

TWAIN HARTE COMMUNITY SERVICES DISTRICT

WATER – SEWER – FIRE – PARK
22912 Vantage Pointe Drive, Twain Harte, CA 95383
Phone (209) 586-3172 Fax (209) 586-0424

SPECIAL MEETING OF THE BOARD OF DIRECTORS VIDEO TELECONFERENCE March 23, 2022 9:00 A.M.

IMPORTANT NOTICE:

To help slow the spread of COVID-19, the District's board room is closed to the public. This meeting will be held remotely by teleconference using Zoom:

- Videoconference Link: <https://us02web.zoom.us/j/82801419230>
- Meeting ID: 828 0141 9230
- Telephone: (669) 900-6833

ANYONE CAN PARTICIPATE IN THIS MEETING: see details at the end of this agenda.

AGENDA

The board may take action on any item on the agenda.

1. Call to Order

2. Pledge of Allegiance & Roll Call

3. Reading of Mission Statement

4. Public Comment

This time is provided to the public to speak regarding items not listed on this agenda.

5. Public Hearing

- A. Open public hearing.
- B. Presentation of the proposed Mitigated Negative Declaration for the Twain Harte Pipeline Replacement Project.
- C. Review written comments.
- D. Receive public comment.
- E. Close public hearing.
- F. Discussion/action to adopt Resolution #22-09 – Adoption of a Mitigated Negative Declaration for the Twain Harte Pipeline Replacement Project.

6. New Business

- A. Discussion/action to adopt Resolution 22-10 – Authorizing Application to the State Water Resources Control Board for Financial Assistance for the Twain Harte Pipeline Replacement Project.
- B. Discussion/action to adopt Resolution #22-11 – Approval of a Fiscal Year 2021-22 Fire CERT Fund Budget Adjustment to Reallocate \$11,000 for Purchasing Equipment.
- C. Discussion/action to adopt Resolution #22-12 – Approving a Contract with Watershed Progressive for the Design, Build, and Construction Management of a Portion of Twain Harte Meadows Park for an Amount not to Exceed \$1,252,795.
- D. Discussion/action to consider recommencement of in-person Board meetings or continuance of remote teleconference Board meetings.
- E. Discussion/action to select the District’s representatives for labor negotiations with represented and non-represented employees.

7. Closed Session

- A. Conference with Labor Negotiators pursuant to Government Code §54957.6:
Agency Designated Representative: General Manager and/or other designated representative(s) selected in open session
Employee Organization: Communication Workers of America, AFL-CIO

8. Adjourn

HOW TO VIRTUALLY OBSERVE THIS MEETING:

The public can virtually observe and participate in a meeting as follows:

- **Computer:** Join the videoconference by clicking the videoconference link located at the top of this agenda or on our website. You may be prompted to enter your name and email. Your email will remain private and you may enter “anonymous” for your name.
- **Smart Phone/Tablet:** Join the videoconference by clicking the videoconference link located at the top of this agenda OR log in through the Zoom mobile app and enter the Meeting ID# and Password found at the top of this agenda. You may be prompted to enter your name and email. Your email will remain private and you may enter “anonymous” for your name.
- **Telephone:** Listen to the meeting by calling Zoom at (669) 900-6833. Enter the Meeting ID# listed at the top of this agenda, followed by the pound (#) key.

* NOTE: your personal video will be disabled and your microphone will be automatically muted.

FOR MORE DETAILED INSTRUCTIONS, CLICK [HERE](#)

HOW TO SUBMIT PUBLIC COMMENTS:

The public will have an opportunity to comment before and after the meeting as follows:

- **Before the Meeting:** If you cannot attend the meeting, you may:

- Email comments to ksilva@twainhartecsd.com, write “Public Comment” in the subject line. In the body of the email, include the agenda item number and title, as well as your comments.
- Mail comments to THCSD Board Secretary: P.O. Box 649, Twain Harte, CA 95383
- **During the Meeting:** The public will have opportunity to provide comment before and after the meeting as follows:
 - Computer/Tablet/Smartphone: Click the “Raise Hand” icon and the host will unmute your audio when it is time to receive public comment. If you would rather make a comment in writing, you may click on the “Q&A” icon and type your comment. You may need to tap your screen or click on “View Participants” to make icons visible.



- Telephone: Press *9 if to notify the host that you have a comment. The host will unmute you during the public comment period and invite you to share comments.

* NOTE: If you wish to speak on an item on the agenda, you are welcome to do so during consideration of the agenda item itself. If you wish to speak on a matter that does not appear on the agenda, you may do so during the Public Comment period. Persons speaking during the Public Comment will be limited to five minutes or depending on the number of persons wishing to speak, it may be reduced to allow all members of the public the opportunity to address the Board. Except as otherwise provided by law, no action or discussion shall be taken/conducted on any item not appearing on the agenda. Public comments must be addressed to the board as a whole through the President. Comments to individuals or staff are not permitted.

ACCESSIBILITY:

Board meetings are accessible to people with disabilities. In compliance with the Americans with Disabilities Act, those requiring accommodations for this meeting should notify the District office 48 hours prior to the meeting at (209) 586-3172.

WRITTEN MEETING MATERIALS:

If written materials relating to items on this Agenda are distributed to Board members prior to the meeting, such materials will be made available for public inspection on the District’s website: www.twainhartecsd.com

AFFP
NOTICE OF PUBLIC HEARING AND I

Affidavit of Publication

STATE OF CALIFORNIA }
COUNTY OF TUOLUMNE } SS

Bev Woodland, being duly sworn, says:

That she is Principal Clerk of the Union-Democrat, a daily newspaper of general circulation, published in Sonora, Tuolumne County, California; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

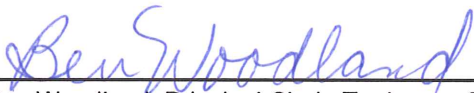
February 22, 2022

That said newspaper was regularly issued and circulated on those dates.

SIGNED:


Principal Clerk

Subscribed to and sworn to me this 22nd day of February 2022.


Bev Woodland, Principal Clerk, Tuolumne County, California

00000127 00018165

TWAIN HARTE COMMUNITY SERVICES DISTRICT
PO BOX 649
TWAIN HARTE, CA 95383

NOTICE OF PUBLIC HEARING AND
INTENT TO ADOPT MITIGATED
NEGATIVE DECLARATION

NOTICE IS HEREBY GIVEN that the Twain Harte Community Services District will conduct a special public meeting Wednesday, March 23, 2022, at 9:00 a.m. to consider and accept public comment for the proposed Twain Project Pipeline Improvement Project. This is to advise that the Twain Harte Community Services District has prepared a Mitigated Negative Declaration for the project. To help slow the spread of COVID-19, the District's board room is closed to the public. This meeting will be held remotely by teleconference using Zoom.

Project Title: Twain Project Pipeline Improvement Project

Project Location: The proposed Project is located within the boundaries of the Twain Harte Community Service District (District). The District serves the unincorporated community of Twain Harte, Tuolumne County, California.

Project Description: The proposed project consists of the replacement of existing deteriorating 4- to 10-inch diameter sewer pipelines within existing road rights-of-way and utilities easements. In addition, severely damaged manhole covers will also be replaced. These areas include the following:

- Adjacent to Twain Harte Lake;
- Two (2) located around Marquis Drive;
- Twain Harte Drive to Spruce Drive;
- Fuller to Manzanita Drive;
- Golf Club Drive (South);
- Sewer crossing of inlet to Twain Harte Lake;
- Willowood Drive and Tuolumne Drive; and
- Golf Club Drive.

The District is seeking funding through the California's Clean Water State Revolving Fund (CWSRF) for the areas listed above. Implementation of the proposed project will allow the District to maintain, replace, and upgrade its collection system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality. Some of the pipeline runs above ground sitting on cradles and in some areas the pipe is belowground. The pipelines being replaced belowground will be abandoned in place and remain under ground. Construction is anticipated to take approximately 5 months.

The document and documents referenced in the Initial Study/Mitigated Negative Declaration are available for review at the Twain Harte Community Services District at 22912 Vantage Pointe Drive, Twain Harte, CA 93245. Persons wishing to review information on file must contact staff by phone at (209) 586-3172. or by email at info@twainhartecsd.com to make arrangements. Due to the limits mandated by State law, mailed responses must be filed with the District office, 22912 Vantage Pointe Drive, Twain Harte CA 95383 no later than March 16, 2022, at 5:00 p.m.

Persons having comments or concerns about the proposed project must submit your public comments by e-mail to: Jaymie.Brauer@qkinc.com. Persons unable to email comments may send them via USPS mail or other courier to Jaymie Brauer, c/o

Quad Knopf, Inc, 5080 Californian Avenue, Ste 220, Bakersfield CA 93309. Mailed comments must be received by 5:00 p.m. the day of the meeting to be entered into record.

As mandated by the California Environmental Quality Act (CEQA), the public review period for this document is 30 days (CEQA Section 15073[b]). The public review period begins on February 15, 2022 and ends on March 16, 2022. For further information, please contact Jaymie Brauer at (661) 626-2600.

Publication date: 2/22/2022

The Union Democrat, Sonora, CA

TWAIN HARTE PIPELINE IMPROVEMENT PROJECT



FEBRUARY 2022



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

TWAIN HARTE PIPELINE IMPROVEMENT PROJECT

Prepared for:

Twain Harte Community Service District
22912 Vantage Pointe Drive
Twain Harte, CA 95383
Contact Person: Jeff Black, PE
Phone: (209) 322-1820

Consultant:



5080 California Avenue, Suite 220
Bakersfield, CA 93309
Contact: Jaymie L. Brauer
Phone: (661) 616-2600

February 2022

**NOTICE OF PUBLIC HEARING AND INTENT TO ADOPT
MITIGATED NEGATIVE DECLARATION**

NOTICE IS HEREBY GIVEN that the Twain Harte Community Services District will conduct a special public meeting Wednesday, March 23, 2022, at 9:00 a.m. to consider and accept public comment for the proposed Twain Project Pipeline Improvement Project. This is to advise that the Twain Harte Community Services District has prepared a Mitigated Negative Declaration for the project. *To help slow the spread of COVID-19, the District's board room is closed to the public. This meeting will be held remotely by teleconference using Zoom.*

Project Title: Twain Project Pipeline Improvement Project

Project Location: The proposed Project is located within the boundaries of the Twain Harte Community Service District (District). The District serves the unincorporated community of Twain Harte, Tuolumne County, California.

Project Description: The proposed project consists of the replacement of existing deteriorating 4- to 10-inch diameter sewer pipelines within existing road rights-of-way and utilities easements. In addition, severely damaged manhole covers will also be replaced. These areas include the following:

- Adjacent to Twain Harte Lake;
- Two (2) located around Marquis Drive;
- Twain Harte Drive to Spruce Drive;
- Fuller to Manzanita Drive;
- Golf Club Drive (South);
- Sewer crossing of inlet to Twain Harte Lake;
- Willowood Drive and Tuolumne Drive; and
- Golf Club Drive.

The District is seeking funding through the California's Clean Water State Revolving Fund (CWSRF) for the areas listed above. Implementation of the proposed project will allow the District to maintain, replace, and upgrade its collection system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality. Some of the pipeline runs above ground sitting on cradles and in some areas the pipe is belowground. The pipelines being replaced belowground will be abandoned in place and remain under ground. Construction is anticipated to take approximately 5 months.

The document and documents referenced in the Initial Study/Mitigated Negative Declaration are available for review at the Twain Harte Community Services District at 22912 Vantage Pointe Drive, Twain Harte, CA 93245. Persons wishing to review information on file must contact staff by phone at (209) 586-3172. or by email at info@twainhartecsd.com to make arrangements. Due to the limits mandated by State law, mailed responses must be filed with the District office, 22912 Vantage Pointe Drive, Twain Harte CA 95383 no later than March 16, 2022, at 5:00 p.m.

Persons having comments or concerns about the proposed project **must submit your public comments by e-mail to:** Jaymie.Brauer@qkinc.com. Persons unable to email comments may send them via USPS mail or other courier to Jaymie Brauer, c/o Quad Knopf, Inc, 5080 Californian Avenue, Ste 220, Bakersfield CA 93309. Mailed comments must be received by 5:00 p.m. the day of the meeting to be entered into record.

As mandated by the California Environmental Quality Act (CEQA), the public review period for this document is 30 days (CEQA Section 15073[b]). The public review period begins on February 15, 2022 and ends on March 16, 2022. For further information, please contact Jaymie Brauer at (661) 626-2600.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Twain Harte Pipeline Improvement Project

Lead Agency: Twain Harte Community Service District Contact Person: Jeff Black

Mailing Address: 22912 Vantage Pointe Drive Phone: (209) 322-1820

City: Twain Harte Zip: 95383 County: Tuolumne

Project Location: County: Tuolumne City/Nearest Community: Twain Harte

Cross Streets: Marquis Drive; Twain Harte Drive to Spruce Drive; Fuller to Manzanita Drive; Golf Club Drive; Willowood Drive and Tuolumne Drive; Golf Club Drive. Zip Code: 95383

Longitude/Latitude (degrees, minutes and seconds): 38 ° 02 ' 12.3 " N / 120 ° 14 ' 22.2 " W Total Acres: N/A

Assessor's Parcel No.: N/A Section: 8, 9, 16, 17 Twp.: 2N Range: 16E Base: MDB&M

Within 2 Miles: State Hwy #: SR 108 Waterways: N/A

Airports: N/A Railways: N/A Schools: Twain Harte School

Document Type:

CEQA: <input type="checkbox"/> NOP	<input type="checkbox"/> Draft EIR	NEPA: <input type="checkbox"/> NOI	Other: <input type="checkbox"/> Joint Document
<input type="checkbox"/> Early Cons	<input type="checkbox"/> Supplement/Subsequent EIR	<input type="checkbox"/> EA	<input type="checkbox"/> Final Document
<input type="checkbox"/> Neg Dec	(Prior SCH No.) _____	<input type="checkbox"/> Draft EIS	<input type="checkbox"/> Other: _____
<input checked="" type="checkbox"/> Mit Neg Dec	Other: _____	<input type="checkbox"/> FONSI	_____

Local Action Type:

<input type="checkbox"/> General Plan Update	<input type="checkbox"/> Specific Plan	<input type="checkbox"/> Rezone	<input type="checkbox"/> Annexation
<input type="checkbox"/> General Plan Amendment	<input type="checkbox"/> Master Plan	<input type="checkbox"/> Prezone	<input type="checkbox"/> Redevelopment
<input type="checkbox"/> General Plan Element	<input type="checkbox"/> Planned Unit Development	<input type="checkbox"/> Use Permit	<input type="checkbox"/> Coastal Permit
<input type="checkbox"/> Community Plan	<input type="checkbox"/> Site Plan	<input type="checkbox"/> Land Division (Subdivision, etc.)	<input checked="" type="checkbox"/> Other: State Funding

Development Type:

<input type="checkbox"/> Residential: Units _____ Acres _____	<input type="checkbox"/> Transportation: Type _____
<input type="checkbox"/> Office: Sq.ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Mining: Mineral _____
<input type="checkbox"/> Commercial: Sq.ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Power: Type _____ MW _____
<input type="checkbox"/> Industrial: Sq.ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Waste Treatment: Type _____ MGD _____
<input type="checkbox"/> Educational: _____	<input type="checkbox"/> Hazardous Waste: Type _____
<input type="checkbox"/> Recreational: _____	<input checked="" type="checkbox"/> Other: Pipeline Replacement
<input type="checkbox"/> Water Facilities: Type _____ MGD _____	

Project Issues Discussed in Document:

<input checked="" type="checkbox"/> Aesthetic/Visual	<input type="checkbox"/> Fiscal	<input checked="" type="checkbox"/> Recreation/Parks	<input checked="" type="checkbox"/> Vegetation
<input checked="" type="checkbox"/> Agricultural Land	<input checked="" type="checkbox"/> Flood Plain/Flooding	<input checked="" type="checkbox"/> Schools/Universities	<input checked="" type="checkbox"/> Water Quality
<input checked="" type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Forest Land/Fire Hazard	<input checked="" type="checkbox"/> Septic Systems	<input checked="" type="checkbox"/> Water Supply/Groundwater
<input checked="" type="checkbox"/> Archeological/Historical	<input checked="" type="checkbox"/> Geologic/Seismic	<input checked="" type="checkbox"/> Sewer Capacity	<input checked="" type="checkbox"/> Wetland/Riparian
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Minerals	<input checked="" type="checkbox"/> Soil Erosion/Compaction/Grading	<input type="checkbox"/> Growth Inducement
<input type="checkbox"/> Coastal Zone	<input checked="" type="checkbox"/> Noise	<input checked="" type="checkbox"/> Solid Waste	<input checked="" type="checkbox"/> Land Use
<input checked="" type="checkbox"/> Drainage/Absorption	<input checked="" type="checkbox"/> Population/Housing Balance	<input checked="" type="checkbox"/> Toxic/Hazardous	<input type="checkbox"/> Cumulative Effects
<input type="checkbox"/> Economic/Jobs	<input checked="" type="checkbox"/> Public Services/Facilities	<input checked="" type="checkbox"/> Traffic/Circulation	<input type="checkbox"/> Other: _____

Present Land Use/Zoning/General Plan Designation:
 Existing roads/R/P- Parks and Recreation, GC- General Commercial, LDR- Low Density Residential, MU- Mixed Use/R-A: (Rural Residential) • C-1: (General Commercial)

Project Description: (please use a separate page if necessary)

The proposed Project consists of the replacement of existing deteriorating 4- to 10-inch diameter sewer pipelines, within existing rights-of-way (ROW) and utility easements. In addition, severely damaged manhole covers will also be replaced. These areas include the following: adjacent to Twain Harte Lake, two (2) located around Marquis Drive; Twain Harte Drive to Spruce Drive; Fuller to Manzanita Drive; Golf Club Drive (South); Sewer crossing of inlet to Twain Harte Lake; Willowood Drive and Tuolumne Drive; and Golf Club Drive. The District is seeking funding through the California's Clean Water State Revolving Fund (CWSRF) for the areas listed above. Implementation of the proposed project will allow the District to maintain, replace, and upgrade its sewer system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality. Construction is expected to take approximately 5 months, with construction anticipated to start in Q2 of 2023 (depending on funding). Some of the pipeline runs above ground sitting on cradles and in some areas the pipe is below ground. The pipelines being replaced below ground will be abandoned in place and remain under ground.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

- | | |
|---|---|
| <input checked="" type="checkbox"/> Air Resources Board | <input checked="" type="checkbox"/> Office of Historic Preservation |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> California Emergency Management Agency | <input type="checkbox"/> Parks & Recreation, Department of |
| <input type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input type="checkbox"/> Caltrans District # _____ | <input type="checkbox"/> Public Utilities Commission |
| <input type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Regional WQCB # <u>5</u> |
| <input type="checkbox"/> Caltrans Planning | <input type="checkbox"/> Resources Agency |
| <input type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Recycling and Recovery, Department of |
| <input type="checkbox"/> Coachella Valley Mtns. Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Comm. |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mtns. Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input checked="" type="checkbox"/> SWRCB: Water Quality |
| <input type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> Fish & Game Region # <u>4</u> | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> Forestry and Fire Protection, Department of | <input checked="" type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> General Services, Department of | |
| <input type="checkbox"/> Health Services, Department of | <input checked="" type="checkbox"/> Other: <u>Tuolumne County Community Development Department- Land Use Division</u> |
| <input type="checkbox"/> Housing & Community Development | <input checked="" type="checkbox"/> Other: <u>California Environmental Protection Agency</u> |
| <input checked="" type="checkbox"/> Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)

Starting Date February 15, 2022 Ending Date March 16, 2022

Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: _____
Address: _____	Address: _____
City/State/Zip: _____	City/State/Zip: _____
Contact: _____	Phone: _____
Phone: _____	

Signature of Lead Agency Representative: _____ Date: 2/15/22

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

DISTRIBUTION LIST

State Clearinghouse (SCH) OPR
P.O. Box 3044 Sacramento, CA 95812-3044
ELECTRONIC

California Air Resources
Board
SCH DISTRIBUTION

California Department of
Fish and Wildlife
SCH DISTRIBUTION

Native American Heritage Commission
SCH DISTRIBUTION

Office of Historic Preservation
SCH DISTRIBUTION

California Department of Water
Resources
SCH DISTRIBUTION

State Water Resources Control Board

Water Quality
SCH DISTRIBUTION

State Water Resources Control Board
Financial Assistance
SCH DISTRIBUTION

California Environmental
Protection Agency
P.O. Box 2815
Sacramento, CA 95812
SCH DISTRIBUTION

Tuolumne County Community Development
Department- Land Use and Natural Resources
Division
2 South Green Street
Sonora, CA 95370

Tuolumne County Air Pollution
Control District
22365 S Airport Rd, Sonora, CA 95370

U S. Fish and Wildlife Service
2800 Cottage Way
Rm W-2605
Sacramento, CA 95825

U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Chicken Ranch Rancheria of Me-Wuk
Indians of California
Attn: Waylon Coates
PO Box 1159
Jamestown, CA 95327

Table of Contents

Mitigated Negative Declaration..... 1

SECTION 1 - Introduction..... 1-1

1.1 - Overview 1-1

1.2 - California Environmental Quality Act 1-1

1.3 - Impact Terminology..... 1-1

1.4 - Document Organization and Contents 1-2

1.5 - Regulation Incorporated by Reference..... 1-2

SECTION 2 - Project Description..... 2-1

2.1 - Introduction/Background 2-1

2.2 - Project Location 2-1

2.3 - Project Environment..... 2-1

2.4 - Proposed Project 2-4

SECTION 3 - Initial Study..... 3-1

3.1 - Environmental Checklist..... 3-1

3.2 - Environmental Factors Potentially Affected 3-3

3.3 - Determination..... 3-3

3.4 - Evaluation of Environmental Impacts..... 3-5

 3.4.1 - Aesthetics 3-7

 3.4.2 - Agriculture and Forestry Resources..... 3-10

 3.4.3 - Air Quality 3-13

 3.4.4 - Biological Resources..... 3-19

 3.4.5 - Cultural resources 3-29

 3.4.6 - Energy 3-35

 3.4.7 - Geology and Soils 3-37

 3.4.8 - Greenhouse Gas Emissions..... 3-45

 3.4.9 - Hazards and Hazardous Materials..... 3-47

 3.4.10 - Hydrology and Water Quality 3-53

 3.4.11 - Land Use and Planning..... 3-61

 3.4.12 - Mineral Resources 3-63

 3.4.13 - Noise 3-65

 3.4.14 - Population and Housing 3-69

 3.4.15 - Public Services..... 3-71

 3.4.16 - Recreation 3-75

 3.4.17 - Transportation 3-77

 3.4.18 - Tribal Cultural Resources..... 3-80

 3.4.19 - Utilities and Service Systems 3-82

3.4.20 - Wildfire.....	3-85
3.4.21 - Mandatory Findings of Significance.....	3-88
SECTION 4 - Mitigation, Monitoring and Reporting Plan.....	4-1
SECTION 5 - List of Preparers.....	5-1
QK.....	5-1
SECTION 6 - References.....	6-1

List of Appendices

- Appendix A: Air Quality
- Appendix B: Biological Analysis Report
- Appendix C: Class III Inventory/Phase I Survey Report
- Appendix D: Project Engineering Report

List of Figures

Figure 2-1 Regional Map	2-2
Figure 2-2 Project Area.....	2-3
Figure 3.4.7-1 Soil Types.....	3-44
Figure 3.4.10-1 FEMA Flood Hazards.....	3-60

List of Tables

Table 3.4.3-1 Short-Term Project Emissions- Annual.....	3-15
Table 3.4.3-2 Short-Term Project Emissions- Daily.....	3-15
Table 3.4.3-3 Sensitive Receptors Located < 2 Miles from Project.....	3-16
Table 3.4.4-1 Blooming Period of Special-status Plants with Potential to Occur.....	3-26
Table 3.4.8-1 Estimated Construction GHG Emissions (MT/Year).....	3-45
Table 3.4.13-1 Typical Construction Noise Emission Levels.....	3-66
Table 3.4.13-2 Different Levels of Groundborne Vibration	3-67

MITIGATED NEGATIVE DECLARATION

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

Project Name

Twain Harte Pipeline Improvement Project

Project Location

The proposed project is located within the boundaries of the Twain Harte Community Service District (District). The District serves the unincorporated community of Twain Harte, Tuolumne County, California.

Project Description

The proposed project consists of the replacement of existing deteriorating 4- to 10-inch diameter sewer pipelines, within existing road rights of way and utility easements. In addition, severely damaged manhole covers will also be replaced. These areas include the following locations:

- Adjacent to Twain Harte Lake.
- Two located around Marquis Drive.
- Twain Harte Drive to Spruce Drive.
- Fuller to Manzanita Drive.
- Golf Club Drive (South).
- Sewer crossing of inlet to Twain Harte Lake.
- Willowood Drive and Tuolumne Drive.
- Golf Club Drive.

The District provides water, parks, recreation, and fire protection services and operates and maintains the sewer collection system serving the community with an estimated population of 2,500, which includes a total of 1,607 equivalent single-family resident units and 1,436 physical connections (1,347 residential, 84 commercial and 5 public facilities).

The District is seeking funding through the California’s Clean Water State Revolving Fund (CWSRF) for the areas listed above. Implementation of the proposed project will allow the District to maintain, replace, and upgrade its sewer system so that it can continue to comply

with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality.

Construction is expected to take approximately five months, with construction anticipated to start in Q2 of 2023 (depending on funding). Some of the pipeline runs above ground sitting on cradles and in some areas the pipe is belowground. The pipelines being replaced belowground will be abandoned in place and remain under ground.

The construction will require approximately 10 crew members. Construction equipment will include a backhoe, bobcat, trencher, generator, grader, dump truck, concrete truck, and three pickup trucks. Construction will include exposing the existing sewer pipeline for replacement. The depth of ground excavation or trenching will be no more than 6 ft below grade.

Mailing Address and Phone Number of Contact Person

Twain Harte Community Services District
22912 Vantage Pointe Drive
Twain Harte, CA 95383
Contact person: Jeff Black, PE
(209) 586-3172

Findings

As Lead Agency in compliance with CEQA Guidelines Section 15102, the Twain Harte Community Services District (District) finds that the project will not have a significant adverse effect on the environment. The Initial Study (IS) (see *Section 3 – Initial Study*) identified one or more potentially significant effects on the environment, but revisions to the project have been made before the release of this Mitigated Negative Declaration (MND) or mitigation measures would be implemented that reduce all potentially significant impacts less-than-significant levels. The County further finds that there is no substantial evidence that this project would have a significant effect on the environment.

Mitigation Measures Included in the Project to Avoid Potentially Significant Effects

MM BIO-1: If project construction activities will be initiated during the nesting season (February 1 to September 15), a pre-activity nesting bird survey shall be conducted within 14 days prior to the start of project activities. The surveys shall encompass the proposed project footprint and accessible areas or land visible from accessible areas within a 250-foot buffer for songbirds and a 500-foot buffer for raptors. If no active nests are found, no further action is required. However, existing nests may become active and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress.

If active nests are found during the survey or at any time during construction of the proposed project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the adults or the nest, or if breeding attempts have otherwise been unsuccessful. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.

MM BIO-2: Prior to the initiation of construction activities, all construction personnel shall attend a Worker Environmental Awareness Training program developed by a qualified biologist. Any personnel associated with construction that did not attend the initial training shall be trained by the authorized biologist prior to working on the project area. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Worker Environmental Awareness Training program prior to starting work on the project and on an annual basis. The Program shall be developed and presented by the project qualified biologist(s) or designee approved by the qualified biologist(s). The program shall include information on the life histories of special-status species with potential to occur on the proposed project, their legal status, course of action shall these species be encountered onsite, and avoidance and minimization measures to protect these species. It shall include the components described below:

- a. Information on the life history and identification of special-status species that may occur or that may be affected by project activities. The program shall also discuss the legal protection status of each such species, the definition of “take” under the Federal Endangered Species Act and California Endangered Species Act, measures the project proponent/operator shall implement to protect the species, reporting requirements, specific measures for workers to avoid take of special-status plant and wildlife species, and penalties for violation of the requirements outlined in the California Environmental Quality Act mitigation measures and agency permit requirements.
- b. An acknowledgement form signed by each worker indicating that the Worker Environmental Awareness Training and Education Program has been completed shall be kept on file at the construction site.
- c. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Worker Environmental Awareness Training and Education Program, and signed acknowledgement forms shall be submitted to the Tuolumne County Planning Department.
- d. A copy of the training transcript, training video or informational binder for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.
- e. A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Training and Education Program. Construction

workers shall not be permitted to operate equipment within the construction areas unless they have attended the Worker Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker.

MM BIO-3: If the proposed project is expected to occur during the blooming period, as listed in Table 3.4.4-1, positive plant identification may occur. If these species are observed, they shall be avoided to maximum extent possible. If project activities cannot avoid those areas, a qualified botanist or biologist may have opportunity to salvage and relocate the plants that will be impacted.

**Table 3.4.4-1
Blooming Period of Special-status Plants with Potential to Occur**

Special-Status Plant Species	Optimal Blooming Period
<i>Clarkia australis</i> Small's southern clarkia	May - August
<i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia	April - July
<i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower	April - July
<i>Erythronium tuolumnense</i> Tuolumne fawn lily	March - June
<i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris	May - June
<i>Navarretia miwukensis</i> Mi-Wuk navarretia	May - August
<i>Rhynchospora capitellata</i> brownish beaked-rush	July - August

MM BIO-4: The introduction and spread of invasive and non-native plant species shall be avoided and controlled wherever possible during construction, on both the project and surrounding areas. This may be achieved through measures such as cleaning vehicles and equipment before they enter construction areas, removing invasive species that exist on the site and disposing of the removed debris in a manner that prohibits their spread on- and off-site.

MM BIO-5: To reduce any indirect impacts to special-status plants that may be in the vicinity of the proposed project, best management practices (BMPs) shall be implemented to control dust pollution, prevent discharge of potentially harmful chemicals, and prevent changes in hydrology. BMPs may include the installation of erosion and sedimentation control devices, applying water to control dust, placing drip pans under equipment when not in use, refueling in designated areas, and containing concrete washout properly, among other practices.

MM CUL-1: Prior to any ground disturbance, the project developer/contractor shall retain a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's

Standards for professional archaeology (U.S. Department of the Interior, 2011), to carry out all mitigation measures related to archaeological and historical resources.

- a. Prior to the start of any ground-disturbing or construction activities, Cultural Resources Sensitivity Training shall be conducted. This includes an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification of the qualified archaeologist and/or Native American monitor for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources.
- b. The project operator shall ensure all new employees who have not participated in earlier Cultural Resources Sensitivity Trainings shall:
 - Participate in Cultural Resources Sensitivity Training as described above.
 - Shall be provided a Cultural Resources Sensitivity Training guide for all personnel that is approved by the Lead archaeologist and.
 - The Cultural Resources Sensitivity Training guide shall be kept available for all personnel to review and be familiar with as necessary.

MM CUL-2: Prior to any ground disturbance, the developer/contractor shall enter into an agreement with the Chicken Ranch Rancheria of Me-Wuk Indians of California. If requested, the developer shall:

- a. Retain a qualified native American monitor to be onsite during initial ground disturbance activities.
- b. Retain a qualified tribal member to conduct a Cultural Resources Sensitivity training session with the construction crew prior to ground disturbance activities.

Evidence of the agreement with the Chicken Ranch Rancheria of Me-Wuk Indians of California tribe shall be submitted to the lead agency as evidence of compliance.

MM CUL-3: The Wildwood Ditch (**P-55-006544**) shall be substantially flagged as an Environmentally Sensitive Area (ESA) prior to construction as determined by the Lead Archaeologist in consultation with the Native American monitor and carefully monitored to ensure avoidance.

MM CUL-4: Prior to any excavation in Marquis Drive (Sections 3A and 3B), a Phase II test excavation program shall be implemented to determine whether significant artifacts or features occur in the proposed locations for sewer line improvements. Significant features would include, but not limited to, house and round house floors and other structural remains, human burials, cooking hearths, other stone features, storage pits, food processing areas and tool manufacturing loci.

MM CUL-5: If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a

qualified archaeologist can evaluate the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation.

MM CUL-6: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the NAHC, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.

MM GEO-1: Prior to issuing of grading or building permits, if required, (a) the project developer shall prepare and implement a Type 1 Linear Underground/Overhead Projects SWPPP (LUP SWPPP), if applicable. The LUP SWPPP shall comply with the General National Pollutant Discharge Elimination System (NPDES) from the Central Valley Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts.

MM GEO-2: The project shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbance activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources require further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Lead Agency and the project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find.

If the find is determined to be significant and the Lead Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with the applicable standards. The plan shall be submitted to the Lead Agency for review and approval. Upon approval, the plan shall be incorporated into the project.

MM NSE-1: During construction, the project developer shall implement the following measures:

- a. All stationary construction equipment on the project site shall be located so that noise emitting objects or equipment faces away from any potential sensitive receptors.
- b. The construction contractor shall ensure that all construction equipment is equipped with manufacturer-approved mufflers and baffles and cover equipment with sound

blankets, to the extent feasible. During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

- c. Construction activities shall take place during daylight hours, when feasible.

SECTION 1 - INTRODUCTION

1.1 - Overview

The Twain Harte Community Service District (District/Lead Agency) proposes the replacement of existing deteriorated sewer pipelines and the replacement of manhole covers project. The project will be funded with State Revolving Funds. The Lead Agency has developed this CEQA document to fulfill both the CEQA and the federal cross-cutter regulation requirements.

1.2 - California Environmental Quality Act

This IS/MND examines the potential environmental effects of the replacement of existing 4- to 10-inch diameter pipelines, within existing rights of way and utility easements. In addition, severely damaged manhole covers will also be replaced. The project site is located within the Twain Harte Community Service District service area.

The Twain Harte Community Service District is the Lead Agency for this project pursuant to the CEQA Guidelines (Public Resources Code Section 15000 *et seq.*). Section 15063 of the CEQA Guidelines requires the Lead Agency to prepare an IS to determine whether a discretionary project will have a significant effect on the environment. A Mitigated Negative Declaration (MND) is appropriate when an IS has been prepared and a determination can be made that no significant environmental effects will occur because revisions to the project have been made or mitigation measures will be implemented that reduce all potentially significant impacts to less-than-significant levels. The content of an MND is the same as a Negative Declaration, with the addition of identified mitigation measures and a Mitigation Monitoring and Reporting Program (MMRP) (See *Section 4 - Mitigation Monitoring and Reporting Plan*).

Based on the IS, the Lead Agency has determined that the environmental review for the proposed application can be completed with an MND.

1.3 - Impact Terminology

The following terminology is used to describe the level of significance of impacts.

- A finding of *no impact* is appropriate if the analysis concludes that the project would not affect the particular topic area in any way.
- An impact is considered *less than significant* if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments that have been agreed to by the applicant.
- An impact is considered *potentially significant* if the analysis concludes that it could have a substantial adverse effect on the environment.

1.4 - Document Organization and Contents

The content and format of this IS/MND is designed to meet the requirements of CEQA. The report contains the following sections:

- *Section 1 – Introduction:* This section provides an overview of CEQA requirements, intended uses of the IS/MND, document organization, and a list of regulations that have been incorporated by reference.
- *Section 2 – Project Description:* This section describes the project and provides data on the site’s location.
- *Section 3 – Initial Study:* This section contains the evaluation of 21 different environmental resource factors contained in Appendix G of the CEQA Guidelines. Each environmental resource factor is analyzed to determine whether the proposed project would have an impact. One of four findings is made which include: no impact, less-than-significant impact, less than significant with mitigation, or significant and unavoidable. If the evaluation results in a finding of significant and unavoidable for any of the 21 environmental resource factors, then an Environmental Impact Report will be required.
- *Section 4 – Mitigation Monitoring and Reporting Plan:* This section contains a Mitigation Monitoring and Reporting Program that summarizes the impacts, mitigation measures, and level of significance after mitigation.
- *Section 5 – List of Preparers:* This section identifies the individuals who prepared the IS/MND.
- *Section 6 – References:* This section contains a full list of references that were used in the preparation of this IS/MND.

1.5 - Regulation Incorporated by Reference

The following regulations are incorporated into this IS/MND by reference. Other applicable federal, State, and regional regulations are referenced throughout this document:

- Tuolumne County General Plan.
- Tuolumne County Zoning Ordinance.
- Tuolumne County Water Urban Management.
- Tuolumne County Airport Land Use Compatibility Plan.
- Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan- Annex C Twain Harte Community Services District.
- Tuolumne County Multi-Hazard Emergency Response Plan.
- Twain Harte Community Services District Strategic Plan.

SECTION 2 - PROJECT DESCRIPTION

2.1 - Introduction/Background

The Twain Harte Community Service District (District/Lead Agency) proposes the replacement of existing deteriorated 4- to 10-inch diameter sewer pipelines so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality (project). In addition, severely damaged manhole covers will also be replaced.

The project will be funded with State Revolving Funds. The Lead Agency has developed this CEQA document to fulfill both the CEQA and the federal cross-cutter regulation requirements.

2.2 - Project Location

The proposed project is located in the unincorporated community of Twain Harte, Tuolumne County, California (Figure 2-1). The project area is within the boundaries of the Twain Harte Community Service District (Figure 2-2).

2.3 - Project Environment

The proposed project is located in the unincorporated community of Twain Harte in Tuolumne County, California. Twain Harte is accessible via State Route (SR) 108 and is in the foothills of the western Sierra Nevada Mountain range, approximately 50 miles northeast of Modesto, California and 8.5 miles northeast of Sonora, California. The topography of Twain Harte comprises of hillsides slope upward away from this valley to the northwest and southeast with various changes in topography. Elevation in the project area ranges from approximately 3,500 feet above mean sea level at the southwest end of the project to approximately 3,760 feet above mean sea level at its northern end.

The proposed project is in portions of Sections 8, 9, 16 and 17, Township 2 North, Range 16 East, Mount Diablo Base & Meridian of the Public Land Survey System. It located within the Twain Harte United States Geological (USGS) 7.5-minute topographic quadrangle.



Figure 2-1
Regional Map



Figure 2-2
Project Area

2.4 - Proposed Project

The proposed project consists of the replacement of existing deteriorating 4- to 10-inch diameter sewer pipelines within existing road rights of way and utilities easements. In addition, severely damaged manhole covers will also be replaced. These areas include the following:

- Adjacent to Twain Harte Lake.
- Two located around Marquis Drive.
- Twain Harte Drive to Spruce Drive.
- Fuller to Manzanita Drive.
- Golf Club Drive (South).
- Sewer crossing of inlet to Twain Harte Lake.
- Willowood Drive and Tuolumne Drive.
- Golf Club Drive.

The District provides water, parks, recreation, and fire protection services and operates and maintains the sewer collection system serving the community with an estimated population of 2,500, which includes a total of 1,607 equivalent single-family resident units and 1,436 physical connections (1,347 residential, 84 commercial and 5 public facilities).

The District is seeking funding through the California's Clean Water State Revolving Fund (CWSRF) for the areas listed above. Implementation of the proposed project will allow the District to maintain, replace, and upgrade its sewer system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality.

Construction is expected to take approximately five months, with construction anticipated to start in Q2 of 2023 (depending on funding). Some of the pipeline runs above ground sitting on cradles and in some areas the pipe is belowground. The pipelines being replaced belowground will be abandoned in place and remain under ground. The depth of ground excavation or trenching will be no more than 6 ft below grade.

The construction will require approximately 10 crew members. Construction equipment will include a backhoe, bobcat, trencher, generator, grader, dump truck, concrete truck, and three pickup trucks. Some of the pipeline runs above ground sitting on cradles and in some areas the pipe is belowground. The pipelines being replaced belowground will be abandoned in place and remain under ground.

SECTION 3 - INITIAL STUDY

3.1 - Environmental Checklist

1. Project Title:

Twain Harte Pipeline Improvement Project

2. Lead Agency Name and Address:

Twain Harte Community Services District
22912 Vantage Pointe Drive
Twain Harte, CA 95383

3. Contact Person and Phone Number:

Jeff Black, PE
(209) 322-1820

4. Project Location:

The proposed project is located within the boundaries of the Twain Harte Community Service District (District). The District serves the unincorporated community of Twain Harte, Tuolumne County, California.

5. Project Sponsor's Name and Address:

Same as above

6. Tuolumne County General Plan Designation:

The unincorporated community of Twain Harte consists of the following designations:

- R/P- Parks and Recreation
- GC- General Commercial
- LDR- Low Density Residential
- MU- Mixed Use

7. Zoning:

Zoning within the project area consists of these zones:

- R-A: (Rural Residential) allows single-family dwellings and farming uses.
- C-1: (General Commercial) Zone is intended for retail stores and businesses, which do not involve manufacturing and/or processing.

8. Description of Project:

The proposed project consists of the replacement of existing deteriorating 4- to 10-inch diameter sewer pipelines within existing rights of way and utility easements. In addition, severely damaged manhole covers will also be replaced. These areas include the following:

- Adjacent to Twain Harte Lake.
- Two located around Marquis Drive.
- Twain Harte Drive to Spruce Drive.
- Fuller to Manzanita Drive.
- Golf Club Drive (South).
- Sewer crossing of inlet to Twain Harte Lake.
- Willowood Drive and Tuolumne Drive.
- Golf Club Drive.

The District is seeking funding through the California's Clean Water State Revolving Fund (CWSRF) for the areas listed above. Implementation of the proposed project will allow the District to maintain, replace, and upgrade its sewer system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality. Construction will include exposing the existing sewer pipeline, which will be abandoned in place and remain under ground replacement, and a new pipeline will be installed.

9. Surrounding Land Uses and Setting:

The surrounding land uses includes residential and commercial land uses, and undeveloped parcels. The replacement of the pipelines would occur along existing rights-of-way and utility easements.

Other Public Agencies Whose Approval May be Required:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- California Department of Water Resources
- Central Valley Regional Water Quality Control Board
- California Department of Fish and Wildlife- Region 4
- Native American Heritage Commission
- Tuolumne County Air Pollution Control District
- County of Tuolumne

3.2 - Environmental Factors Potentially Affected

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

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

3.3 - Determination

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENT IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed

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

Signature

Date

Printed Name

For

3.4 - Evaluation of Environmental Impacts

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

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question.
 - b. The mitigation measure identified, if any, to reduce the impact to less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.1 - AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. In nonurbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Impact #3.4.1a – Would the project have a substantial adverse effect on a scenic vista?

The proposed project area is located in an area that is developed and not located in or near any designated scenic vistas. There are only three vistas points officially designated by Caltrans. These vistas points are located along SR 120, located approximately 25 miles southwest of the project area. There are no known aesthetic resources existing on or near the project site (Tuolumne County, 2018b). Additionally, the pipelines being replaced will be abandoned in place and remain under ground and any obstruction cause by equipment would be temporary in nature. The proposed project will be installed underground. The proposed project will not have an adverse effect on known scenic vistas. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.1b – Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

See Impact #3.4.1a, above.

The project area does not contain any designated scenic highways, pursuant to the California Streets and Highways Code, Sections 260 through 263. The closest designated Scenic Highway is a portion of SR 4 near Arnold, which is approximately 15 miles to the northwest (California Department of Transportation, 2022). The project would be visible from that roadway. There are eligible segments of SR 49 that are being considered as State scenic highways, but at this time, neither road has been formally designated as such (Tuolumne County, 2018b).

During project-related activities, the visual character of the project would be impacted as a result of trenching and other construction-related activities. However, these impacts would be short-term, temporary, and are typical of these types of activities. The long-term operation of the underground pipelines would not present the potential to impact the visual character. There are no known historic buildings, trees, rock outcroppings, historic buildings or scenic highways that have been identified. Therefore, the proposed project would have a less-than-significant impact on scenic resources within a scenic highway.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.1c – In nonurbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

See discussion of Impact #3.4.1a and #3.4.1b, above.

All project work will be limited to the pipeline route and temporary. Construction equipment may temporarily obstruct views within the community during the installation of the pipeline along each section of road. Once completed the proposed project's appearance will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The proposed project will not conflict with local zoning or other regulations governing scenic quality. Therefore, the proposed project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.1d – Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Construction activities on the proposed project would typically be conducted during daylight hours, from 7:00 a.m. to 6:00 p.m. In the unlikely event that work is performed between dusk and 6:00 a.m., construction crews will use minimal illumination to perform the work safely. All construction lighting would be directed downward and shielded to focus illumination on the desired work areas only and prevent light spillage onto adjacent properties.

Compliance with the Twain Harte Design Review and Planning Advisory Guidelines (Tuolumne County, 2007) would ensure that the proposed project would not adversely affect day or nighttime views significantly in the area and impacts related to light or glare would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--------------------------------	--	------------------------------	-----------

3.4.2 - AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use or a Williamson Act Contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Impact #3.4.2a – Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

The project is primarily located within existing ROW the area is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as

designated by the Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP). The project area is designated as Urban and Built-up Land by the DOC FMMP (Department of Conservation, 2021). The proposed project will not convert Prime, Unique or Statewide Important Farmland; therefore, the project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.2b – Would the project conflict with existing zoning for agricultural use or a Williamson Act Contract?

The majority project area is generally within a Low Density Residential and General Commercial land use designation. As previously mentioned, no parcels in the project area are subject to a Williamson Act Land Use contract. There are no surrounding properties that are zoned for agricultural, under cultivation and/or subject to a Land Use contract. However, implementation of the project would not conflict with land zoned for agricultural uses or cause conversion to a nonagricultural use of a property under a Williamson Act land use contract. Therefore, the project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *no impact*.

Impact #3.4.2c – Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?

The California Public Resources Code Section 12220(g) defines "Forest Land" as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

There is no land in or near the project site that is identified as forest land or timberland. The project areas are within existing roads. Therefore, implementation of the project would have no impact on forest land or timberland.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.2d – Would the project result in the loss of forest land or conversion of forest land to non-forest use?

See discussion of Impact #3.4.2c, above.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.2e – Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?

See discussion of Impacts #3.4.2a, #3.4.2b, and #3.4.2c, above. The project site consists of developed areas within the community of Twain Harte, and will use existing road rights of way, paved roadways and utility easements. As such, no Farmland or forest land would be impacted or converted to a nonagricultural use during construction-related activities. The project would not result in the conversion of agriculturally productive land to nonagricultural uses. There would be no impacts.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.3 - AIR QUALITY

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

a.	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Result in other emissions (such as those leading to odor) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The following analysis is based on the Air Quality Conformity Analysis prepared for the proposed project (Trinity Consultants, 2021) found in Appendix A of this document.

Impact #3.4.3a – Would the project Conflict with or obstruct implementation of the applicable air quality plan?

The project site and all of Tuolumne County is within the Mountain Counties Air Basin. The Tuolumne County Air Pollution Control District (TCAPCD) has jurisdiction over most air quality matter in the County.

Under the provisions of the U.S. Clean Air Act, the Tuolumne County portion of the MCAB has been classified as nonattainment/extreme, nonattainment/severe, nonattainment, attainment/unclassified, attainment, or unclassified under the established NAAQS and CAAQS for various criteria pollutants.

The Environmental Protection Act (EPA) has established pollutant specific “significant impact levels” (SIL) to be used in the PSD program to determine whether proposed construction would impact the NAAQS in attainment areas. The PSD SIL thresholds are used with ambient air quality modeling for a CEQA project to address whether the project would “violate any air quality standard or contribute substantially to an existing or projected air quality violation.” A project’s impacts are considered less than significant if emissions are

below the PSD SIL for a particular pollutant. Ambient air quality emissions estimates below the PSD SIL thresholds would result in less-than-significant ambient air quality impacts on both a project and cumulative CEQA impact analysis. When a SIL is exceeded, an additional “increment analysis” is required. PSD SILs and increments are more stringent than the CAAQS or NAAQS and represent the most stringent thresholds of significance.

TCAPCD’s Air Rules and Regulations define a “major source” as a stationary source which has the potential to emit a regulated air pollutant or Hazardous Air Pollutant (HAP) in quantities equal to or exceeding the lesser of any of the following thresholds:

- 100 tons per year (tpy) of any regulated air pollutant.
- 10 tpy of one HAP or 25 tpy of two or more HAPs.
- Any lesser quantity threshold promulgated by the U.S. EPA.

As the project would not include any new major sources or major modifications to existing stationary sources under NSR, it would not be subject to either PSD or NSR review. The MCAB is classified as nonattainment for the O₃ NAAQS and as attainment or unclassifiable for the PM, CO, NO_x, SO_x, and Lead NAAQS.

TCAPCD’s Rule 408 (Attainment Pollutant Air Quality Analysis) states, “The [air quality simulation model designated in Rule 407] shall consider air quality impacts projected for the area as a result of general commercial, residential, industrial, and other growth associated with the facility if such facility or modification is proposed to employ more than 2,000 new residents” (TCAPCD 2020). The proposed project will not house any new residents; therefore, air quality simulation modeling for MCAB attainment pollutants is not required.

TCAPCD’s Rule 419 (Nonattainment Pollutant Air Quality Analysis) states, “Where a facility or modification is constructed in phases which individually do not emit more than 100 tons per year of a nonattainment pollutant or precursor, the allowable emissions from all such phases granted an Authority to Construct after December 21, 1976, shall be added together and this Rule shall be applicable when a proposed phase would cause the sum of the allowable emissions to exceed 100 tons per year of such nonattainment pollutant or precursor. The proposed project is not anticipated to increase operational emissions and will not exceed a combined total of less than 100 tons per year of O₃ precursor pollutants (ROG, NO_x, and CO); therefore, air quality simulation modeling for MCAB nonattainment pollutants is not required.

The project is in compliance with TCAPCD plans, rules, goals and policies, and will not contribute significantly to violations of the NAAQS or CAAQS.

Construction

The project would generate short-term construction emissions generated by the replacement of existing pipeline. Construction emissions of the proposed project were estimated using a 5-month construction schedule and using the following equipment: backhoe, bobcat, trencher, generator, grader, dump truck and concrete truck. All

construction equipment activity levels were assumed based on the specified CalEEMod default values for type and number of equipment, hours per day and horsepower.

As seen on Tables 3.4.3-1 and 3.4.3-2 the emissions from short-term pipeline replacement activities emissions would be minimal and would not exceed TCAPCD significance thresholds levels during any given year.

**Table 3.4.3-1
Short-Term Project Emissions- Annual**

	ROG	NOx	CO	SO2	PM10	PM2.5
			(Tons/Year)			
2023	0.09	0.80	0.74	0.00	0.04	0.04
TCAPCD Significance Threshold	100	100	100	NA	100	NA
Exceeds Threshold for a Single Year after Mitigation?	No	No	No	NA	No	NA

Source: (Trinity Consultants, 2021).

**Table 3.4.3-2
Short-Term Project Emissions- Daily**

	ROG	NOx	CO	SO2	PM10	PM2.5
			(Tons/Year)			
Summer	1.56	14.57	13.60	0.03	0.82	0.68
Winter	1.56	14.58	13.54	0.03	0.82	0.68
Max	1.56	14.58	13.60	0.03	0.82	0.68
TCAPCD Significance Threshold	1,000	1,000	1,000	NA	1,000	NA
Exceeds Threshold for a Single Year after Mitigation?	No	No	No	NA	No	NA

Source: (Trinity Consultants, 2021).

Based on these anticipated levels, project activities would not exceed construction emission thresholds. Therefore, construction emissions were found to be less than significant.

Long-term emissions are caused by operational mobile, area, and energy sources. Long-term emissions are not expected from the proposed project since there are no operational changes of the pipelines. Therefore, operational emissions were not quantified (Trinity Consultants, 2021).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.3b – Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As discussed in Impact #3.4.3a above, the project would be required to comply with all applicable Air District and ARB standards, rules, and regulations for construction activities. As shown in Tables 3.4.3-1 and 3.4.3-2, project-related construction emissions do not exceed the Air District’s thresholds of significance for any criteria pollutant.

Pipeline replacement activities would result in a limited number of vehicle trips associated with maintenance of the pipeline. As discussed in Impact #3.4.3a above, the project activities related emissions would not exceed the Air District’s thresholds of significance and would not contribute substantially to an existing or projected air quality violations. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.3c – Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are those individuals who are sensitive to air pollution and include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. Examples of sensitive receptors include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units. The nearest residential sensitive receptor to the proposed project site is 0.01 miles east of the project. The three known non-residential sensitive receptors within two miles of the proposed project site are listed below in Table 3.4.3-3.

**Table 3.4.3-3
Sensitive Receptors Located < 2 Miles from Project**

Receptor	Type of Facility	Distance from Project in Miles	Direction from Project
Twain Harte School	PK-8 Public	0.1	East
Crystal Falls Family Care Home	Nursing Home	0.83	West
Bellview Elementary School	K-6 Public	1.43	West

Source: (Trinity Consultants, 2021).

The closest school is Twain Harte School at 0.1 miles to the east. The closest hospital is Sierra Valley Medical Center at 7.8 miles southwest. The closest nursing home is Crystal Falls Family Care Home, approximately 0.8 miles to the west.

The proposed project would result in emissions of Hazardous Air Pollutants (HAPs) and would be located near sensitive receptors and workers. The only HAP expected to be emitted is Diesel Particulate Matter (DPM) from construction equipment and diesel trucks. There is currently no acute risk associated with DPM emissions. Chronic non-cancer and cancer risk are expected from long-term exposure, typically over one year of exposure. The project construction is expected to only last for five months; therefore, there would be no chronic non-cancer or cancer risk associated with exposure to the project's DPM construction emissions.

Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading of development projects, and at mining operations (Trinity Consultants, 2021).

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. However, according to information provided by the Department of Conservation Division of Mines and Geology, the project site is not located in an area where naturally occurring asbestos is likely to be present (CDCDMG, 2000). Therefore, impacts associated with exposure of construction workers and nearby sensitive receptors to asbestos would be less than significant (Trinity Consultants, 2021).

Based on the predicted non-existent operational emissions, the proposed project is not expected to affect any onsite or offsite sensitive receptors and is not expected to have any adverse impacts on any known sensitive receptor. Therefore, the proposed project will have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.3d – Would the project result in emissions (such as those leading to odors) adversely affecting a substantial number of people?

Some common types of facilities that have been known to produce odors in the SJVAB such as wastewater treatment facilities, sanitary landfills, transfer stations, composting facilities,

petroleum refinery, asphalt batch plants, chemical manufacturing plants, fiberglass manufacturing, paint/coating operations, food processing facilities, feed lot/dairy, and rendering plants. Any project with the potential to expose members of the public to objectionable odors has the potential to adversely impact the atmosphere (environment). Because of the subjective nature of odor impacts, the number of variables that may influence the potential for an odor impact, and the variety of odor sources; there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Projects should be evaluated on a case-by-case basis to determine if there are anticipated impacts to the environment associated with objectionable odors.

It is anticipated that the project construction-related activities would result in diesel emissions exhaust from equipment used for trenching along the existing pipeline system. These activities may release odors into the atmosphere. However, emissions would be short-term, temporary, and are not anticipated to affect a substantial number of receptors at any given time. The project is not expected to have an increase in operational emissions; therefore, it is not expected to be a source of objectionable odors. Therefore, the proposed project will have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.4 - BIOLOGICAL RESOURCES

Would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 Wildlife or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <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"/> |

Discussion

As described in the Clean Water State Revolving Fund (CWSRF) Cross-Cutting Environmental Review Process Guidelines for State Revolving Fund Loan Applications, CEQA-Plus requires compliance with the Federal Endangered Species Act. Applicants would need to provide State Water Resources Control Board (SWRCB) with any species lists,

biological assessments, and other documents that disclose information on a project's effect on sensitive species at the earliest date. SWRCB would confer informally with United States Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS), as appropriate. If there are federally-listed species that may be affected by a project, either directly or indirectly, SWRCB would evaluate the extent of any impacts as part of its environmental review process and submit its findings to the USFWS/NMFS. The analysis of impacts to Biological Resources is based upon a Biological Analysis Report prepared for the proposed project (QK, 2021), which is included as Appendix B.

Impact #3.4.4a – Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The biological resources evaluation is based upon a review of available literature and databases and existing site conditions evaluated during a reconnaissance survey. These studies evaluated the potential for sensitive biological resources to occur on and in the vicinity of the project, and any impacts that could potentially occur.

A reconnaissance level survey conducted on September 15, 2021; one special-status wildlife species was determined to have potential to occur within the Biological Study Area (BSA): Northern goshawk (*Accipiter gentilis*). Nesting migratory birds also have the potential to occur within the BSA. These two biological resources have the potential to be impacted by the project. Direct impacts could include direct injury or mortality of individual special-status species and/or their young during the breeding and/or nesting season.

All project activities will occur on previously developed land (i.e., paved surfaces, residential lots and existing utility easements), so habitat loss for special-status species would be minimal. Indirect impacts are not expected to occur because the proposed project would have a short duration of construction, the timing of the project may occur during the nesting season, and project activities will not alter the general composition of the BSA. The proposed project is not expected to impact any other sensitive resources and would not conflict with local policies or ordinances, or conservation plans.

Special-Status Species

One special-status wildlife species determined to have potential to occur onsite.

NORTHERN GOSHAWK

The northern goshawk is a large raptor that prefers mature old-growth forests with relatively high canopy closures (QK, 2021). It typically nests in large trees on moderate slopes with open understories. Nests are built in coniferous, deciduous, or mixed-pine forests, usually in the largest tree available. Preferred prey items include rabbits, large rodents, and other birds, which goshawks will aggressively capture from an observation perch.

The nearest CNDDDB occurrence for northern goshawk is approximately 2.8 miles northeast of the BSA, where a nest was observed in a stand of tall conifers between the Stanislaus River and Deer Creek in 1996 (EONDX 29760). This species was not observed during the September 15, 2021, reconnaissance survey, which was conducted on the last day of the accepted “nesting bird season”, (February 1 and ends on September 15). There is suitable habitat for northern goshawk in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA and in the lands surrounding the BSA.

NESTING BIRDS

Habitat within the BSA would support nesting native bird species, which are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. The site survey for the project was conducted on the last day of the nesting bird season (February 1 to September 15). No bird nests, active or inactive, were observed during the survey.

Various species of migratory birds will construct nests in a variety of habitats and structures, and nests may be constructed in trees or shrubs, man-made structures, and directly on the ground at any time during the nesting season. Since the BSA supports several types of habitats and characteristics suitable for nesting birds, it is likely that birds will nest within the BSA.

Construction

The project activities will occur on previously disturbed, developed land, and habitat loss would be minimal. Indirect impacts are not expected to occur because the project will have a short duration of construction.

CONCLUSION

The limited disturbance footprint for the proposed project and the short duration of construction activities at any given location, coupled with implementation of the proposed mitigation measures would reduce impacts to less-than-significant levels and would not result in a substantial adverse effect on special-status wildlife species and migratory birds. Mitigation Measure BIO-1 requires a pre-activity clearance survey prior to project activities. This measure will ensure that the proposed project site and vicinity is clear to avoid and minimize impacts to northern goshawk and nesting birds, as well as other special status species. Mitigation Measures BIO-2 requires construction personnel to receive training and information on the life histories of special-status species with potential to occur on the proposed project area, their legal status, course of action should these species be encountered onsite, and avoidance and minimization measures to protect these species. Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce project-related construction impacts to less-than-significant levels.

MITIGATION MEASURE(S)

MM BIO-1: If project construction activities will be initiated during the nesting season (February 1 to September 15), a pre-activity nesting bird survey shall be conducted within 14 days prior to the start of project activities. The surveys shall encompass the proposed project footprint and accessible areas or land visible from accessible areas within a 250-foot buffer for songbirds and a 500-foot buffer for raptors. If no active nests are found, no further action is required. However, existing nests may become active and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress.

If active nests are found during the survey or at any time during construction of the proposed project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the adults or the nest, or if breeding attempts have otherwise been unsuccessful. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.

MM BIO-2: Prior to the initiation of construction activities, all construction personnel shall attend a Worker Environmental Awareness Training program developed by a qualified biologist. Any personnel associated with construction that did not attend the initial training shall be trained by the authorized biologist prior to working on the project area. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Worker Environmental Awareness Training program prior to starting work on the project and on an annual basis. The Program shall be developed and presented by the project qualified biologist(s) or designee approved by the qualified biologist(s). The program shall include information on the life histories of special-status species with potential to occur on the proposed project, their legal status, course of action shall these species be encountered onsite, and avoidance and minimization measures to protect these species. It shall include the components described below:

- a. Information on the life history and identification of special-status species that may occur or that may be affected by project activities. The program shall also discuss the legal protection status of each such species, the definition of “take” under the Federal Endangered Species Act and California Endangered Species Act, measures the project proponent/operator shall implement to protect the species, reporting requirements, specific measures for workers to avoid take of special-status plant and wildlife species, and penalties for violation of the requirements outlined in the California Environmental Quality Act mitigation measures and agency permit requirements.
- b. An acknowledgement form signed by each worker indicating that the Worker Environmental Awareness Training and Education Program has been completed shall be kept on file at the construction site.

- c. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Worker Environmental Awareness Training and Education Program, and signed acknowledgement forms shall be submitted to the Tuolumne County Planning Department.
- d. A copy of the training transcript, training video or informational binder for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.
- e. A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Worker Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.4b – Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

There are seven special-status plant species that may occur within and near the project area and be potentially impacted by project activities, as detailed below. No plant species that may occur on the project area are federally or State listed for protection, but rare plants should be conserved to the extent possible.

SMALL'S SOUTHERN CLARKIA

The Small's southern clarkia is endemic to California and typically occurs in open, rocky sites within cismontane woodland and lower montane coniferous forest habitats. It blooms from May to August and occurs at elevations between 2,625 and 6,810 feet. The Small's southern clarkia is primarily threatened by logging activities.

There is one CNDDDB record of this species from 1965 that overlaps the 250-foot survey buffer for the project. This species was not observed during the September 15, 2021, reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat for Small's southern clarkia in the Montane Hardwood-Conifer habitat that is present throughout much of project area (QK, 2021).

MARIPOSA CLARKIA

The Mariposa clarkia is an annual herb, endemic to California. It occurs in serpentinite soils, in chaparral, ultramafic, and foothill and cismontane woodlands and sometimes in riparian areas as well as large talus rockslides (QK, 2021). The Mariposa clarkia has a blooming

period from April to July and occurs at elevations between 980 and 4,790 feet. It is threatened by road maintenance, foot traffic and competition with non-native plants.

The nearest CNDDDB record for *Mariposa clarkia* is approximately 1.1 miles southwest of the BSA, from 1958 (QK, 2021). Another CNDDDB occurrence is approximately 2.1 miles southeast of the proposed project, where a large population was observed over multiple years between 2001 and 2008 (QK, 2021). This species was not observed during the September 15, 2021, site visit, which was conducted outside of the blooming period for this species. There is suitable habitat for *Mariposa clarkia* in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA (QK, 2021).

YELLOW-LIP PANSY MONKEYFLOWER

The yellow-lip pansy monkeyflower is an annual herb, endemic to California. It occurs in vernal wet and often disturbed areas, either on clay, volcanic or granitic soils in lower montane coniferous forest and meadows and seeps (QK, 2021). The yellow-lip pansy monkeyflower blooms from April to July and occurs in elevations from approximately 1,960 to 6,565 feet. It is generally threatened by vehicles, logging, competition from non-native plants, and grazing, and potentially threatened by development.

The nearest CNDDDB occurrence for the species approximately 0.5 miles southeast is from 1971 and is presumed extant, of the (QK, 2021). This species was not observed during the reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat within the BSA for yellow-lip pansy monkeyflower in the Valley Foothill Riparian habitat along the unnamed creek that runs through Twain Harte, and potentially in the Montane Hardwood-Conifer habitat (QK, 2021). However, construction of the project is not anticipated to impact that area directly.

TUOLUMNE FAWN LILY

Tuolumne fawn lily is perennial bulbiferous species endemic to California that blooms between March and June. It occurs in cismontane woodland, lower montane coniferous forest, and chaparral habitats, often on clay soils and on cliffs and near drainages in broadleaf upland forests, at elevations between 1,675 and 4,480 feet. The species is threatened by competition with non-native plants, grazing, and mining activities.

The nearest CNDDDB occurrence for Tuolumne fawn lily is from 2003 and approximately 1.7 miles northwest of the BSA, on a steep north-facing slope above the South Fork Stanislaus River (QK, 2021). This species was not observed during the September 15, 2021, reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat for Tuolumne fawn lily in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA (QK, 2021).

TUOLUMNE IRIS

Tuolumne iris is a perennial herb that is endemic to California and blooms between May and June (QK, 2021). It occurs in cismontane woodland, lower montane coniferous forest, and yellow pine forest habitats at elevations between 1,395 and 4,595 feet.

The nearest CNDDDB occurrence for Tuolumne iris is from 2006, approximately 2.8 miles northwest of the BSA, in mixed oak-conifer forest (QK, 2021). This species was not observed during the September 15, 2021, reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat for Tuolumne iris in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA (QK, 2021).

MI-WUK NAVARRETIA

Mi-Wuk navarretia is an annual herb endemic to California and blooms between May and July or August. It occurs in openings on gentle slopes in lower montane coniferous forest habitat on pyroclastic (volcanic) soils, at elevation between 2,625 and 4,920 feet (QK, 2021). Threats to the species include urbanization, off-road vehicle and recreational activities, and competition with non-native plants.

The nearest CNDDDB occurrence for Mi-Wuk navarretia overlaps the south side of the BSA documenting a population observed over a road cut in 2014. This species was not observed during the reconnaissance survey, which was conducted outside of the blooming period of this species. There is suitable habitat for the species in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA (QK, 2021).

BROWNISH BEAKED-RUSH

Brownish beaked rush is a perennial herb that blooms between July and August (QK, 2021). It occurs in mesic montane coniferous forest, in meadows and seeps, and in marshes and swamps at elevations between 150 and 6,560 feet.

The nearest CNDDDB occurrence for the species is from 2014 and over 10 miles southeast of the BSA. This species was not observed during the reconnaissance survey, which was conducted outside of the blooming period for these species. There is suitable habitat within the BSA for this species in the Valley Foothill Riparian habitat along the unnamed creek that runs through Twain Harte, and potentially in the Montane Hardwood-Conifer habitat (QK, 2021). However, construction of the project is not anticipated to impact that area directly.

If any of these species were present within the BSA, direct impacts could include the mortality of or injury to individual plants. During the growth and blooming period, the spread of dust during construction, soil contamination, or alteration of existing hydrology could cause an indirect impact to the species, as could the spread of non-native or invasive species caused by project activities. Because the proposed project may impact the vegetated areas along roadway shoulders and the southern bank of Twain Harte Lake, Measures BIO-3 through BIO-5 shall be implemented, as outlined below. Implementation of these measures would reduce impacts to these plant species to a less-than-significant level.

Additionally, no sensitive natural communities are present that would be impacted by the proposed project.

MITIGATION MEASURE(S)

MM BIO-3: If the proposed project is expected to occur during the blooming period, as listed in Table 3.4.4-1, positive plant identification may occur. If these species are observed, they shall be avoided to maximum extent possible. If project activities cannot avoid those areas, a qualified botanist or biologist may have opportunity to salvage and relocate the plants that will be impacted.

Table 3.4.4-1
Blooming Period of Special-status Plants with Potential to Occur

Special-Status Plant Species	Optimal Blooming Period
<i>Clarkia australis</i> Small's southern clarkia	May - August
<i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia	April - July
<i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower	April - July
<i>Erythronium tuolumnense</i> Tuolumne fawn lily	March - June
<i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris	May - June
<i>Navarretia miwukensis</i> Mi-Wuk navarretia	May - August
<i>Rhynchospora capitellata</i> brownish beaked-rush	July - August

MM BIO-4: The introduction and spread of invasive and non-native plant species shall be avoided and controlled wherever possible during construction, on both the project and surrounding areas. This may be achieved through measures such as cleaning vehicles and equipment before they enter construction areas, removing invasive species that exist on the site and disposing of the removed debris in a manner that prohibits their spread on- and off-site.

MM BIO-5: To reduce any indirect impacts to special-status plants that may be in the vicinity of the proposed project, best management practices (BMPs) shall be implemented to control dust pollution, prevent discharge of potentially harmful chemicals, and prevent changes in hydrology. BMPs may include the installation of erosion and sedimentation control devices, applying water to control dust, placing drip pans under equipment when not in use, refueling in designated areas, and containing concrete washout properly, among other practices.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.4c – Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

During the reconnaissance survey, an unnamed creek was observed, running northeast to southwest through the town of Twain Harte and feeding Twain Harte Lake. This creek is mapped by the NHD and is traced as a tributary to the Tuolumne River, so it is likely to be federally jurisdictional as a Traditionally Navigable Water under the U.S. Army Corps of Engineers (QK, 2021).

Project activities will occur only on previously disturbed areas, beneath previously disturbed roadways paved with asphalt. The unnamed creek and Twain Harte Lake will be avoided, and not impacted by project activities. Therefore, the proposed project would not have no impact on any jurisdictional aquatic resources and no mitigation measures are warranted.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *no impact*.

Impact #3.4.4d – Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife migratory corridors are described as a narrow stretch of land that connects two open pieces of habitat that would otherwise be unconnected. These routes provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of riparian, woodlands, or forested habitats that span contiguous acres of undisturbed habitat and are important elements of resident species' home ranges.

No movement corridors are present that would be impacted by the proposed project. The project would not interfere with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Therefore, there would be no impacts as a result of the proposed project.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.4e – Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project does not conflict with the Tuolumne County General Plan (Tuolumne County, 2018a), and is not subject to any local ordinances. No trees will be removed as a result of the proposed project. Therefore, there are no impacts with respect to local policies and ordinances and no measures are warranted. Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.4f – Would the project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?

The proposed project will not conflict with any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan, so there will be no impacts and no measures are warranted (QK, 2021). Therefore, implementation of the proposed project would have no impacts related to habitat conservation or natural community plans.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.5 - CULTURAL RESOURCES

Would the project:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

The following analysis is based on the Phase I Cultural Resource Assessment prepared for the proposed project (Paleo Solutions, Inc., 2021), which is included as Appendix C of this document.

Impact #3.4.5a – Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

As defined by CEQA Guidelines Section 15064.5, "historical resources" are:

- A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resource Code Section 5024.1, Title 14 California Code of Regulations, Section 4850 et seq.).
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or identified as significant in a historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of the evidence demonstrates that it is not historically or culturally significant.

Any object, building, structure, site, area, place, record, or manuscript that a Lead Agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the Lead Agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the Lead Agency to be "historically significant" if the

resource meets the criteria for listing on the California Register of Historical Resources (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852) including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history.

A Phase I survey was conducted for the proposed project. The project Area of Potential Effects (APE) will occur in areas where existing sewer lines occur, construction activities will occur on previously disturbed areas. Trenching to replace or repair sewer lines will be roughly 2 to 3 feet wide and excavated up to 6-feet deep for the new sewer pipe placement. The abandoned pipes located below ground will be left in place.

The Native American Heritage Commission (NAHC) was contacted to conduct a sacred lands files (SLF) search. The NAHC provided the results of its SLF search dated November 1, 2021, indicating “negative results” (that is, no sacred lands are known to be located in the Twain Harte area) and they provided a list of potentially interested tribal groups. A letter requesting consultation was sent to the tribes on November 3, 2021, in order to solicit their interest regarding tribal consultation: Chicken Ranch Rancheria of Me-Wuk Indians; Nashville Enterprise Miwok-Maidu-Nishinam Tribe; North Fork Rancheria of Mono Indians; Picayune Rancheria of Chukchansi Indians; Tule River Indian Tribe; Tuolumne Band of Me-Wuk Indians; Washoe Tribe of Nevada and California; and Wuksache Indian Tribe. A follow-up phone call was also made to the groups on the NAHC list. An email from the representative of the Chicken Ranch Rancheria of Me-Wuk Indians was received requesting the use of Native American monitors onsite during construction. To date, no other tribal group A copy of these correspondences is included in Appendix C of this document.

A cultural resources records search was requested on September 14, 2021, from the California Historical Resources Information System (CHRIS) facility at the Central California Information Center (CCIC) at California State University Stanislaus. Field surveys were conducted on September 29, 2021. The records on file at the CCIC indicate six cultural resources are present in the APE. These resources include four historic resources and two prehistoric resources.

The prehistoric resources include:

- P-55-000130 (Bald Rock)
- P-55-001422 (Prehistoric Encampment)

The historic resources include:

- P-55-007116 (Twain Harte Dam)
- P-55-007117 (Twain Harte Lake)

- P-55-000054 (Sonora-Mono Road)
- P-55-006544 (Wildwood Ditch)

The proposed project would not have adverse effects on Bald Rock (P-55-000130). Additionally, there are no indications of prehistoric settlement or use within the APE surrounding Twain Harte Lake. The Marquis Drive sewer line easement is within the recorded boundary of P-55-001422 east of Marquis Drive. No documented features at the site are within the APE, but soils on sections along Marquis Drive may contain artifacts and buried features that may suffer adverse effects from equipment transport and excavation (Paleo Solutions, Inc., 2021).

The proposed project would have no adverse effects on P-55-007116, P-55-007117, or P-55-000054. The Wildwood Ditch (P-55-006544) is very close to intersecting the sewer line easement and may suffer adverse impacts from equipment transport and excavation (Paleo Solutions, Inc., 2021). However, Mitigation Measure CUL-3 requires the establishment of an Environmentally Sensitive Area (ESA) prior to construction and monitoring by a qualified cultural resource specialist and Native American monitor during construction activities in that area. With implementation of this measure, impacts would be less than significant.

Avoidance is the preferred measure for mitigating adverse effects to cultural resources. However, there is the potential during construction to unearth, damage, or destroy previously unknown subsurface resources. These previously unidentified are potentially significant cultural resources within the project area, including historical resources. MM CUL-1 through CUL-5 would be implemented prior to the initiation of ground disturbance activities. Implementation of Mitigation Measure CUL-1 through CUL-5 includes engaging a qualified cultural resource specialist and Native American monitor, who will conduct a cultural resources training with the crew and be onsite during construction activities. Other actions include establishing an ESA prior to construction (CUL-3) and to complete a Phase II test excavation to determine whether significant artifacts or features occur in the proposed locations along Sections 3A and 3B of Marquis Drive. Mitigation Measure MM CUL-5 requires if prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find would stop until a qualified archaeologist can evaluate the find and make recommendations. With implementation of MM CUL-1 through MM CUL-5, impacts to known or unknown cultural resources would be less than significant.

MITIGATION MEASURE(S)

MM CUL-1: Prior to any ground disturbance, the project developer/contractor shall retain a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior, 2011), to carry out all mitigation measures related to archaeological and historical resources.

- a. Prior to the start of any ground-disturbing or construction activities, Cultural Resources Sensitivity Training shall be conducted. This includes an overview of potential cultural resources that could be encountered during ground disturbing

activities to facilitate worker recognition, avoidance, and subsequent immediate notification of the qualified archaeologist and/or Native American monitor for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources.

- b. The project operator shall ensure all new employees who have not participated in earlier Cultural Resources Sensitivity Trainings shall:
 - Participate in Cultural Resources Sensitivity Training as described above.
 - Shall be provided a Cultural Resources Sensitivity Training guide for all personnel that is approved by the Lead archaeologist and.
 - The Cultural Resources Sensitivity Training guide shall be kept available for all personnel to review and be familiar with as necessary.

MM CUL-2: Prior to any ground disturbance, the developer/contractor shall enter into an agreement with the Chicken Ranch Rancheria of Me-Wuk Indians of California. If requested, the developer shall:

- a. Retain a qualified native American monitor to be onsite during initial ground disturbance activities.
- b. Retain a qualified tribal member to conduct a Cultural Resources Sensitivity training session with the construction crew prior to ground disturbance activities.

Evidence of the agreement with the Chicken Ranch Rancheria of Me-Wuk Indians of California tribe shall be submitted to the lead agency as evidence of compliance.

MM CUL-3: The Wildwood Ditch (**P-55-006544**) shall be substantially flagged as an Environmentally Sensitive Area (ESA) prior to construction as determined by the Lead Archaeologist in consultation with the Native American monitor and carefully monitored to ensure avoidance.

MM CUL-4: Prior to any excavation in Marquis Drive (Sections 3A and 3B), a Phase II test excavation program shall be implemented to determine whether significant artifacts or features occur in the proposed locations for sewer line improvements. Significant features would include, but not limited to, house and round house floors and other structural remains, human burials, cooking hearths, other stone features, storage pits, food processing areas and tool manufacturing loci.

MM CUL-5: If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations

may be required to mitigate adverse impacts from project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.5b – Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

See response to Impact #3.4.5a, above.

MITIGATION MEASURE(S)

Implementation of Mitigation Measure MM CUL-1 through MM CUL-5.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.5c – Would the project disturb any human remains, including those interred outside of formal cemeteries?

There are no known cemeteries or burials on or near the project. Although unlikely, subsurface construction activities, such as trenching and grading, associated with the proposed project could potentially disturb previously undiscovered human burial sites. Accordingly, this is a potentially significant impact. Although considered unlikely subsurface project activities could cause a potentially significant impact to previously undiscovered human burial sites. The cultural resources and Sacred Lands File records searches did not indicate the presence of human remains, burials, or cemeteries within or in the vicinity of the project site. No human remains have been discovered at the project site, and no burials or cemeteries are known to occur within the area of the site. However, project activities would involve earth-disturbing activities, and it is still possible that human remains may be discovered, possibly in association with archaeological sites. Implementation of the mitigation measure below would ensure that the proposed project would not directly or indirectly destroy previously unknown human remains. It is unlikely that the proposed project would disturb any known human remains, including those interred outside of formal cemeteries. However, with implementation of MM CUL-6, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

MM CUL-6: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the NAHC, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982,

Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.6 - ENERGY

Would the project:

a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The following analysis is based on the Air Quality Conformity Analysis prepared for the project (Trinity Consultants, 2021), which is included as Appendix A of this document.

Impact #3.4.6a – Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Energy demand during the project activities would result from the transportation of materials, construction equipment, and construction worker vehicle trips. Construction equipment includes backhoe, bobcat, trencher, generator, grader, dump truck and concrete truck. The fuel usage to complete the project construction was calculated to be 24,592 gallons. Once operational, there is no energy demand beyond what is currently being used for ongoing maintenance activities by the District.

There are no unusual project characteristics that would cause construction equipment to be less energy efficient compared with other similar construction activities in other areas within the area. Construction-related fuel consumption is not expected to result in inefficient, wasteful, or unnecessary energy use. The proposed project will comply with the goals of the Tuolumne County General Plan related to the conservation of energy resources, and the policies and provisions of the Tuolumne County Code of Ordinances. Therefore, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.6b – Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

As stated in Impact #3.4.6a above, the project will comply with the goals of the Tuolumne County General Plan related to the conservation of energy resources policies and provisions of the Tuolumne County Code of Ordinances. Therefore, the proposed project would have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.7 - GEOLOGY AND SOILS

Would the project:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

Impact #3.4.7a(i) – Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving – rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

According to the County of Tuolumne General Plan, there are no known major fault systems within the unincorporated area of Twain Harte (Tuolumne County, 2018a)The closest fault line is the Mono Lake Fault located approximately 55 miles east of the proposed project area (California Department of Conservation, 2021).

The proposed project area is not within an Alquist-Priolo earthquake fault zone. There are no active fault traces in the project vicinity. Accordingly, the proposed project area is not within an earthquake fault zone (Special Studies Zone) and will not require a special site investigation by an engineering Geologist. Since there are no permanent structures being built as part of this project, and pipeline replacement activities will occur along existing roads there would be no impact related to endangering people and structures associated with this project Therefore, the project would have a less-than-significant impact (California Department of Conservation, 2021).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant*.

Impact #3.4.7a(ii) – Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving – strong seismic ground shaking?

See response to Impact #3.4.6a(i).

Historically, earthquake activity in Tuolumne County is significantly below the California state average. Tuolumne County has one of the lowest earthquake risks in the State. A total of 5 historical earthquake events with recorded magnitudes of 3.5 or greater occurred in or near (50 miles) Tuolumne County this past century (Tuolumne County, 2018d).

The proposed project does not propose to construct permanent, habitable structures. Project activities will take place along existing roadways. The proposed project area is located in an area that is sufficiently far from known faults and consists primarily of a stable geological formation. Project-specific hazards due to ground shaking would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.7a(iii) – Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving – seismic-related ground failure, including liquefaction?

See discussion of Impacts #3.4.7a(i) and a(ii), above.

Liquefaction is the process by which saturated, unconsolidated soil and sand is converted into quicksand like suspension during an earthquake. Since liquefaction most likely would occur during or following an earthquake and severe earthquake risk is deemed to be low in the Tuolumne County, the risk and danger of liquefaction and subsidence occurring within the County of Tuolumne is also considered to be minimal (Tuolumne County, 2018b)

The proposed project would be replacing existing pipeline along existing roadways and utility easements located in private property. No new buildings or habitable structures are proposed. The project would comply with all local and State regulations regarding the design and installation of the pipeline. Therefore, impacts from liquefaction are considered less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.7a(iv) – Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving – landslides?

See discussion of Impacts #3.4.7a(i) and a(iii), above.

The California Department of Conservation’s CGS Information Warehouse indicates that the planning area is not located in an area prone to landslides (California Department of Conservation, 2021).

Although some portions of the project area’s topography can be considered steep to very steep; the underlying rock formation is very stable, and the soil found on these slopes is shallow and held in place by deep rooted vegetation. These slopes do not typically fail unless disturbed by grading or development (Tuolumne County, 2018d). The proposed project

activities will be conducted on flat areas, not on slopes or hillsides. No new grading or additional ground disturbance beyond the existing project footprint is anticipated since pipeline replacement activities will be along the current pipeline route and existing roads within the project area. Therefore, the proposed project would have a less-than-significant impact on exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.7b – Would the project result in substantial soil erosion or the loss of topsoil?

The proposed project will install replacement sewer pipelines that would be constructed within existing road rights of way that typically collect stormwater runoff from the roadways or within existing utility easements along private undeveloped property.

The preparation and implementation of a Type 1 Linear Underground/Overhead Projects (LUPs) SWPPP is required for construction activities where greater than 30 percent of construction activities occur within the nonpaved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them (California Water Board, 2018). A LUP SWPPP must identify potential sources of erosion or sedimentation as well as identify and implement best management practices (BMPs) that ensure reduce erosion. If a SWPPP was not required, the project would implement the standard BMPs. Typical BMPs intended to control erosion include sandbags, silt fencing, street sweeping, etc. Mitigation Measure GEO-1 requires the approval of a LUP SWPPP to comply with the NPDES General Construction Permit, if appropriate. Compliance with local grading and erosion control ordinances would also help minimize adverse effects associated with erosion and sedimentation. Any stockpiled soils would be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction. Once constructed, the project would not result in a loss of topsoil or soil erosion.

The proposed project will not expand or increase the amount of impermeable and permeable surfaces. Overall, development of the project would not result in conditions where substantial surface soils would be exposed to wind and water erosion. Therefore, impact would be less than significant.

MITIGATION MEASURE(S)

MM GEO-1: Prior to issuing of grading or building permits, if required, (a) the project developer shall prepare and implement a Type 1 Linear Underground/Overhead Projects SWPPP (LUP SWPPP), if applicable. The LUP SWPPP shall comply with the General National

Pollutant Discharge Elimination System (NPDES) from the Central Valley Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.7c – Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

As previously discussed, although portions of the project area’s topography can be considered steep to very steep; the underlying rock formation is very stable, and the soil found on these sloped is shallow and held in place by deep rooted vegetation. Therefore, the proposed project area is considered stable with minimal to no potential of on or offsite landslide, lateral spreading, subsidence, or collapse. Additionally, no structures are being proposed as part of the proposed project. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.7d – Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive clay soils are subject to shrinking and swelling due to changes in moisture content over the seasons. These changes can cause damage or failure of foundations, utilities, and pavements. During periods of high moisture content, expansive soils under foundations can heave and result in structures lifting. The project does not propose to construct habitable structures or buildings. No structures are being proposed as part of the proposed project, and therefore impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.7e – Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

The proposed project will not include septic tank installation or alternative wastewater disposal systems. Additionally, there are not proposed buildings or habitable structures so there would no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

The would be *no impact*.

Impact #3.4.7f – Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The activity within the project area would be within the existing rights of way and a currently developed parcel. Based on geologic mapping, the majority of Tuolumne County is not considered sensitive for paleontological resources. A pocket of Plio-Pleistocene and Pliocene loose consolidated deposits also occurs along SR 108 to southwest of Jamestown and northwest of Chinese Camp. This area may contain evidence of Pleistocene era large mammals (Tuolumne County, 2018b). However, the project is not in the vicinity of this potential area. Additionally, the depth of the trench for the pipeline would not exceed six feet, which makes the discovery of paleontological resources highly unlikely.

As noted previously, the pipeline would be installed within existing road rights of way and utility easements. However, there is a possibility that unknown subsurface paleontological resources could be uncovered during project-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. Therefore, with implementation of MM GEO-1, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

MM GEO-2: The project shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbance activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources require further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Lead Agency and the project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find.

If the find is determined to be significant and the Lead Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with

the applicable standards. The plan shall be submitted to the Lead Agency for review and approval. Upon approval, the plan shall be incorporated into the project.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

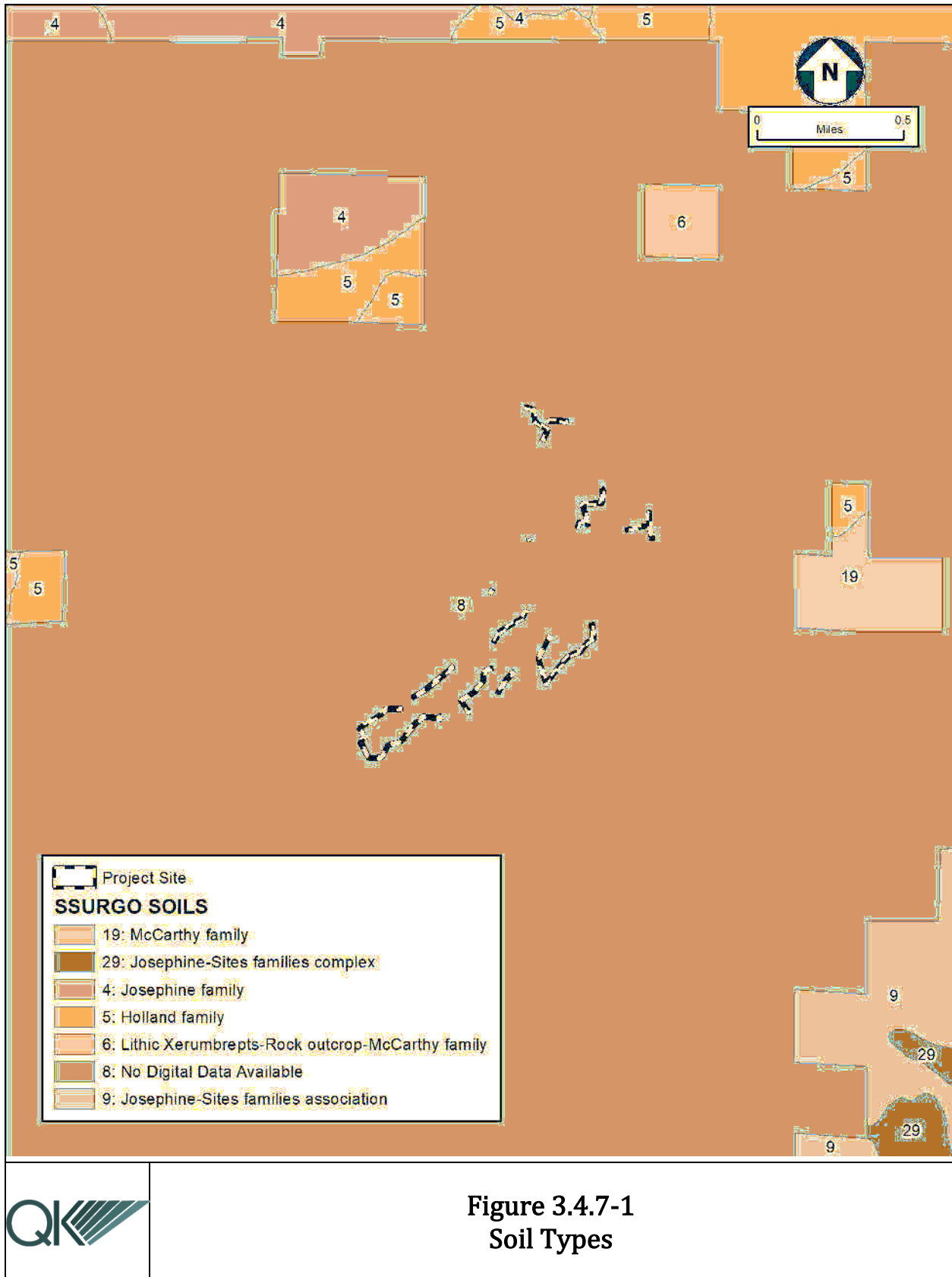


Figure 3.4.7-1
Soil Types

Potentially Significant Impact Less than Significant with Mitigation Incorporated Less-than-Significant Impact No Impact

3.4.8 - GREENHOUSE GAS EMISSIONS

Would the project:

- a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b. Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Discussion

The following analysis is based on the Air Quality Conformity Analysis prepared for the proposed project (Trinity Consultants, 2021) found in Appendix A of this document.

Impact #3.4.8a – Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Assembly Bill 32 (AB32), the California Global Warming Solutions Act of 2006 (the Act) was enacted by the State of California. The legislature stated, “Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.” The Act defines GHG emissions as all of the following gases: carbon dioxide (CO2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Project construction activities will result in minimal and temporary Greenhouse Gases (GHG) emissions, as shown in Table 3.4.8-1. The proposed project as a whole is not expected to generate GHGs either directly or indirectly that may have a significant impact on the environment. The project GHG emissions will primarily be from the use of machinery used to replace the existing pipelines.

**Table 3.4.8-1
Estimated Construction GHG Emissions (MT/Year)**

Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
2023 Construction Emissions	121.07	0.03	0.00	121.84

Source: (Trinity Consultants, 2021) *Note: 0.000 could represent <0.000

In order for the project to conform with the goals of AB32, the GHG emissions should not exceed 3.1 MTCO₂e per service population target for 2040. Construction-related GHG

emissions would be temporary and intermittent in nature and therefore would not have a significant impact on statewide GHG goals. The project is not expected to have an increase in operational GHG emissions; therefore, the project would have less-than-significant GHG impacts. Tuolumne County, the Lead Agency for this project, has not developed specific thresholds for GHGs. However, according to the General Plan Update EIR, the Statewide service population GHG emissions threshold for 2040 is 3.1 MTCO₂e per service population. The project would not result in a substantial increase in GHGs or conflict with local or State plans adopted for the purpose of reducing GHG emissions. Therefore, the proposed project is considered less than significant for GHG emission impacts.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.8b – Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

See Impact #3.4.8a, above. Construction-related activities are temporary and emissions will be minimal. The proposed project would comply with all applicable County, State and federal guidelines rules and regulations to reduce GHG emissions.

The project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases and impacts will be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

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

Discussion

Impact #3.4.9a, #3.4.9b – Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction would involve the temporary transport and use of minor quantities of hazardous materials such as fuels, oils, lubricants, hydraulic fluids, paints and solvents. The types and quantities of hazardous materials to be used and stored onsite would not be of a significant amount to create a reasonably foreseeable upset or accident condition. The handling and transport of all hazardous materials onsite would be performed in accordance with all applicable federal, State, and local laws and regulations.

Hazardous and nonhazardous wastes would likely be transported to and from the project sites during construction activities. Pipeline replacement activities could involve the use of some hazardous materials, such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products, although these materials are commonly used during construction activities and would not be disposed of on the project sites. Workers would be trained to properly identify and handle all hazardous materials, if applicable during construction activities. If hazardous materials are used during construction, crews would be required to have HAZWOPER training per OSHA regulations (OSHA, 2022). Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. Any hazardous waste or debris that is generated during the proposed project would be collected and transported away from the site and disposed of at an approved offsite landfill or other such facility.

In addition, sanitary waste generated during construction would be managed through the use of portable toilets, which would be located at reasonably accessible onsite locations. Hazardous materials such as paint, bleach, water treatment chemicals, gasoline, oil, etc., may be used during construction. These materials are stored in appropriate storage locations and containers in the manner specified by the manufacturer and disposed of in accordance with local, federal, and State regulations. No significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste during pipeline replacement activities would occur.

Once improvements have been completed there would no storage of hazardous materials on the project site. The project would not result in a significant hazard to the public or the environment; therefore, project-specific impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.9c – Would the project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The Twain Harte School is in the vicinity of a small portion of the project. Emissions generated by construction equipment would be temporary in nature and is not expected that hazardous emissions would impact the school. The small amount hazardous materials are those typically found on many types of projects and are not expected to negatively impact the school. These include fuel, oils, lubricants, hydraulic fluids, paints, bleach and solvents. It is highly unlikely that the project would use acutely hazardous materials during construction activities. Once operational, the project will not involve the use of any hazardous materials in close proximity to the school. Therefore, project-specific impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.9d – Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Literature review of available federal, State, and local database information systems was performed for the purpose of identifying known recognized environmental conditions present on the site and the nearby properties that have the potential to adversely impact the site (CalEPA, 2019). An online search was conducted of Cortese List to identify locations on or near the project site. The search indicated that there are no hazardous or toxic sites within one mile of the project site (Department of Toxic Substances Control, 2021).

The proposed project area has no sites that are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment. The project area is not within the immediate vicinity of a hazardous materials site and would not impact a listed site. There is no data identifying any facilities in the vicinity that might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials, substances, or wastes that might affect the proposed project. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.9e – For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

There are no public airports within two miles of the project area. The closest public airport is the Columbia Airport, located approximately 10 miles to west of the project area. The project is not within an identified impact area of the Tuolumne County Airport Land Use Compatibility Plan (ALUCP) (Tuolumne County, 2003).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.9f – Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

The 2012 Tuolumne County Emergency Services Plan ensures the most effective and economical allocation of resources for the maximum benefit and protection of the community in response to significant emergency. The County Emergency Services Plan delineates the County's procedures and policies when responding to a significant disaster (Tuolumne County, 2012). Additionally, the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan (Tuolumne County, 2018d) is a master plan that outlines the unique risks faced by the Twain Harte community, and outlines various safety strategies and mitigation measures to reduce impacts to hazards such as wildfire, water/wastewater system failure, dam failure, etc.

In addition, the District has an adopted Overflow Emergency Response Plan specifically designed to handle emergency events related to the community's sewer system (Twain Hart Community Services District, 2019). This plan ensures that District staff coordinate with other first responders during an emergency event.

The replacement of existing underground pipeline would not require long-term roadway closures, nor would it impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project would not

inhibit the ability of local roadways to continue to accommodate emergency response and evacuation activities. The proposed project will comply with all applicable emergency plan guidelines during the replacement of existing pipelines and in the event of an emergency, disaster, or evacuation event. Therefore, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.9g – Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The proposed project is within a CalFire Federal Responsibility Area (FRA). Cal Fire has determined that the majority of the community of Twain Harte is categorized as Very High Fire Hazard Severity Zone in SRA (CalFire, 2021). Fire hazards in Tuolumne County range from moderate in the far western portion of the County to very high in the central portion. Communities in the very high fire hazard zone include Twain Harte (Tuolumne County, 2018b).

The Tuolumne General Plan *Natural Hazards Element* also includes policies to reduce the potential for exposure to risk associated with wildland fire. Development in high or very high fire hazard areas is addressed in Policy 17.E.1 and Implementation Programs 17.E.a and 17.E.b. Policy 17.E.2 would require maintenance of defensible space where there is a wildfire hazard on adjacent property. Policy 17.E.3 and Implementation Programs 17.E.c through 17.E.e would require new development to mitigate fire hazards and provide safe access.

Further, the General Plan Update includes policies to support federal and state fire service capabilities (Policy 9.4.A and Implementation Program 9.A.d), provide information to the public about fire hazards (Policy 9.A.5 and Implementation Program 9.A.e), and support the Strategic Fire and Resource Protection Planning Program (Policy 9.A.6) (Tuolumne County, 2018b).

The replacement of existing deteriorated pipelines along rights of way is not expected to increase the risk of wildfires. However, the project route consists mainly of semi-rural paved roads and existing utility easements within residential properties. In the unlikely event of fire, the Twain Harte Fire Department located in close proximity to the project area and would provide fire protection services. The proposed project will comply with applicable local fire codes. The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

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

Discussion

Impact #3.4.10a – Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality?

Construction

Project-related activities would involve excavation, soil stockpiling and installation of new pipeline. During site preparation and project-related activities, areas of bare soil could be exposed to erosive forces for a period of time. Project-related activities involving soil disturbance, excavation, cutting/filling, and stockpiling could result in increased erosion and sedimentation to surface waters.

As noted in Impact #3.4.7b, accidental spills or disposal of potentially harmful materials used during construction could possibly wash into and pollute surface water runoff. Materials that could potentially contaminate the construction area, or spill or leak, include diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. In order to reduce potential impacts to water quality during construction activities, if required, the project LUP SWPPP and implement standard BMPs targeted at minimizing and controlling construction runoff and erosion to the maximum extent practicable.

Once replacement activities have been completed, the pipelines would not result in increased runoff. The pipelines would be constructed within the existing road rights of way that typically collect stormwater runoff from the roadways.

In order to reduce potential impacts to water quality during project construction activities, Mitigation Measure GEO-1 would be required, if applicable. With implementation of the recommended mitigation, the project is not anticipated to violate any water quality standards or result in significant impacts to the waste discharge requirements or otherwise substantially degrade surface water quality and impacts would be less than significant.

Operations

The implementation of the proposed project is intended to protect groundwater quality by eliminating the potential for sewage to leak into the water table from the existing deteriorated or damaged sewer pipes.

The District currently has an approved Sewer System Management Plan (SSMP), as required by the State Water Resources Control Board's Statewide General Waste Discharge Requirements (WDR) for sanitary sewer systems (Twain Hart Community Services District, 2019). The goals of developing and implementing this Sewer System Management Plan (SSMP) are the following:

- Maintain or improve the condition of the collection system infrastructure in order to provide reliable service now and into the future.

- Minimize infiltration/inflow (I/I) and provide adequate sewer capacity to accommodate design storm flows.
- Minimize the number and impact of sanitary sewer overflows that occur.

The SSMP outlines a number of monitoring, inspection and maintenance tasks that ensure the sewer system operates effectively. The District is developing hydraulic models of the sewer collection system to assess system capacity, identify deficiencies, and evaluate scenarios for capital project alternatives for upgrading and improving the collection system. The SSMP also includes an Overflow Emergency Response Plan that allows District staff to respond immediately if potential overflows are detected and provides the steps necessary if a spill occurs. A System Evaluation and Capacity Assurance Plan has been developed to review the effectiveness of the District's activities, and to determine whether changes in the SSMP is needed. Compliance with specific standards and requirements of the WDR is reported and audits are preformed to substantiate fulfilment.

The Project Engineering Report (PER) that was prepared for this project also outlines the current conditions of the District's sewer system and identified deficiencies and prioritized recommended upgrades and replacement of deteriorated pipelines and damaged manhole covers (Black Water Consulting Engineers, Inc., 2021). The PER can be found in Appendix D of this document.

As noted above, the proposed project will help the District meet these objectives by upgrading and replacing deteriorated portions of the sewer pipeline system to better serve the community and protect water quality. With continued implementation of the approved WDR and SSMP, impacts of ongoing operations are less than significant.

MITIGATION MEASURE(S)

Implementation of Mitigation Measure MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.10b – Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The proposed project will replace existing sewer pipelines to protect groundwater and surface water quality. The project is anticipated to use minimal water during construction for dust control.

The District treats and distributes drinking water to the community of Twain Harte - approximately 1,600 residential, commercial and public facility connections. Surface water is the primary water supply source. Groundwater serves as a secondary source of water. The District owns and operate three groundwater wells that are capable of providing about 80

percent of normal winter water use and about 35 percent of normal summer water use. Each well treats water for drinking before pumping it into the distribution system.

An Urban Water Management Plan (UWMP) for the Tuolumne Utilities District was prepared in coordination with the District, which evaluates the factors influencing water demand, outlines an action plan for a drought or catastrophic water supply shortage and specifies opportunities to reduce demand and augment supplies under such conditions (Tuolumne Utilities District, 2021b).

The District will continue to abide by the adopted UWMP requirements, and provide water to the community. However, this project does not increase or expand water demand beyond current baseline levels and therefore would not decrease groundwater levels or exceed available water supplies. Therefore, there would be no impacts from the project on the groundwater supply.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.10c(i) –Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or offsite?

See Impacts #3.4.7b and #3.4.10a. The proposed project will install replacement sewer pipeline would not result in a change in drainage patterns or increased runoff. The pipelines would be replaced within existing road rights of way that typically collect stormwater runoff from the roadways. Following construction, the trenches would be backfilled and restored to roadways and gravel roadway shoulders. During the proposed project activities, the project may be required to prepare LUP SWPPP to minimize erosion or soil loss onsite. Mitigation Measure GEO-1 requires the preparation of a LUP SWPPP, if applicable.

The proposed project is not anticipated to substantially later the drainage pattern of the areas where project activities would be conducted, in a manner that would result in substantial erosion or siltation on or offsite. Therefore, the project would have a less-than-significant impact with the implemented mitigation measures.

MITIGATION MEASURE(S)

Implementation of Mitigation Measure MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.10c(ii) – Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate of amount of surface runoff in a manner which would result flooding on- or offsite?

See Impacts #3.4.4c, #3.4.7b, #3.4.10a and #3.4.10c(i).

MITIGATION MEASURE(S)

Implementation of Mitigation Measure MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.10c(iii) – Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

See Impacts #3.4.4c, #3.4.7b, #3.4.10a and #3.4.10c(i) and (ii). The extent of erosion on a site would typically vary depending upon slope steepness and stability, vegetation, percentage of cover, concentration of runoff, and weather conditions. The proposed replacement of the existing sewer pipelines would not result in increased runoff. Replacement of the existing pipelines would be within existing road rights of way and the trenches would be backfilled and restored to roadways and gravel roadway shoulders, or along existing utility easement within undeveloped private property. Therefore, the proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As such, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.10c(iv) – Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through

the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

See Impacts #3.4.4c, #3.4.7b, #3.4.10a and #3.4.10c(i) and (ii). The majority of the project areas are within an area identified by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map as a minimal flood hazard; however, Twain Harte Lake is categorized as an area with a 1 percent chance of annual flooding (Figure 3.4.10-1). The pipeline route is along its perimeter and would not impact the lake itself.

The proposed project will not impede or redirect floodwaters through the addition of impervious surfaces in a manner which would impede or redirects flood flows. Therefore, the proposed project will have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.10d – Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project is not within the FEMA Flood Insurance Rate Map of a 100-year flood zone. The majority of the project sites are located within the FEMA Flood Hazard Zone X: Area of Minimal Flood Hazard, Twain Harte Lake is categorized as an area with a 1 percent chance of annual flooding; however, the potential for flooding at the site appears to be very low.

The project site is not located near the ocean. Tsunamis are waves generated in oceans from seismic activity. Seiches are standing waves in bodies of water and are often found in large lake systems during strong winds. The winds themselves cause waves and water displacement, which can have a harmonic effect, causing the water to move sideways.

As an inland region separated from the Pacific Ocean by approximately 150 miles, Tuolumne County and the project area are at no risk from tsunamis. There are no levees located within the County. Therefore, flooding as a result of a levee failure would not occur. According to the most recent Alquist-Priolo Earthquake Fault Zoning Map, earthquake-induced seiches also do not pose a risk to Tuolumne County. There is no potential for inundation of the project site by seiche (Tuolumne County, 2018b). Therefore, the project impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.10e – Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

See Impact #3.4.10b.

The proposed project would not increase water demand or induce population growth that would negatively impact groundwater levels conflict with or obstruct the implementation of the Tuolumne County Water Quality Plan or the Tuolumne Utilities District UWMP. The District currently complies with all water quality and sustainable groundwater management requirements. The project will not expand or increase water demand beyond what is currently required; therefore, impacts are less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

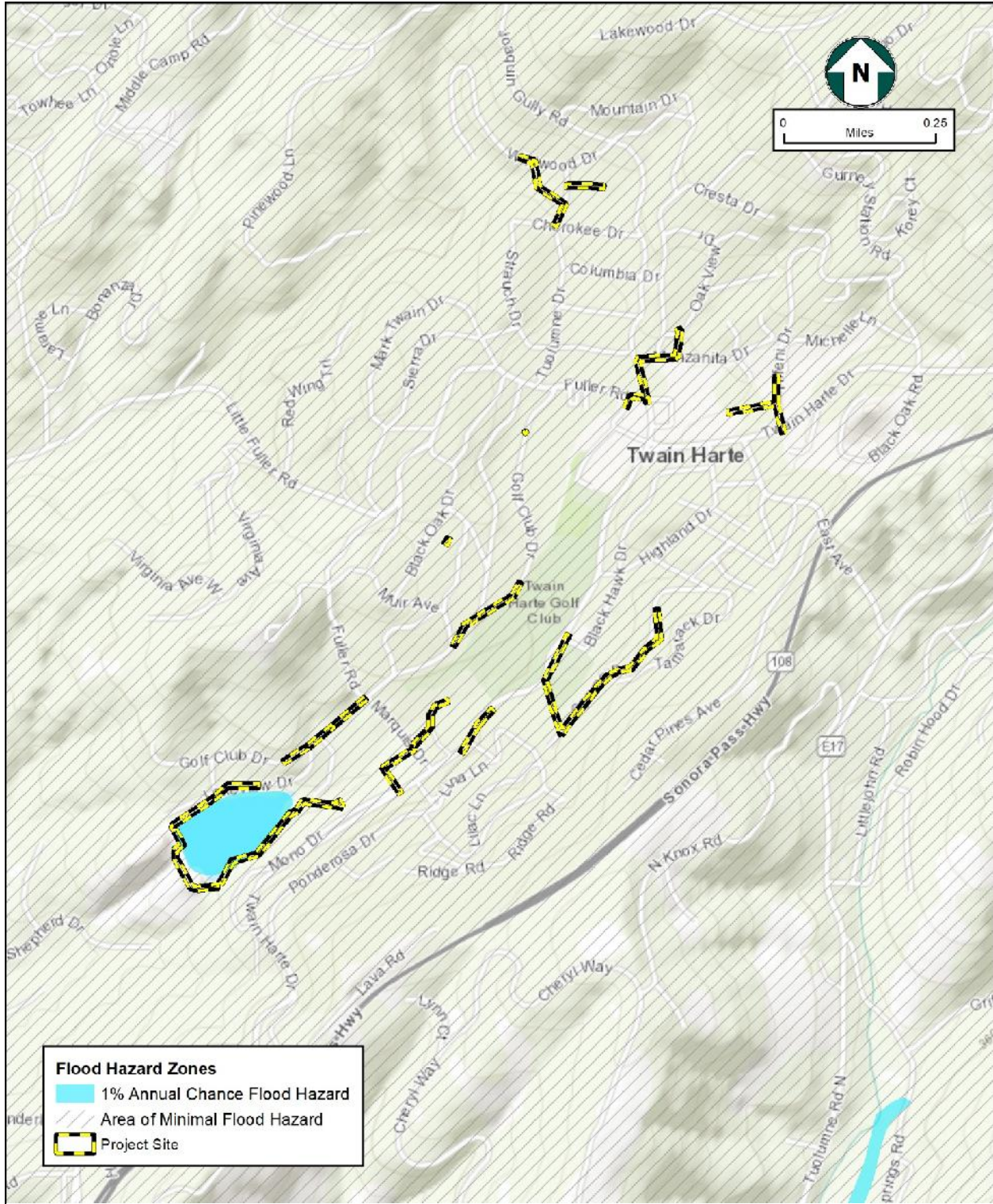


Figure 3.4.10-1
FEMA Flood Hazards

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.11 - LAND USE AND PLANNING

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

Impact #3.4.11a – Would the project physically divide an established community?

The proposed project would replace existing sewer pipelines, within existing right of way throughout the established community on Twain Harte. Therefore, the proposed would not divide the established Twain Harte community. The proposed project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.11b – Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No changes in land use designation or zoning are required, and none would result from the implementation of the proposed project. Therefore, the proposed project would not conflict with any land use plans, policies or regulations. The proposed project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.12 - MINERAL RESOURCES

Would the project:

- | | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. | Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. | Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

Impact #3.4.12a – Would the project 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?

The unincorporated community of Twain Harte and surrounding area have no mapped mineral resources and regulated mine facilities (Tuolumne County, 2021). Additionally, per the California Department of Conservation- Geologic Energy Management Division (CalGEM), there are no active, inactive, or capped oil wells located within the project site, and it is not within a CalGEM-recognized oilfield (California Dept. of Conservation, 2021). Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.12b – Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The proposed project is not designated for mineral and petroleum resources activities by the County of Tuolumne General Plan. The project area and surrounding lands are zones for single-family, general commercial, mixed use and general recreational uses. No mining occurs in the project area or in the nearby vicinity. There are no mineral extraction activities that will be conducted in the future as a result of the project. The project would not result in

the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and would therefore have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.13 - NOISE

Would the project result in:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Impact #3.4.13a – Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

Project activities would involve temporary noise sources and is expected to last for approximately five months. Construction-related temporary noise levels would be higher than existing ambient noise levels in the project area but would not occur after replacement pipeline activities are completed. Project-related activities would be restricted to daytime hours and would be of short duration. Once replacement activities have been completed, noise would be similar in character to existing noise in the area resulting from existing uses in the vicinity of the project area.

Tuolumne County General Plan Policy 5.A.5 require that construction activity and temporary construction impacts do not expose existing noise-sensitive land uses to excessive noise levels, and that developers implement all feasible noise-reducing measures as necessary to limit construction noise exposure at receiving occupied land uses to within acceptable County noise levels (Tuolumne County, 2018a). Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction

equipment, and the use of temporary walls and noise barriers to block and deflect noise the impacts would be less than significant.

Table 3.4.13-1 illustrates various types of construction equipment measured under a wide variety of construction activities with an average of source levels. Although the table gives one level for each piece of equipment, it should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provide a reasonable estimate for a wide range of soil conditions (Federal Transit Administration , 2006).

Table 3.4.13-1
Typical Construction Noise Emission Levels
Typical Vibration Levels for Construction Equipment

Equipment	Typical Noise Level (dBA) 50 ft from Source
Truck	88
Compactor	82
Roller	72
Loader	85
Backhoe	80

Notes:

1 - Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006. Table 12-1.

D = the distance from the equipment to the receiver

Portions of the project route are in areas have few to no residences, however some portions are in close proximity to houses or near the Twain Harte School. The area is generally considered quiet, although there is noise generated by daily residential traffic along the roadways where the majority of the project is located. The project will not require piledriving or the use of jackhammers, which generate extremely loud noise. To reduce potential temporary noise impacts to nearby residence, implementation of the Mitigation Measure MM NSE-1 requires construction equipment be located as far from residences as possible, as well as the use of mufflers, baffles and sound blankets on equipment to the extent feasible. Compliance with MM NSE-1 will reduce the temporary noise impacts from construction-related activities to levels that will be less than significant.

MITIGATION MEASURE(S)

MM NSE-1: During construction, the project developer shall implement the following measures:

- a. All stationary construction equipment on the project site shall be located so that noise emitting objects or equipment faces away from any potential sensitive receptors.
- b. The construction contractor shall ensure that all construction equipment is equipped with manufacturer-approved mufflers and baffles and cover equipment with sound

blankets, to the extent feasible. During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

- c. Construction activities shall take place during daylight hours, when feasible.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.13b – Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The proposed project is expected to create temporary groundborne vibration as a result of replacement activities. According to the U.S. Department of Transportation, Federal Railroad Administration, vibration is sound radiated through the ground. The rumbling sound caused by the vibration is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB). The background vibration velocity level in residential areas is usually around 50 VdB. A list of typical vibration-generating equipment is shown in Table 3.4.13-2.

**Table 3.4.13-2
Different Levels of Groundborne Vibration**

Vibration Velocity Level	Equipment Type
94 VdB	Vibratory roller
87 VdB	Large bulldozer
87 VdB	Caisson drilling
86 VdB	Loaded trucks
58 VdB	Small bulldozer

Source: (Federal Transit Administration , 2006)

Note: 25 feet from the corresponding equipment

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.

Typical outdoor sources of perceptible groundborne vibration are construction equipment and traffic on rough roads. For example, if a roadway is smooth, the groundborne vibration from traffic is rarely perceptible.

Typically, groundborne vibration generated by construction activity attenuates rapidly with distance from the source of the vibration. Therefore, vibration issues are generally confined to distances of less than 500 feet (U.S. Department of Transportation, 2005).

The proposed project would not use equipment such as piledrives, caisson drilling, or jackhammers, all of which produce substantial vibrations. Project construction equipment

will include a backhoe, bobcat, trencher, generator, grader, dump truck, concrete truck, and three pickup trucks. These types of equipment tend to generate less vibration during operation.

Therefore, potential sources of temporary vibration during construction of the proposed project would be considered minimal and not exceed applicable standards.

Construction activities would include exposing of the existing pipelines for replacement. These activities would not involve the use of equipment that would cause high groundborne vibration levels such as pile-driving or blasting.

Once constructed, the proposed project would not generate high vibration levels. Thus, construction and ongoing operation of the proposed project would not result in any vibration and impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.13c – For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

See Impact #3.4.9e.

The closest public airport is the Columbia Airport, located approximately 10 miles to west of the project area. The project is not within an identified impact area of the Tuolumne County Airport Land Use Compatibility Plan (ALUCP) (Tuolumne County, 2003).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.14 - POPULATION AND HOUSING

Would the project

a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Impact #3.4.14a – Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The intent of the proposed project is to upgrade and replace its existing deteriorating sewer pipeline system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality. The proposed project will not cause Twain Harte’s population growth or economic development beyond what has been anticipated and analyzed in the Tuolumne General Plan. No roadways or infrastructure in the project area will be extended. The proposed project would not provide additional capacity that could accommodate a substantial amount of future development.

Therefore, the proposed project would not induce substantial population growth in the area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). Therefore, the proposed project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.14b – Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project would replace existing pipelines and would not add any additional pipelines into the system to support any additional capacity. The project would not displace housing or require replacement housing, since the proposed replacement activities would occur along existing rights of way. Therefore, the project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.15 - PUBLIC SERVICES

Would the project:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services:

(i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Impact #3.4.15a(i) – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services - Fire Protection?

There are two fire stations located with the community of Twain Harte: Twain Harte CSD Fire Division, also known as the Twain Harte Fire Department (THFD), located at 18781 Cedar Drive and the California Department of Forestry and Fire Protection (Cal Fire), located at 22978 Meadow Drive.

The THFD provides emergency response and fire-protection services to all residents and structures in the District. While THFD firefighters are trained to fight wildfire, providing structure fire-protection is the Department’s primary responsibility. Cal Fire is a regional State Responsibility Areas (SRA) station strategically located in Twain

Harte and staffed to fight wildfire with the SRA in Twain Harte's region (Twain Harte Community Services District, 2021).

Construction the proposed project would not be expected to result in an increase in demand of fire protection services leading to the construction of new or physically altered facilities. The project consists of replacing existing deteriorated pipelines along rights of way and public easements. Additionally, the project does not include construction of new dwelling units and would not increase the demand for fire protection services.

Therefore, the project will not result in significant environmental impacts related to acceptable service ratios, response times, or to other performance objectives fire protection services. The proposed project will comply with all local, State and federal building codes, development standards and regulations where applicable. The project is not anticipated to result in substantial or adverse impacts to fire protection services. Therefore, the Project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.15a(ii) – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Police Protection?

The County of Tuolumne Sheriff's Office located at 28 Lower Sunset Drive, Sonora, California, approximately 12 miles southwest of Twain Harte, provides police protection services to the project area. The project will not increase the local population and it is not expected that the project will result in significant environmental impacts related to acceptable service ratios, response times, or to other performance objectives police protection services. Police service response is, and would remain, adequate to the project and surrounding areas. The proposed project is not anticipated to require active police protection. Therefore, the proposed project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.15a(iii) – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Schools?

The Twain Harte School District operates the Twain Harte School. The proposed project would not result in the creation of new residences or other facilities that could result in an increase in student population or need for new or expanded school facilities. Therefore, the proposed project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.15a(iv) – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Parks?

See Impacts #3.4.15a(i) through (iii). The Eproson Park located downtown of Twain Harte at Meadow Lane, within the project area. The proposed project does not include dwelling units and would not induce population growth in the area. Therefore, the project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.15a(v) – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Other Public Facilities?

See Impacts #3.4.15a(i) through (iv). The proposed project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.16 - RECREATION

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

Impact #3.4.16a – Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Implementation of the proposed project would allow the District to maintain, replace, and upgrade its collection system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality.

The proposed project is intended to serve the same number of residents and public facilities within the Community of Twain Harte. These improvements are not intended to provide additional capacity for substantial amounts of future development. Typically, the increased use of parks and recreational facilities result from the addition of new housing and the corresponding population increase. No new housing is proposed as part of the proposed project. Therefore, the proposed project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.16b – Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

See Impact #3.4.15a(iv)-(v), above. The project does not require the construction of any new recreational facilities. Therefore, it would not generate an adverse physical effect on the environment. The proposed project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.17 - TRANSPORTATION

Would the project:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Impact #3.4.17a – Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project will not construct any new circulation (transit) systems, roadways, bicycle or pedestrian facilities. The proposed project may result in short-term, temporary traffic impacts during the installation phase of the new pipelines along existing roadways, but because the route is along the shoulder of the road, these impacts would be minimal and of short duration. Following completion, the proposed project would not generate vehicle trips, beyond the routine maintenance-related trips already conducted by District staff. There is no increase in staff or increase the traffic in the area.

Therefore, the proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Therefore, impacts of the proposed project would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.17b – Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

See Impact #3.4.17a, above.

The State of California Governor’s Office of Planning and Research document entitled *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory) provides guidance for determining a project’s transportation impacts based on Vehicle Miles Traveled (VMT). VMT per capita is calculated as the total annual miles of vehicle travel divided by the total population in a state or in an urbanized area. This analysis relates to residential, commercial and industrial uses. It does not include an analysis of construction-related travel.

The proposed project does not include the construction of residential, commercial and industrial uses. Trips made to the proposed project site during construction-related activities will be temporary in nature and will include workers and equipment from the local areas. Therefore, impacts of the proposed project will be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.17c – Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project does not consist of any elements that would substantially increase hazards as a result of a design feature (e.g., sharp curves or dangerous intersections) or have incompatible uses (e.g., farm equipment). The majority of the project (replacement of pipelines) will be on the existing roadway system; no new roads will be constructed. All construction will occur on the proposed project site and will not create dangerous intersections or curves. Once complete, the excavated roadway shoulders will be backfilled and returned to their existing conditions. Therefore, impacts of the proposed project will be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.17d – Would the project result in inadequate emergency access?

See Impact #3.4.9f.

Construction-related activities associated with the proposed project could temporarily interrupt access along the affected local roadways. The replacement of existing underground pipeline would not require long-term roadway closures, nor would it impair implementation of or physically interfere with an adopted emergency response or emergency access. The proposed project would not inhibit the ability of local roadways to continue to accommodate emergency response activities. The proposed project will comply with all applicable emergency plan guidelines and the Tuolumne County Municipal Code. Therefore, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.18 - TRIBAL CULTURAL RESOURCES

Would the project:

a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

(ii) A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

Discussion

Impact #3.4.18a(i) – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is – listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

These questions were addressed in the discussion presented in Section 3.4.5 - *Cultural Resources* see discussion for Impacts #3.4.5a through #3.4.5c.

MITIGATION MEASURE(S)

Implementation of Mitigation Measures CUL-1 through CUL-6.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.18a(ii) – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is – a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe?

See discussion for Impacts #3.4.5a through #3.4.5c and Impact #3.4.18a(i), above.

MITIGATION MEASURE(S)

Implementation of Mitigation Measures CUL-1 through CUL-6.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.19 - UTILITIES AND SERVICE SYSTEMS

Would the project:

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Impact #3.4.19a – Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The proposed project includes the replacement and upgrade to existing, deteriorated sewer lines and manhole covers. No new lines or connections of service are proposed. As such, the project would not require the expansion of sewer or wastewater facility capacity or increase water demand. Electrical power, natural gas, or telecommunication facilities would be unaffected by the project. Therefore, the project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.19b – Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

See Impacts #3.4.10b and #3.4.10e.

The proposed project will not increase water demand or induce population growth that would negatively impact available water supplies to serve the project during normal, dry and multiple dry years. Therefore, there would be no impacts from the project on the groundwater supply.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.19c – Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

See Impacts #3.4.19a.

The project would not require the expansion of the wastewater facility service or increase demand. Therefore, there would be no impacts from the project on the wastewater capacity.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.19d – Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

This project would generate minimal solid waste from replacement activities related to site preparation and construction. There is one landfill within proximity of Twain Harte where solid waste can be disposed of. All solid waste will be collected and removed from the site and be disposed at the Cal Sierra Transfer Station, located at 19309 Industrial Drive, approximately eight miles southeast of Twain Harte (CalRecycle, 2021).

The proposed project will comply with State and local standards by properly disposing of any project-related solid waste. The proposed project is not expected to result in excessive amounts of solid waste that would be in excess of State or local standards or be in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the proposed project will have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.19e – Would the project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

See discussion for Impact #3.4.19d, above.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.20 - WILDFIRE

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:

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

Discussion

Impact #3.4.20a – If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

See Impact 3.4.9f.

The replacement of existing underground pipeline would not require long-term roadway closures, nor would it impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.20b – If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentration from a wildfire or the uncontrolled spread of a wildfire?

See Impact #3.4.9g.

The proposed project is within a CalFire Federal Responsibility Area (FRA). Cal Fire has determined that the majority of the community of Twain Harte is categorized as Very High Fire Hazard Severity Zone in SRA (CalFire, 2021).

However, the replacement of existing pipeline along the roadway is not expected to increase the risk of wildfires. The project route consists mainly of semi-rural paved roads and existing road rights of way and existing utility easements within residential properties. In the unlikely event of fire, the Twain Harte Fire Department located within the project area, would provide fire protection services to the proposed project area. The proposed project will comply with applicable State and local building standards as required by local fire codes. The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.20c – If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

See Impacts #3.4.20a-b, above. The project area consists mainly of paved roads, existing road rights of way and utility easement within undeveloped property. The project would not require the installation or maintenance of associated infrastructure (roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Therefore, the project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.20d – If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

See Impacts #3.4.20a-c above. The proposed project includes the replacement and upgrade to existing, deteriorated sewer lines. No new lines or connections of service are proposed. It is not expected that such activities would result in a fire hazard or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change. Therefore, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

3.4.21 - MANDATORY FINDINGS OF SIGNIFICANCE

- | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

Impact #3.4.21a – Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As evaluated in this IS/MND, the proposed project is not expected to result in or substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. With recommended mitigation, MM BIO-1

through MM BIO-5, the proposed project would reduce or eliminated potential impacts to sensitive plant and species, nesting birds and raptors, by implementing avoidance and minimization measures. Therefore, the project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, the project would have a less-than-significant impact with mitigation incorporated.

MITIGATION MEASURE(S)

Implementation of Mitigation Measures MM BIO-1 through MM BIO-5.

LEVEL OF SIGNIFICANCE

The project would have a *less-than-significant impact with mitigation incorporated*.

Impact #3.4.21b - Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)?

As described in the impact analyses in Sections 3.4.1 through 3.4.20 of this IS/MND, any potentially significant impacts of the proposed project would be reduced to a less-than-significant level following incorporation of the mitigation measures listed in *Section 4, Mitigation, Monitoring and Reporting Plan*. Projects completed in the past have also implemented mitigation as necessary. Accordingly, the proposed project would not otherwise combine with impacts of related development to add considerably to any cumulative impacts in the region. With implementation of the recommended mitigation measure, the proposed project would not have impacts that are individually limited, but cumulatively considerable. Therefore, the project would have a less than cumulatively considerable impact with mitigation incorporated.

MITIGATION MEASURE(S)

Implementation of Mitigation Measures MM BIO-1 through MM BIO-5, MM CUL-1 through MM CUL-6, MM GEO-1, MM GEO-2 and MM NSE-1.

LEVEL OF SIGNIFICANCE

The project would have a *less-than-significant impact with mitigation incorporated*.

Impact #3.4.21c - Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

All of the project's impacts, both direct and indirect, that are attributable to the project were identified and mitigated. As shown in *Section 4, Mitigation, Monitoring and Reporting Plan*, the Lead Agency has agreed to implement mitigation, substantially reducing or eliminating impacts from the project. Therefore, the proposed project would not either directly or indirectly cause substantial adverse effects on human beings because all potentially adverse direct impacts of the proposed project are identified as having no impact, less-than-significant impact, or less-than-significant impact with mitigation.

MITIGATION MEASURE(S)

Implementation of Mitigation Measures MM BIO-1 through MM BIO-5, MM CUL-1 through MM CUL-6, MM GEO-1, MM GEO-2 and MM NSE-1.

LEVEL OF SIGNIFICANCE

The project would have a *less-than-significant impact with mitigation incorporated*.

SECTION 4 - MITIGATION, MONITORING AND REPORTING PLAN

Impact	Mitigation Measures	Implementation	Monitoring
Biological Resources			
<p>3.4.4a</p>	<p>MM BIO-1: If project construction activities will be initiated during the nesting season (February 1 to September 15), a pre-activity nesting bird survey shall be conducted within 14 days prior to the start of project activities. The surveys shall encompass the proposed project footprint and accessible areas or land visible from accessible areas within a 250-foot buffer for songbirds and a 500-foot buffer for raptors. If no active nests are found, no further action is required. However, existing nests may become active and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress.</p> <p>If active nests are found during the survey or at any time during construction of the proposed project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the adults or the nest, or if breeding attempts have otherwise been unsuccessful. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.</p>	<p>Contractor/ Qualified Biologist</p>	<p>THCSD</p>
<p>3.4.4a</p>	<p>MM BIO-2: Prior to the initiation of construction activities, all construction personnel shall attend a Worker Environmental Awareness Training program developed by a qualified biologist. Any personnel associated with construction that did not attend the</p>	<p>Contractor/ Qualified Biologist</p>	<p>THCSD</p>

Impact	Mitigation Measures	Implementation	Monitoring
	<p>initial training shall be trained by the authorized biologist prior to working on the project area. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Worker Environmental Awareness Training program prior to starting work on the project and on an annual basis. The Program shall be developed and presented by the project qualified biologist(s) or designee approved by the qualified biologist(s). The program shall include information on the life histories of special-status species with potential to occur on the proposed project, their legal status, course of action shall these species be encountered onsite, and avoidance and minimization measures to protect these species. It shall include the components described below:</p> <ul style="list-style-type: none"> a. Information on the life history and identification of special-status species that may occur or that may be affected by project activities. The program shall also discuss the legal protection status of each such species, the definition of “take” under the Federal Endangered Species Act and California Endangered Species Act, measures the project proponent/operator shall implement to protect the species, reporting requirements, specific measures for workers to avoid take of special-status plant and wildlife species, and penalties for violation of the requirements outlined in the California Environmental Quality Act mitigation measures and agency permit requirements. b. An acknowledgement form signed by each worker indicating that the Worker Environmental Awareness Training and Education Program has been completed shall be kept on file at the construction site. 		

Impact	Mitigation Measures	Implementation	Monitoring
	<p>c. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Worker Environmental Awareness Training and Education Program, and signed acknowledgement forms shall be submitted to the Tuolumne County Planning Department.</p> <p>d. A copy of the training transcript, training video or informational binder for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.</p> <p>e. A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Worker Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker.</p>		
<p>3.4.4b</p>	<p>MM BIO-3: If the proposed project is expected to occur during the blooming period, as listed in Table 3.4.4-1, positive plant identification may occur. If these species are observed, they shall be avoided to maximum extent possible. If project activities cannot avoid those areas, a qualified botanist or biologist may have opportunity to salvage and relocate the plants that will be impacted.</p>	<p>Contractor/ Qualified Biologist</p>	<p>THCSD</p>

Impact	Mitigation Measures	Implementation	Monitoring																
	<p style="text-align: center;">Table 3.4.4-1 Blooming Period of Special-status Plants with Potential to Occur</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Special-Status Plant Species</th> <th style="text-align: left;">Optimal Blooming Period</th> </tr> </thead> <tbody> <tr> <td><i>Clarkia australis</i> Small's southern clarkia</td> <td>May - August</td> </tr> <tr> <td><i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia</td> <td>April - July</td> </tr> <tr> <td><i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower</td> <td>April - July</td> </tr> <tr> <td><i>Erythronium tuolumnense</i> Tuolumne fawn lily</td> <td>March - June</td> </tr> <tr> <td><i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris</td> <td>May - June</td> </tr> <tr> <td><i>Navarretia miwukensis</i> Mi-Wuk navarretia</td> <td>May - August</td> </tr> <tr> <td><i>Rhynchospora capitellata</i> brownish beaked-rush</td> <td>July - August</td> </tr> </tbody> </table>	Special-Status Plant Species	Optimal Blooming Period	<i>Clarkia australis</i> Small's southern clarkia	May - August	<i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia	April - July	<i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower	April - July	<i>Erythronium tuolumnense</i> Tuolumne fawn lily	March - June	<i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris	May - June	<i>Navarretia miwukensis</i> Mi-Wuk navarretia	May - August	<i>Rhynchospora capitellata</i> brownish beaked-rush	July - August		
Special-Status Plant Species	Optimal Blooming Period																		
<i>Clarkia australis</i> Small's southern clarkia	May - August																		
<i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia	April - July																		
<i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower	April - July																		
<i>Erythronium tuolumnense</i> Tuolumne fawn lily	March - June																		
<i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris	May - June																		
<i>Navarretia miwukensis</i> Mi-Wuk navarretia	May - August																		
<i>Rhynchospora capitellata</i> brownish beaked-rush	July - August																		
<p>3.4.4b</p>	<p>MM BIO-4: The introduction and spread of invasive and non-native plant species shall be avoided and controlled wherever possible during construction, on both the project and surrounding areas. This may be achieved through measures such as cleaning vehicles and equipment before they enter construction areas, removing invasive species that exist on the site and disposing of the removed debris in a manner that prohibits their spread on- and off- site.</p>	<p>Contractor/ Qualified Biologist</p>	<p>THCSD</p>																
<p>3.4.4b</p>	<p>MM BIO-5: To reduce any indirect impacts to special-status plants that may be in the vicinity of the proposed project, best management practices (BMPs) shall be implemented to control dust pollution, prevent discharge of potentially harmful chemicals,</p>	<p>Contractor/ Qualified Biologist</p>	<p>THCSD</p>																

Impact	Mitigation Measures	Implementation	Monitoring
	<p>and prevent changes in hydrology. BMPs may include the installation of erosion and sedimentation control devices, applying water to control dust, placing drip pans under equipment when not in use, refueling in designated areas, and containing concrete washout properly, among other practices.</p>		
Cultural Resources			
<p>3.4.5a-b</p>	<p>MM CUL-1: Prior to any ground disturbance, the project developer/contractor shall retain a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior’s Standards for professional archaeology (U.S. Department of the Interior, 2011), to carry out all mitigation measures related to archaeological and historical resources.</p> <p>a. Prior to the start of any ground-disturbing or construction activities, Cultural Resources Sensitivity Training shall be conducted. This includes an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification of the qualified archaeologist and/or Native American monitor for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources.</p> <p>b. The project operator shall ensure all new employees who have not participated in earlier Cultural Resources Sensitivity Trainings shall:</p> <ul style="list-style-type: none"> • Participate in Cultural Resources Sensitivity Training as described above. 	<p>Qualified Archaeologist</p>	<p>THCSD</p>

Impact	Mitigation Measures	Implementation	Monitoring
	<ul style="list-style-type: none"> • Shall be provided a Cultural Resources Sensitivity Training guide for all personnel that is approved by the Lead archaeologist and. • The Cultural Resources Sensitivity Training guide shall be kept available for all personnel to review and be familiar with as necessary. 		
3.4.5a-b	<p>MM CUL-2: Prior to any ground disturbance, the developer/contractor shall enter into an agreement with the Chicken Ranch Rancheria of Me-Wuk Indians of California. If requested, the developer shall:</p> <ul style="list-style-type: none"> a. Retain a qualified native American monitor to be onsite during initial ground disturbance activities. b. Retain a qualified tribal member to conduct a Cultural Resources Sensitivity training session with the construction crew prior to ground disturbance activities. <p>Evidence of the agreement with the Chicken Ranch Rancheria of Me-Wuk Indians of California tribe shall be submitted to the lead agency as evidence of compliance.</p>	Qualified Archaeologist	THCSD
3.4.5a-b	<p>MM CUL-3: The Wildwood Ditch (P-55-006544) shall be substantially flagged as an Environmentally Sensitive Area (ESA) prior to construction as determined by the Lead Archaeologist in consultation with the Native American monitor and carefully monitored to ensure avoidance.</p>	Qualified Archaeologist	THCSD
3.4.5a-b	<p>MM CUL-4: Prior to any excavation in Marquis Drive (Sections 3A and 3B), a Phase II test excavation program shall be implemented to determine whether significant artifacts or features occur in the</p>	Qualified Paleontologist	THCSD

Impact	Mitigation Measures	Implementation	Monitoring
	<p>proposed locations for sewer line improvements. Significant features would include, but not limited to, house and round house floors and other structural remains, human burials, cooking hearths, other stone features, storage pits, food processing areas and tool manufacturing loci.</p>		
<p>3.4.5a-b</p>	<p>MM CUL-5: If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation.</p>	<p>Qualified Paleontologist</p>	<p>THCSD</p>
<p>3.4.5c</p>	<p>MM CUL-6: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the NAHC, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.</p>	<p>Qualified Paleontologist</p>	<p>THCSD</p>

Impact	Mitigation Measures	Implementation	Monitoring
Geology and Soils			
3.4.7b	<p>MM GEO-1: Prior to issuing of grading or building permits, if required, (a) the project developer shall prepare and implement a Type 1 Linear Underground/Overhead Projects SWPPP (LUP SWPPP), if applicable. The LUP SWPPP shall comply with the General National Pollutant Discharge Elimination System (NPDES) from the Central Valley Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts.</p>	Contractor	THCSD
3.4.7f	<p>MM GEO-2: The project shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbance activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources require further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Lead Agency and the project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find.</p> <p>If the find is determined to be significant and the Lead Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with the applicable standards. The plan shall be submitted to the Lead Agency for review and approval. Upon approval, the plan shall be incorporated into the project.</p>	Contractor	THCSD
Noise			

Impact	Mitigation Measures	Implementation	Monitoring
3.4.13a	<p>MM NSE-1: During construction, the project developer shall implement the following measures:</p> <ul style="list-style-type: none"> a. All stationary construction equipment on the project site shall be located so that noise emitting objects or equipment faces away from any potential sensitive receptors. b. The construction contractor shall ensure that all construction equipment is equipped with manufacturer-approved mufflers and baffles and cover equipment with sound blankets, to the extent feasible. During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. c. Construction activities shall take place during daylight hours, when feasible. 	Contractor	THCSD
Mandatory Findings of Significance			
3.4.21a-c	Implementation of Mitigation Measures MM BIO-1 through MM BIO-5, MM CUL-1 through MM CUL-6, MM GEO-1, MM GEO-2 and MM NSE-1.	Contractor	THCSD

SECTION 5 - LIST OF PREPARERS

QK

Jaymie L. Brauer, Principal Planner- Project Manager /QAQC

Carlos Rojas, Senior Associate Planner- Lead author

SECTION 6 - REFERENCES

. (2018). Retrieved from :

Black Water Consulting Engineers, Inc. (2021). *Project Engineering Report*.

CalEPA. (2019). Retrieved from California Environmental Protection Agency:
<https://calepa.ca.gov/#>

CALFIRE. (2019). *Fire Hazard Severity Zone Maps*. Retrieved from
<https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

CalFire. (2021). *Fire Severity Maps*. Retrieved from FHSZ Viewer:
<https://egis.fire.ca.gov/FHSZ/>

California Department of Conservation. (2021). *CGS Information Warehouse: Landslides*. Retrieved from <https://maps.conservation.ca.gov/cgs/informationwarehouse/>

California Department of Conservation. (2021). Maps and Data. Retrieved from
<https://maps.conservation.ca.gov/cgs/DataViewer/>

California Department of Transportation. (2022, January). *California State Scenic Highway System Map*. Retrieved from State Scenic Highway System ARC GIS On LIne.:
<https://www.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>

California Water Board. (2018). *Attachment A Linear Underground/ Overhead Requirements*. Retrieved from
https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/const_permits/wqo_2009_0009_att_a.pdf

California Dept. of Conservation. (2021). *Well Finder CalGEM GIS*. Retrieved from
<https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-120.21893/38.03519/15>

CalRecycle. (2021). *SWIS Facility/Site Activity Details*. Retrieved from
<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/885?siteID=3902>

Department of Conservation. (2021). *Farmland Mapping and Monitoring Program*. Retrieved from <https://maps.conservation.ca.gov/DLRP/CIFF/>

Department of Toxic Substances Control. (2021, September 17). *Hazardous Waste and Substances List*. Retrieved November 12, 2015, from EnviroStor:
http://www.envirostor.dtsc.ca.gov/public/search.asp?PAGE=3&CMD=search&ocierp=False&business_name=&main_street_number=&main_street_name=&city=&z

ip=&county=&branch=&status=ACT%2CBKLG%2CCOM&site_type=CSITES%2COPEN%2CFUDS%2CCLOSE&cleanup_type=&npl=&funding=&

Federal Transit Administration . (2006). *Transit Noise and Vibration Impact Assessment*.

OSHA. (2022, January). *HAZWOPER - Construction*. Retrieved from OSHA Training Requirements - HAZWOPER / Construction: <https://www.oshatraining.com/osha-training-requirements-hazardous-waste-operations-and-emergency-response-construction.php>

Paleo Solutions, Inc. (2021). *Results of a Phase I NHPA (CEQA+) Cultural Resource Assessment of the Twain Harte Sewer Upgrade Project*.

QK. (2021). *Biological Analysis Report- Twain Harte Sewer Pipeline Improvements Projects*.

Trinity Consultants. (2021). *Air Quality Comformity Analysis- Twain Harte Pipeline Project*.

Tuolumne County. (2003). *Tuolumne County Airport Land Use Compatibility Plan*.

Tuolumne County. (2007). *Twain Harte Design Review/Planning Advisory*. Retrieved from <https://www.tuolumnecounty.ca.gov/DocumentCenter/View/222/Twain-Harte-Design-Guidelines?bidId=>

Tuolumne County. (2012). *2012 Multi-Hazard Emergency Response Plan for Tuolumne County*. Retrieved from <https://www.tuolumnecounty.ca.gov/DocumentCenter/View/6165/Tuolumne-County-EOP>

Tuolumne County. (2018a). *Tuolumne County General Plan 2018*.

Tuolumne County. (2018b). *Tuolumne County General Plan Update EIR*. Retrieved from <https://www.tuolumnecounty.ca.gov/DocumentCenter/View/5761/46-Geology?bidId=>

Tuolumne County. (2018d). *Multi-Jurisdictional Hazard Mitigation Plan*. Retrieved from <https://www.tuolumnecounty.ca.gov/DocumentCenter/View/12281/Annex-C-Twain-Harte-Community-Services-District-2018-UPDATE-REVISIONS>

Tuolumne County. (2021). *Tuolumne County Zoning & Land Use Lookup*. Retrieved from <https://tuolumne.maps.arcgis.com/apps/webappviewer/index.html?id=3e926c5038e74b729ed2e78dcfe490d9&extent=-13476902.3442%2C4529999.5288%2C-13309352.3782%2C4633648.1392%2C102100>

Tuolumne Utilities District . (2021b). *2020 Urban Water Management Plan*.

Twain Hart Community Services District. (2019). *Sewer System Management Plan- Regional Sewer System*.

Twain Harte Community Services District. (2019). *Twain Harte Strategic Plan*.

Twain Harte Community Services District. (2021). *Fire*. Retrieved from Why are there two fire stations in Twain Harte?: <https://www.twainhartecsd.com/why-are-there-two-fire-stations-in-twain-harte>

U.S. Department of Transportation, F. R. (2005). *High-Speed Ground Transportation Noise and Vibration Impact Assessment*.

APPENDIX A

AIR QUALITY

AIR QUALITY COMFORMITY ANALYSIS

Twain Harte Sewer Pipeline Improvement Project Twain Harte, Tuolumne County, CA

Prepared For:

QK, Inc.
5080 California Avenue, Suite 220
Bakersfield, CA 93309

Prepared By:

TRINITY CONSULTANTS
4900 California Avenue, Suite 420A
Bakersfield, CA 93309
661-282-2200

November 2021

Project 210505.0187



TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	1-1
2. INTRODUCTION	2-1
2.1 Purpose.....	2-1
2.2 General Project Description	2-1
3. SETTING	3-1
3.1 Air Quality Standards	3-1
3.2 Existing Air Quality	3-4
3.2.1 Ozone (O ₃).....	3-5
3.2.2 Suspended Particulate Matter (PM ₁₀ and PM _{2.5})	3-5
3.2.3 Carbon Monoxide (CO)	3-5
3.2.4 Nitrogen Dioxide (NO ₂) and Hydrocarbons.....	3-6
3.2.5 Sulfur Dioxide (SO ₂)	3-6
3.2.6 Lead (Pb) and Suspended Sulfate	3-6
3.3 Climate.....	3-7
3.4 Climate Change and Greenhouse Gases	3-8
3.4.1 Global Climate Change.....	3-8
3.4.2 Effects of Global Climate Change	3-10
3.4.3 Global Climate Change Regulatory Issues	3-11
3.5 Regulatory Setting	3-13
3.5.1 Federal	3-13
3.5.2 State	3-14
3.5.3 Local.....	3-14
3.5.4 General Conformity for Federal Actions Under NEPA	3-15
4. IMPACT ASSESSMENT	4-1
4.1 Significance Criteria	4-1
4.1.1 Thresholds Adopted for the Evaluation of Air Quality Impacts under CEQA.....	4-1
4.1.2 Thresholds for Ambient Air Quality Impacts	4-2
4.1.3 Thresholds for Hazardous Air Pollutants	4-3
4.1.4 Global Climate Change Thresholds of Significance	4-3
4.2 Project Related Emissions.....	4-3
4.2.1 Short-Term Emissions.....	4-4
4.2.2 Long-Term Operations Emissions.....	4-5
4.3 Potential Impact on Sensitive Receptors	4-5
4.4 Potential Impacts to Visibility to Nearby Areas.....	4-5
4.5 Potential Impacts from Carbon Monoxide.....	4-5
4.6 Predicted Health Risk Impacts.....	4-6
4.7 Potential Impacts from Asbestos	4-6
4.8 Odor Impacts and Mitigation	4-6
4.9 Impacts to Ambient Air Quality	4-6
4.10 Impacts to Greenhouse Gases and Climate Change	4-6
4.11.1 Feasible and Reasonable Mitigation Relative to Global Warming.....	4-7
5. CUMULATIVE IMPACTS	5-1
5.1 Cumulative Regional Air Quality Impacts.....	5-1

5.2	Cumulative Local Air Quality Impacts	5-3
5.3	Cumulative Hazardous Air Pollutants	5-3
5.4	Cumulative Carbon Monoxide (CO) – Mobile Sources.....	5-3
6.	CONSISTENCY WITH THE AIR QUALITY ATTAINMENT PLAN	6-1
6.1	Required Evaluation Guidelines	6-1
6.2	Consistency with the Tuolumne County Regional Transportation Plan and General Plan Zoning	6-2
7.	MITIGATION AND OTHER RECOMMENDED MEASURES	7-1
7.1	Tuolumne County Measures to Reduce Equipment Exhaust and Fugitive PM ₁₀	7-1
8.	LEVEL OF SIGNIFICANCE AFTER MITIGATION	8-1
9.	REFERENCES	9-1
	APPENDIX A. EXISTING AIR QUALITY MONITORING DATA	A-1
	APPENDIX B. PROJECT EMISSION CALCULATIONS	B-1
	APPENDIX C. CARB 2020 AND 2025 ESTIMATED EMISSION INVENTORIES	C-1

LIST OF FIGURES

Figure 2-1. Regional Location	2-1
Figure 2-2. Project Location	2-2
Figure 2-3. Project Site Topography	2-2

LIST OF TABLES

Table 3-1. Federal & California Air Quality Standards	3-2
Table 3-2. Mountain Counties Attainment Status	3-3
Table 3-3. Mountain Counties Air Basin Monitoring Network	3-3
Table 3-4. Existing Air Quality Monitoring Data in Project Area	3-4
Table 3-5. Sonora Weather Data	3-7
Table 3-6. General Conformity De Minimus Levels	3-16
Table 4-1. TCAPCD CEQA Thresholds of Significance	4-1
Table 4-2. Measures of Significance - Toxic Air Contaminants	4-3
Table 4-3. Short-Term Project Emissions – Annual	4-4
Table 4-4. Short-Term Project Emissions – Daily	4-4
Table 4-5. Sensitive Receptors Located < 2 Miles from Project	4-5
Table 4-6. Estimated Construction GHG Emissions (MT/Year)	4-7
Table 4-7. Select CARB GHG Emission Reduction Strategies	4-7
Table 5-1. Comparative Analysis Based on MCAB 2020 Inventory - Tons per Year	5-2
Table 5-2. Emission Inventory MCAB 2025 Projection - Tons per Year	5-2
Table 5-3. Emission Inventory MCAB - Tuolumne County Portion 2025 Projection - Tons per Year	5-2
Table 5-4. 2025 Emissions Projections - Proposed Project, Tuolumne County, and SJVAB	5-3

1. EXECUTIVE SUMMARY

Trinity Consultants has completed an Air Quality Conformity Study (AQCS) for the replacement of existing pipelines in the unincorporated community of Twain Harte in Tuolumne County, CA. The Twain Harte Sewer Pipeline Improvement Project (Project) would be located within the boundaries of the Twain Harte Community Service District (THCSD). The Project will replace existing pipelines to allow the THCSD to maintain, replace, and upgrade its collection system to comply with regulations, avoid sanitary sewer overflows, provide adequate capacity, and protect groundwater and surface water quality.

The proposed Project's construction would include the following criteria pollutant emissions: reactive organic gases (ROG), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and suspended particulate matter (PM₁₀ and PM_{2.5}). There is no expected change in Project operations; therefore, operational emissions were not quantified for the Project. Project construction activities would also generate greenhouse gas (GHG) emissions. Criteria and GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 (California Air Pollution Control Officers Association (CAPCOA) 2021), which is the most current version of the model approved for use by the Tuolumne County Air Pollution Control District (TCAPCD).

Tables 4-3 and 4-4 present the Project's construction emissions and provide substantial evidence to support a *less than significant* air quality impact on the Mountain Counties Air Basin. The Project is not expected to increase operational emissions; therefore, the Project is considered to have a *less than significant* air quality impact on the Mountain Counties Air Basin. The Project's construction GHG emissions are short-term and intermittent in nature and therefore are not expected to have a significant impact on statewide GHG goals. The Project is not expected to have an increase in operational GHG emissions. Based on the foregoing conclusions, the Project is considered to have *less than significant* air quality impacts on the Mountain Counties Air Basin.

Cumulative impacts were also evaluated. The Tuolumne County public search for building permit applications indicates that there are no projects within a one-mile radius of the proposed Project. Owing to the inherently cumulative nature of air quality impacts, the threshold for whether a project would make a cumulatively considerable contribution to a significant cumulative impact is simply whether the project would exceed project-level thresholds. As such, a qualitative evaluation of the cumulative projects supports a finding that the Project's contribution would not be cumulatively considerable because the proposed Project's incremental emissions would be *less than significant*.

2. INTRODUCTION

2.1 Purpose

This AQCS was prepared pursuant to the TCAPCD CEQA Significance Thresholds, the California Environmental Quality Act (CEQA) Statute and Guidelines (CEQA 2021), and the National Environmental Policy Act (NEPA).

2.2 General Project Description

The Twain Harte Sewer Pipeline Improvement Project (Project) will replace existing pipelines to allow the THCS to maintain, replace, and upgrade its collection system to comply with regulations, avoid sanitary sewer overflows, provide adequate capacity, and protect groundwater and surface water quality. The Project would be located within the boundaries of the Twain Harte Community Service District.

A 5-month construction schedule starting in Quarter 2 of 2023 is estimated; therefore, most of the defaults in the CalEEMod emissions model were applied to estimate a construction schedule. **Figure 2-1** depicts the regional location and **Figure 2-2** depicts an aerial view of the Project location.

Figure 2-1. Regional Location

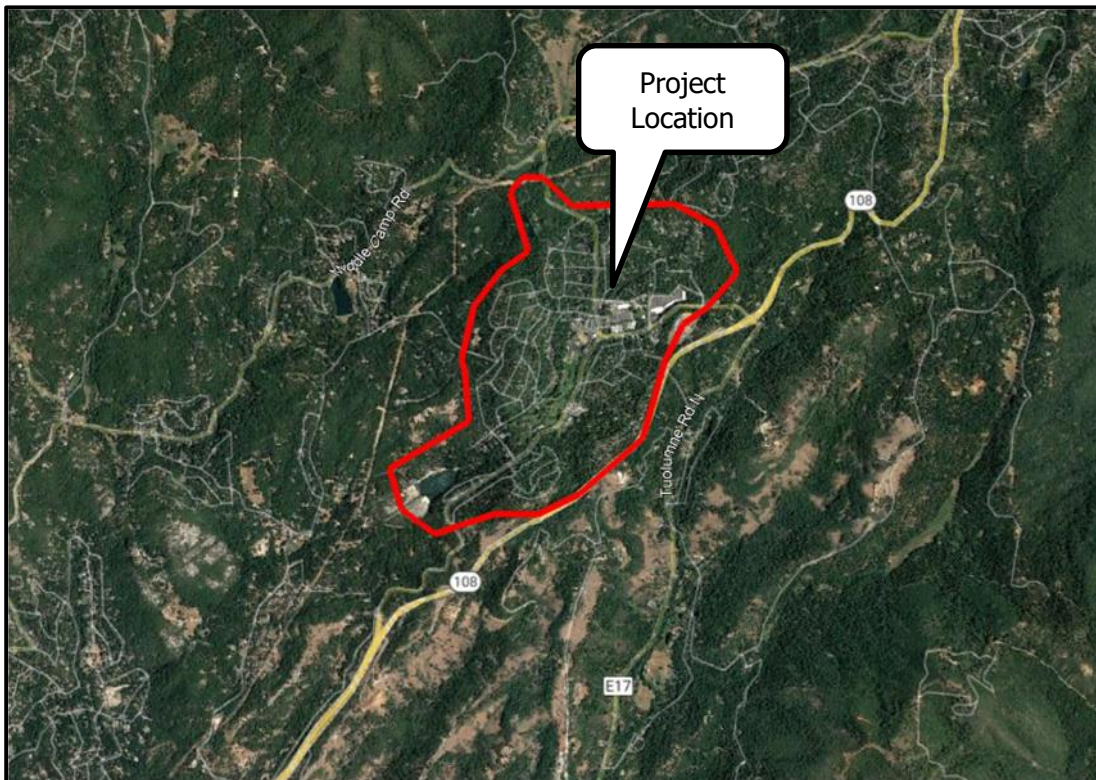


Figure 2-2. Project Location

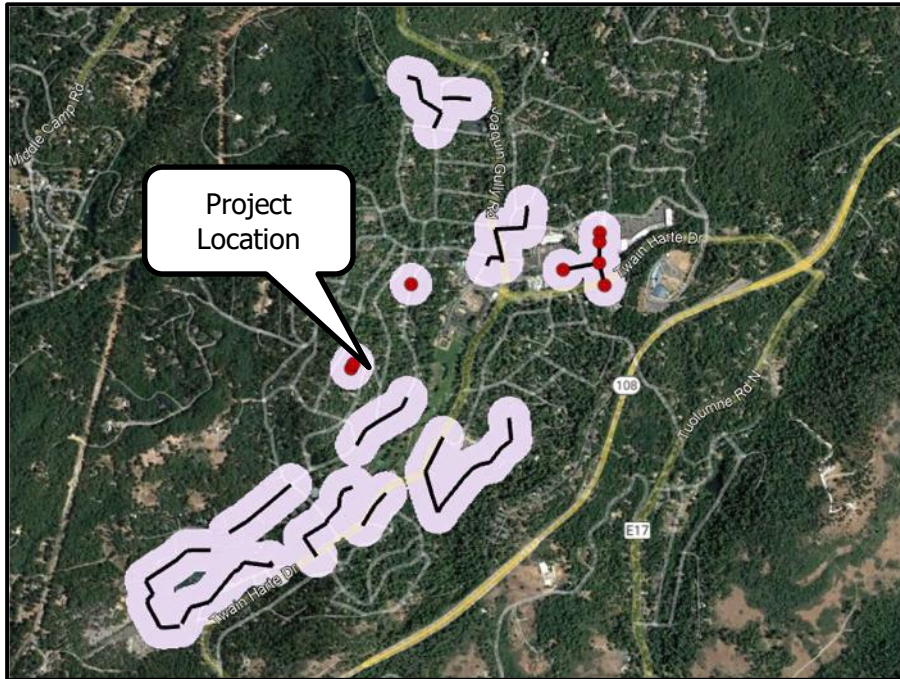
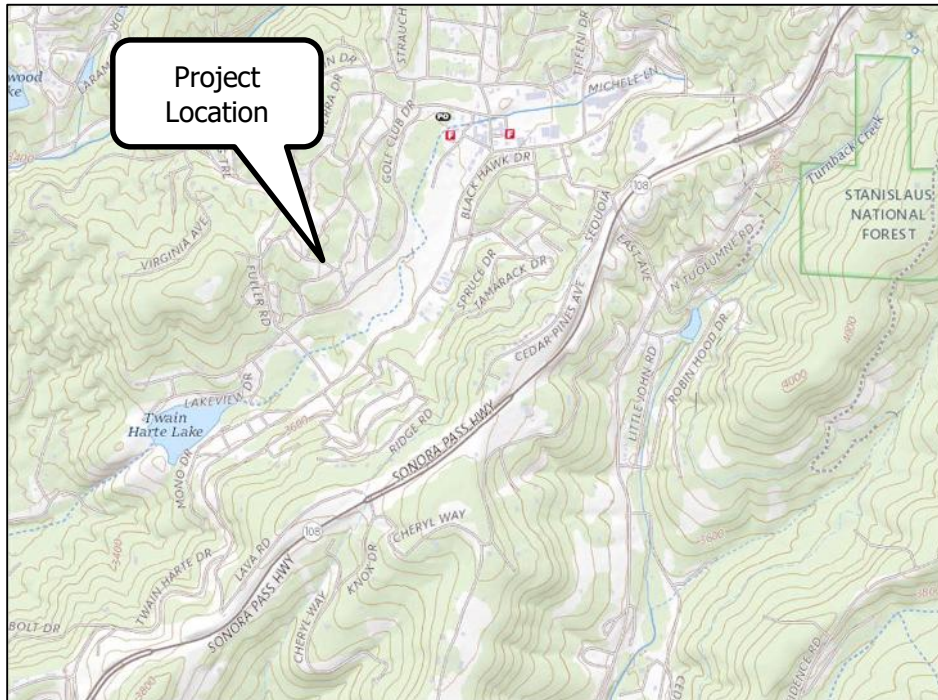


Figure 2-3 depicts the Project site's topography based on United States Geological Survey's (USGS) National Map (USGS 2019). The Project site is located at elevations of approximately 3,400 to 4,000 feet above mean sea level and is surrounded by various residential and retail land uses as well as open land.

Figure 2-3. Project Site Topography



3. SETTING

Protection of the public health is maintained through the attainment and maintenance of ambient air quality standards for various atmospheric compounds and the enforcement of emissions limits for individual stationary sources. The Federal Clean Air Act requires that the U.S. Environmental Protection Agency (EPA) establish National Ambient Air Quality Standards (NAAQS) to protect the health, safety, and welfare of the public. NAAQS have been established for ozone (O₃), CO, NO₂, SO₂, PM₁₀ and PM_{2.5}, and lead (Pb). California has also adopted ambient air quality standards (CAAQS) for these "criteria" air pollutants. CAAQS are more stringent than the corresponding NAAQS and include standards for hydrogen sulfide (H₂S), vinyl chloride (chloroethene), and visibility reducing particles. The U.S. Clean Air Act Amendments of 1977 required each state to identify areas that were in non-attainment of the NAAQS and to develop State Implementation Plans (SIP's) containing strategies to bring these non-attainment areas into compliance. NAAQS and CAAQS designation/classification for Tuolumne County are presented in **Section 3.1** below.

Responsibility for regulation of air quality in California lies with the California Air Resources Board (CARB) and the 35 local air districts with oversight responsibility held by the EPA. CARB is responsible for regulating mobile source emissions, establishing CAAQS, conducting research, managing regulation development, and providing oversight and coordination of the activities of the 35 air districts. The air districts are primarily responsible for regulating stationary source emissions and monitoring ambient pollutant concentrations. CARB also determines whether air basins, or portions thereof, are "unclassified," in "attainment" or in "non-attainment" for the NAAQS and CAAQS relying on statewide air quality monitoring data.

3.1 Air Quality Standards

The Project area is located within Tuolumne County's portion of the Mountain Counties Air Basin (MCAB or Basin). Tuolumne County is included among the nine counties that comprise the MCAB; the other counties include Amador, Calaveras, El Dorado, Nevada, Placer, Plumas, Sierra, and Mariposa, each having their respective Air Pollution Control District. The TCAPCD acts as the regulatory agency for air pollution control in Tuolumne County and is the local agency empowered to regulate air pollutant emissions for the Project area. **Table 3-1** provides the NAAQS and CAAQS.

Table 3-1. Federal & California Air Quality Standards

Pollutant	Averaging Time	NAAQS	CAAQS
		Concentration	
O ₃	8-hour	0.070 ppm (137 µg/m ³) ^a	0.070 ppm (137 µg/m ³)
	1-hour		0.09 ppm (180 µg/m ³)
CO	8-hour	9 ppm (10 µg/m ³)	9 ppm (10 µg/m ³)
	1-hour	35 ppm (40 µg/m ³)	20 ppm (23 µg/m ³)
NO ₂	Annual Average	53 ppb (100 µg/m ³)	0.030 ppm (57 µg/m ³)
	1-Hour	100 ppb (188.68 µg/m ³)	0.18 ppm (339 µg/m ³)
SO ₂	3-Hour	0.5 ppm (1,300 µg/m ³)	
	24 Hour	0.14 ppm (365 µg/m ³)	0.04 ppm (105 µg/m ³)
	1-Hour	75 ppb (196 µg/m ³)	0.25 ppm (655 µg/m ³)
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean		20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	
Sulfates	24-Hour		25 µg/m ³
Pb ^d	Rolling Three-Month Average	0.15 µg/m ³	
	30 Day Average		1.5 µg/m ³
H ₂ S	1-Hour		0.03 ppm (42 µg/m ³)
Vinyl Chloride (chloroethene)	24-Hour		0.010 ppm (26 µg/m ³)
Visibility Reducing particles	8 Hour (1000 to 1800 PST)		b
ppm = parts per million ppb = parts per billion		mg/m ³ = milligrams per cubic meter	µg/m ³ = micrograms per cubic meter
Source: CARB 2016			
a. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm			
b. In 1989, CARB converted both the general statewide 10-mile visibility standards and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.			

Under the provisions of the U.S. Clean Air Act, the Tuolumne County portion of the MCAB has been classified as nonattainment/extreme, nonattainment/severe, nonattainment, attainment/unclassified, attainment, or unclassified under the established NAAQS and CAAQS for various criteria pollutants. **Table 3-2** provides the MCAB designation and classification based on the various criteria pollutants under both NAAQS and CAAQS.

Table 3-2. Mountain Counties Attainment Status

Pollutant	NAAQS ^a	CAAQS ^b
O ₃ , 1-hour	No Federal Standard ^f	Nonattainment
O ₃ , 8-hour	Nonattainment/Marginal ^e	Nonattainment
PM ₁₀	Attainment ^c	Attainment/Unclassified
PM _{2.5}	Attainment ^d	Attainment/Unclassified
CO	Attainment/Unclassified	Attainment
NO ₂	Attainment/Unclassified	Attainment
SO ₂	Attainment/Unclassified	Attainment
Pb (Particulate)	No Designation/Classification	Attainment
H ₂ S	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particulates	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Source: CARB 2020a
 Note: Where CAAQS or NAAQS attainment status was further differentiated by County, the status of Tuolumne County is shown.

TCAPCD does not operate its own air quality monitoring network and instead relies on the air quality monitoring networks of CARB and other surrounding air districts within the MCAB to provide information on average concentrations of those pollutants for which Federal or State agencies have established NAAQS and CAAQS, respectively. The monitoring station in the MCAB are listed in **Table 3-3**.

Table 3-3. Mountain Counties Air Basin Monitoring Network

Site Name	County	Agency	Pollutants
Jackson-Clinton Road	Amador	CARB	O ₃
San Andreas-Gold Strike Road	Calaveras	CARB	O ₃ , PM ₁₀ , PM _{2.5}
Placerville-Gold Nugget Way	El Dorado	CARB	O ₃
Cool (seasonal)	El Dorado	CARB	O ₃
Echo Summit (seasonal)	El Dorado	CARB	O ₃
Yosemite Village-Visitor Center	Mariposa	CARB	PM ₁₀ , PM _{2.5}
Jerseydale Mariposa	Mariposa	CARB	O ₃
Yosemite Natl Park-Turtleback	Mariposa	National Park Service (NPS)	O ₃
Truckee-Fire Station	Nevada	Northern Sierra AQMD	PM _{2.5}
Grass Valley-Litton Building	Nevada	Northern Sierra AQMD	O ₃ , PM _{2.5}
Colfax-City Hall	Placer	Placer County APCD	O ₃ , PM _{2.5}
Quincy-N Church Street	Plumas	Northern Sierra AQMD	PM _{2.5}
Chester	Plumas	Northern Sierra AQMD	PM _{2.5}
Sonora-Barretta Street	Tuolumne	CARB	O ₃
Portola-Gulling Street	Plumas	Northern Sierra AQMD	PM _{2.5}

Source: CARB 2020b

3.2 Existing Air Quality

For the purposes of background data and this air quality analysis, this analysis relied on data collected in the last three years for the CARB monitoring stations that are located in the closest proximity to the project site. **Table 3-3** provides the background concentrations for O₃, particulate matter of 10 microns (PM₁₀), particulate matter of less than 2.5 microns (PM_{2.5}), CO, NO₂, SO₂, and Pb. Information is provided for the Sonora – Barretta Street and San Andreas – Gold Strike Road, and Jerseydale monitoring stations for 2018 through 2020. No data is available for H₂S, Vinyl Chloride or other toxic air contaminants in Tuolumne County.

Table 3-4. Existing Air Quality Monitoring Data in Project Area

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2018	2019	2020	2018	2019	2020
O₃ – 1-hour CAAQS (0.09 ppm)						
Sonora – Barretta Street	0.101	0.087	0.093	4	0	0
San Andreas – Gold Strike Road	0.105	0.082	0.095	2	0	2
Jerseydale	0.127	0.082	0.111	2	0	4
O₃ – 8-hour CAAQS (0.07 ppm)						
Sonora – Barretta Street	0.087	0.074	0.083	22	2	5
San Andreas – Gold Strike Road	0.086	0.074	0.097	10	2	5
Jerseydale	0.088	0.074	0.101	15	5	26
O₃ – 8-hour NAAQS (0.070 ppm)						
Sonora – Barretta Street	0.087	0.073	0.083	21	2	5
San Andreas – Gold Strike Road	0.086	0.073	0.097	10	1	5
Jerseydale	0.084	0.074	0.100	11	5	24
PM₁₀ – 24-hour CAAQS (50 µg/m³)						
San Andreas – Gold Strike Road	66.8	48.5	205.7	5	0	30
PM₁₀ – 24-hour NAAQS (150 µg/m³)						
San Andreas – Gold Strike Road	69.4	47.6	217.3	0	0	4
PM_{2.5} - 24-hour NAAQS (35 µg/m³)						
San Andreas – Gold Strike Road	67.7	24.8	134.2	16	0	23
CO - 8-Hour CAAQS & NAAQS (9.0 ppm)						
No data collected	*	*	*	*	*	*
NO₂ - 1-Hour CAAQS (0.18 ppm)						
No data collected	*	*	*	*	*	*
NO₂ - 1-Hour NAAQS (0.10 ppm)						
No data collected	*	*	*	*	*	*
SO₂ – 24-hour Concentration - CAAQS (0.04 ppm) & NAAQS (0.14 ppm)						
No data collected	*	*	*	*	*	*
Pb - Maximum 30-Day Concentration CAAQS (1500 ng/m³)						
No data collected	*	*	*	*	*	*
Source: CARB 2021 Notes: ppm= parts per million * There was insufficient (or no) data available to determine the value.						

The following is a description of criteria air pollutants, typical sources and health effects and the recently documented pollutant levels in the project vicinity.

3.2.1 Ozone (O₃)

The most severe air quality problem in the Mountain Counties is high concentrations of O₃. High levels of O₃ cause eye irritation and can impair respiratory functions. High levels of O₃ can also affect plants and materials. Grapes, lettuce, spinach and many types of garden flowers and shrubs are particularly vulnerable to O₃ damage. O₃ is not emitted directly into the atmosphere but is a secondary pollutant produced through photochemical reactions involving hydrocarbons and nitrogen oxides (NO_x). Significant O₃ generation requires about one to three hours in a stable atmosphere with strong sunlight. For this reason, the months of April through October comprise the "ozone season." O₃ is a regional pollutant because O₃ precursors are transported and diffused by wind concurrently with the reaction process. The data contained in **Table 3-3** shows that the Tuolumne area exceeded the 1-hour average ambient O₃ CAAQS and the 8-hour average ambient O₃ NAAQS and CAAQS for the 2018 through 2020 period.

3.2.2 Suspended Particulate Matter (PM₁₀ and PM_{2.5})

Both State and Federal particulate standards now apply to particulates under 10 microns (PM₁₀) rather than to total suspended particulate (TSP), which includes particulates up to 30 microns in diameter. Continuing studies have shown that the smaller-diameter fraction of TSP represents the greatest health hazard posed by the pollutant; therefore, EPA has recently established NAAQS for PM_{2.5}. The project area is classified as attainment or unclassifiable for PM₁₀ and PM_{2.5} for NAAQS and CAAQS.

Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion, and from atmospheric photochemical reactions. Natural activities also increase the level of particulates in the atmosphere; wind-raised dust and ocean spray are two sources of naturally occurring particulates. The largest sources of PM₁₀ and PM_{2.5} in the MCAB are motor vehicle emissions and forest fires. PM₁₀ and PM_{2.5} are considered regional pollutants with elevated levels typically occurring over a wide geographic area. Concentrations tend to be highest in the winter, during periods of high atmospheric stability and low wind speed. In the respiratory tract, very small particles of certain substances may produce injury by themselves or may contain absorbed gases that are injurious. Particulates of aerosol size suspended in the air can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

Table 3-3 shows that PM₁₀ levels exceeded the CAAQS and the NAAQS at the monitoring station in 2020 and the CAAQS in 2018. **Table 3-3** shows that PM_{2.5} NAAQS were exceeded in 2018 and 2020. Similar levels can be expected to occur in the vicinity of the Project site.

3.2.3 Carbon Monoxide (CO)

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. Wind speed and atmospheric mixing also influence CO concentrations; however, under inversion conditions, CO concentrations may be more uniformly distributed over a broad area.

Internal combustion engines, principally in vehicles, produce CO due to incomplete fuel combustion. Various industrial processes also produce CO emissions through incomplete combustion. Gasoline-powered motor vehicles are typically the major source of this contaminant. CO does not irritate the respiratory tract but passes through the lungs directly into the blood stream, and by interfering with the transfer of fresh oxygen to the blood, deprives sensitive tissues of oxygen, thereby aggravate cardiovascular disease, causing fatigue, headaches, and dizziness. CO is not known to have adverse effects on vegetation, visibility, or materials.

Table 3-3 reports no CO data is available for the three-year period from 2018 through 2020; historically Tuolumne area data for CO has been below the CAAQS and NAAQS.

3.2.4 Nitrogen Dioxide (NO₂) and Hydrocarbons

Tuolumne County has been designated as an attainment area for the NAAQS for NO₂. NO₂ is the "whiskey brown" colored gas readily visible during periods of heavy air pollution. Mobile sources and oil and gas production account for nearly all of the County's NO_x emissions, most of which is emitted as NO₂. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the region. Railroads and aircraft are other potentially significant sources of combustion air contaminants. Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of hydrocarbons and sunlight to form NO₂ and O₃. NO₂, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 10-mile visibility. NO_x is an important air pollutant in the region because it is a primary receptor of ultraviolet light, which initiates the reactions producing photochemical smog. It also reacts in the air to form nitrate particulates.

Motor vehicles are the major source of reactive hydrocarbons in the basin. Other sources include evaporation of organic solvents and petroleum production and refining operations. Certain hydrocarbons can damage plants by inhibiting growth and by causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions, which produce photochemical oxidants.

Table 3-3 shows that the Federal and State NO₂ standards have not been measured at any MCAB-monitoring stations over the three-year period of 2018 through 2020. Hydrocarbons are not currently monitored.

3.2.5 Sulfur Dioxide (SO₂)

Tuolumne County has been designated as an attainment area for the NAAQS for SO₂. SO₂ is the primary combustion product of sulfur, or sulfur containing fuels. Fuel combustion is the major source of this pollutant, while chemical plants, sulfur recovery plants, and metal processing facilities are minor contributors. Gaseous fuels (natural gas, propane, etc.) typically have lower percentages of sulfur containing compounds than liquid fuels such as diesel or crude oil. SO₂ levels are generally higher in the winter months. Decreasing levels of SO₂ in the atmosphere reflect the use of natural gas in power plants and boilers.

At high concentrations, SO₂ irritates the upper respiratory tract. At lower concentrations, when respired in combination with particulates, SO₂ can result in greater harm by injuring lung tissues. Sulfur oxides (SO_x), in combination with moisture and oxygen, results in the formation of sulfuric acid, which can yellow the leaves of plants, dissolve marble, and oxidize iron and steel. SO_x can also react to produce sulfates that reduce visibility and sunlight.

Table 3-3 shows no data has been reported over the three-year period in Tuolumne County.

3.2.6 Lead (Pb) and Suspended Sulfate

Ambient Pb levels have dropped dramatically due to the increase in the percentage of motor vehicles that run exclusively on unleaded fuel. Ambient Pb levels in Tuolumne are well below the ambient standard and are expected to continue to decline; the data reported in **Table 3-3** only shows the highest concentration as the number of days exceeding standards are not reported. Suspended sulfate levels have stabilized to the point where no excesses of the State standard are expected in any given year.

3.3 Climate

Tuolumne County is located in the Mountain Counties Air Basin (MCAB). The MCAB consists of a variety of geography and topography, which affects the region's climate. Tuolumne County is located in central California bridging from the San Joaquin Valley to the west, to the Sierra Nevada foothills, to the Sierra Nevada Mountains on the east. The MCAB includes Plumas, Sierra, Nevada, Placer (middle portion), El Dorado (western portion), Amador, Calaveras, Mariposa, and Mariposa Counties. Tuolumne County is bordered by Calaveras County on the north, Stanislaus County on the west, Mariposa County on the south, and Alpine and Mono Counties to the east. The basin lies along the northern Sierra Nevada Mountain Range, close to or contiguous with the Nevada border, and covers an area of roughly 11,000 square miles. The population of the entire air basin is less than 500,000. The western slope of El Dorado County, from Lake Tahoe on the east to the Sacramento County boundary on the west, lies within the MCAB. Elevations range from over 10,000 feet at the Sierra crest down to several hundred feet above sea level at the Sacramento County boundary. Throughout the basin, the topography is highly variable, and includes rugged mountain peaks and valleys with extreme slopes and differences in elevation in the Sierras, as well as rolling foothills to the west. The western half of the County consists of gently sloping foothills with generally thin soils and hard underlying metamorphic bedrock. The eastern half of the County consists of steep to extremely steep foothills and mountains that generally ramp upwards to the northeast to the crest of the Sierra Nevada range. The general climate of the MCAB varies considerably with elevation and proximity to the Sierra ridge. The terrain features of the basin make it possible for various climates to exist in relatively close proximity. The Sierra Nevada receives large amounts of precipitation in the winter, with lighter amounts in the summer. Precipitation levels are high in the highest mountain elevations but decline rapidly toward the western portion of the basin. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial depths of snow can accumulate, but in the western foothills, winter temperatures usually dip below freezing only at night and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80s, but the western end of the basin can routinely exceed 100 degrees.

Meteorological data for various monitoring stations is maintained by the Western Regional Climate Center. Meteorological data for the Project site is expected to be similar to the data recorded at the Sonora monitoring station. This data is provided in **Table 3-4**, which contains average precipitation data recorded at the Sonora monitoring station. Over the 113-year period from December of 1903 through June of 2016 (the most recent data available), the average annual precipitation was 32.14 inches.

Table 3-5. Sonora Weather Data

Period of Record Monthly Climate Summary for the Period 12/01/1903 to 6/10/2016													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Avg. Maximum Temp (F)	54.5	58.0	62.4	68.5	77.1	86.1	94.5	93.0	86.7	76.0	63.5	55.6	73.0
Avg. Minimum Temp (F)	33.4	35.5	38.0	41.7	46.7	52.7	58.7	57.4	52.7	45.2	38.1	33.8	44.5
Average Total Precipitation (in.)	6.13	5.55	5.10	2.77	1.27	0.33	0.04	0.08	0.39	1.62	3.46	5.39	32.14
Average Snowfall (in.)	2.3	1.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.7
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent of possible observations for period of record: Max. Temp.: 90.2% Min. Temp.: 90% Precipitation: 94.8% Snowfall: 92.6% Snow Depth: 91.8%													
Source: Western Regional Climate Center, 2021.													

3.4 Climate Change and Greenhouse Gases

3.4.1 Global Climate Change

“Global climate change” refers to change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms, lasting for decades or longer. The term “global climate change” is often used interchangeably with the term “global warming,” but “global climate change” is preferred by some scientists and policy makers to “global warming” because it helps convey the notion that in addition to rising temperatures, other changes in global climate may occur. Climate change may result from the following influences:

- ▶ Natural factors, such as changes in the sun’s intensity or slow changes in the Earth’s orbit around the sun;
- ▶ Natural processes within the climate system (e.g., changes in ocean circulation); and/or
- ▶ Human activities that change the atmosphere’s composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, and desertification).

As determined from worldwide meteorological measurements between 1990 and 2005, the primary observed effect of global climate change has been a rise in the average global tropospheric temperature of 0.36 degree Fahrenheit (°F) per decade. Climate change modeling shows that further warming could occur, which could induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns or more energetic aspects of extreme weather (e.g., droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones). Specific effects from climate change in California may include a decline in the Sierra Nevada snowpack, erosion of California’s coastline, and seawater intrusion in the Sacramento-San Joaquin River Delta.

Human activities, including fossil fuel combustion and land use changes, release carbon dioxide (CO₂) and other compounds cumulatively termed greenhouse gases (GHGs). GHGs are effective at trapping radiation that would otherwise escape the atmosphere. This trapped radiation warms the atmosphere, the oceans, and the earth’s surface (USGCRP, 2014). Many scientists believe “most of the warming observed over the last 50 years is attributable to human activities” (IPCC, 2017). The increased amount of CO₂ and other GHGs in the atmosphere is the alleged primary result of human-induced warming.

GHGs are present in the atmosphere naturally, released by natural sources, or formed from secondary reactions taking place in the atmosphere. They include CO₂, methane (CH₄), nitrous oxide (N₂O), and O₃. In the last 200 years, substantial quantities of GHGs have been released into the atmosphere, primarily from fossil fuel combustion. These human-induced emissions are increasing GHG concentrations in the atmosphere, therefore enhancing the natural greenhouse effect. The GHGs resulting from human activity are believed to be causing global climate change. While human-made GHGs include CO₂, CH₄, and N₂O, some (like chlorofluorocarbons [CFCs]) are completely new to the atmosphere. GHGs vary considerably in terms of Global Warming Potential (GWP), the comparative ability of each GHG to trap heat in the atmosphere. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e).

Natural sources of CO₂ include the respiration (breathing) of humans and animals and evaporation from the oceans. Together, these natural sources release approximately 150 billion metric tons of CO₂ each year, far

outweighing the 7 billion metric tons of GHG emissions from fossil fuel burning, waste incineration, deforestation, cement manufacturing, and other human activity. Nevertheless, natural GHG removal processes such as photosynthesis cannot keep pace with the additional output of CO₂ from human activities. Consequently, GHGs are building up in the atmosphere (Enviropedia, 2017).

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources of CH₄ production include wetlands, termites, and oceans. Human activity accounts for the majority of the approximately 500 million metric tons of CH₄ emitted annually. These anthropogenic sources include the mining and burning of fossil fuels; digestive processes in ruminant livestock such as cattle; rice cultivation; and the decomposition of waste in landfills. The major removal process for atmospheric CH₄, the chemical breakdown in the atmosphere, cannot keep pace with source emissions; therefore, CH₄ concentrations in the atmosphere are rising.

Worldwide emissions of GHGs in 2008 were 30.1 billion metric tons of CO₂e and have increased considerably since that time (United Nations, 2011). It is important to note that the global emissions inventory data are not all from the same year and may vary depending on the source of the data (U.S. EPA, 2019). Emissions from the top five emitting countries and the European Union accounted for approximately 70% of total global GHG emissions in 2014. The United States was the number two producer of GHG emissions behind China. The primary GHG emitted by human activities was CO₂, representing approximately 76% of total global GHG emissions (U.S. EPA, 2019).

In 2017, the United States emitted approximately 6.5 million metric tons of CO₂e. Of the six major sectors nationwide (electric power industry, transportation, industry, agriculture, commercial, and residential), the electric power industry and transportation sectors combined account for approximately 57% of the GHG emissions; the majority of the electrical power industry and all of the transportation emissions are generated from direct fossil fuel combustion. Between 1990 and 2017, total United States GHG emissions rose approximately 1.3% (U.S. EPA, 2019).

Worldwide, energy-related CO₂ emissions are expected to increase at an average rate of 0.6% annually between 2018 and 2050, compared with the average growth rate of 1.8% per year from 1990 to 2018. Much of the increase in these emissions is expected to occur in the developing world where emerging economies, such as China and India, fuel economic development with fossil fuel energy. Developing countries' emissions are expected to grow above the world average at a rate of approximately 1% annually between 2018 and 2050 and surpass emissions of industrialized countries by 2025 (U.S. EIA, 2019).

CARB is responsible for developing and maintaining the California GHG emissions inventory. This inventory estimates the amount of GHGs emitted into and removed from the atmosphere by human activities within the state of California and supports the Assembly Bill (AB) 32 Climate Change Program. CARB's current GHG emission inventory covers the years 2000 through 2017 and is based on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, and agricultural lands).

In 2017, emissions from statewide emitting activities were 424 million metric tons of CO₂ equivalent (MMT CO₂e), which is 5 MMT CO₂e lower than 2016 levels. 2017 emissions have decreased by 14% since peak levels in 2004 and are 7 MMT CO₂e below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 tonnes per person to 10.7 tonnes per person in 2017, a 24% decrease (CARB 2019).

CARB estimates that transportation was the source of approximately 40% of California's GHG emissions in 2017, followed by electricity generation at 15%. Other sources of GHG emissions were industrial sources at 21%, residential plus commercial activities at 10%, and agriculture at 8% (CARB 2019).

CARB has projected the estimated statewide GHG emissions for the year 2020, which represent the emissions that would be expected to occur with reductions anticipated from Pavley I and the Renewables Electricity Standard (30 MMT CO₂e total), will be 509 MMT of CO₂e (CARB, 2014). GHG emissions from the transportation and electricity sectors as a whole are expected to increase at approximately 36% and 20% of total CO₂e emissions, respectively, as compared to 2009. The industrial sector consists of large stationary sources of GHG emissions and the percentage of the total 2020 emissions is projected to be 18% of total CO₂e emissions. The remaining sources of GHG emissions in 2020 are high global warming potential gases at 6%, residential and commercial activities at 10%, agriculture at 7%, and recycling and waste at 2%.

3.4.2 Effects of Global Climate Change

Changes in the global climate are assessed using historical records of temperature changes that have occurred in the past. Climate change scientists use this temperature data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from past climate changes in rate and magnitude.

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fifth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100 could range from 1.1 degree Celsius (°C) to 6.4 °C (8 to 10.4 °Fahrenheit) (IPCC, 2013). Global average temperatures and sea levels are expected to rise under all scenarios (IPCC, 2014). The IPCC concluded that global climate change was largely the result of human activity, mainly the burning of fossil fuels. However, the scientific literature is not consistent regarding many of the aspects of climate change, the actual temperature changes during the 20th century, and contributions from human versus non-human activities.

Effects from global climate change may arise from temperature increases, climate sensitive diseases, extreme weather events, and degradation of air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems. Heat-related problems include heat rash and heat stroke, drought, etc. In addition, climate-sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects. Such diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture. Global warming may also contribute to air quality problems from increased frequency of smog and particulate air pollution.

According to the 2006 California Climate Action Team (CAT) Report, several climate change effects can be expected in California over the course of the next century (CalEPA, 2006). These are based on trends established by the IPCC and are summarized below.

- ▶ A diminishing Sierra snowpack declining by 70% to 90%, threatening the state's water supply.
- ▶ A rise in sea levels, resulting in the displacement of coastal businesses and residences. During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Sea level rises of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. (Note: This condition would not affect the Proposed Project area, as it is a significant distance away from coastal areas.)
- ▶ An increase in temperature and extreme weather events. Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.

- ▶ Increased risk of large wildfires if rain increases as temperatures rise. Wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30% toward the end of the 21st century because more winter rain will stimulate the growth of more plant fuel available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90% more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- ▶ Increasing temperatures from 8 to 10.4 °F under the higher emission scenarios, leading to a 25% to 35% increase in the number of days that ozone pollution levels are exceeded in most urban areas (see below).
- ▶ Increased vulnerability of forests due to forest fires, pest infestation, and increased temperatures.
- ▶ Reductions in the quality and quantity of certain agricultural products. The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- ▶ Exacerbation of air quality problems. If temperatures rise to the medium warming range, there could be 75 to 85% more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- ▶ A decrease in the health and productivity of California's forests. Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.
- ▶ Increased electricity demand, particularly in the hot summer months.
- ▶ Increased ground-level ozone formation due to higher reaction rates of ozone precursors.

3.4.3 Global Climate Change Regulatory Issues

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change established an agreement with the goal of controlling GHG emissions, including methane. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs. Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete O₃ in the stratosphere (chlorofluorocarbons [CFCs], halons, carbon tetrachloride, and methyl chloroform) were phased out by 2000 (methyl chloroform was phased out by 2005).

On September 27, 2006, Assembly Bill 32 (AB32), the California Global Warming Solutions Act of 2006 (the Act) was enacted by the State of California. The legislature stated, "Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." The Act caps California's GHG emissions at 1990 levels by 2020. The Act defines GHG emissions as all of the following gases: carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. This agreement represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB32 lays out a program to inventory and reduce GHG emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB32 charges CARB with responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. CARB has adopted a list of discrete early action measures that can be implemented to reduce GHG emissions. CARB has defined the 1990 baseline emissions for California and has adopted that baseline as the 2020 statewide emissions cap. CARB is conducting rulemaking for reducing GHG emissions to achieve the emissions cap by 2020. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system

reliability, maximize additional environmental and economic co-benefits for California, and complement the state's efforts to improve air quality.

Subsequent legislation by the California legislature has included Senate Bill (SB) 32, which expanded upon AB32 to reduce GHG emissions to 40% below the 1990 levels by 2030; AB197 which increased the legislative oversight of the CARB by adding two legislatively appointed non-voting members to the CARB Board and provided additional protection to disadvantaged communities; SB350, which increased California's renewable energy electricity procurement goal and SB100, which established a landmark policy requiring renewable energy and zero-carbon resources to supply 100 percent of electrical retail sales to end use customers and 100 percent of electricity procured to serve state agencies by 2045.

Global warming and climate change have received substantial public attention for more than 20 years. For example, the United States Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and human-induced changes in the Earth's global environmental system, to monitor, understand, and predict global change, and to provide a sound scientific basis for national and international decision-making. Even so, the analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in GHG emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

The California Supreme Court's most recent CEQA decision on the Newhall Ranch development case, *Center for Biological v. California Department of Fish and Wildlife* (November 30, 2015, Case No. 217763), determined that the project's Environmental Impact Report (EIR) did not substantiate the conclusion that the GHG cumulative impacts would be less than significant. The EIR determined that the Newhall Ranch development project would reduce GHG emissions by 31 percent from business as usual (BAU). This reduction was compared to the California's target of reducing GHG emissions statewide by 29 percent from business as usual. The Court determined that "the EIR's deficiency stems from taking a quantitative comparison method developed by the Scoping Plan as a measure of the greenhouse gas reduction effort required by the state as a whole, and attempting to use that method, without adjustments, for a purpose very different from its original design." In the Court's final ruling it offered suggestions that were deemed appropriate use of the BAU methodology:

1. Lead agencies can use the comparison to BAU methodology if they determine what reduction a particular project must achieve in order to comply with statewide goals,
2. Project design features that comply with regulations to reduce emissions may demonstrate that those components of emissions are less than significant, and
3. Lead agencies could also demonstrate compliance with locally adopted climate plans or could apply specific numerical thresholds developed by some local agencies.

Tuolumne County, the Lead CEQA agency for this Project, has not developed specific thresholds for GHGs. However, according to the General Plan Update EIR, the statewide service population GHG emissions threshold for 2040 is 3.1 MTCO_{2e} per service population. The 3.1 MTCO_{2e} per service population would not result in a substantial increase in GHGs or conflict with local or state plans adopted for the purpose of reducing GHG emissions.

3.5 Regulatory Setting

3.5.1 Federal

3.5.1.1 U.S. Environmental Protection Agency

The 1977 federal CAA and 1990 revisions require EPA to identify National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare. In January of 2013, EPA adopted new PM₁₀ and PM_{2.5} federal standards, 150 µg/m³ and 35 µg/m³ respectively.

In October 2015, EPA implemented a new 8-hour standard for ozone. The new primary 8-hour standard is 0.070 ppm, and the new secondary standard is set at a form and level identical to the primary standard. The previous primary and secondary standards were an identical 8-hour standard, set at 0.075 ppm. On April 12, 2010, EPA implemented a new 1-hour standard for NO₂ of 100 parts per billion (ppb).

Pursuant to the 1990 CAA Amendments (CAAA), EPA classified air basins (or portions thereof) as either attainment or nonattainment areas for each criteria air pollutant based on whether or not the NAAQS have been achieved. The CAA also required each state to prepare an air quality control plan (State Implementation Plan [SIP]). The 1990 amendments additionally required states containing areas that violate NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. EPA has the responsibility to review all SIPs to determine if they conform to the mandates of the CAAA and will achieve air quality goals when implemented.

Regulation of TACs (HAPs under federal regulations) is achieved through federal and state controls on individual sources. Federal law defines HAPs as non-criteria air pollutants with short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects. The 1977 CAA required EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare.

The 1990 CAAA offer a technology-based approach to reducing air toxics. Since the CAAA were approved, 188 chemicals have been designated as HAPs and are regulated under a two-phase strategy. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT), which includes measures, methods, and techniques, such as material substitutions, work practices, and operational improvements, aimed at reducing toxic air emissions. MACT is the lowest emission rate, or highest level of control demonstrated, on average by the top performing companies (top 12%) in the source category. MACT standards already exist for the 174 source categories: 166 major sources and 8 area sources. Under the air toxics program, facilities having similar operating processes are grouped into categories. These MACTs were promulgated in four "bins" of years: 1992, 1994 (39 categories), 1997 (62 categories), and 2000 (67 categories). As of August 2003, MACT standards have been made for 174 source categories and their sub-categories.

Title V of the CAA, as amended in 1990, creates an operating permits program for certain defined sources. In general, owner/operators of defined stationary sources that emit more than 25 tons per year (tpy) of NO_x and VOC must possess a Title V permit. Title V is a federally enforceable state operating permit that is required under 40 CFR, Part 70. The Title V programs are developed at the state or local level, as outlined in 40 CFR 70.

Under the extreme definition, the definition of a major source subject to Title V permitting changes from 25 tpy to 10 tpy, which results in more businesses having to comply with Title V permitting requirements under the extreme nonattainment designation.

Title V does not impose any new air pollution standards, require installation of any new controls on the affected facilities, or require reductions in emissions. Title V does enhance public and EPA participation in the permitting process and requires additional recordkeeping and reporting by businesses, which results in significant administrative requirements. As this Project is not considered a stationary source under SJVAPCD or CAA regulations, it will not be subject to Title V requirements.

3.5.2 State

3.5.2.1 California Air Resources Board (CARB)

CARB, a department of the California Environmental Protection Agency (Cal/EPA), oversees air quality planning and control throughout California by administering the SIP. Its primary responsibility lies in ensuring implementation of the 1989 amendments to the CCAA as well as responding to the federal CAA requirements and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to reduce vehicular emissions further.

The amendments to the CCAA establish the CAAQS and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same criteria pollutants as the federal CAA; they also include sulfate, Visibility Reducing Particles (VRPs), H₂S, and vinyl chloride. They are also more stringent than the federal standards. The San Joaquin Valley Air Basin (SJVAB) is designated as a nonattainment area for the state ozone, PM₁₀, and PM_{2.5} standards. Concentrations of all other pollutants meet state standards.

CARB is also responsible for regulations pertaining to TACs. AB 2588 was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report information regarding the types and quantities of certain substances that their facilities routinely release into the SJVAB. Each air pollution control district ranks the data into high, intermediate, and low priority categories. When considering the ranking, the potency, toxicity, quantity, volume, and proximity of the facility to receptors are given consideration by an air district.

CARB also has on- and off-road engine emission-reduction programs that would indirectly affect the proposed project's emissions through the phasing in of cleaner on- and off-road engines. In addition, CARB has a Portable Equipment Registration Program that allows owners or operators of portable engines and associated equipment to register their units under a statewide program, with specified emission requirements, without having to obtain individual permits from local air districts.

The state has also enacted a regulation for the reduction of diesel particulate matter and criteria pollutant emissions from in-use off-road diesel-fueled vehicles (13 CCR Article 4.8, Chapter 9, Section 2449). This regulation provides target emission rates for particulate matter and NO_x emissions for owners of fleets of diesel-fueled off-road vehicles. It applies to equipment fleets of three specific sizes, and the target emission rates are reduced over time.

3.5.3 Local

3.5.3.1 Tuolumne County General Plan

The policies, goals, and implementation measures in the Tuolumne County General Plan applicable to air quality as related to the proposed project are provided below. The Tuolumne County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the proposed project. Therefore, they are not listed below.

3.5.3.2 Tuolumne County Air Pollution Control District (TCAPCD)

The policies, rules, and Air Quality Attainment Plan (AQAP) prepared and maintained by the TCAPCD govern efforts to get into and maintain compliance with federally established Ambient Air Quality Standards. The following discussion details the development and rules associated with the TCAPCD's AQAP efforts.

3.5.3.2.1 Ozone Air Quality Attainment Plan

Tuolumne County is in nonattainment for the state standards of ozone. CARB has determined that the ozone levels in Tuolumne County are caused by "overwhelming transport" of emissions into the air district. Therefore, TCAPCD is relieved from preparing an ozone attainment plan (CAPCOA 2015).

3.5.3.2.2 TCAPCD Rules and Regulations

The Project is an improvement project that will primarily be subject to SJVAPCD rules governing construction emissions, dust control, and nuisance issues.

3.5.4 General Conformity for Federal Actions Under NEPA

Section 176(c) of the Clean Air Act prohibits Federal entities from taking actions in nonattainment or maintenance areas which do not conform to the State Implementation Plan (SIP) for the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). The purpose of "conformity" is to 1) ensure that Federal activities do not interfere with emissions budgets within the affected SIP; 2) ensure such actions do not cause or contribute to new violations; and 3) ensure attainment and maintenance of the NAAQS. In November of 1993 the U. S. Environmental Protection Agency (EPA) promulgated two sets of regulations to implement Section 176(c). On November 24, 1993, the EPA promulgated the Transportation Conformity Regulations, applicable to highway and mass transit actions, to establish the criteria and procedures for determining that transportation plans, programs, and projects which are funded under Title 23 U.S.C. or the Federal Transit Act, conform with the SIP (58 FR 62188). On November 30, 1993, the EPA promulgated the General Conformity Regulations which applies to all other Federal actions to ensure that such actions also conform to applicable SIPs (58 FR 63214).

Under General Conformity, all Federal actions are covered unless exempted (i.e. actions covered by transportation conformity, actions with de minimus emissions, exempt actions listed by rule, or actions covered by a Presumed to Conform listing. Conformance can be demonstrated in any one of five ways:

1. Showing that proposed emissions increases are included in the SIP;
2. Provision that the State will agree to include the proposed emission increases in the SIP;
3. Demonstrating that there will be new violations of NAAQS and/or increase in frequency/severity of violations;
4. Identification and provision of emissions offsets; or
5. Avoidance, Minimization and/or Mitigation Measures.

Some emissions are excluded from conformity determination, such as those already subject to new source review (stationary sources); those covered by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) or compliance with other environmental laws, actions not reasonably foreseeable, and those for which the Agency has no continuing program responsibility.

At issue for the Project is the potential for an increase in total NO_x emissions in excess of de minimis levels during project construction. The project will result in no change to the current operational (long-term)

emissions of all criteria pollutants; thus, no consideration of these emissions is required. General Conformity de minimus levels are presented below in **Table 3-6**.

Table 3-6. General Conformity De Minimus Levels

Pollutant	Attainment Status¹	Tons Per Year
Ozone (VOC)	Non-Attainment Area Inside an Ozone Transport Region	50
Ozone (NOx)	Non-Attainment Area Inside an Ozone Transport Region	100

1. 40 CFR Part 93.153(b)(1) – Federal (NAAQS)

If the planned Federal action for the Project can be demonstrated to pose emissions impacts less than those listed above in **Table 3-6**, the project can be said to be in conformity with the CAA and NEPA and no further demonstration is required. This fact is demonstrated in Chapter 4 of this analysis.

4. IMPACT ASSESSMENT

4.1 Significance Criteria

To determine whether a proposed Project could create a potential CEQA impact, local, State, and Federal agencies have developed various means by which a project's impacts may be measured and evaluated. Such means can generally be categorized as follows:

- ▶ Thresholds of significance adopted by air quality agencies to guide lead agencies in their evaluation of air quality impacts under the CEQA.
- ▶ Regulations established by air districts, CARB and EPA for the evaluation of stationary sources when applying for Authorities to Construct, Permits to Operate and other permit program requirements (e.g., New Source Review).
- ▶ Thresholds utilized to determine if a project would cause or contribute significantly to violations of the ambient air quality standards or other concentration-based limits.
- ▶ Regulations applied in areas where severe air quality problems exist.

Summary tables of these emission-based and concentration-based thresholds of significance for each pollutant are provided below along with a discussion of their applicability.

4.1.1 Thresholds Adopted for the Evaluation of Air Quality Impacts under CEQA

In order to maintain consistency with CEQA, the TCAPCD adopted evaluation criteria from CEQA Guidelines Appendix G with points of significance for air quality to assist applicants with complying with the various requirements. According to these criteria, a project would have potentially significant air quality impacts when the project:

- ▶ Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- ▶ Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard, including releasing emissions which exceed quantitative thresholds for ozone precursors.
- ▶ Expose sensitive receptors to substantial pollutant concentrations.
- ▶ Create objectionable odors affecting a substantial number of people.

The TCAPCD thresholds are designed to implement the general criteria for air quality emissions as required in the CEQA Guidelines, Appendix G, Paragraph III (Title 14 of the California Code of Regulations §15064.7) and CEQA (California Public Resources Code Sections 21000 et. al). TCAPCD's specific CEQA air quality thresholds are presented in **Table 4-1**.

Table 4-1. TCAPCD CEQA Thresholds of Significance

Criteria Pollutant	Significance Level	
	Daily	Annual
CO	1,000 lbs/day	100 tons/yr
NOx	1,000 lbs/day	100 tons/yr
ROG	1,000 lbs/day	100 tons/yr
SOx	-	-
PM ₁₀	1,000 lbs/day	100 tons/yr
PM _{2.5}	-	-
<i>Source: TCAPCD 2017</i>		

4.1.2 Thresholds for Ambient Air Quality Impacts

CEQA Guidelines – Appendix G (Environmental Checklist) states that a project that would “violate any air quality standard or contribute substantially to an existing or projected air quality violation” would be considered to create significant impacts on air quality. Therefore, an AQIA should determine whether the emissions from a project would cause or contribute significantly to violations of the NAAQS or CAAQS (presented above in **Table 3-1**) when added to existing ambient concentrations.

The EPA has established the Federal New Source Review (NSR), which is divided into three types of NSR permitting requirements:

1. Prevention of Significant Deterioration (PSD) permits, where federal regulations are applied to new major sources, or existing major sources making a major modification, that are located in areas that have been designated as federal *attainment* for the NAAQS. The purpose of PSD is to ensure that areas with good ambient air quality will continue to maintain good air quality.
2. Nonattainment NSR permits, where federal regulations are applied to new major sources, or existing major sources making a major modification, that are located in areas designated as federal *nonattainment* for the NAAQS. The purpose of federal NSR is to ensure that ambient air quality does not deteriorate any further in nonattainment areas.
3. Minor NSR permits apply to stationary sources that do not require PSD or Nonattainment NSR permits. The purpose of Minor NSR permits is to prevent the construction of sources that would interfere with attainment or maintenance of a NAAQS or violate the control strategy in nonattainment areas. Also, Minor NSR permits often contain permit conditions to limit the sources emissions to avoid PSD or Nonattainment NSR.

The EPA has established pollutant specific “significant impact levels” (SIL) to be used in the PSD program to determine whether proposed construction would impact the NAAQS in attainment areas. The PSD SIL thresholds are used with ambient air quality modeling for a CEQA project to address whether the project would “*violate any air quality standard or contribute substantially to an existing or projected air quality violation.*” A project’s impacts are considered less than significant if emissions are below the PSD SIL for a particular pollutant. Ambient air quality emissions estimates below the PSD SIL thresholds would result in less than significant ambient air quality impacts on both a project and cumulative CEQA impact analysis. When a SIL is exceeded, an additional “increment analysis” is required. PSD SILs and increments are more stringent than the CAAQS or NAAQS and represent the most stringent thresholds of significance. (CARB 2020c; U.S. EPA 2016)

TCAPCD’s Air Rules and Regulations define a “major source” as a stationary source which has the potential to emit a regulated air pollutant or Hazardous Air Pollutant (HAP) in quantities equal to or exceeding the lesser of any of the following thresholds:

1. 100 tons per year (tpy) of any regulated air pollutant;
2. 10 tpy of one HAP or 25 tpy of two or more HAPs; or
3. Any lesser quantity threshold promulgated by the U.S. EPA. (MCAPCD 2020)

As the Project would not include any new major sources or major modifications to existing stationary sources under NSR, it would not be subject to either PSD or NSR review. The MCAB is classified as nonattainment for the O₃ NAAQS and as attainment or unclassifiable for the PM, CO, NO_x, SO_x, and Lead NAAQS.

TCAPCD’s Rule 408 (Attainment Pollutant Air Quality Analysis) states, “The [air quality simulation model designated in Rule 407] shall consider air quality impacts projected for the area as a result of general commercial, residential, industrial, and other growth associated with the facility if such facility or modification is proposed to employ more than 2,000 new residents” (TCAPCD 2020). The proposed Project will not house any new residents; therefore, air quality simulation modeling for MCAB attainment pollutants is not required.

TCAPCD’s Rule 419 (Nonattainment Pollutant Air Quality Analysis) states, “Where a facility or modification is constructed in phases which individually do not emit more than 100 tons per year of a nonattainment pollutant or precursor, the allowable emissions from all such phases granted an Authority to Construct after December 21, 1976, shall be added together and this Rule shall be applicable when a proposed phase would cause the sum of the allowable emissions to exceed 100 tons per year of such nonattainment pollutant or precursor” (TCAPCD 2020). The proposed Project is not anticipated to increase operational emissions and will not exceed a combined total of less than 100 tons per year of O₃ precursor pollutants (ROG, NO_x, and CO); therefore, air quality simulation modeling for MCAB nonattainment pollutants is not required.

4.1.3 Thresholds for Hazardous Air Pollutants

Table 4-2 presents the thresholds of significance used with toxic air contaminants when evaluating hazardous air pollutants (HAPs).

Table 4-2. Measures of Significance - Toxic Air Contaminants

Agency	Level	Description
Significance Thresholds Adopted for the Evaluation of Impacts Under CEQA		
TCAPCD	Carcinogens	Maximally Exposed Individual risk equals or exceeds 10 in one million.
	Non-Carcinogens	Acute: Hazard Index equals or exceeds 1 for the Maximally Exposed Individual.
		Chronic: Hazard Index equals or exceeds 1 for the Maximally Exposed Individual.

4.1.4 Global Climate Change Thresholds of Significance

CEQA Guidelines Appendix G includes the following criteria to determine if projects would have potentially significant air quality impacts. These criteria ask if the project would:

- ▶ Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or
- ▶ Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

TCAPCD does not have specific thresholds for project GHG emissions. However, according to the General Plan Update EIR, the statewide service population GHG emissions threshold for 2040 is 3.1 MTCO₂e per service population. The 3.1 MTCO₂e per service population threshold was used for this analysis.

4.2 Project Related Emissions

This document was prepared pursuant to the TCAPCD’s thresholds of significance. There are separate thresholds for a project’s short-term (construction) and long-term (operational) emissions.

Project emissions were estimated for the following project development stages:

- ▶ **Short-term (Construction and Demolition)** – Construction emissions of the proposed Project were estimated in CalEEMod using a 5-month construction schedule and the following construction equipment for the replacement of existing pipeline.
 - Backhoe
 - Bobcat
 - Trencher
 - Generator
 - Grader
 - Dump Truck
 - Concrete Truck
- ▶ **Long-term (Operations)** – Long term emissions are not expected from this Project since there is no change to the operation of the pipelines. Therefore, operational emissions were not quantified.

4.2.1 Short-Term Emissions

The Project applicant provided a list of specific construction equipment; the construction emissions were therefore based on this list. Applying model defaults as well as a conservative analysis approach, construction emissions were estimated as if construction started in April of 2023. Based on the Project applicant, the Project construction is estimated to last 5 months. The dates entered into the CalEEMod program may not represent the actual dates the equipment will operate; however, the total construction time is accurate, and therefore, all estimated emission totals are conservative and reflect a reasonable and legally sufficient estimate of potential impacts. All construction equipment activity levels were assumed based on the specified CalEEMod default values for type and number of equipment, hours per day and horsepower.

Table 4-3 and **4-4** present the Project’s short-term emissions based on the anticipated construction period.

Table 4-3. Short-Term Project Emissions – Annual

Year	Pollutant (tons/year)					
	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
2023	0.09	0.80	0.74	0.00	0.04	0.04
Significance Threshold	100	100	100	NA	100	NA
Is Threshold Exceeded for a Single Year After Mitigation?	No	No	No	NA	No	NA
<i>Source: Trinity Consultants 2021</i>						

Table 4-4. Short-Term Project Emissions – Daily

Season	Pollutant (tons/year)					
	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Summer	1.56	14.57	13.60	0.03	0.82	0.68
Winter	1.56	14.58	13.54	0.03	0.82	0.68
Max	1.56	14.58	13.60	0.03	0.82	0.68
<i>Significance Threshold</i>	<i>1,000</i>	<i>1,000</i>	<i>1,000</i>	<i>NA</i>	<i>1,000</i>	<i>NA</i>
Is Threshold Exceeded for a Single Year After Mitigation?	No	No	No	NA	No	NA
<i>Source: Trinity Consultants 2021</i>						

As calculated with CalEEMod, the estimated short-term construction-related emissions would not exceed TCAPCD significance threshold levels during any given year and would therefore be *less than significant* under CEQA and is in compliance with the requirements of NEPA.

4.2.2 Long-Term Operations Emissions

Long-term emissions are caused by operational mobile, area, and energy sources. Long term emissions are not expected from this Project since there is no change to the operation of the pipelines. Therefore, operational emissions were not quantified.

4.3 Potential Impact on Sensitive Receptors

Sensitive receptors are defined as locations where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside, such as schools, hospitals, nursing homes, and daycare centers. The nearest residential sensitive receptor to the proposed Project site is 0.01 miles east of the Project. The three known non-residential sensitive receptors within 2 miles of the Project site are listed below in **Table 4-5**.

Table 4-5. Sensitive Receptors Located < 2 Miles from Project

Receptor	Type of Facility	Distance from Project in Miles	Direction from Project
Twain Harte School	PK-8 Public	0.1	E, W
Crystal Falls Family Care Home	Nursing Home	0.83	W
Bellevue Elementary School	K-6 Public	1.43	W

4.4 Potential Impacts to Visibility to Nearby Areas

Visibility impact analyses are intended for stationary sources of emissions which are subject to the Prevention of Significant Deterioration (PSD) requirements in 40 CFR Part 60; they are not usually conducted for area sources. Because the Project's PM₁₀ emissions increase is predicted to be less than the PSD threshold levels, an impact at any Class 1 area or military/airspace operation within 100 kilometers of the Project (including Mokelumne Wilderness, Emigrant Wilderness, Hoover Wilderness, Yosemite National Park, Ansel Adams Wilderness, Kaiser Wilderness, John Muir Wilderness, and Kings Canyon National Park) is extremely unlikely. Therefore, based on the Project's predicted less-than significant PM₁₀ emissions, the Project would be expected to have a less than significant impact to visibility at any Class 1 area or military/airspace operation.

4.5 Potential Impacts from Carbon Monoxide

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. CO concentrations are also influenced by wind speed and atmospheric mixing. CO concentrations may be more uniformly distributed when inversion conditions are prevalent in the valley. Under certain meteorological conditions, CO concentrations along a congested roadway or intersection may reach unhealthful levels for sensitive receptors, e.g. children, the elderly, hospital patients, etc. This localized impact can result in elevated levels of CO, or "hotspots" even though concentrations at the closest air quality monitoring station may be below NAAQS and CAAQS.

The localized Project impacts depend on whether ambient CO levels in the Project vicinity would be above or below NAAQS. If ambient levels are below the standards, a project is considered to have significant impacts if a project's emissions would exceed of one or more of these standards.

The Project is not expected to have any change in traffic. Therefore, CO "Hotspot" Modeling was not conducted for this Project and no concentrated excessive CO emissions are expected to be caused once the proposed Project is completed.

4.6 Predicted Health Risk Impacts

The proposed Project would result in emissions of Hazardous Air Pollutants (HAPs) and would be located near existing residents and workers. The only HAP expected to be emitted is Diesel Particulate Matter (DPM) from construction equipment and diesel trucks. There is currently no acute risk associated with DPM emissions. Chronic non-cancer and cancer risk are expected from long-term exposure, typically over one year of exposure. The Project construction is expected to only last for 5 months; therefore, there would be no chronic non-cancer or cancer risk associated with exposure to the Project's DPM construction emissions.

4.7 Potential Impacts from Asbestos

Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading of development projects, and at mining operations.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. However, according to information provided by the Department of Conservation Division of Mines and Geology, the project site is not located in an area where naturally occurring asbestos is likely to be present (CDCDMG, 2000). Therefore, impacts associated with exposure of construction workers and nearby sensitive receptors to asbestos would be less than significant.

4.8 Odor Impacts and Mitigation

The General Plan EIR evaluates project odor impacts as measured by if the project will "create objectionable odors affecting a substantial number of people". The County relies on the TCAPCD's Rule 205 ("Nuisance") to control nuisance impacts and deal with odor complaints (TCAPCD 2018). According to the General Plan EIR, "Rule 205 prohibits the emission of any material that may cause a nuisance to a person or the public".

The Project is not expected to have an increase in operational emissions; therefore, it is not expected to be a source of objectionable odors.

4.9 Impacts to Ambient Air Quality

The TCAPCD has not established specific quantitative thresholds for determining whether a project will cause or contribute to a violation of state or federal Ambient Air Quality Standards (AAQS). In lieu of specific thresholds from TCAPCD, Appendix G of the CEQA Guidelines will be used to determine a project's potential impact on ambient air quality. The Project is not expected to increase operational emissions; therefore, the Project is not expected to cause or contribute to a violation of any AAQS, and an AAQA is not required for this Project

4.10 Impacts to Greenhouse Gases and Climate Change

The proposed Project's construction GHG emissions were estimated using the CalEEMod program (version 2020.4.0). These emissions are summarized in **Table 4-6**. In order for the Project to conform with the goals of AB32, the GHG emissions should not exceed 3.1 MTCO₂e per service population target for 2040. Construction-related GHG emissions would be temporary and intermittent in nature and therefore would not have a significant impact on statewide GHG goals. The Project is not expected to have an increase in operational GHG emissions; therefore, the Project would have *less than significant* GHG impacts.

Table 4-6. Estimated Construction GHG Emissions (MT/Year)

Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
2023 Construction Emissions	121.07	0.03	0.00	121.84
*Note: 0.000 could represent <0.000				

The Project will not result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF₆), the other gases identified as GHG in AB32. The proposed Project will be subject to any regulations developed under AB32 as determined by CARB.

4.10.1 Feasible and Reasonable Mitigation Relative to Global Warming

CEQA requires that all feasible and reasonable mitigation be applied to the project to reduce the impacts from construction and operations on air quality. These measures include using controls that limit the exhaust from construction equipment and using alternatives to diesel when possible. Additional reductions would be achieved through the regulatory process of the air district and CARB as required changes to diesel engines are implemented which would affect the product delivery trucks and limits on idling.

While it is not possible to determine whether the Project individually would have a significant impact on global warming or climate change, the Project would potentially contribute to cumulative GHG emissions in California as well as related health effects. The Project emissions would only be a very small fraction of the statewide GHG emissions. However, without the necessary science and analytical tools, it is not possible to assess, with certainty, whether the Project’s contribution would be cumulatively considerable, within the meaning of CEQA Guidelines Sections 15065(a)(3) and 15130. CEQA, however, does note that the more severe environmental problems the lower the thresholds for treating a project’s contribution to cumulative impacts as significant. Given the position of the legislature in AB32 which states that global warming poses serious detrimental effects, and the requirements of CEQA for the lead agency to determine that a project not have a cumulatively considerable contribution, the effect of the Project’s CO₂ contribution may be considered cumulatively considerable. This determination is “speculative,” given the lack of clear scientific evidence or other criteria for determining the significance of the Project’s contribution of GHG to the air quality in the SJVAB.

The strategies currently being implemented by CARB may help in reducing the Project’s GHG emissions and are summarized in the table below.

Table 4-7. Select CARB GHG Emission Reduction Strategies

Strategy	Description of Strategy
Vehicle Climate Change Standards	AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by CARB in Sept. 2004.
Diesel Anti-Idling	In July 2004, CARB adopted a measure to limit diesel-fueled retail motor vehicle idling.
Other Light-Duty Vehicle Technology	New standards would be adopted to phase in beginning in the 2017 model year.
Alternative Fuels: Biodiesel Blends	CARB would develop regulations to require the use of 1% to 4% Biodiesel displacement of California diesel fuel.
Alternative Fuels: Ethanol	Increased use of ethanol fuel.
Heavy-Duty Vehicle Emission Reduction Measures	Increased efficiency in the design of heavy-duty vehicles and an educational program for the heavy-duty vehicle sector.

Not all of these measures are currently appropriate or applicable to the proposed Project. While future legislation could further reduce the Project's GHG footprint, the analysis of this is speculative and in accordance with CEQA Guidelines Section 15145, will not be further evaluated in this AQIA.

CEQA Guidelines Section 15130 notes that sometimes the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis. Global climate change is this type of issue. The causes and effects may not be just regional or statewide, they may also be worldwide. Given the uncertainties in identifying, let alone quantifying the impact of any single project on global warming and climate change, and the efforts made to reduce emissions of GHGs from the Project through design, in accordance with CEQA Section 15130, any further feasible emissions reductions would be accomplished through CARB regulations adopted pursuant to AB32. The Project will not result in a significant impact on GHG emissions. Therefore, the Project's contribution to cumulative global climate change impacts would *not be cumulatively considerable*.

5. CUMULATIVE IMPACTS

By its very nature, air pollution has a cumulative impact. Tuolumne County is classified as either “attainment” or “unclassified” for the state and federal ambient air quality standards for CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and Lead. The County is classified as “nonattainment” for the state and federal standards for ozone (O₃) due to transport issues beyond the control of the TCAPCD.

Furthermore, attainment of ambient air quality standards can be jeopardized by increasing emissions-generating activities in the region. No single project would be sufficient in size, by itself, to result in nonattainment of the regional air quality standards. Instead, a project’s emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development within the MCAB. When assessing whether there is a new significant cumulative effect, the Lead Agency shall consider whether the incremental effects of the project are cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects [CCR §15064(h)(1)]. Per CEQA Guidelines §15064(h)(3) a Lead Agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located.

The Project would comply with the requirements of the General Plan and air pollution control measures. Additionally, the Project’s less-than-significant impacts would also support the conclusion that the Project is not cumulatively considerable. Based on the analysis conducted for this Project, it is individually *less than significant*.

5.1 Cumulative Regional Air Quality Impacts

The most recent, certified MCAB Emission Inventory data available from the CARB is based on data gathered for the 2020 annual inventory¹. **Table 5-1** provides a comparative look at the impacts proposed by the proposed Project to the MCAB Emissions Inventory.

¹ SJVAPCD Emissions for Aggregated Stationary, Area-Wide, Mobile, and Natural Sources

Table 5-1. Comparative Analysis Based on MCAB 2020 Inventory - Tons per Year

	ROG	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Tuolumne County - 2020	22,484	20,842	33,872	511	13,688	3,833
MCAB - 2020	112,931	96,105	199,509	2,738	95,667	21,681
Proposed Project	0.00	0.00	0.00	0.00	0.00	0.00
Proposed Project's % of Tuolumne	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Proposed Project's % of MCAB	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Note: This is the latest inventory available as of November 2021 Source: CARB 2021b						

As shown in **Table 5-1** the proposed Project does not pose a substantial increase to basin emissions, as such basin emissions would be essentially the same if the Project is approved.

Table 5-1, 5-2, and 5-3 provide CARB Emissions Inventory projections for the year 2025 for both the MCAB and the Tuolumne County portion of the air basin. Looking at the MCAB Emissions predicted by the CARB year 2025 emissions inventory, the Tuolumne County portion of the air basin is a moderate source of the emissions. The proposed Project produces a small portion of the total emissions in both Tuolumne County and the entire MCAB.

Table 5-2. Emission Inventory MCAB 2025 Projection - Tons per Year

	ROG	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Total Emissions	13,870.0	7,774.5	73,109.5	657.0	21,024.0	6,497.0
Percent Stationary Sources	15.53%	34.27%	16.38%	72.22%	14.24%	20.79%
Percent Area-Wide Sources	55.26%	7.51%	44.33%	27.78%	83.16%	74.72%
Percent Mobile Sources	29.21%	58.22%	39.24%	5.56%	2.43%	4.49%
Total Stationary Source Emissions	2,153.5	2,664.5	11,972.0	474.5	2,993.0	1,350.5
Total Area-Wide Source Emissions	7,665.0	584.0	32,412.0	182.5	17,483.5	4,854.5
Total Mobile Source Emissions	4,051.5	4,526.0	28,689.0	36.5	511.0	292.0
Source: CARB 2021b Note: Total may not add due to rounding						

**Table 5-3. Emission Inventory MCAB - Tuolumne County Portion
2025 Projection - Tons per Year**

	ROG	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Total Emissions	2,336.0	1,058.5	13,030.5	219.0	2,664.5	1,022.0
Percent Stationary Sources	9.38%	48.28%	2.52%	83.33%	27.40%	21.43%
Percent Area-Wide Sources	54.69%	6.90%	52.66%	16.67%	71.23%	71.43%
Percent Mobile Sources	35.94%	44.83%	44.82%	0.00%	2.74%	3.57%
Total Stationary Source Emissions	219.0	511.0	328.5	182.5	730.0	219.0
Total Area-Wide Source Emissions	1,277.5	73.0	6,862.0	36.5	1,898.0	730.0
Total Mobile Source Emissions	839.5	474.5	5,840.0	0.0	73.0	36.5
Source: CARB 2021b Note: Total may not add due to rounding						

Table 5-4. 2025 Emissions Projections - Proposed Project, Tuolumne County, and SJVAB

	ROG	NOx	PM₁₀
Proposed Project	0.00	0.00	0.00
Tuolumne County	21,535	15,878	13,651
MCAB	108,113	74,205	96,652
Proposed Project Percent of Tuolumne County	0.00%	0.00%	0.00%
Proposed Project Percent of MCAB	0.00%	0.00%	0.00%
Tuolumne County Percent of MCAB	19.92%	21.40%	16.83%
Source: CARB 2021b			

As shown above, the proposed Project would not increase operational emissions; therefore, would pose no impact on regional O₃ and PM₁₀ formation. Because there would be no regional contribution to these cumulative impacts, the Project would not be considered cumulatively considerable in its contribution to regional O₃ and PM₁₀ impacts.

5.2 Cumulative Local Air Quality Impacts

Tuolumne County has a public search for building permit applications. Per the public search, there are no active applications within a 1-mile radius of the proposed Project area. Therefore, since the proposed Project would generate less-than-significant impacts to criteria air pollutants, the Project's incremental contribution to cumulative air quality impacts would not be cumulatively considerable (CEQA Guidelines Section 15064(h)(3)).

5.3 Cumulative Hazardous Air Pollutants

Because the Project would not be a significant source of HAPs, the proposed Project would also not be expected to pose a significant cumulative HAPs impact.

5.4 Cumulative Carbon Monoxide (CO) – Mobile Sources

The Project is not expected to have any change in traffic. Therefore, CO "Hotspot" Modeling was not conducted for this Project and no concentrated excessive CO emissions are expected to be caused once the proposed Project is completed.

6. CONSISTENCY WITH THE AIR QUALITY ATTAINMENT PLAN

CARB has determined that the ozone levels in Tuolumne County are caused by “overwhelming transport” of emissions into the air district and is relieved from preparing an attainment plan. At this time, TCAPCD does not have an air quality attainment plan (AQAP). Therefore, consistency will be based on air quality guidelines, rules, and regulations set forth by TCAPCD.

Air quality impacts from proposed projects within Tuolumne County are controlled through policies and provisions of the TCAPCD and the General Plan. In order to demonstrate that a proposed project would not cause further air quality degradation in either the TCAPCD’s plan to improve air quality within the air basin or the federal requirements to meet certain air quality compliance goals, each project should also demonstrate consistency with TCAPCD’s adopted air quality guidelines, rules, and regulations.

The Project would comply with the requirements of the General Plan air quality guidelines and air pollution control measures and mitigating policies. Additionally, air pollution associated with stationary sources are regulated through the permitting authority of the TCAPCD under Regulations IV and V (Authority to Construct and Permit to Operate Regulations). Owners of any new or modified equipment that emits, reduces, or controls air contaminants, except those specifically exempted by TCAPCD, are required to apply for an Authority to Construct and Permit to Operate. Through this mechanism, the TCAPCD would ensure that all stationary sources within the Project area would be subject to the standards of the TCAPCD to ensure that new developments do not result in net increases in stationary sources of criteria air pollutants.

6.1 Required Evaluation Guidelines

State CEQA Guidelines and the Federal Clean Air Act (Sections 176 and 316) contain specific references on the need to evaluate consistencies between the proposed project and the applicable AQAP for the project site. To accomplish this, CARB has developed a three-step approach to determine project conformity with the applicable AQAP:

1. *Determination that an AQAP is being implemented in the area where the project is being proposed.* TCAPCD does not have an AQAP. However, TCAPCD has implemented air quality guidelines, rules, and regulations for all projects.
2. *The proposed project must be consistent with the growth assumptions of the applicable AQAP.* TCAPCD does not have an AQAP. However, the proposed Project land use type was anticipated in the current growth assumptions.
3. *The project must contain in its design all reasonably available and feasible air quality control measures.* The proposed project incorporates various policy and rule-required implementation measures that will reduce related emissions.

The CCAA and Tuolumne County identify transportation control measures as methods to further reduce emissions from mobile sources. Strategies identified to reduce vehicular emissions such as reductions in vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, and traffic congestion, in order to reduce vehicular emissions, can be implemented as control measures under the CCAA as well. Additional measures may also be implemented through the building process such as providing electrical outlets on exterior walls of structures to encourage use of electrical landscape maintenance equipment or measures such as electrical outlets for electrical systems on diesel trucks to reduce or eliminate idling time.

As the growth represented by the proposed Project will be updated in the General Plan, conclusions may be drawn from the following criteria:

1. That, by definition, the proposed emissions from the Project are below the TCAPCD's established emissions impact thresholds;
2. That the primary source of emissions from the Project will be motor vehicles that are licensed through the State of California and whose emissions are already incorporated into CARB's MCAB Emissions Inventory.

Based on these factors, the Project is *consistent with the air quality guidelines, rules, and regulations set forth by the TCAPCD, which serve in place of an AQAP for Tuolumne County.*

6.2 Consistency with the Tuolumne County Regional Transportation Plan and General Plan Zoning

The 2016 Tuolumne County Final Regional Transportation Plan (RTP) has been developed by the Tuolumne County Transportation Council (TCTC) to document the transportation policy, actions, and funding recommendations that will meet the short- and long-term access and mobility needs of Tuolumne County over the next twenty-five years (2016-2041). The Tuolumne County RTP serves as the planning blueprint to guide future transportation investments in Tuolumne County involving local, state, and federal funding over the next twenty-five years.

The 2016 RTP establishes regional transportation goals, objectives, and rural sustainable strategies. The RTP identifies present and future needs, deficiencies and constraints, analyzes potential solutions, estimates available funding, and proposes investments for short- and long-term projections (TCTC 2016).

The proposed Project will not result in a change of operations and therefore will not impact any projected growth in the RTP or General Plan zoning.

7. MITIGATION AND OTHER RECOMMENDED MEASURES

As the estimated construction and operational emissions from the proposed Project would be less than significant, no specific mitigation measures would be required. However, to ensure that Project is in compliance with all applicable TCAPCD rules and regulations and emissions are further reduced, the applicant should implement and comply with a number of measures that are either recommended as a “good operating practice” for environmental stewardship or they are required by regulation. Some of the listed measures are regulatory requirements or construction requirements that would result in further emission reductions through their inclusion in Project construction and long-term design. The following measures either have been applied to the Project through the CalEEMod model and would be incorporated into the Project by design or would be implemented in conjunction with SJVAPCD rules as conditions of approval.

7.1 Tuolumne County Measures to Reduce Equipment Exhaust and Fugitive PM₁₀

The General Plan Air Quality guidelines provide a variety of feasible mitigation measures which can be applied to construction activities. In general, mitigation measures that address larger sources of PM₁₀ during construction (e.g., grading, excavation, entrained dust from unpaved roads) have the greatest potential to substantially reduce fugitive dust.

Per Policy 15.A.4, construction emissions can be reduced by a number of techniques, including:

- ▶ Exposed soils shall be watered as needed to control wind borne dust.
- ▶ Exposed piles of dirt, sand, gravel, or other construction debris shall be enclosed, covered and/or watered as needed to control wind borne dust.
- ▶ Vehicle trackout shall be minimized through the use of rumble strips and wheel washers for all trucks and equipment leaving the site.
- ▶ Sweep streets once a day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water).
- ▶ On-site vehicle speed shall be limited to 15 miles per hour on unpaved surfaces.
- ▶ Loads on all haul/dump trucks shall be covered securely or at least two feet of freeboard shall be maintained on trucks hauling loads.
- ▶ Construction equipment shall be maintained and tuned at the interval recommended by the manufacturers to minimize exhaust emissions.
- ▶ Equipment idling shall be kept to a minimum when equipment is not in use.
- ▶ Construction equipment shall be in compliance with the California Air Resources Board off-road and portable equipment diesel particulate matter regulations

The use of the above emissions control measures, or others as appropriate, during construction can be expected to reduce emissions to a level of less than significant.

8. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Project would have short-term air quality impacts due to facility construction activities as well as vehicular emissions. Both of these impacts would be mitigated and *were found to be less than significant before and after mitigation* under CEQA and is in compliance with the requirements of NEPA.

The proposed Project would not result long-term air quality impacts since there will not be an increase in operational and related mobile source emissions. Therefore, these impacts *were found to be less than significant* under CEQA and is in compliance with the requirements of NEPA.

The proposed Project, in conjunction with other past, present, and foreseeable future projects, would result in cumulative short-term impacts to air quality. The proposed Project's incremental contribution to these impacts would be mitigated, are below thresholds of significance, and would not be considered cumulatively considerable. Therefore, the Project's contribution to cumulative impacts *were found to be less than significant* under CEQA and is in compliance with the requirements of NEPA.

The proposed Project, in conjunction with other past, present, and foreseeable future projects, would result in cumulative long-term impacts to global climate change. The proposed Project's incremental contribution to these impacts will be mitigated to the extent feasible and are considered *less than significant* under CEQA and is in compliance with the requirements of NEPA.

9. REFERENCES

- California Air Pollution Control Officers Association (CAPCOA). 2021. California Emissions Estimator Model™ (CalEEMod), version 2020.4.0, released May 2021.
- , 2015. California’s Progress Toward Clean Air. https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/aqdocs/progress_report_2015.pdf?sfvrsn=ca23ee89_2. Accessed November 2021.
- California Air Resources Board (CARB). 2021a. website – Background Emissions Data. <https://www.arb.ca.gov/adam>, accessed October 2021.
- , 2020a. Maps of State and Federal Area Designations. <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>, accessed November 2021.
- , 2020b. Quality Assurance Air Monitoring Site Information – Mountain Counties Air Basin. Accessed March 2021. https://ww3.arb.ca.gov/qaweb/sitelist_create.php.
- , 2019. California Greenhouse Gas Emissions for 2000 to 2017: Trends of Emissions and Other Indicators. 2019. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf
- , 2021b. Almanac Emission Projection Data. <https://www.arb.ca.gov/app/emsmv/2017/emssumcat.php>, accessed October 2021.
- , 2016. “Ambient Air Quality Standards.” May 4, 2016. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- , 2015. Hotspots Analysis and Reporting Program (HARP2) User Guide. <https://ww2.arb.ca.gov/sites/default/files/classic/toxics/harp/docs2/harp2admrtuserguide.pdf>, accessed April 2021.
- California Environmental Protection Agency (CalEPA). 2006. Climate Action Team (CAT) Report to Governor Schwarzenegger and the Legislature. http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF.
- California Environmental Quality Act (CEQA) Statute and Guidelines. 2021. (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).
- , 2018. Appendix G – Environmental Checklist Form, Final Text. December 28, 2018.
- Enviropedia, 2019. Greenhouse Gas Emissions website, accessed September 2019. http://www.enviropedia.org.uk/Global_Warming/Emissions.php.
- Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2014 Synthesis Report. https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf

- , 2013. Climate Change 2013: The Physical Science Basis. <http://www.ipcc.ch/report/ar5/wg1/>.
- Tuolumne County Air Pollution Control District (TCAPCD). 2017. CEQA Thresholds of Significance. https://www.tuolumnecounty.ca.gov/DocumentCenter/View/1072/TCAPCD_Significance_Thresholds_2_?bidId=, accessed October 2021.
- , 2018. General Plan Update. <https://www.tuolumnecounty.ca.gov/889/General-Plan-Update>, accessed October 2021.
- , 2020. Rulebook. <https://www.tuolumnecounty.ca.gov/DocumentCenter/View/14680/TCAPCD-Rulebook-June-2020->, accessed October 2021.
- Tuolumne County Transportation Council (TCTC). 2016 Final Regional Transportation Plan. https://docs.wixstatic.com/ugd/fe950e_c35135627b714de69e18b76eb4807156.pdf, accessed November 2021.
- United Nations, 2011. The Millennium Development Goals Report 2011. [http://www.un.org/millenniumgoals/pdf/\(2011_E\)%20MDG%20Report%202011_Book%20LR.pdf](http://www.un.org/millenniumgoals/pdf/(2011_E)%20MDG%20Report%202011_Book%20LR.pdf)
- United States Energy Information Administration (U.S. EIA). 2019. International Energy Outlook 2019. <https://www.eia.gov/outlooks/ieo/pdf/ieo2019.pdf>
- United States Environmental Protection Agency (U.S. EPA). 2019. Inventory of US Greenhouse Gas Emissions and Sinks 1990–2017. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>. April 11, 2019.
- United States Geological Survey's (USGS) National Map. 2021. Twain Harte, CA. 7.5 minute. <https://viewer.nationalmap.gov/basic/?basemap=b1&category=ustopo&title=US%20Topo%20Download>
- United States Global Change Research Program (USGCRP). 2014. Climate Change Impacts in the United States: The Third National Climate Assessment. <http://nca2014.globalchange.gov/>, accessed September 2019.
- Western Regional Climate Center, 2021. Sonora, California, Period of Record Monthly Climate Summary, 12/01/1903 to 6/10/2016. <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8353>, accessed October 2021.

APPENDIX A. EXISTING AIR QUALITY MONITORING DATA

Top 4 Summary: Highest 4 Daily Maximum Hourly Ozone Measurements

at San Andreas-Gold Strike Road



	2018		2019		2020	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Aug 2	0.105	Aug 26	0.085	Aug 20	0.109
Second High:	Jul 31	0.096	Jun 18	0.082	Aug 23	0.095
Third High:	Jul 30	0.094	Aug 15	0.081	Sep 30	0.091
Fourth High:	Aug 5	0.092	Jun 12	0.080	Sep 8	0.086
California:						
# Days Above the Standard:	2		0		2	
California Designation Value:	0.10		0.09		0.09	
Expected Peak Day Concentration:	0.095		0.092		0.093	
National:						
# Days Above the Standard:	0		0		0	
3-Year Estimated Expected Number of Exceedance Days:	0.0		0.0		0.0	
1-Year Estimated Expected Number of Exceedance Days:	0.0		0.0		0.0	
Nat'l Standard Design Value:	0.094		0.094		0.095	
Year Coverage:	100		96		100	

Notes:

Hourly ozone measurements and related statistics are available at San Andreas-Gold Strike Road between 1994 and 2020. Some years in this range may not be represented.

All concentrations expressed in parts per million.

The national 1-hour ozone standard was revoked in June 2005. Statistics related to the national 1-hour ozone standard are shown in or .

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Top 4 Summary: Highest 4 Daily Maximum Hourly Ozone Measurements

at Sonora-Barretta Street



	2018		2019		2020	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Jul 18	0.101	Jun 12	0.087	Aug 21	0.093
Second High:	Jul 19	0.100	Aug 26	0.084	Aug 20	0.092
Third High:	Aug 5	0.099	Aug 14	0.080	Aug 22	0.090
Fourth High:	Aug 2	0.097	Aug 15	0.080	Aug 24	0.086
California:						
# Days Above the Standard:	4		0		0	
California Designation Value:	0.10		0.10		0.09	
Expected Peak Day Concentration:	0.097		0.095		0.094	
National:						
# Days Above the Standard:	0		0		0	
3-Year Estimated Expected Number of Exceedance Days:	0.0		0.0		0.0	
1-Year Estimated Expected Number of Exceedance Days:	0.0		0.0		0.0	
Nat'l Standard Design Value:	0.099		0.097		0.097	
Year Coverage:	100		100		99	

Notes:

Hourly ozone measurements and related statistics are available at Sonora-Barretta Street between 1992 and 2020. Some years in this range may not be represented.

All concentrations expressed in parts per million.

The national 1-hour ozone standard was revoked in June 2005. Statistics related to the national 1-hour ozone standard are shown in or .

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Ozone Averages

at San Andreas-Gold Strike Road



	2018		2019		2020	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National 2015 Std (0.070 ppm):						
First High:	Jul 31	0.086	Aug 15	0.073	Aug 20	0.097
Second High:	Aug 9	0.081	Aug 14	0.070	Aug 23	0.078
Third High:	Aug 5	0.078	Aug 16	0.067	Sep 30	0.075
Fourth High:	Jul 30	0.077	Jun 12	0.066	Aug 31	0.073
California Std (0.070 ppm):						
First High:	Jul 31	0.086	Aug 15	0.074	Aug 20	0.097
Second High:	Aug 9	0.081	Aug 14	0.071	Aug 23	0.079
Third High:	Aug 5	0.079	Aug 16	0.068	Sep 30	0.075
Fourth High:	Jul 30	0.077	Jun 12	0.067	Aug 31	0.074
National 2015 Std (0.070 ppm):						
# Days Above the Standard:		10		1		5
Nat'l Standard Design Value:		0.077		0.073		0.072
National Year Coverage:		100		96		99
California Std (0.070 ppm):						
# Days Above the Standard:		10		2		5
California Designation Value:		0.086		0.083		0.081
Expected Peak Day Concentration:		0.086		0.083		0.082
California Year Coverage:		100		95		98

Notes:

Eight-hour ozone averages and related statistics are available at San Andreas-Gold Strike Road between 1994 and 2020. Some years in this range may not be represented.

All averages expressed in parts per million.

An exceedance of a standard is not necessarily related to a violation of the standard.

State and national statistics may differ for the following reasons:

National 8-hour averages are truncated to three decimal places; State 8-hour averages are rounded to three decimal places.

State criteria for ensuring that data are sufficiently complete for calculating 8-hour averages are more stringent than the national criteria.

Daily maximum 8-hour averages associated with the National 0.070 ppm standard exclude those 8-hour averages that have first hours between midnight and 6:00 am, Pacific Standard Time.

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Ozone Averages

at Sonora-Barretta Street



	2018		2019		2020	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National 2015 Std (0.070 ppm):						
First High:	Aug 8	0.087	Jun 12	0.073	Aug 21	0.083
Second High:	Jul 18	0.084	Aug 15	0.072	Aug 20	0.081
Third High:	Jul 19	0.084	Jun 19	0.069	Aug 22	0.081
Fourth High:	Aug 5	0.084	Sep 14	0.069	Aug 24	0.080
California Std (0.070 ppm):						
First High:	Aug 8	0.087	Jun 12	0.074	Aug 21	0.083
Second High:	Jul 18	0.084	Aug 15	0.072	Aug 20	0.081
Third High:	Jul 19	0.084	Sep 14	0.070	Aug 22	0.081
Fourth High:	Aug 5	0.084	Jun 19	0.069	Aug 24	0.081
National 2015 Std (0.070 ppm):						
# Days Above the Standard:		21		2		5
Nat'l Standard Design Value:		0.083		0.076		0.077
National Year Coverage:		100		99		99
California Std (0.070 ppm):						
# Days Above the Standard:		22		2		5
California Designation Value:		0.092		0.087		0.084
Expected Peak Day Concentration:		0.094		0.088		0.086
California Year Coverage:		100		98		99

Notes:

Eight-hour ozone averages and related statistics are available at Sonora-Barretta Street between 1992 and 2020. Some years in this range may not be represented.

All averages expressed in parts per million.

An exceedance of a standard is not necessarily related to a violation of the standard.

State and national statistics may differ for the following reasons:

National 8-hour averages are truncated to three decimal places; State 8-hour averages are rounded to three decimal places.

State criteria for ensuring that data are sufficiently complete for calculating 8-hour averages are more stringent than the national criteria.

Daily maximum 8-hour averages associated with the National 0.070 ppm standard exclude those 8-hour averages that have first hours between midnight and 6:00 am, Pacific Standard Time.

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Ozone Averages

at Jerseydale - 6440 Jerseydale



	2018		2019		2020	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National 2015 Std (0.070 ppm):						
First High:	Sep 28	0.084	Aug 6	0.074	Aug 24	0.100
Second High:	Aug 8	0.081	Sep 15	0.074	Aug 22	0.098
Third High:	Jul 25	0.079	Aug 15	0.073	Aug 21	0.092
Fourth High:	Sep 27	0.077	Aug 3	0.071	Aug 20	0.091
California Std (0.070 ppm):						
First High:	Jul 26	0.088	Aug 6	0.074	Aug 24	0.101
Second High:	Sep 28	0.085	Sep 15	0.074	Aug 22	0.098
Third High:	Aug 8	0.081	Aug 15	0.073	Aug 23	0.093
Fourth High:	Jul 25	0.079	Aug 3	0.072	Aug 21	0.092
National 2015 Std (0.070 ppm):						
# Days Above the Standard:		11		5		24
Nat'l Standard Design Value:		0.076		0.074		0.079
National Year Coverage:		98		96		94
California Std (0.070 ppm):						
# Days Above the Standard:		15		5		26
California Designation Value:		0.085		0.085		0.093
Expected Peak Day Concentration:		0.086		0.085		0.093
California Year Coverage:		97		96		92

Notes:

Eight-hour ozone averages and related statistics are available at Jerseydale - 6440 Jerseydale between 1995 and 2020. Some years in this range may not be represented.

All averages expressed in parts per million.

An exceedance of a standard is not necessarily related to a violation of the standard.

State and national statistics may differ for the following reasons:

National 8-hour averages are truncated to three decimal places; State 8-hour averages are rounded to three decimal places.

State criteria for ensuring that data are sufficiently complete for calculating 8-hour averages are more stringent than the national criteria.

Daily maximum 8-hour averages associated with the National 0.070 ppm standard exclude those 8-hour averages that have first hours between midnight and 6:00 am, Pacific Standard Time.

Top 4 Summary: Highest 4 Daily 24-Hour PM10 Averages

at San Andreas-Gold Strike Road



	2018		2019		2020	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Aug 8	69.4	Oct 29	47.6	Sep 8	217.3
Second High:	Aug 6	62.8	Oct 30	44.5	Sep 12	163.2
Third High:	Aug 7	62.2	Nov 25	43.8	Aug 21	161.0
Fourth High:	Aug 9	60.1	Nov 26	42.8	Sep 9	156.6
California:						
First High:	Aug 8	66.8	Oct 29	48.5	Sep 8	205.7
Second High:	Aug 6	61.3	Oct 30	45.3	Sep 12	158.8
Third High:	Aug 7	60.0	Nov 25	44.7	Aug 21	156.0
Fourth High:	Aug 9	57.5	Nov 21	40.7	Sep 9	151.0
National:						
Estimated # Days > 24-Hour Std:	0.0		0.0		4.0	
Measured # Days > 24-Hour Std:	0		0		4	
3-Yr Avg Est # Days > 24-Hr Std:	*		*		1.0	
Annual Average:	15.0		13.6		24.4	
3-Year Average:	14		14		18	
California:						
Estimated # Days > 24-Hour Std:	*		0.0		30.4	
Measured # Days > 24-Hour Std:	5		0		30	
Annual Average:	*		13.3		24.1	
3-Year Maximum Annual Average:	12		13		24	
Year Coverage:	0		0		0	

Notes:

Daily PM10 averages and related statistics are available at San Andreas-Gold Strike Road between 1994 and 2020. Some years in this range may not be represented.
All averages expressed in micrograms per cubic meter.

Top 4 Summary: Highest 4 Daily 24-Hour PM2.5 Averages

at San Andreas-Gold Strike Road



	2018		2019		2020	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Aug 8	67.7	Jan 2	24.8	Aug 21	134.2
Second High:	Aug 6	64.0	Jan 1	17.9	Aug 20	118.3
Third High:	Aug 7	61.4	Jan 30	17.0	Aug 22	117.5
Fourth High:	Aug 5	58.5	Jan 29	13.7	Aug 23	113.5
California:						
First High:	Aug 8	67.7	Jan 2	24.8	Aug 21	134.2
Second High:	Aug 6	64.0	Jan 1	17.9	Aug 20	118.3
Third High:	Aug 7	61.4	Jan 30	17.0	Aug 22	117.5
Fourth High:	Aug 5	58.5	Jan 29	13.7	Aug 23	113.5
National:						
Estimated # Days > 24-Hour Std:	16.2		0.0		24.2	
Measured # Days > 24-Hour Std:	16		0		23	
24-Hour Standard Design Value:	*		*		50	
24-Hour Standard 98th Percentile:	40.6		12.5		96.6	
2006 Annual Std Design Value:	*		*		10.9	
2013 Annual Std Design Value:	*		*		10.9	
Annual Average:	14.6		5.5		12.6	
California:						
Annual Std Designation Value:	*		*		*	
Annual Average:	*		*		*	
Year Coverage:	98		87		96	

Notes:

Daily PM2.5 averages and related statistics are available at San Andreas-Gold Strike Road between 1999 and 2020. Some years in this range may not be represented.

APPENDIX B. PROJECT EMISSION CALCULATIONS

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Twain Harte Pipeline
Tuolumne County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	7,924.79	1000sqft	181.93	7,924,792.60	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Total construction period is 5 months

Off-road Equipment -

Off-road Equipment - Per project applicant

Trips and VMT - 10 employees

10 trucks for hauling pipeline material

Vehicle Trips - No change in operational emissions

Consumer Products - No change in operational emissions

Area Coating - No change in operational emissions

Landscape Equipment - No change in operational emissions

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Energy Use - No change in operational emissions

Water And Wastewater - No change in operational emissions

Solid Waste - No change in operational emissions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	PhaseEndDate	4/8/2039	9/15/2023
tblConstructionPhase	PhaseStartDate	6/5/2038	4/17/2023
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	1.81	0.00
tblEnergyUse	NT24E	1.85	0.00
tblEnergyUse	NT24NG	0.31	0.00
tblEnergyUse	T24E	0.56	0.00
tblEnergyUse	T24NG	3.17	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblLandUse	LandUseSquareFeet	7,924,790.00	7,924,792.60
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	9,826.74	0.00

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	1,832,607,687.50	0.00

2.0 Emissions Summary

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

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

	ROG	NOx	CO	SO2	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	Pipeline	Trenching	4/17/2023	9/15/2023	5	110	

Acres of Grading (Site Preparation Phase): 0

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline	Trenchers	1	8.00	78	0.50
Pipeline	Generator Sets	1	8.00	84	0.74
Pipeline	Graders	1	8.00	187	0.41
Pipeline	Dumpers/Tenders	1	8.00	16	0.38
Pipeline	Cement and Mortar Mixers	1	8.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pipeline	7	10.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Pipeline - 2023

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	0.0809	0.7972	0.7131	1.3300e-003		0.0378	0.0378		0.0355	0.0355	0.0000	114.9015	114.9015	0.0273	0.0000	115.5831
Total	0.0809	0.7972	0.7131	1.3300e-003		0.0378	0.0378		0.0355	0.0355	0.0000	114.9015	114.9015	0.0273	0.0000	115.5831

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	2.0000e-005	1.4100e-003	1.5000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3547	0.3547	0.0000	6.0000e-005	0.3713
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	4.6400e-003	3.1100e-003	0.0314	6.0000e-005	6.7500e-003	5.0000e-005	6.8000e-003	1.8000e-003	5.0000e-005	1.8400e-003	0.0000	5.8169	5.8169	2.4000e-004	2.2000e-004	5.8873
Total	4.6600e-003	4.5200e-003	0.0315	6.0000e-005	6.8300e-003	6.0000e-005	6.8900e-003	1.8200e-003	6.0000e-005	1.8700e-003	0.0000	6.1716	6.1716	2.4000e-004	2.8000e-004	6.2587

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Pipeline - 2023

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	0.0809	0.7972	0.7131	1.3300e-003		0.0378	0.0378		0.0355	0.0355	0.0000	114.9013	114.9013	0.0273	0.0000	115.5830
Total	0.0809	0.7972	0.7131	1.3300e-003		0.0378	0.0378		0.0355	0.0355	0.0000	114.9013	114.9013	0.0273	0.0000	115.5830

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	2.0000e-005	1.4100e-003	1.5000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3547	0.3547	0.0000	6.0000e-005	0.3713
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	4.6400e-003	3.1100e-003	0.0314	6.0000e-005	6.7500e-003	5.0000e-005	6.8000e-003	1.8000e-003	5.0000e-005	1.8400e-003	0.0000	5.8169	5.8169	2.4000e-004	2.2000e-004	5.8873
Total	4.6600e-003	4.5200e-003	0.0315	6.0000e-005	6.8300e-003	6.0000e-005	6.8900e-003	1.8200e-003	6.0000e-005	1.8700e-003	0.0000	6.1716	6.1716	2.4000e-004	2.8000e-004	6.2587

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	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
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.398947	0.076285	0.208230	0.170724	0.065991	0.011574	0.007403	0.003656	0.001142	0.000414	0.044570	0.002045	0.009017

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Twin Harte Pipeline - Tuolumne County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

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

7.0 Water Detail

7.1 Mitigation Measures Water

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

Twin Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

Waste Disposed	Total CO2	CH4	N2O	CO2e
tons	MT/yr			
0	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000

Mitigated

Waste Disposed	Total CO2	CH4	N2O	CO2e
tons	MT/yr			
0	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Twain Harte Pipeline - Tuolumne County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Twain Harte Pipeline
Tuolumne County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	7,924.79	1000sqft	181.93	7,924,792.60	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - Total construction period is 5 months
- Off-road Equipment -
- Off-road Equipment - Per project applicant

- Trips and VMT - 10 employees
10 trucks for hauling pipeline material

- Vehicle Trips - No change in operational emissions
- Consumer Products - No change in operational emissions
- Area Coating - No change in operational emissions
- Landscape Equipment - No change in operational emissions

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Energy Use - No change in operational emissions

Water And Wastewater - No change in operational emissions

Solid Waste - No change in operational emissions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	PhaseEndDate	4/8/2039	9/15/2023
tblConstructionPhase	PhaseStartDate	6/5/2038	4/17/2023
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	1.81	0.00
tblEnergyUse	NT24E	1.85	0.00
tblEnergyUse	NT24NG	0.31	0.00
tblEnergyUse	T24E	0.56	0.00
tblEnergyUse	T24NG	3.17	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblLandUse	LandUseSquareFeet	7,924,790.00	7,924,792.60
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	9,826.74	0.00

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	1,832,607,687.50	0.00

2.0 Emissions Summary

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
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	0.0000
Total	0.0749	7.3600e-003	0.8090	6.0000e-005	0.0000	2.8800e-003	2.8800e-003	0.0000	2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003	0.0000	1.8481

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
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	0.0000
Total	0.0749	7.3600e-003	0.8090	6.0000e-005	0.0000	2.8800e-003	2.8800e-003	0.0000	2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003	0.0000	1.8481

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	Pipeline	Trenching	4/17/2023	9/15/2023	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline	Trenchers	1	8.00	78	0.50
Pipeline	Generator Sets	1	8.00	84	0.74
Pipeline	Graders	1	8.00	187	0.41
Pipeline	Dumpers/Tenders	1	8.00	16	0.38
Pipeline	Cement and Mortar Mixers	1	8.00	9	0.56

Trips and VMT

Twin Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Pipeline	7	10.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pipeline - 2023

Unmitigated Construction On-Site

Category		lb/day														lb/day	
ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
Off-Road	1.4702	14.4948	12.9654	0.0242	0.6867	0.6867	0.6445	0.6445	0.6445	2,302.858	2,302.858	2,302.858	0.5464		2,316.518	9	
Total	1.4702	14.4948	12.9654	0.0242	0.6867	0.6867	0.6445	0.6445	0.6445	2,302.858	2,302.858	2,302.858	0.5464		2,316.518	9	

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Pipeline - 2023

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	4.0000e-004	0.0244	2.6800e-003	7.0000e-005	1.5700e-003	1.8000e-004	1.7500e-003	4.3000e-004	1.7000e-004	6.0000e-004		7.1091	7.1091	2.0000e-005	1.1200e-003	7.4423
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
Worker	0.0895	0.0474	0.6303	1.2200e-003	0.1277	8.9000e-004	0.1286	0.0339	8.2000e-004	0.0347		124.7285	124.7285	4.5900e-003	3.8500e-003	125.9908
Total	0.0899	0.0717	0.6330	1.2900e-003	0.1293	1.0700e-003	0.1304	0.0343	9.9000e-004	0.0353		131.8376	131.8376	4.6100e-003	4.9700e-003	133.4331

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	1.4702	14.4948	12.9654	0.0242		0.6867	0.6867		0.6445	0.6445	0.0000	2,302.8580	2,302.8580	0.5464		2,316.5189
Total	1.4702	14.4948	12.9654	0.0242		0.6867	0.6867		0.6445	0.6445	0.0000	2,302.8580	2,302.8580	0.5464		2,316.5189

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Pipeline - 2023

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	4.0000e-004	0.0244	2.6800e-003	7.0000e-005	1.5700e-003	1.8000e-004	1.7500e-003	4.3000e-004	1.7000e-004	6.0000e-004		7.1091	7.1091	2.0000e-005	1.1200e-003	7.4423
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
Worker	0.0895	0.0474	0.6303	1.2200e-003	0.1277	8.9000e-004	0.1286	0.0339	8.2000e-004	0.0347		124.7285	124.7285	4.5900e-003	3.8500e-003	125.9908
Total	0.0899	0.0717	0.6330	1.2900e-003	0.1293	1.0700e-003	0.1304	0.0343	9.9000e-004	0.0353		131.8376	131.8376	4.6100e-003	4.9700e-003	133.4331

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	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
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.398947	0.076285	0.208230	0.170724	0.065991	0.011574	0.007403	0.003656	0.001142	0.000414	0.044570	0.002045	0.009017

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
Unmitigated	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
Total	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
Total	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481

7.0 Water Detail

7.1 Mitigation Measures Water

Twain Harte Pipeline - Tuolumne County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Twain Harte Pipeline
Tuolumne County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	7,924.79	1000sqft	181.93	7,924,792.60	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - Total construction period is 5 months
- Off-road Equipment -
- Off-road Equipment - Per project applicant
- Trips and VMT - 10 employees
10 trucks for hauling pipeline material
- Vehicle Trips - No change in operational emissions
- Consumer Products - No change in operational emissions
- Area Coating - No change in operational emissions
- Landscape Equipment - No change in operational emissions

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Energy Use - No change in operational emissions

Water And Wastewater - No change in operational emissions

Solid Waste - No change in operational emissions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	PhaseEndDate	4/8/2039	9/15/2023
tblConstructionPhase	PhaseStartDate	6/5/2038	4/17/2023
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	1.81	0.00
tblEnergyUse	NT24E	1.85	0.00
tblEnergyUse	NT24NG	0.31	0.00
tblEnergyUse	T24E	0.56	0.00
tblEnergyUse	T24NG	3.17	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblLandUse	LandUseSquareFeet	7,924,790.00	7,924,792.60
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	9,826.74	0.00

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	1,832,607,687.50	0.00

2.0 Emissions Summary

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
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	0.0000
Total	0.0749	7.3600e-003	0.8090	6.0000e-005	0.0000	2.8800e-003	2.8800e-003	0.0000	2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003	0.0000	1.8481

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
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	0.0000
Total	0.0749	7.3600e-003	0.8090	6.0000e-005	0.0000	2.8800e-003	2.8800e-003	0.0000	2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003	0.0000	1.8481

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	Pipeline	Trenching	4/17/2023	9/15/2023	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline	Trenchers	1	8.00	78	0.50
Pipeline	Generator Sets	1	8.00	84	0.74
Pipeline	Graders	1	8.00	187	0.41
Pipeline	Dumpers/Tenders	1	8.00	16	0.38
Pipeline	Cement and Mortar Mixers	1	8.00	9	0.56

Trips and VMT

Twin Hart Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Pipeline	7	10.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHT

3.1 Mitigation Measures Construction

3.2 Pipeline - 2023

Unmitigated Construction On-Site

Category	lb/day																lb/day	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
Off-Road	1.4702	14.4948	12.9654	0.0242	0.6867	0.6867	0.6867	0.6445	0.6445	0.6445	2,302.858	2,302.858	2,302.858	0.5464		2,316.518	9	
Total	1.4702	14.4948	12.9654	0.0242	0.6867	0.6867	0.6867	0.6445	0.6445	0.6445	2,302.858	2,302.858	2,302.858	0.5464		2,316.518	9	

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Pipeline - 2023

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	3.9000e-004	0.0259	2.7100e-003	7.0000e-005	1.5700e-003	1.8000e-004	1.7500e-003	4.3000e-004	1.7000e-004	6.0000e-004		7.1088	7.1088	2.0000e-005	1.1200e-003	7.4420
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
Worker	0.0931	0.0621	0.5732	1.1200e-003	0.1277	8.9000e-004	0.1286	0.0339	8.2000e-004	0.0347		114.8378	114.8378	4.9500e-003	4.6200e-003	116.3397
Total	0.0935	0.0880	0.5759	1.1900e-003	0.1293	1.0700e-003	0.1304	0.0343	9.9000e-004	0.0353		121.9466	121.9466	4.9700e-003	5.7400e-003	123.7817

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	1.4702	14.4948	12.9654	0.0242		0.6867	0.6867		0.6445	0.6445	0.0000	2,302.8580	2,302.8580	0.5464		2,316.5189
Total	1.4702	14.4948	12.9654	0.0242		0.6867	0.6867		0.6445	0.6445	0.0000	2,302.8580	2,302.8580	0.5464		2,316.5189

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Pipeline - 2023

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	3.9000e-004	0.0259	2.7100e-003	7.0000e-005	1.5700e-003	1.8000e-004	1.7500e-003	4.3000e-004	1.7000e-004	6.0000e-004		7.1088	7.1088	2.0000e-005	1.1200e-003	7.4420
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
Worker	0.0931	0.0621	0.5732	1.1200e-003	0.1277	8.9000e-004	0.1286	0.0339	8.2000e-004	0.0347		114.8378	114.8378	4.9500e-003	4.6200e-003	116.3397
Total	0.0935	0.0880	0.5759	1.1900e-003	0.1293	1.0700e-003	0.1304	0.0343	9.9000e-004	0.0353		121.9466	121.9466	4.9700e-003	5.7400e-003	123.7817

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	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
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.398947	0.076285	0.208230	0.170724	0.065991	0.011574	0.007403	0.003656	0.001142	0.000414	0.044570	0.002045	0.009017

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
Unmitigated	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
Total	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481
Total	0.0749	7.3600e-003	0.8090	6.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003		1.7344	1.7344	4.5500e-003		1.8481

7.0 Water Detail

7.1 Mitigation Measures Water

Twain Harte Pipeline - Tuolumne County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX C. CARB 2020 AND 2025 ESTIMATED EMISSION INVENTORIES



[About](#) [Our Work](#) [Resources](#) [Services](#) [Rulemaking](#) [News](#) [Equity](#)

2016 SIP EMISSION PROJECTION DATA 2020 Estimated Annual Average Emissions TUOLUMNE COUNTY

All emissions are represented in Tons per Day and reflect the most current data provided to ARB.

[See detailed information.](#)

[Start a new query.](#)

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
FUEL COMBUSTION	0.1	0.0	0.8	1.3	0.5	0.3	0.3	0.3	0.0
WASTE DISPOSAL	-	-	-	-	-	-	-	-	0.0
CLEANING AND SURFACE COATINGS	0.5	0.4	-	-	-	-	-	-	-
PETROLEUM PRODUCTION AND MARKETING	0.1	0.1	-	-	-	-	-	-	-
INDUSTRIAL PROCESSES	0.1	0.1	0.0	0.0	0.0	3.3	1.6	0.3	-
* TOTAL STATIONARY SOURCES	0.7	0.6	0.8	1.3	0.5	3.6	1.8	0.6	0.0
AREAWIDE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
SOLVENT EVAPORATION	1.3	1.3	-	-	-	-	-	-	-
MISCELLANEOUS PROCESSES	8.3	2.1	18.7	0.2	0.1	7.8	5.1	2.0	2.2
* TOTAL AREAWIDE SOURCES	9.7	3.4	18.7	0.2	0.1	7.8	5.1	2.0	2.2
MOBILE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
ON-ROAD MOTOR VEHICLES	0.7	0.6	4.1	1.0	0.0	0.1	0.1	0.0	0.0
OTHER MOBILE SOURCES	2.7	2.3	13.8	0.8	0.0	0.2	0.1	0.1	0.0
* TOTAL MOBILE SOURCES	3.3	2.9	18.0	1.8	0.0	0.2	0.2	0.1	0.0
GRAND TOTAL FOR TUOLUMNE COUNTY	13.7	6.9	37.5	3.3	0.6	11.6	7.2	2.8	2.2

[Start a new query.](#)

CONTACT US

(800) 242-4450 | helpline@arb.ca.gov
1001 I Street, Sacramento, CA 95814
P.O. Box 2815, Sacramento, CA 95812

California Governor
Gavin Newsom
[Visit Governor's Website](#)

Secretary for Environmental Protection
Jared Blumenfeld
[Visit his Website](#)



[ACCESSIBILITY](#)
[PRIVACY POLICY](#)
[CONDITIONS OF USE](#)
[LOCAL AIR DISTRICTS](#)
[REGISTER TO VOTE](#)



[About Our Work](#) [Resources](#) [Services](#) [Rulemaking](#) [News](#) [Equity](#)

2016 SIP EMISSION PROJECTION DATA 2020 Estimated Annual Average Emissions MOUNTAIN COUNTIES AIR BASIN

All emissions are represented in Tons per Day and reflect the most current data provided to ARB.

[See detailed information.](#)

[Start a new query.](#)

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
FUEL COMBUSTION	1.5	1.0	29.7	6.6	0.8	1.0	0.9	0.8	0.1
WASTE DISPOSAL	5.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
CLEANING AND SURFACE COATINGS	3.0	2.3	-	-	-	0.0	0.0	0.0	-
PETROLEUM PRODUCTION AND MARKETING	13.5	0.8	-	-	-	-	-	-	-
INDUSTRIAL PROCESSES	1.7	1.5	0.2	0.3	0.4	13.1	7.0	2.7	-
* TOTAL STATIONARY SOURCES	25.1	5.6	30.0	6.9	1.2	14.1	7.9	3.6	0.2
AREAWIDE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
SOLVENT EVAPORATION	8.9	8.3	-	-	-	-	-	-	0.3
MISCELLANEOUS PROCESSES	48.2	12.1	87.8	1.7	0.5	77.4	46.9	13.1	6.5
* TOTAL AREAWIDE SOURCES	57.1	20.3	87.8	1.7	0.5	77.4	46.9	13.1	6.8
MOBILE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
ON-ROAD MOTOR VEHICLES	5.9	5.4	37.2	11.6	0.1	1.0	1.0	0.5	0.5
OTHER MOBILE SOURCES	9.9	8.6	53.9	7.1	0.0	0.6	0.6	0.5	0.0
* TOTAL MOBILE SOURCES	15.8	14.0	91.1	18.6	0.1	1.7	1.6	0.9	0.5
GRAND TOTAL FOR MOUNTAIN COUNTIES AIR BASIN	98.0	39.9	208.9	27.3	1.8	93.1	56.4	17.6	7.5

[Start a new query.](#)

CONTACT US

(800) 242-4450 | helpline@arb.ca.gov
1001 I Street, Sacramento, CA 95814
P.O. Box 2815, Sacramento, CA 95812

California Governor
Gavin Newsom
[Visit Governor's Website](#)

Secretary for Environmental Protection
Jared Blumenfeld



[ACCESSIBILITY](#)
[PRIVACY POLICY](#)
[CONDITIONS OF USE](#)
[LOCAL AIR DISTRICTS](#)
[REGISTER TO VOTE](#)



[About Our Work](#) [Resources](#) [Services](#) [Rulemaking](#) [News](#) [Equity](#)

2016 SIP EMISSION PROJECTION DATA 2025 Estimated Annual Average Emissions TUOLUMNE COUNTY

All emissions are represented in Tons per Day and reflect the most current data provided to ARB.

[See detailed information.](#)

[Start a new query.](#)

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
FUEL COMBUSTION	0.1	0.0	0.8	1.4	0.5	0.3	0.3	0.3	0.0
WASTE DISPOSAL	-	-	-	-	-	-	-	-	0.0
CLEANING AND SURFACE COATINGS	0.5	0.4	-	-	-	-	-	-	-
PETROLEUM PRODUCTION AND MARKETING	0.1	0.1	-	-	-	-	-	-	-
INDUSTRIAL PROCESSES	0.1	0.1	0.0	0.0	0.0	3.4	1.6	0.3	-
* TOTAL STATIONARY SOURCES	0.7	0.6	0.9	1.4	0.5	3.8	2.0	0.6	0.0
AREAWIDE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
SOLVENT EVAPORATION	1.4	1.3	-	-	-	-	-	-	-
MISCELLANEOUS PROCESSES	8.3	2.2	18.8	0.2	0.1	7.9	5.2	2.0	2.2
* TOTAL AREAWIDE SOURCES	9.8	3.5	18.8	0.2	0.1	7.9	5.2	2.0	2.2
MOBILE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
ON-ROAD MOTOR VEHICLES	0.5	0.4	2.5	0.6	0.0	0.1	0.1	0.0	0.0
OTHER MOBILE SOURCES	2.1	1.8	13.5	0.7	0.0	0.1	0.1	0.1	0.0
* TOTAL MOBILE SOURCES	2.6	2.3	16.0	1.3	0.0	0.2	0.2	0.1	0.0
GRAND TOTAL FOR TUOLUMNE COUNTY	13.1	6.4	35.7	2.9	0.6	11.9	7.3	2.8	2.2

[Start a new query.](#)

CONTACT US

(800) 242-4450 | helpline@arb.ca.gov
1001 I Street, Sacramento, CA 95814
P.O. Box 2815, Sacramento, CA 95812

California Governor
Gavin Newsom
[Visit Governor's Website](#)

Secretary for Environmental Protection
Jared Blumenfeld
[Visit his Website](#)



[ACCESSIBILITY](#)
[PRIVACY POLICY](#)
[CONDITIONS OF USE](#)
[LOCAL AIR DISTRICTS](#)
[REGISTER TO VOTE](#)



[About Our Work](#) [Resources](#) [Services](#) [Rulemaking](#) [News](#) [Equity](#)

2016 SIP EMISSION PROJECTION DATA 2025 Estimated Annual Average Emissions

MOUNTAIN COUNTIES AIR BASIN

All emissions are represented in Tons per Day and reflect the most current data provided to ARB.

[See detailed information.](#)

[Start a new query.](#)

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
FUEL COMBUSTION	1.6	1.1	32.6	7.0	0.9	1.1	1.0	0.9	0.1
WASTE DISPOSAL	5.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
CLEANING AND SURFACE COATINGS	3.3	2.5	-	-	-	0.0	0.0	0.0	-
PETROLEUM PRODUCTION AND MARKETING	13.4	0.7	-	-	-	-	-	-	-
INDUSTRIAL PROCESSES	1.7	1.5	0.2	0.3	0.4	13.6	7.2	2.8	-
* TOTAL STATIONARY SOURCES	25.7	5.9	32.8	7.3	1.3	14.7	8.2	3.7	0.2
AREAWIDE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
SOLVENT EVAPORATION	9.4	8.8	-	-	-	-	-	-	0.3
MISCELLANEOUS PROCESSES	48.6	12.2	88.8	1.6	0.5	79.2	47.9	13.3	6.6
* TOTAL AREAWIDE SOURCES	58.1	21.0	88.8	1.6	0.5	79.2	47.9	13.3	6.9
MOBILE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
ON-ROAD MOTOR VEHICLES	4.4	4.2	24.7	6.9	0.1	1.0	1.0	0.4	0.5
OTHER MOBILE SOURCES	8.0	7.0	53.9	5.5	0.0	0.5	0.4	0.3	0.0
* TOTAL MOBILE SOURCES	12.5	11.1	78.6	12.4	0.1	1.5	1.4	0.8	0.5
GRAND TOTAL FOR MOUNTAIN COUNTIES AIR BASIN	96.3	38.0	200.3	21.3	1.8	95.4	57.6	17.8	7.5

[Start a new query.](#)

CONTACT US

(800) 242-4450 | helpline@arb.ca.gov
1001 I Street, Sacramento, CA 95814
P.O. Box 2815, Sacramento, CA 95812

California Governor
Gavin Newsom
[Visit Governor's Website](#)

Secretary for Environmental Protection
Jared Blumenfeld



[ACCESSIBILITY](#)
[PRIVACY POLICY](#)
[CONDITIONS OF USE](#)
[LOCAL AIR DISTRICTS](#)
[REGISTER TO VOTE](#)

APPENDIX B

BIOLOGICAL ANALYSIS REPORT

BIOLOGICAL ANALYSIS REPORT

TWAIN HARTE COMMUNITY SERVICES DISTRICT

TWAIN HARTE SEWER PIPELINE IMPROVEMENTS PROJECT



NOVEMBER 2021



BIOLOGICAL ANALYSIS REPORT

TWAIN HARTE SEWER PIPELINE IMPROVEMENTS PROJECT

Prepared for:

Twain Harte Community Service District
22912 Vantage Pointe Drive
Twain Harte, CA 95383
Contact Person: Jeff Black, PE
Phone: (209) 322-1820

Consultant:



5080 California Avenue, Suite 220
Bakersfield, CA 93309
Contact: Jaymie Brauer
Phone: (661) 616-2600

November 2021

Table of Contents

Executive Summary..... 1

SECTION 1 - Introduction 1-1

1.1 - Project Location..... 1-1

1.2 - Project Description..... 1-1

1.3 - Purpose, Goals, and Objectives 1-1

SECTION 2 - Methods..... 2-1

2.1 - Definition of Biological Study Area 2-1

2.2 - Definition of Special-Status Species 2-1

2.3 - Literature Review and Database Analysis..... 2-3

2.4 - Reconnaissance-Level Field Surveys..... 2-4

SECTION 3 - Regulatory Setting..... 3-1

SECTION 4 - Environmental Setting..... 4-1

4.1 - Physical Characteristics..... 4-1

 4.1.1 - Topography 4-1

 4.1.2 - Climate..... 4-1

 4.1.3 - Land Use 4-1

 4.1.4 - Soils..... 4-2

 4.1.5 - Hydrology..... 4-2

4.2 - Vegetation and Other Land Cover..... 4-5

 4.2.1 - Barren 4-5

 4.2.2 - Lacustrine..... 4-5

 4.2.3 - Montane Hardwood-Conifer 4-6

 4.2.4 - Urban 4-6

 4.2.5 - Valley Foothill Riparian 4-7

4.3 - General Wildlife Observations 4-7

SECTION 5 - Sensitive Biological Resources..... 5-1

5.1 - Special-Status Species 5-1

 5.1.1 - Special-Status Plant Species..... 5-2

 5.1.2 - Special-Status Animal Species..... 5-4

 5.1.3 - Other Protected Species 5-5

5.2 - Sensitive Natural Communities 5-5

 5.2.1 - Sensitive Plant Communities 5-5

 5.2.2 - Critical Habitats 5-6

5.3 - Jurisdictional Aquatic Resources 5-6

5.4 - Wildlife Movement 5-6

5.5 - Resources Protected by Local Policies and Ordinances..... 5-6

5.6 - Habitat Conservation Plans.....	5-7
<i>SECTION 6 - Impact Analysis and Recommended Mitigation Measures.....</i>	<i>6-1</i>
6.1 - Special-Status Species	6-1
6.1.1 - Project Impacts to Special-Status Plant Species.....	6-1
6.1.2 - Project Impacts to Special-Status Animal Species.....	6-2
6.2 - Sensitive Natural Communities and Critical Habitat.....	6-5
6.3 - Jurisdictional Aquatic Resources	6-5
6.4 - Wildlife Movement	6-5
6.5 - Local Policies and Ordinances.....	6-6
6.6 - Adopted or Approved Plans.....	6-6
<i>SECTION 7 - Limitations, Assumptions, and Use Reliance</i>	<i>7-1</i>
<i>SECTION 8 - References.....</i>	<i>8-1</i>
<i>SECTION 9 - List of Preparers.....</i>	<i>9-1</i>
 Appendices	
Appendix A	Regulatory Setting
Appendix B	Representative Photographs
Appendix C	Plants and Animals Observed On-Site
Appendix D	Special-Status Species Evaluation Table, IPac query and 9 QUAD CNDDDB

List of Figures

Figure 1-1 Regional Map 1-2
Figure 1-2 Project Location Map..... 1-3
Figure 2-1 Biological Study Area..... 2-2
Figure 4-1 NWI and NHD Records of Aquatic Resources 4-3
Figure 4-2 FEMA Flood Zone Map 4-4

List of Tables

Table 2-1 Reconnaissance Survey Personnel and Timing 2-4
Table 5-1 Special-Status Species with Potential to Occur On-Site 5-1
Table 6-1 Blooming Period of Special-status Plants with Potential to Occur..... 6-1

Acronyms and Abbreviations

BAR	Biological Analysis Report
BIOS	Biogeography Information and Observation System
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
ROW	Right-of-Way
SR	State Route
U.S.	United States
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

EXECUTIVE SUMMARY

Quad Knopf, Inc. (QK) has prepared this Biological Analysis Report (BAR) to evaluate the potential for sensitive biological resource to be impacted by the construction of the Twain Harte Sewer Pipeline Improvements Project (Project) in Tuolumne County, California.

The proposed Project is located in the unincorporated community of Twain Harte, in the lower Sierra Nevada mountain range to the east of California's Central Valley. The Twain Harte Community Services District proposes to replace 4- to 10-inch diameter sewer pipelines at 12 locations to maintain and upgrade the existing sanitary collection system. The Project is located mainly beneath asphalt-paved roadways, although a portion of the Project runs along the southern edge of the man-made Twain Harte Lake.

A database review and reconnaissance site visit were completed by QK Environmental Scientists to characterize existing conditions and determine the potential for special-status species and other sensitive biological resources that may occur and be impacted by the Project.

The database and literature review identified one sensitive natural community and 15 special-status plant species with potential to occur in the vicinity of the Project (Biological Study Area or BSA). One sensitive plant community identified in the review was determined not to be present during the site visit. Seven (7) special-status species identified in the review were determined to have the potential to occur on the BSA because they are within the known range of the species, the accepted elevation range, and suitable habitat is present. None of these species are State or federally protected but are State listed as rare.

The literature and database review identified 19 special-status wildlife species known or with potential to occur in the vicinity of the BSA (see Appendix D). Of those, only one (1) was determined to have the potential to occur within the BSA, northern goshawk (*Accipiter gentilis*). The BSA presents suitable habitat for numerous nesting birds that are covered by the Migratory Bird Treaty Act, although no bird nests were observed within the BSA during the reconnaissance site visit.

There is an unnamed creek that runs through Twain Harte near to proposed work areas for the Project. Twain Harte Lake is located at the southwestern end of the Project. These hydrological resources are likely under the jurisdiction of both the State and the U.S. Army Corps of Engineers. However, the Project would avoid any impacts to these features.

Direct and indirect impacts of the Project to potentially occurring plant and wildlife species could include injury to or mortality of individuals and loss of habitat. Avoidance and minimization measures are recommended which, when implemented, would reduce Project impacts to biological resources to less than significant levels.

SECTION 1 - INTRODUCTION

QK prepared this Biological Analysis Report (BAR) to evaluate the potential for sensitive biological resources to be impacted by the construction of the Twain Harte Sewer Pipeline Improvement Project (Project) in Tuolumne County, California.

1.1 - Project Location

The proposed Project is located in the unincorporated community of Twain Harte in Tuolumne County, California (Figures 1-1 and 1-2). Twain Harte is accessible via State Route (SR) 108 and is in the foothills of the western Sierra Nevada mountain range, approximately 50 miles northeast of Modesto, California and 8.5 miles northeast of Sonora, California. The Project is within the *Twain Harte* U.S. Geological Survey (USGS) 7.5-minute quadrangle, and within Sections 8, 9, 16, and 17 of Township 2 North, Range 16 East, Mount Diablo Base and Meridian.

1.2 - Project Description

The proposed Project consists of the replacement of existing 4- to 10- inch sewer pipelines within existing rights-of-way (ROWs) and utility easements at twelve locations, mainly buried beneath paved roads. A portion of the Project is adjacent to the man-made Twain Harte Lake and is not within an existing ROW. The Project will maintain and upgrade the existing sanitary collection system to provide adequate capacity for the community and avoid any sanitary sewer overflows into groundwater or surface waters.

1.3 - Purpose, Goals, and Objectives

The purpose of this BAR is to identify where potential special-status biological resources may occur within the Project site, determine how those resources may be impacted by the proposed Project, and recommend avoidance, minimization, and mitigation measures to reduce the potential for impact to a less than significant level. This BAR has been prepared to support an analysis of biological conditions as required by the California Environmental Quality Act (CEQA). Information contained in this BAR would, at least partially, support an analysis of project effects required by the National Environmental Policy Act (NEPA) and to support regulatory permit applications, if needed.



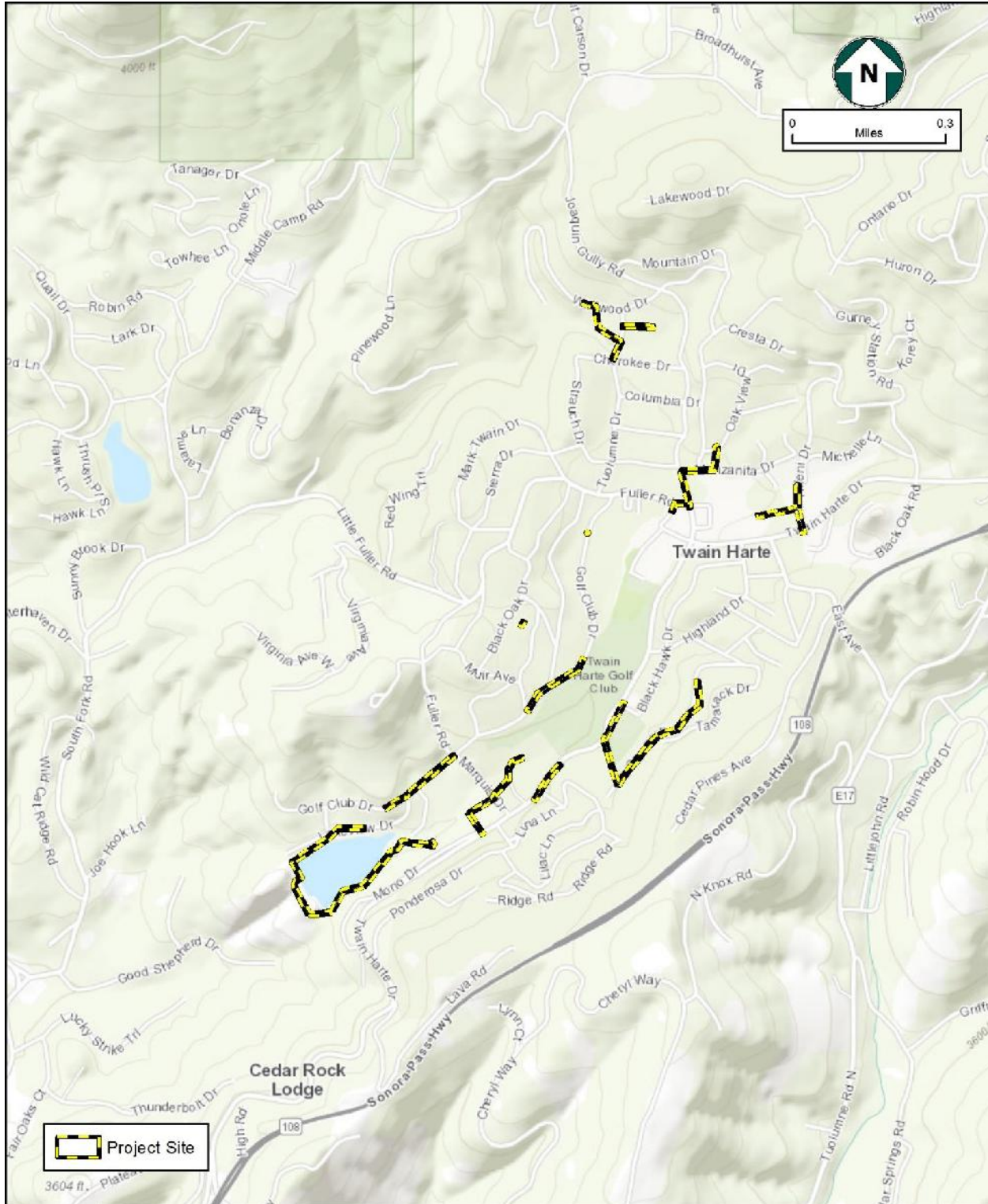


Figure 1-2
Project Location Map
Twain Harte Sewer Pipeline Improvements Project,
Tuolumne County, California

SECTION 2 - METHODS

This section discusses the methods used to obtain relevant data on the occurrence, or potential occurrence, of sensitive biological resources on or in the vicinity of the Project.

2.1 - Definition of Biological Study Area

The Biological Study Area (BSA) consists of the proposed Project and a surrounding 250-foot buffer (Figure 2-1). The Project consists of twelve (12) segments of pipeline, which are numbered for ease of reference (Figure 2-1).

2.2 - Definition of Special-Status Species

Special-status species evaluated in this BAR include:

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA). Species that are under review by the United States fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) may be included if there is a reasonable expectation of listing within the life of the Project;
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA);
- Species designated as Fully Protected, Species of Special Concern, or included on a Watch List by the California Department of Fish and Wildlife (CDFW);
- Other species included on the CDFW's Special Animals List;
- Plant species with a California Rare Plant Rank (CRPR); and
- Species designated as locally important by a Local Agency and/or otherwise protected through ordinance or local policy.

The potential for each special-status species to occur in the study area was evaluated according to the following criteria:

- **No.** Habitat on and adjacent to the site is clearly unsuitable to meet the needs of the species (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees).
- **Yes.** Conditions on the site may, in some way, support a portion of the species ecology (foraging, reproduction, movement/migration). Negative survey results independent of other information does not exclude the potential for a species to occur.
- **Present.** Species was observed on the site or has been recorded (e.g., California Natural Diversity Database, California Native Plant Society) on the site recently (within the last 5 years).

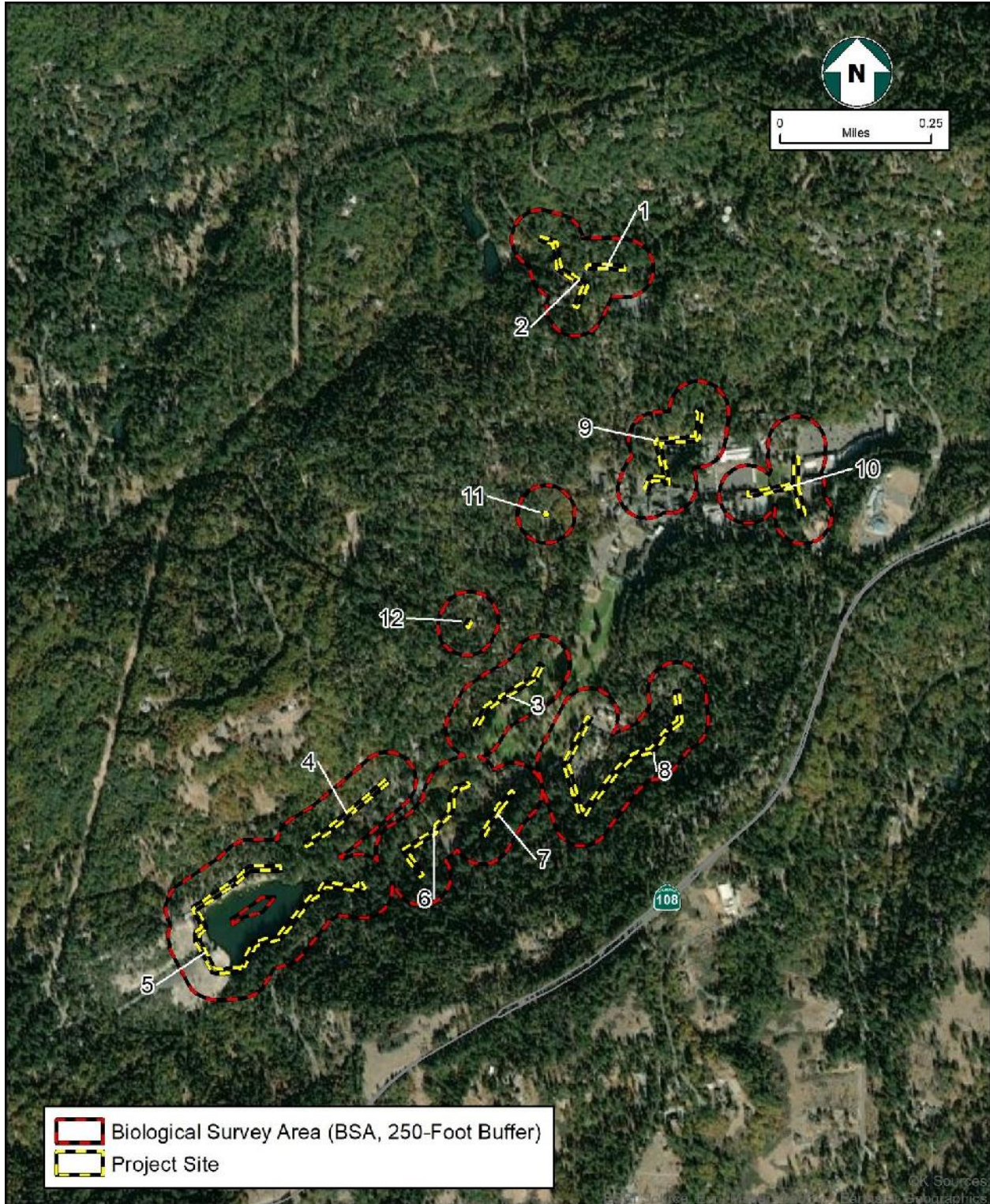


Figure 2-1
Biological Study Area
Twain Harte Sewer Pipeline Improvements Project,
Tuolumne County, California

2.3 - Literature Review and Database Analysis

The following sources were reviewed for information on sensitive biological resources in the project vicinity:

- CDFW's California Natural Diversity Database (CNDDDB; CDFW 2021a)
- CDFW's Biogeographic Information and Observation System (BIOS; CDFW 2021b)
- CDFW's Special Animals List (CDFW 2021c)
- CDFW's California Wildlife Habitat Relationships (CWHR) System (Mayer and Laudenslayer 1988)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2021)
- U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation system (USFWS 2021a)
- USFWS Critical Habitat Mapper (USFWS 2021b)
- USFWS National Wetlands Inventory (USFWS 2021c)
- National Hydrography Dataset (USGS 2021)
- Federal Emergency Management Agency (FEMA) flood zone maps (FEMA 2021)
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2021)
- Current and historical aerial imagery (Google LLC 2021)

For each of these data sources, the search was focused on the *Twain Harte, California* USGS 7.5-minute quadrangle in which the Project is located, plus the surrounding eight (8) quadrangles: *Stanislaus, Crandall Peak, Strawberry, Hull Creek, Duckwall Mountain, Tuolumne, Standard, and Columbia SE*.

The CNDDDB provides element-specific spatial information on individually documented occurrences of special-status species and sensitive natural communities. Some of the information available for review in the CNDDDB is still undergoing review by the CDFW; these records are identified as unprocessed data. The CNPS database provides similar information as the CNDDDB, but at a much lower spatial resolution. Much of this information in these databases is obtained opportunistically and is often focused on protected lands or on lands where development has been proposed. Neither database represents a comprehensive survey for special-status resources in the region. As such, the absence of recorded occurrences in these databases at any specific location does not preclude the possibility that a special-status resource could be present. The National Wetlands Inventory (NWI), National Hydrography Dataset (NHD), and Web Soil Survey provide comprehensive data, but at a low resolution that requires confirmation in the field. The CDFW Special Animals List and USFWS Information for Planning and Consultation system provide no spatial data on wildlife occurrences and provide only lists of species that might potentially be present.

The results of the database inquiries were reviewed to develop a comprehensive list of sensitive biological resources that may be present in the vicinity of the Project. This list was then evaluated against existing site conditions observed during the on-site biological

investigations of the BSA to determine which resources occur or have the potential to occur, and then the potential for the Project to impact those resources was evaluated.

2.4 - Reconnaissance-Level Field Surveys

A reconnaissance survey of the BSA was conducted on September 15, 2021 by QK Environmental Scientists Karissa Denney and Shannon Gleason (Table 2-1). The survey consisted of visiting each of the proposed work locations conducting pedestrian surveys. Much of the 250-foot survey buffer fell on residential property or other privately-owned lands and was inaccessible. These areas were surveyed visually with the aid of binoculars to gather a representative inventory of the plant and wildlife species present.

**Table 2-1
Reconnaissance Survey Personnel and Timing
Twain Harte Sewer Pipeline Improvements Project,
Kern County, California**

Date	Personnel	Time	Weather Conditions	Temperature
September 15, 2021	Karissa Denney, Shannon Gleason	0700-1500	hazy, warm	61-82°F

General tasks completed during the survey included compiling an inventory of plant and wildlife species observed, characterizing vegetation associations and habitat conditions, verifying presence of wetlands and waters within the BSA, and assessing the potential for federal- and State- listed and special-status plant and wildlife species to occur on the BSA. All locational data were recorded using ESRI Collector for ArcGIS software installed on an iPad and site conditions were documented with representative photographs.

SECTION 3 - REGULATORY SETTING

Regulated or sensitive resources that were studied and analyzed include special-status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement areas, and locally protected resources such as protected trees. Regulatory authority over biological resources is shared by federal, State, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, Tuolumne County).

Potential impacts to biological resources were analyzed based on the following list of statutes. Summaries of these statutes are provided in Appendix A.

- CEQA
- FESA
- CESA
- Federal Clean Water Act
- California Fish and Game Code
- Migratory Bird Treaty Act
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- Tuolumne County General Plan

SECTION 4 - ENVIRONMENTAL SETTING

This section identifies the regional and local environmental setting of the Project and describes existing baseline conditions. The environmental setting of the BSA was obtained from various sources of literature, databases, and aerial photographs. Site conditions were verified and updated during the reconnaissance survey conducted by QK Environmental Scientists.

4.1 - Physical Characteristics

This section identifies the regional environmental setting of the Project and describes baseline conditions. Representative photographs of the BSA are included in Appendix B.

4.1.1 - TOPOGRAPHY

The Project is in the lower elevation of the Sierra Nevada mountain range, east of California's Central Valley. The topography of the BSA is variable, with the majority of the Project work locations located Twain Harte municipality. Hillsides slope upward away from this valley to the northwest and southeast with various changes in topography. Elevation in the BSA ranges from approximately 3,500 feet above mean sea level at the southwest end of the Project to approximately 3,760 feet above mean sea level at its northern end.

4.1.2 - CLIMATE

The Project is within the lower elevations of the Sierra Nevada Mountain range, a region consisting of warm, mostly dry summers and cold, wet winters. Average high temperatures range from 54.5°F in January to 94.5°F in July, and temperatures may occasionally exceed 100°F in the summer (WRCC 2021). Average low temperatures range from 33.4°F in January to 58.7°F in July. Precipitation occurs primarily as rain, most of which falls from November to April, with an average of 32.14 inches of rainfall per year. Precipitation in the form of snowfall can occur in winter, mainly from December to March, with an average of 4.7 inches per year.

4.1.3 - LAND USE

The Project is situated on the western side of the lower-elevation Sierra Nevada mountain range, much of which is undeveloped forested land (Figures 1-1 and 1-2). It is within the community of Twain Harte, which was originally established during California's gold rush. Twain Harte is accessible via SR 108, which is just southeast of the Project and runs from Modesto to U.S. Route 395 through the Sonora Pass.

Almost all proposed work locations are along existing paved residential and commercial roads, and there are numerous residences immediately adjacent to and surrounding the Project. Areas between residences remain densely forested. Most Project sites are situated around the "town center" of Twain Harte, which supports a golf course, a park, Twain Harte Lake, an elementary school, a fire department, restaurants, and various shops and services.

An unnamed creek runs through Twain Harte and collects in a small artificial lake on the southwest end of the BSA. Twain Harte Lake is used for recreational swimming by community members. There are several other artificial ponds in the vicinity of the BSA.

4.1.4 - SOILS

The Web Soil Survey has not mapped the soil type(s) that underlay the BSA, so this information is not available (NRCS 2021).

4.1.5 - HYDROLOGY

The entire BSA is within the Upper Tuolumne watershed (USGS 2021). This watershed drains waters from the western Sierra Nevada mountains into the Tuolumne River, which flows westward into the Central Valley. The Tuolumne River joins the San Joaquin River west of Modesto, California, which flows north towards the San Francisco delta region.

The NWI and NHD identify two water resources within the BSA (Figure 4-1; USFWS 2021c, USGS 2021). Twain Harte Lake is at the southwest end of the BSA and is classified by the NWI as an artificially flooded pond or lake with less than 30% vegetative cover. These conditions were confirmed during the reconnaissance survey and are described further below in Section 4.2.2. Photographs of Twain Harte Lake are included in Appendix B.

An unnamed creek flows southwest through Twain Harte and feeds Twain Harte Lake (Figure 4-1). Water flow from this creek is released downstream of Twain Harte Lake from the levy as needed based on seasonal flow. Upstream and downstream of the lake, the creek is classified as “intermittent” by the NWI, meaning flows fluctuate seasonally. Immediately adjacent to the lake, both upstream and downstream, the creek is classified as “semipermanently flooded”, meaning surface water persists throughout the growing system in most years, due to the regulated flow from Twain Harte Lake (NWI 2021). This creek was not surveyed in all portions of the BSA because much of it is located on private property, but some accessible areas were confirmed to support a low flow of water and/or pooled surface water (Appendix B, Photograph 16). The creek flows southwest into Phoenix Reservoir, which drains into the Don Pedro Reservoir via Sullivan Creek, eventually reaching the Tuolumne River (USGS 2021)

The majority of the BSA is within an area of minimal flood hazard as determined by FEMA (Figure 4-2; FEMA 2021). Twain Harte Lake is categorized as an area with a 1% chance of annual flooding.

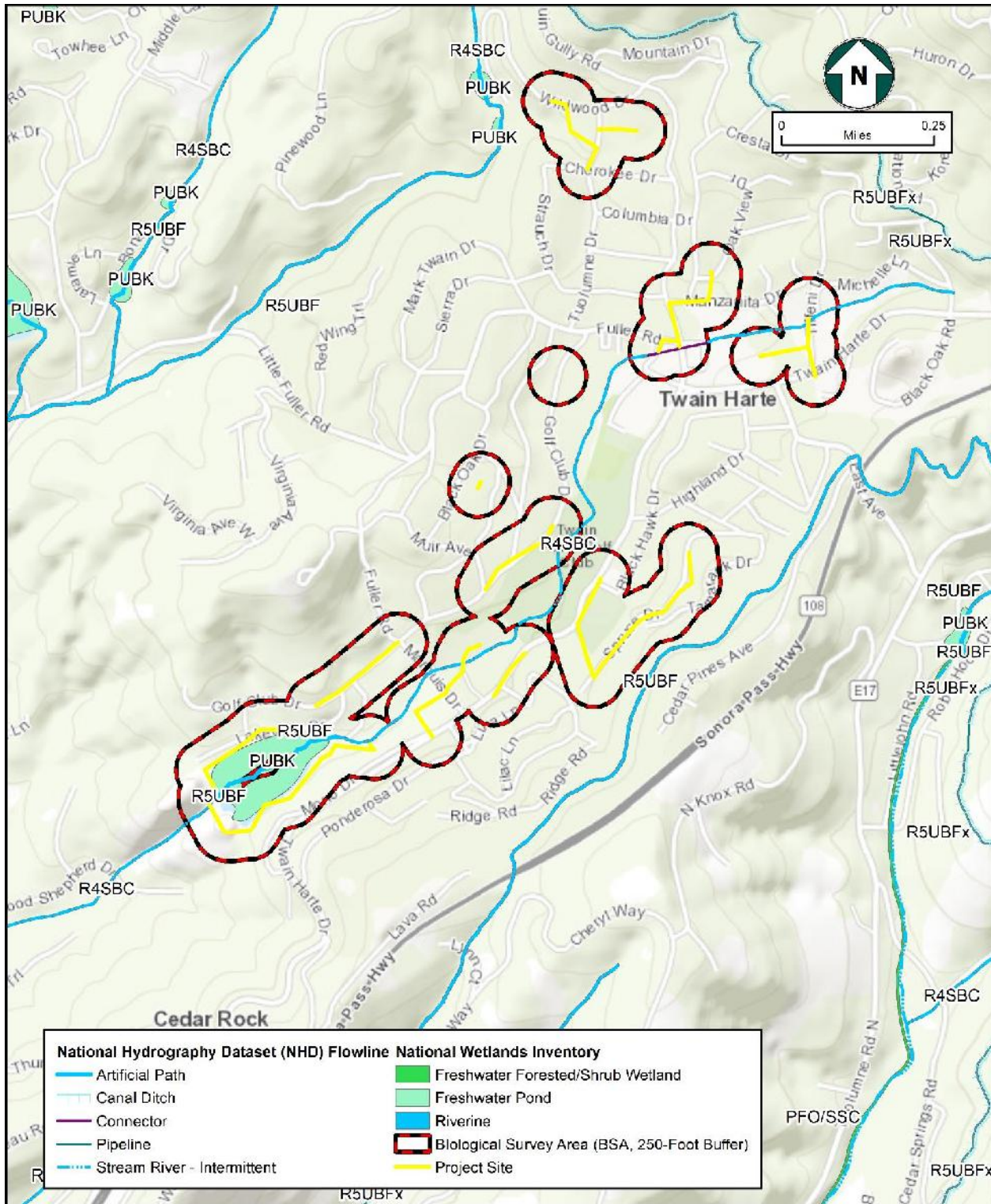


Figure 4-1
NWI and NHD Records of Aquatic Resources
Twain Harte Sewer Pipeline Improvements Project, Tuolumne
County, California



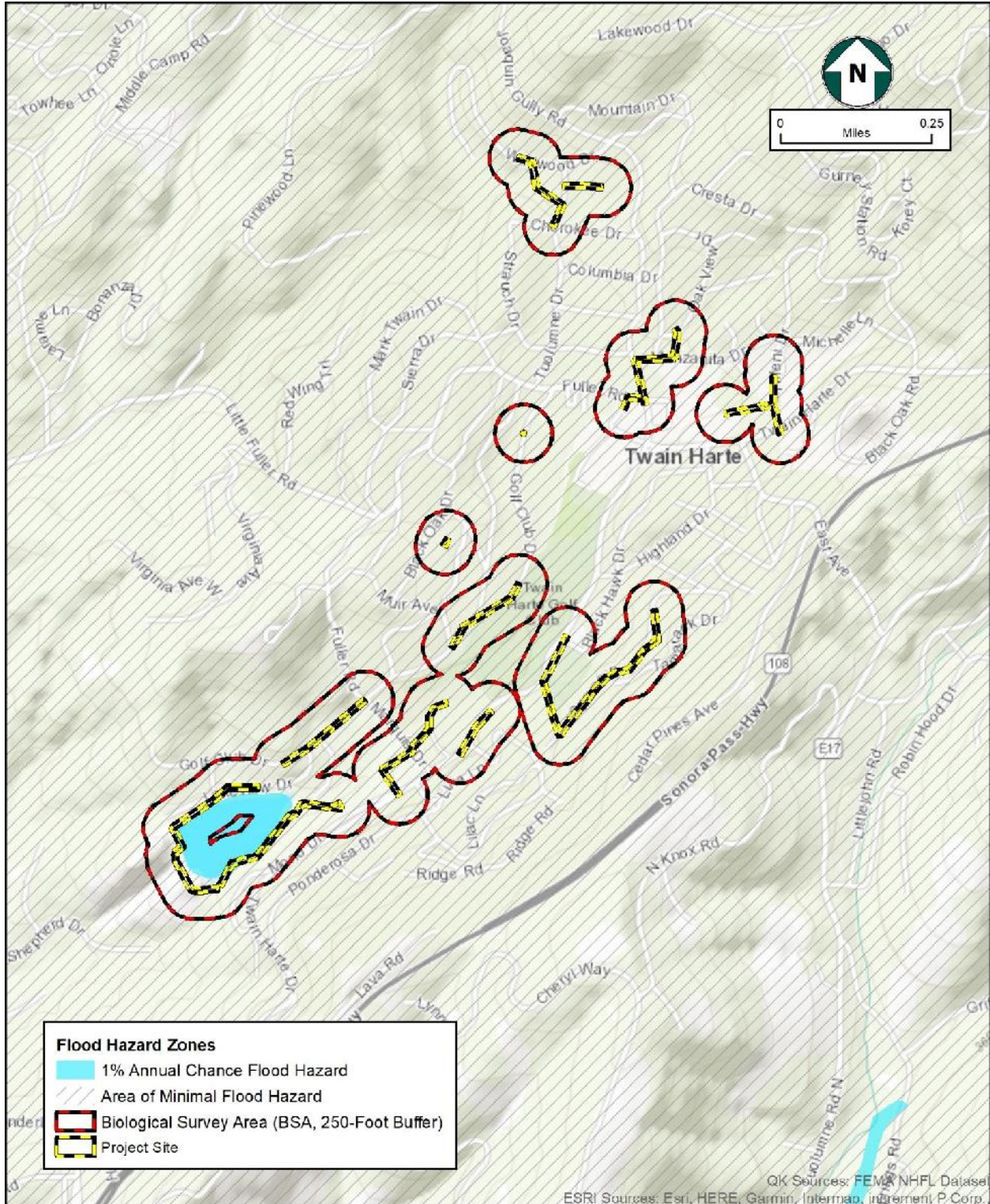


Figure 4-2
FEMA Flood Zone Map
Twain Harte Sewer Pipeline Improvements Project,
Tuolumne County, California

4.2 - Vegetation and Other Land Cover

Five habitat types were observed within the BSA: Barren, Lacustrine, Montane Conifer-Hardwood, Valley Foothill Riparian, and Urban. Habitats were characterized according to CWHR descriptions (Mayer and Laudenslayer 1988). A complete list of plant species observed during the reconnaissance survey is attached in Appendix C.

4.2.1 - BARREN

Mayer and Laudenslayer (1988) describe barren habitat as any habitat with <2% total vegetation cover by herbaceous, desert, or non-wildland species and <10% cover by tree or shrub species. Barren habitat may be found in combination with many different habitats, depending on the region of the state. Where there is little or no vegetation, structure of the non-vegetated substrate becomes a critical component of the habitat. Certain bird species nest on rock ledges and open ground covered with sand or gravel to construct scrape nests. Rocky canyon walls above open water is preferred foraging habitat for many bats. The physical settings for permanently barren habitat represent extreme environments for vegetation.

The majority of the Project consists of asphalt-paved residential and commercial roads through the town of Twain Harte, which would be categorized as Barren habitat. These roads are completely unvegetated, and the sewer lines that would be replaced or maintained during Project activities are buried beneath asphalt-paved roads. There is also Barren habitat in the Project buffer where there are asphalt-paved roads and parking lots as well as commercial buildings, as described in Section 4.1.3. There is naturally barren habitat immediately downstream of the Twain Harte Lake Levy, where there is an exposed layer of rock.

4.2.2 - LACUSTRINE

Mayer and Laudenslayer (1988) describe Lacustrine habitat as an aquatic habitat consisting of inland areas or dammed riverine channels containing standing water. Typical habitats include permanently flooded lakes, reservoirs, intermittent lakes and ponds, including vernal pools. Zonation occurs in the Lacustrine habitat from deeper water to the shore that supports a variety of life. Biodiversity is abundant in lacustrine habitats, providing resources for reproduction, cover, food, and water for numerous wildlife species. The waters of lakes and ponds offer calm conditions that contrast with that of running water. As such, oxygen occurs in gradations dependent on light and temperature in these sites influencing the diversity of life in these zones. These habitats are found throughout California at virtually all elevations, but less abundant in arid regions.

Lacustrine habitat is present at the man-made pond at the southwestern end of the BSA, Twain Harte Lake. This pond was created by constructing a levy across the unnamed creek that runs through the community. The banks of the pond are concrete-lined along its northern edge and do not support any vegetation; the southern edge of the pond meets the backyards of residential homes, and a small amount of vegetation grows near the levy. No

debris (e.g, logs, tree branches, etc.) was observed in the water or on the banks, and no wildlife was observed at the pond. The pond is fenced with chain link and locked along the northern edge of the pond and around the levy, open only to Twain Harte community members.

4.2.3 - MONTANE HARDWOOD-CONIFER

Mayer and Laudenslayer (1988) describe Montane Hardwood-Conifer often as a closed forest with a mixture of conifer and hardwood tree species. To be categorized as Montane Hardwood-Conifer habitat at least one-thirds of the trees must be conifers and one-third must be broad-leaved trees. Because the canopy is dense and typically bilayered, there is relatively little understory. Considerable ground and shrub cover can occur in ecotones or following disturbance such as fire or logging. Species composition varies substantially among different geographic areas but typically consists of ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), incense-cedar (*Calocedrus decurrens*), California black oak (*Quercus kelloggii*), coast live oak (*Q. agrifolia*), tanoak (*Notholithiocarpus densiflorus*), and Pacific madrone (*Arbutus menziesii*). Golden chinquapin (*Chrysolepis chrysophylla*), canyon live oak (*Quercus chrysolepis*), white fir (*Abies concolor*), bigleaf maple (*Acer macrophyllum*), black cottonwood (*Populus trichocarpa*), Jeffrey pine (*Pinus jeffreyi*), giant sequoia (*Sequoiadendron giganteum*), and coastal redwood (*Sequoia sempervirens*) are common associated tree species, among others. Montane Hardwood-Conifer provides habitat for a variety of wildlife species, including cavity nesting birds, amphibians, and mammals. Montane Hardwood-Conifer occurs throughout California at elevations from 300 to 1200 m (1,000 to 4,000 ft) in the north to 605 to 1760 m (2,000 to 5,700 ft) in the south.

The majority of the BSA is vegetated with Montane Hardwood-Conifer habitat. Many of the plant species characteristic of this habitat are present, including ponderosa pine, incense cedar, Jeffrey pine, California black oak, canyon live oak, tanoak, and coast redwood. In many cases the overstory of these large trees covered the Barren and Urban (described below in Section 4.2.4) habitats that were beneath them. Understory species frequently observed during the reconnaissance survey and typical of the region include whiteleaf manzanita (*Actophylos viscida*), French broom (*Genista monspessulana*), St. John's wort (*Hypericum calycinum*), Himalayan blackberry (*Rubus armeniacus*), prostrate knotweed (*Polygonum aviculare*), perennial pea (*Lathyrus latifolius*), and various grasses. Aside from manzanita, these species are non-native.

4.2.4 - URBAN

Urban habitats include five types of vegetative structure which includes tree grove, street strip, shade tree/lawn, lawn, and shrub cover. Species composition in urban habitats varies with planting design and climate. Monoculture is commonly found in tree groves and street tree strips. Three Urban categories relevant to wildlife are classified as downtown, urban residential, and suburbia. There is a progression of decreasing development and increasing vegetative cover, species abundance, and diversity from downtown to suburbia types. Urban habitats are not limited to any particular physical setting.

Urban habitat is concentrated in the town center of Twain Harte, around which most of the Project work areas are arranged. Portions of the Project buffer consist of Urban habitat, and include the golf course, park, and baseball diamond, which feature maintained grass lawns and various ornamental plant species.

4.2.5 - VALLEY FOOTHILL RIPARIAN

Mayer and Laudenslayer (1988) describe Valley Foothill Riparian as a tree dominated community consisting of primarily winter deciduous riparian trees providing 20 to 80 percent cover, a subcanopy tree layer, an understory shrub layer, and about one percent herbaceous vegetation. The dominant species in the canopy layer are cottonwood (*Populus* sp.), California sycamore (*Platanus racemosa*), and valley oak (*Quercus lobata*). Subcanopy trees typically include white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), and Oregon ash (*Fraxinus latifolia*). Typical understory shrub and herbaceous layers consist of wild grape (*Vitis californica*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), poison oak (*Toxicodendron diversilobum*), buttonbush (*Cephalanthus occidentalis*), willows (*Salix* sp.), sedges, rushes, grasses, miner's lettuce (*Claytonia perfoliata*), California mugwort (*Artemisia douglasiana*), and hoary nettle (*Urtica dioica* ssp. *holosericea*). Valley Foothill Riparian habitats provide food, water, migration and dispersal corridors, and escape, nesting, and thermal cover for an abundance of wildlife. This habitat is generally associated with low velocity flows, flood plains, and gentle topography. Valleys provide deep alluvial soils and a high-water table. The substrate is coarse, gravelly or rocky soils more or less permanently moist, but probably well aerated.

Valley Foothill Riparian habitat is present within the BSA along the unnamed creek that runs through Twain Harte. Species observed in this habitat type include red willow (*Salix laevigata*), arroyo willow (*S. lasiolepis*), cottonwood (*Populus fremontii*), Himalayan blackberry, yellow monkeyflower (*Erythranthe guttata*), watercress (*Nasturtium officinale*), floating primrose willow (*Ludwigia peploides*), American speedwell (*Veronica americana*), and tall flatsedge (*Cyperus eragrostis*). Due to the time of year of the reconnaissance survey and the low amount of precipitation during the previous wet season, water flow in the creek was very low, with little visible flowing surface water. There were some areas along the creek with pooled surface water, with a low flow of water collecting in Twain Harte Lake and continuing downstream through the levy.

4.3 - General Wildlife Observations

Wildlife species observed during the reconnaissance survey were typical for Montane Hardwood-Conifer habitat. Birds were the most common taxonomic group observed, and included mountain chickadee (*Poecile gambeli*), Anna's hummingbird (*Calypte anna*), California scrub jay (*Aphelocoma californica*), Steller's jay (*Cyanocitta stelleri*), and oak titmouse (*Baeolophus inornatus*). Other species observed included black-tailed deer (*Odocoileus hemionus*), gray squirrel (*Sciurus gresius*), and California ground squirrel (*Otospermophilus beecheyi*). A complete list of wildlife observed is attached in Appendix C.

SECTION 5 - SENSITIVE BIOLOGICAL RESOURCES

Local, State, and federal agencies regulate special-status species and other sensitive biological resources and require an assessment of their presence or potential for presence to be on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed on the project site and evaluates the potential for the Project site to support additional sensitive biological resources. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDDB and CNPS, species occurrence records from other sites in the vicinity of the BSA, relevant reports, and the results of surveys of the Project site.

5.1 - Special-Status Species

There were eight (8) special-status plant and wildlife species determined to have potential to occur within the BSA and potentially be affected by the Project (Table 5-1). The complete list of species evaluated for this Project is included in Appendix D. Each species with potential to occur on the site is further discussed in the subsections below.

**Table 5-1
Special-Status Species with Potential to Occur On-Site**

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Potentially Affected by Project? Yes/No	Viability Threat? Yes/No
Plants			
<i>Clarkia australis</i> Small's southern clarkia	-/- 1B.2/-	Yes	No
<i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia	-/- 1B.2/-	Yes	No
<i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower	-/- 1B.2/-	Yes	No
<i>Erythronium tuolumnense</i> Tuolumne fawn lily	-/- 1B.2/-	Yes	No
<i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris	-/- 1B.2/-	Yes	No
<i>Navarretia miwukensis</i> Mi-Wuk navarretia	-/- 1B.2/-	Yes	No
<i>Rhynchospora capitellata</i> brownish beaked-rush	-/- 2B.2/-	Yes	No
Birds			
<i>Accipiter gentilis</i> northern goshawk	-/- -/SSC	Yes	No

CRPR (California Rare Plant Rank):

- 1A Presumed Extinct in California
- 1B Rare, Threatened, or Endangered in California and elsewhere
- 2A Plants presumed extirpated in California, but more common elsewhere

SSC

CDFW Species of Special Concern

2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension:

- .1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Fairly endangered in California (20-80% occurrences threatened)

5.1.1 - SPECIAL-STATUS PLANT SPECIES

The literature and database review identified 15 special-status plant species known or with potential to occur in the vicinity of the Project (see Appendix D). Eight (8) of these species were eliminated from consideration because the Project occurs outside of the species' known range, outside of the elevation range of the species, or because habitat that could support the species was absent from the BSA (Table 5-1). The remaining seven (7) species that have potential to occur within the BSA are discussed below.

Small's Southern Clarkia

CLARKIA AUSTRALIS

Status: California Rare Plant Rank 1B.2

The Small's southern clarkia is endemic to California and typically occurs in open, rocky sites within cismontane woodland and lower montane coniferous forest habitats (CNPS 2021). It blooms from May to August and occurs at elevations between 2,625 and 6,810 feet. The Small's southern clarkia is primarily threatened by logging activities.

There is one CNDDDB record of this species from 1965 that overlaps the 250-foot survey buffer for the Project (EONDX 18855). This species was not observed during the September 15, 2021 reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat for Small's southern clarkia in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA.

Mariposa Clarkia

CLARKIA BILOBA SSP. AUSTRALIS

Status: California Rare Plant Rank 1B.2

The Mariposa clarkia is an annual herb, endemic to California. It occurs in serpentinite soils, in chaparral, ultramafic, and foothill and cismontane woodlands and sometimes in riparian areas as well as large talus rockslides (CNPS 2021). The Mariposa clarkia has a blooming period from April to July and occurs at elevations between 980 and 4,790 feet. It is threatened by road maintenance, foot traffic and competition with non-native plants.

The nearest CNDDDB record for Mariposa clarkia is approximately 1.1 mile southeast of the BSA, from 1958 (EONDX 91125). Another CNDDDB occurrence is approximately 2.1 miles southeast of the Project, where a large population was observed over multiple years between 2001 and 2008 (EONDX 110557). This species was not observed during the September 15, 2021 site visit, which was conducted outside of the blooming period for this species. There

is suitable habitat for Mariposa clarkia in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA.

Yellow-lip Pansy Monkeyflower**DIPLACUS PULCHELLUS**

Status: California Rare Plant Rank 1B.2

The yellow-lip pansy monkeyflower is an annual herb, endemic to California. It occurs in vernal wet and often disturbed areas, either on clay, volcanic or granitic soils in lower montane coniferous forest and meadows and seeps (CNPS 2021). The yellow-lip pansy monkeyflower blooms from April to July and occurs in elevations from approximately 1,960 to 6,565 feet. It is generally threatened by vehicles, logging, competition from non-native plants, and grazing, and potentially threatened by development.

The nearest CNDDDB occurrence for the species that is presumed extant is from 1971, approximately 0.5 mile southeast of the Project (EONDX 76169). This species was not observed during the September 15, 2021 reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat within the BSA for yellow-lip pansy monkeyflower in the Valley Foothill Riparian habitat along the unnamed creek that runs through Twain Harte, and potentially in the Montane Hardwood-Conifer habitat.

Tuolumne Fawn Lily**ERYTHRONIUM TUOLUMNENSE**

Status: California Rare Plant Rank 1B.2

Tuolumne fawn lily is a perennial bulbiferous species endemic to California that blooms between March and June. It occurs in cismontane woodland, lower montane coniferous forest, and chaparral habitats, often on clay soils and on cliffs and near drainages in broadleaf upland forests, at elevations between 1,675 and 4,480 feet. The species is threatened by competition with non-native plants, grazing, and mining activities.

The nearest CNDDDB occurrence for Tuolumne fawn lily is from 2003 and approximately 1.7 miles northwest of the BSA, on a steep north-facing slope above the South Fork Stanislaus River (EONDX 3378). This species was not observed during the September 15, 2021 reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat for Tuolumne fawn lily in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA.

Tuolumne Iris**IRIS HARTWEGII SSP. COLUMBIANA**

Status: California Rare Plant Rank 1B.2

Tuolumne iris is a perennial herb that is endemic to California and blooms between May and June (CNPS 2021). It occurs in cismontane woodland, lower montane coniferous forest, and yellow pine forest habitats at elevations between 1,395 and 4,595 feet.

The nearest CNDDDB occurrence for Tuolumne iris is from 2006, approximately 2.8 miles northwest of the BSA, in mixed oak-conifer forest (EONDX 97839). This species was not observed during the September 15, 2021 reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat for Tuolumne iris in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA.

Mi-Wuk Navarretia**NAVARRETIA MIWUKENSIS**

Status: California Rare Plant Rank 1B.2

Mi-Wuk navarretia is an annual herb endemic to California and blooms between May and July or August. It occurs in openings on gentle slopes in lower montane coniferous forest habit on pyroclastic (volcanic) soils, at elevations between 2,625 and 4,920 feet (CNPS 2021). Threats to the species include urbanization, off-road vehicles and recreational activities, and competition with non-native plants.

The nearest CNDDDB occurrence for Mi-Wuk navarretia overlaps the south side of the BSA documenting a population observed over a road cut in 2014 (EONDX 11504). This species was not observed during the September 15, 2021 reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat for the species in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA.

Brownish Beaked-Rush**RHYNCHOSPORA CAPITELLATA**

Status: California Rare Plant Rank 2B.2

Brownish beaked rush is a perennial herb that blooms between July and August (CNPS 2021). It occurs in mesic montane coniferous forest, in meadows and seeps, and in marshes and swamps at elevations between 150 and 6,560 feet.

The nearest CNDDDB occurrence for the species is from 2014 and over 10 miles southeast of the BSA (EONDX 113950). This species was not observed during the September 15, 2021 reconnaissance survey, which was conducted outside of the blooming period for this species. There is suitable habitat within the BSA for this species in the Valley Foothill Riparian habitat along the unnamed creek that runs through Twain Harte, and potentially in the Montane Hardwood-Conifer habitat.

5.1.2 - SPECIAL-STATUS ANIMAL SPECIES

The literature and database review identified 19 special-status wildlife species known or with potential to occur in the vicinity of the BSA (see Appendix D). Of those, only one was determined to have the potential to occur within the BSA, northern goshawk (*Accipiter gentilis*), which is discussed below.

Northern Goshawk**ACCIPITER GENTILIS**

Status: CDFW Species of Special Concern

The northern goshawk is a large raptor that prefers mature old-growth forests with relatively high canopy closures (Squires et al. 2020). It typically nests in large trees on moderate slopes with open understories. Nests are built in coniferous, deciduous, or mixed-pine forests, usually in the largest tree available. Preferred prey items include rabbits, large rodents, and other birds, which goshawks will aggressively capture from an observation perch.

The nearest CNDDDB occurrence for northern goshawk is approximately 2.8 miles northeast of the BSA, where a nest was observed in a stand of tall conifers between the Stanislaus River and Deer Creek in 1996 (EONDX 29760). This species was not observed during the September 15, 2021 reconnaissance survey, which was conducted on the last day of the accepted “nesting bird season”, which begins on February 1 and ends on September 15. There is suitable habitat for northern goshawk in the Montane Hardwood-Conifer habitat that is present throughout much of the BSA and in the lands surrounding the BSA.

5.1.3 - OTHER PROTECTED SPECIES**Nesting Birds and Raptors**

Habitat within the BSA would support nesting native bird species, which are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. The site survey for the Project was conducted on the last day of the nesting bird season (February 1 to September 15). No bird nests, active or inactive, were observed during the survey.

Various species of migratory birds will construct nests in a variety of habitats and structures, and nests may be constructed in trees or shrubs, man-made structures, and directly on the ground at any time during the nesting season. Since the BSA supports several types of habitats and characteristics suitable for nesting birds, it is likely that birds will nest within the BSA.

5.2 - Sensitive Natural Communities**5.2.1 - SENSITIVE PLANT COMMUNITIES**

The database and literature review identified one sensitive plant community in the vicinity of the BSA, Big Tree Forest (CDFW 2021a). This community consists of mixed conifer species and is defined by including the giant sequoia (*Sequoiadendron giganteum*) in this mix (Holland 1986). No giant sequoias were observed within the BSA and there are no CNDDDB occurrences of this sensitive community within 10 miles of the BSA.

5.2.2 - CRITICAL HABITATS

There is no federally designated critical habitat within the BSA or in its immediate vicinity (USFWS 2021b).

5.3 - Jurisdictional Aquatic Resources

A formal delineation of waters of the U.S. and waters of the State was not conducted for this BAR. The database and literature review showed that the NHD and NWI identify two water resources within the BSA. Twain Harte Lake and the unnamed creek that feeds it (see Figure 4-1; USFWS 2021c, USGS 2021). These two features were verified to be present during the reconnaissance survey.

Twain Harte Lake is a small artificial pond formed as a result of the levy at its southwestern end. The northern banks are concrete-lined and do not support wetland habitat. The southern banks support a small amount of hydrophytic vegetation along the waterline near the levy.

The unnamed creek identified by the NWI has an intermittent flow through most of the BSA, as described in Section 4.1.5. After exiting Twain Harte Lake this creek flows in a general southwestward direction, connecting to the Tuolumne River through a series of creeks and reservoirs. This unnamed creek is likely a federally jurisdictional waterway.

5.4 - Wildlife Movement

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. Wildlife movement corridors can be large tracts of land that connect regionally important habitats that support wildlife in general, such as stop-over habitat that supports migrating birds or large contiguous natural habitats that support animals with very large home ranges (e.g., coyotes [*Canis latrans*], black-tailed deer, etc.). They can also be small scale movement corridors, such as riparian zones, that provide connectivity and cover to support movement at a local scale.

The unnamed creek that runs through the town of Twain Harte could provide a movement corridor to wildlife. However, the levy at the southwestern end of Twain Harte Lake presents a significant barrier along this corridor.

5.5 - Resources Protected by Local Policies and Ordinances

The Tuolumne County General Plan contains policies aimed at the preservation of biological resources and promotes coordination with federal and State resource agencies. The General Plan also outlines implementation measures with which it proposes to achieve these goals, which include the preservation of native oak trees (*Quercus* sp.) when possible.

5.6 - Habitat Conservation Plans

The Project is not within the boundaries of any habitat conservation plans (HCPs) and is not subject to any associated regulations (USFWS 2021b).

SECTION 6 - IMPACT ANALYSIS AND RECOMMENDED MITIGATION MEASURES

This section provides an analysis of the potential for special-status biological resources to be impacted by the proposed Project. The analysis was developed using the CEQA Appendix G checklist, but also provides sufficient information to support NEPA documentation.

6.1 - Special-Status Species

The proposed project would have a significant effect on biological resources if it would:

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

6.1.1 - PROJECT IMPACTS TO SPECIAL-STATUS PLANT SPECIES

There are seven (7) special-status plant species that may occur within and near the Project and be potentially impacted by Project activities, as detailed in Section 5.1.1, above. No plant species that may occur on the Project site are federally or State listed for protection, but rare plants should be conserved to the extent possible.

If any of these species were present within the BSA, direct impacts could include the mortality of or injury to individual plants. During the growth and blooming period, the spread of dust during construction, soil contamination, or alteration of existing hydrology could cause an indirect impact to the species, as could the spread of non-native or invasive species caused by Project activities. Because the Project may impact the vegetated areas along roadway shoulders and the southern bank of Twain Harte Lake, Measures BIO-1 through BIO-3 and BIO-5 are recommended, as outlined below. Implementation of these measures would reduce impacts to these plant species to a less than significant level.

BIO-1 Special-Status Plant Avoidance. There are no State or federally protected plant species expected to occur on the Project site, though seven rare plant species have the potential to occur. If the Project is expected to occur during the blooming period, as listed in Table 6-1, plant identification may occur and therefore avoided to maximum extent possible. If Project activities cannot avoid those areas, a qualified botanist or biologist may have opportunity to salvage and relocate the plants that will be impacted.

**Table 6-1
Blooming Period of Special-status Plants with Potential to Occur**

Special-Status Plant Species	Optimal Blooming Period
<i>Clarkia australis</i> Small's southern clarkia	May - August

<i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia	April - July
<i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower	April - July
<i>Erythronium tuolumnense</i> Tuolumne fawn lily	March - June
<i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris	May - June
<i>Navarretia miwukensis</i> Mi-Wuk navarretia	May - August
<i>Rhynchospora capitellata</i> brownish beaked-rush	July - August

BIO-2 Invasive Species. The introduction and spread of invasive and non-native plant species should be avoided and controlled wherever possible during construction, on both the Project and surrounding areas. This may be achieved through measures such as cleaning vehicles and equipment before they enter construction areas, removing invasive species that exist on the site and disposing of the removed debris in a manner that prohibits their spread on- and off- site.

BIO-3 Best Management Practices to Avoid Indirect Impacts to Special-Status Plants. To reduce any indirect impacts to special-status plants that may be in the vicinity of the Project, best management practices (BMPs) should be implemented to control dust pollution, prevent discharge of potentially harmful chemicals, and prevent changes in hydrology. BMPs may include the installation of erosion and sedimentation control devices, applying water to control dust, placing drip pans under equipment when not in use, refueling in designated areas, and containing concrete washout properly, among other practices.

Significance After Mitigation. Implementation of the avoidance, minimization, and mitigation measures above will reduce impacts to special-status plant species to a less than significant level.

6.1.2 - PROJECT IMPACTS TO SPECIAL-STATUS ANIMAL SPECIES

One special-status wildlife species has potential to occur in the BSA: northern goshawk. There is also potential for native birds and raptors to nest on the Project and in its vicinity, and these species are covered by the federal MBTA.

Northern Goshawk

No northern goshawks or nests were observed during the reconnaissance survey. However, the Montane Hardwood-Conifer forest surrounding the Project presents suitable nesting habitat for the species.

Direct and indirect impacts to the species could result if an active nest is present in the vicinity during construction activities. Noise, vibration, and increased human activity could alter the normal behaviors of individual hawks and affect foraging success or lead to nest abandonment or failure. There would be no loss of foraging habitat as a result of the Project. Implementation of Measures BIO-4 and BIO-5, listed below, would reduce impacts to the species to a less than significant level.

Nesting Birds

The BSA supports several habitats for nesting birds, which may nest on trees and shrubs, man-made structures, and directly on the ground. Migratory birds could nest throughout the entire BSA.

If the construction activities and vegetation removal occur during the nesting season, they could lead to the destruction of nests. Construction-related vibration, noise, and dust production, and human presence could alter the normal behaviors of nesting birds in the vicinity of the Project and lead to nest failure.

To avoid and minimize impacts to migratory birds including special-status bird species, mitigation measures BIO-5 and BIO-6, listed below, should be implemented during construction to reduce impacts to nesting birds to a level that is less than significant.

Avoidance and Minimization Measures

Implementation of the avoidance and minimization measures listed below would reduce impacts of the Project to special-status wildlife species to level that would be less than significant. The following measures are recommended to avoid and minimize impacts to the northern goshawk and nesting migratory birds and raptors.

BIO-4 Pre-activity Surveys for Nesting Birds. If Project construction activities will be initiated during the nesting season (February 1 to September 15), a pre-activity nesting bird survey should be conducted within 14 days prior to the start of construction. The surveys should encompass the Project footprint and accessible areas or land visible from accessible areas within a 250-foot buffer for songbirds and a 500-foot buffer for raptors. If no active nests are found, no further action is required. However, existing nests may become active and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress.

If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the adults or the nest, or if breeding attempts have otherwise been unsuccessful. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be

required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.

BIO-5 Worker Environmental Awareness Training. Prior to the initiation of construction activities, all construction personnel should attend a Worker Environmental Awareness Training program developed by a qualified biologist. Any personnel associated with construction that did not attend the initial training shall be trained by the authorized biologist prior to working on the project site. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Worker Environmental Awareness Training program prior to starting work on the project and on an annual basis. The Program shall be developed and presented by the project qualified biologist(s) or designee approved by the qualified biologist(s). The program should include information on the life histories of special-status species with potential to occur on the Project, their legal status, course of action should these species be encountered on-site, and avoidance and minimization measures to protect these species. It shall include the components described below:

- a. Information on the life history and identification of special-status species that may occur or that may be affected by Project activities. The program shall also discuss the legal protection status of each such species, the definition of “take” under the Federal Endangered Species Act and California Endangered Species Act, measures the Project proponent/operator shall implement to protect the species, reporting requirements, specific measures for workers to avoid take of special-status plant and wildlife species, and penalties for violation of the requirements outlined in the California Environmental Quality Act mitigation measures and agency permit requirements.
- b. An acknowledgement form signed by each worker indicating that the Worker Environmental Awareness Training and Education Program has been completed shall be kept on file at the construction site.
- c. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Worker Environmental Awareness Training and Education Program, and signed acknowledgement forms shall be submitted to the Tuolumne County Planning Department.
- d. A copy of the training transcript, training video or informational binder for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.
- e. A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Worker Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker.

The construction crews and contractor(s) shall be responsible for preventing unauthorized impacts from project activities to sensitive biological resources that

are outside the areas defined as subject to impacts by Project permits. Unauthorized impacts may result in project stoppage, and/or fines depending on the impact and coordination with the California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service.

6.2 - Sensitive Natural Communities and Critical Habitat

The proposed project would have a significant effect on biological resources if it would:

- b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

No sensitive natural communities are present that would be impacted by the Project. As such, no measures are warranted.

Significance: No significance.

6.3 - Jurisdictional Aquatic Resources

The proposed project would have a significant effect on biological resources if it would:

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

A formal delineation of wetlands and water features was not conducted for this BAR. During the reconnaissance survey, an unnamed creek was observed, running northeast to southwest through the town of Twain Harte and feeding Twain Harte Lake. This creek is mapped by the NHD and is traced as a tributary to the Tuolumne River, so is likely federally jurisdictional as a Traditionally Navigable Water under the U.S. Army Corps of Engineers.

Project activities will occur only on previously disturbed areas, beneath previously disturbed roadways paved with asphalt. The unnamed creek and Twain Harte Lake will not be impacted by Project activities. As such, the Project will have no impact on any jurisdictional aquatic resources and no measures are warranted.

Significance: No significance.

6.4 - Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

- d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.*

No movement corridors are present that would be impacted by the Project. As such, no measures are warranted.

Significance: No significance.

6.5 - Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance*

The Project does not conflict with the County of Tuolumne General Plan and is not subject to any local ordinances. No trees will be removed as a result of the Project. Therefore, no measures are warranted.

Significance: No significance.

6.6 - Adopted or Approved Plans

The proposed project would have a significant effect on biological resources if it would:

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

The Project is not within an area covered by any HCP. No Project impacts related to adopted or approved plans would occur, and no measures are warranted.

Significance: No significance.

SECTION 7 - LIMITATIONS, ASSUMPTIONS, AND USE RELIANCE

This Biological Analysis Report has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The findings and opinions conveyed in this report are based upon on-site field examinations, jurisdictional areas, and specified historical and literature sources. The biological investigation is limited by the scope of work performed. Biological surveys conducted as part of this assessment may not have been performed during a particular blooming period, nesting period, or particular portion of the season when positive identification of certain taxa would be expected if present, and therefore cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile animal species could occupy the site on a transient basis or re-establish populations in the future. No other guarantees or warranties, expressed or implied, are provided.

SECTION 8 - REFERENCES

- California Department of Fish and Wildlife (CDFW). 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Species Native Plant Populations and Sensitive Natural Communities*. California Natural Resources Agency Department of Fish and Wildlife. California Department of Fish and Wildlife (CDFW). 2021a. California Natural Diversity Database (CNDDDB), from <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>.
- CDFW. 2021a. California Natural Diversity Database (CNDDDB) – Accessed September 2021 from <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>.
- CDFW. 2021b. Biogeographic Information and Observation System (BIOS). Accessed September 2021 from www.wildlife.ca.gov/data/BIOS.
- CDFW. 2021c. *Special Animals List*. Biogeographic Data Branch, California Natural Diversity Database.
- California Native Plant Society, Rare Plant Program (CNPS). 2021. Inventory of Rare and Endangered Plants of California (online edition, v9-01 0.0). Website <https://www.rareplants.cnps.org>. Accessed September 28, 2021.
- Federal Emergency Management Agency (FEMA). 2021. FEMA flood map service center. Tulare County Unincorporated Areas. <https://msc.fema.gov/portal/search#searchresultsanchor>
- Google LLC. 2021. Google Earth Pro.
- Holland, Robert F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Wildlife, Nongame Heritage Program. 156 pgs.
- Mayer, K. E., and W. F. Laudenslayer, Jr. 1988. *A guide to wildlife habitat of California*. State of California, Resources Agency, Department of Fish and Wildlife. Sacramento, CA 166 pp.
- Squires, J. R., Reynolds, R.T., Orta, J., and Marks, J.S. (2020). Northern Goshawk (*Accipiter gentilis*), version 1.0. In *Birds of the World* (S. M. Billerman, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.norgos.01>
- Tuolumne County. 2018. 2018 Tuolumne County General Plan. Prepared by the Tuolumne County Community Resources Agency. <https://www.tuolumnecounty.ca.gov/889/General-Plan-Update>
- U.S. Geological Survey (USGS). 2021. National Hydrography Dataset. <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>

United States Department of Agricultural, Natural Resources Conservation Service (NRCS). 2021. Available at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

United States Fish and Wildlife Service (USFWS). 2021a. Information for Planning and Consultation online project planning tool. Available at: <https://ecos.fws.gov/ipac/>

USFWS. 2021b. Critical Habitat Portal. Available at:
<https://ecos.fws.gov/ecp/report/table/critical-habitat.html>

USFWS. 2021c. National Wetlands Inventory Wetlands Mapper.
<https://www.fws.gov/wetlands/data/mapper.html>

United States Geological Survey, Western Regional Climate Center (WRCC). 2021. Cooperative Climatological Data Summaries, NOAA Cooperative Station Sonora, California (048353). <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8353>

SECTION 9 - LIST OF PREPARERS

QK Inc.

Primary Authors

- Karissa Denney, Associate Environmental Scientist
- Shannon Gleason, Associate Environmental Scientist

Technical Review

- Dave Dayton, Principal Environmental Scientist

Graphics

- Kathie Castanon, Assistant GIS Technician

Production

- Vanessa Williams, Assistant Project Manager

Field Reconnaissance Survey

- Karissa Denney, Associate Environmental Scientist
- Shannon Gleason, Associate Environmental Scientist

APPENDIX A
REGULATORY SETTING

Regulatory Setting

Federal Laws and Regulations

FEDERAL ENDANGERED SPECIES ACT OF 1973 (USC, TITLE 16, SECTIONS 1531 -1543)

The federal Endangered Species Act (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. The FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA provides a program for the conservation and recovery of threatened and endangered species as well as the protection of designated critical habitat that USFWS determines is required for the survival and recovery of listed species.

Section 9 lists actions that are prohibited under the FESA. Although take of a listed species is prohibited, it is allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish, wildlife, and plants without special exemption. The definition of “harm” includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. “Harass” is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 7 of the FESA requires federal agencies, in consultation with and assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction of adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering the FESA. Regulations governing interagency cooperation under Section 7 are found in California Code of Regulations (CCR) Title 50, Part 402. If an activity could result in "take" of a listed species as an incident of an otherwise lawful activity, then a biological opinion can be issued with an incidental take statement that exempts the activity from FESA's take prohibitions.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit. Application procedures are found at CFR Title 50, Sections 13 and 17 for species under the jurisdiction of USFWS and CFR, Title 50, Sections 217, 220, and 222 for species under the jurisdiction of NMFS. Section 10 would apply to the Project if take of a species (as defined in Section 9) were determined to occur.

Section 4(a)(3) and (b)(2) of the FESA requires the designation of critical habitat to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical habitat is defined in section 3(5)(A) of the FESA: 1) areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special

management consideration or protection; and 2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

MIGRATORY BIRD TREATY ACT (USC, TITLE 16, SECTIONS 703 - 711)

The MBTA, first enacted in 1918, is a series of treaties that the United State has with Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird” (U.S. Code Title 16, Section 703). The MBTA currently includes several hundred species and includes all native birds.

BALD AND GOLDEN EAGLE PROTECTION ACT OF 1940 (USC, TITLE 16, SECTION 668)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 protects bald eagles (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of these species and established civil penalties for violation of this act. Take of bald and golden eagles includes to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” To 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 inferring with normal breeding, feeding, or sheltering behavior. (Federal Register [FR], volume 72, page 31132; 50 CFR 22.3).

FEDERAL CLEAN WATER ACT (USC, TITLE 33, SECTIONS 1521 - 1376)

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. Section 401 requires that a Project applicant that is pursuing a federal license or permit allowing a discharge to waters of the U.S. to obtain State Certification of Water Quality, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S. Section 404 establishes a permit program administered by the United States Army Corps of Engineers (USACE) that regulates the discharge of the dredged or fill material into waters of the U.S., including wetlands. The USACA implementing regulations are found in CFR, Title 33, Sections 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the United States Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Applicable State Laws and Regulations

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CALIFORNIA PUBLIC RESOURCES CODE, SECTIONS 21000 - 21178, AND TITLE 14 CCR, SECTION 753, AND CHAPTER 3, SECTIONS 15000 - 15387)

The California Environmental Quality Act (CEQA) is California's broadest environmental law. CEQA helps guide the issuance of permits and approval of projects. Courts have interpreted CEQA to afford the fullest protection of the environment within the reasonable scope of the statutes. CEQA applies to all discretionary projects proposed to be conducted or approved by a State, County, or City agency, including private projects requiring discretionary government approval.

The purpose of CEQA is to disclose to the public the significant environmental effects of a proposed discretionary project; prevent or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring; disclose to the public the agency decision making process to approve discretionary projects; enhance public participation in the environmental review process; and improve interagency coordination.

State CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of protected species nonetheless may be considered rare or endangered for purposes of CEQA if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals.

CALIFORNIA ENDANGERED SPECIES ACT (CALIFORNIA FISH AND GAME CODE SECTION 2050 ET SEQ.)

The California Endangered Species Act (CESA) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve Projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For Projects that would result in take of a species listed under the CESA, a project proponent would need to obtain a take permit under Section 2081(b). Alternatively, the CDFW has the option of issuing a Consistency Determination (Section 2080.1) for Projects that would affect a species listed under both the CESA and the FESA, as long as compliance with the FESA would satisfy the “fully mitigate” standard of CESA, and other applicable conditions.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

Under Section 401 of the CWA, the RWQCB must certify that actions receiving authorization under Section 404 of the CWA also meet State water quality standards. The RWQCB regulates waters of the State under the authority of the Porter-Cologne Water Quality Control Act (Porter Cologne Act). The RWQCB requires Projects to avoid impacts to wetlands whenever feasible and requires that Projects do not result in a net loss of wetland acreage or a net loss

of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the State. The RWQCB has jurisdiction over waters deemed 'isolated' or not subject to Section 404 jurisdiction under the Solid Waste Agency of Northern Cook County (SWANCC) decision. Dredging, filling, or excavation of isolated waters constitutes a discharge of waste into waters of the State, and such discharges are authorized through an Order of Waste Discharge (or waiver of discharge) from the RWQCB.

VARIOUS SECTIONS OF THE CALIFORNIA STATE AND FISH AND GAME CODE

Section 460 and Sections 4000-4003

Chapter 5 of the California Fish and Game Code (FGC) describes regulations concerning the take of furbearing mammals, including defining methods of take, seasons of take, bag and possession limits, and areas of the State where take is allowed. Section 4000-4003 defines furbearing mammals, and the issuance of permits by the Department. Sections 460 and 4000 identifies fisher, marten, river otter, desert kit fox and red fox as furbearing mammals, and Section 460 prohibits take of these species at any time. This section of the California Fish and Game Code (FGC) has historically been interpreted to apply to restriction on furbearer trapping permit but has recently been expanded by CDFW to apply to any forms of take and treated as if these species were listed under CESA.

Sections 1600 through 1616

Under these sections of the FGC, a Project operator is required to notify CDFW prior to any Project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the California Code of Regulations, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events. Preliminary notification and Project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable Project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement.

Sections 3511, 4700, 5050, and 5515

The protection of fully protected species are described in Sections 3511, 4700, 5050, and 5515 of the FGC. These statues prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species, except as allowed for in an approved Natural Communities Conservation Plan (NCCP), or through direct legislative action.

Sections 1900 through 1913 - Native Plant Protection Act

California’s Native Plant Protection Act (CNPA) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provision of the NPPA prohibit that taking of listed plants from the wild and require notification of CDFW at least ten days in advance of any change in land use. This allows CDFW to salvage listed plant species that otherwise would be destroyed. A Project proponent is required to conduct botanical inventories and consult with CDFW during Project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Local and Regional Laws, Regulations, and Policies

TUOLUMNE COUNTY GENERAL PLAN

The Tuolumne County General Plan (2018) has a Natural Resources Element which combines the traditional conservation and open space elements that are more common in general plans. This Element addresses the conservation, development, and utilization of natural resources, as well as identify land that should remain unimproved for the purpose of preservation of natural resources. Natural resources considered in the Element include forests, soils, fisheries, wildlife, plants, energy, minerals, and viewsheds.

There is also a Water Supply Element that addresses water resources and associated habitat and their protection.

Aspects of these Elements that are relevant to biological resources, including waters and wetlands, are summarized below in Tables A-1 and A-2.

**Table A-1
Chapter 14 – Water Supply Element**

Goal	
Goal 14C:	Protect and improve the quality and quantity of the County’s water resources, while protecting the rights of landowners.
Policies	
Policy 14.C.4	Encourage the conservation of water resources in a systematic manner that is sensitive to the maintenance of water quality, natural capacities, ecological values, and consideration of the many water related needs of the County.
Policy 14.C.6	Recognize that the decisions made by the County of Tuolumne concerning water resources have an effect on water supply needs for all beneficial uses of water consistent with the California Water Code, including, but not limited to, domestic, municipal, agricultural and

	industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.
Policy 14.C.7	Recognize that clean water is essential to the public health, safety and welfare, fosters economic development and job creation, protects the environment, maintains fish and wildlife, and supports recreation.
Policy 14.C.9	Promote improved watershed health, improved water quality and water quantity yields of the watersheds in Tuolumne County.
Implementation Measures	
Measure 14.C.e:	Update the Tuolumne County Water Quality Plan, subject to receiving funding, to facilitate a consistent, fair and cost-effective approach to water resource mitigation and encourage and support the restoration of degraded riparian areas through public education programs demonstrating the value of healthy riparian habitats in protecting water quality, and provide for permit streamlining while conserving important water resources.
Measure 14.C.g:	Continue to consult with local public water agencies to determine that water supplies and delivery systems can meet the demands of the anticipated new development and population growth of the County. In accordance with Section 65352.5 of the California Government Code, the General Plan Land Use Diagrams were formulated in consultation with the applicable urban water management plans from these agencies and any amendments to those diagrams shall be reviewed in consultation with the respective public water agency serving the parcel or parcels affected by the proposed amendment.
Measure 14.C.i:	<p>Promote the development of plans for watershed rehabilitation projects which provide for such watershed improvements as:</p> <ul style="list-style-type: none"> • A reduction in the presence of contaminants in drinking water by addressing the origins and treatment of the contaminants, including, to the maximum extent practicable, the specific activities that affect the drinking water supply of a community or communities. • An increase in the quantity of water available from the watershed. • The improvement, restoration, or enhancement of fisheries habitat, including riparian habitat, in and along streams and watercourses in the watershed. <p>These projects may address factors which increase</p>

	<p>sedimentation in streams and watercourses in the watershed.</p> <ul style="list-style-type: none"> • The improvement of overall forest health, including the reduction of factors which may contribute to the severity of wildfires in the watershed.
Measure 14.C.k	Cooperate and consult with Federal, State and local agencies, such as the Tuolumne County Water Agency, in promoting the stewardship of the watersheds within the County. Consult with these agencies to avoid duplication of effort and to maximize use of public resources in working towards a common goal of improving the watersheds within Tuolumne County which will, in turn, contribute to the State and Federal objective of providing long-term Bay-Delta recovery and protection.

**Table A-2
Chapter 16 – Natural Resources Element**

Goal	
Goal 16A:	Balance property rights with the conservation of the environment and rural character of the County, which contributes to the quality of life of residents, encourages tourism and supports economic development.
Policies	
Policy 16.A.6	Encourage the protection of clusters of native trees and vegetation and outstanding individual native and non-native trees which help define the character of Tuolumne County.
Policy 14.C.6	Recognize that the decisions made by the County of Tuolumne concerning water resources have an effect on water supply needs for all beneficial uses of water consistent with the California Water Code, including, but not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.
Policy 14.C.7	Recognize that clean water is essential to the public health, safety and welfare, fosters economic development and job creation, protects the environment, maintains fish and wildlife, and supports recreation.
Policy 14.C.9	Promote improved watershed health, improved water quality and water quantity yields of the watersheds in Tuolumne County.
Implementation Measures	

Measure 14.C.e:	Update the Tuolumne County Water Quality Plan, subject to receiving funding, to facilitate a consistent, fair and cost-effective approach to water resource mitigation and encourage and support the restoration of degraded riparian areas through public education programs demonstrating the value of healthy riparian habitats in protecting water quality, and provide for permit streamlining while conserving important water resources.
Measure 14.C.g:	Continue to consult with local public water agencies to determine that water supplies and delivery systems can meet the demands of the anticipated new development and population growth of the County. In accordance with Section 65352.5 of the California Government Code, the General Plan Land Use Diagrams were formulated in consultation with the applicable urban water management plans from these agencies and any amendments to those diagrams shall be reviewed in consultation with the respective public water agency serving the parcel or parcels affected by the proposed amendment.
Measure 14.C.i:	<p>Promote the development of plans for watershed rehabilitation projects which provide for such watershed improvements as:</p> <ul style="list-style-type: none"> • A reduction in the presence of contaminants in drinking water by addressing the origins and treatment of the contaminants, including, to the maximum extent practicable, the specific activities that affect the drinking water supply of a community or communities. • An increase in the quantity of water available from the watershed. • The improvement, restoration, or enhancement of fisheries habitat, including riparian habitat, in and along streams and watercourses in the watershed. These projects may address factors which increase sedimentation in streams and watercourses in the watershed. • The improvement of overall forest health, including the reduction of factors which may contribute to the severity of wildfires in the watershed.
Measure 14.C.k	Cooperate and consult with Federal, State and local agencies, such as the Tuolumne County Water Agency, in promoting the stewardship of the watersheds within the County. Consult with these agencies to avoid duplication of effort and to maximize use of public resources in working towards a common goal of improving the watersheds within Tuolumne County which will, in turn, contribute to

	the State and Federal objective of providing long-term Bay-Delta recovery and protection.
Measure 14.C.l	Support the Tuolumne County Resource Conservation District in its efforts to improve watersheds within Tuolumne County, including stream water quality sampling, which can assist agencies where to direct their efforts.
Measure 16.A.k	Establish an incentive program to retain existing vegetation, such as Heritage Trees, stands of oak woodlands, or clusters of native shrubs within new development
Measure 16.A.l.	Maintain the Premature Removal of Native Oak Trees Ordinance.
Measure 16.A.m.	Establish a Heritage Tree Program which: <ul style="list-style-type: none"> • Establishes criteria for identifying individual or groves of native and non-native trees and street trees as heritage trees, based on outstanding scenic, historic or biological value and/or the status of the tree as unique in terms of age and/or size when compared to other trees of the same species. Trees considered local landmarks and those contained in the National Register of Big Trees also should be considered as heritage trees. • Creates programs encouraging the preservation of heritage trees including recognition and public education programs and participation in inter-county and interstate competitions. • Addresses health and safety issues associated with trees located adjacent to local airports.

Goal	
Goal 16B:	Support the diversity and quality of biological resources while balancing the needs of public use and private property rights.
Policies	
Policy 16.B.1	Recognize and map the variety of open space types and areas that are located within the County, including natural resources, recreation areas, geologic hazards, floodplains, groundwater recharge areas, managed resource areas and other open areas that support biological resources.

Policy 16.B.2	Recognize that agricultural and timberlands may be compatible with conservation of biological resources.
Policy 16.B.4	Recognize that wildlife, fish and their habitats provide opportunities for recreational uses and educational pursuits and are a source of revenue to the County.
Policy 16.B.5	Evaluate and mitigate impacts to biological resources in accordance with the requirements of State and Federal law.
Policy 16.B.6	Allow property owners to utilize the Tuolumne County Wildlife Handbook, which may be updated periodically, to assist in designing mitigation for impacts to biological resources resulting from new development
Policy 16.B.7	Encourage development in identified communities to minimize impacts to biological resources.
Policy 16.B.8	Balance the conservation of biological resources with the need to reduce wildland fire hazards.
Policy 16.B.9	Encourage the eradication of invasive plant species to protect native habitats, conserve agricultural land, support ecological diversity and reduce the wildland fire hazard.
Policy 16.B.10	Encourage planting of native species or other drought tolerant species.
Policy 16.B.11	Expand the list of permitted uses in the Open Space-1 zoning district in Title 17 of the Tuolumne
Policy 16.C.1	Develop a Natural Resources Division in the Community Resources Agency to centralize County efforts and involvement in issues and projects involving natural resources.
Policy 16.C.2	Develop incentive programs to encourage private property owners to conserve areas that support high value biological resources.
Policy 16.C.3	Support efforts to identify and protect high value biological resource areas on private lands from willing owners, especially on land that provides additional public benefits including educational, recreational and scenic opportunities.
Policy 16.C.4	Support educational programs that describe methods of habitat conservation, encourage voluntary efforts to protect and enhance biological resources, provide opportunities for ongoing study by local students, and provide opportunities for recreation and enjoyment by the community.

Policy 16.C.5	Encourage the conservation of oak woodlands and the preservation of heritage trees.
---------------	---

Implementation Programs

Measure 16.B.2	16.B.a - Recognize that the open area provided by land designated as Agricultural or Timber Production on the General Plan land use diagrams that supports an agricultural, timber management or residential land use or is unimproved may be used to provide on-site or off-site mitigation for development projects, such as conservation easements, mitigation banks for plant and wildlife species impacts, and other in perpetuity mitigation options. streamlining while conserving important water resources.
Measure 16.B.4:	<p>16.B.b - Encourage the preservation of open areas for recreational activities, including provision of an appropriate balance of facilities suitable for intensive use (e.g. playgrounds, sports fields) and low intensity use (e.g., hiking, camping) that meet the needs of residents and visitors. Preservation of open areas that provide cultural, historical and educational opportunities for residents and visitors should also be encouraged.</p> <p>16.B.c - Allow trails, other recreational uses and educational pursuits in areas conserved for biological resources if the effects of such uses are determined to be compatible with conservation of the resources.</p> <p>16.B.d - Design parks and trails incorporating scenic resources and biological and water resource areas consistent with the goals and policies of this Element of the General Plan. (formerly 8.C.3)</p> <p>16.B.e - Review all revisions of the Recreation Master Plan prior to adoption for consistency with this Element of the General Plan. In addition, design plans for all trails, especially those adjacent to creeks, shall require the input and review of the Tuolumne County Community Resources Agency and the California Department of Fish and Wildlife for consistency with this Element. (formerly 8.C.c)</p> <p>16.B.f - To provide recreational use in water resource areas, continue to conditionally permit, in the O (Open Space) and O-1 (Open Space -1) zoning districts, recreational uses where such uses do not adversely impact water resources, such as beaches, picnic areas, non-motorized pedestrian and equestrian trails and other recreational uses.</p>

Measure 16.B.g:

16.B.g - Maintain the Tuolumne County Wildlife Maps to assist in evaluating the effects of land development projects.

16.B.h - Provide the following information to assist in the evaluation of biological resources:

- Tuolumne County Wildlife Maps
- Deer Herd Maps and Management Plans
- California Wildlife Habitat Relationships habitat typing and mapping

- U.S. Department of Agriculture Forest Service Calveg mapping data

- 16.B.i - Require development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law:

- species listed or proposed for listing as threatened, rare, or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA);
- species considered as candidates for listing under the ESA or CESA;
- wildlife species designated by CDFW as Species of Special Concern;
- animals fully protected under the California Fish and Game Code; and
- plants considered by CDFW to be “rare, threatened, or endangered in California”

(California Rare Plant Ranks [CRPR] of 1A, presumed extinct in California and not known to occur elsewhere; 1B, considered rare or endangered in California and elsewhere; 2A, presumed extinct in California, but more common elsewhere and 2B, considered rare or endangered in California but more common elsewhere).

- Sensitive natural communities, including wetlands under Federal or State jurisdiction, other aquatic resources, riparian habitats, and valley oak (*Quercus lobata*) woodland.
 - Important wildlife movement corridors and breeding sites.
 - Oak woodlands, as provided in Implementation Program 16.B.j.
-

16.B.j - Establish thresholds of significance under the California Environmental Quality Act (CEQA) for the conversion of oak woodlands in Tuolumne County. The following provides the County's recommended standard guidelines for determining whether a project may result in a significant impact to oak woodlands, for purposes of review under the California Environmental Quality Act and Public Resources Code Section 21083.4.

- An oak woodland is defined in the General Plan as a woodland stand with 10% or greater native oak canopy cover. Tree removal from parcels with less than 10% native oak canopy cover is not considered a significant conversion or loss of oak woodland.

- For parcels with 10% or greater native oak canopy cover (i.e., parcels with oak woodland, as defined in the General Plan), a significant impact to oak woodland includes tree removal that reduces the total oak canopy cover onsite to below 10% (i.e., conversion to non-oak woodland), or a loss of 10% or greater of oak canopy woodland stand on the parcel, if the conversion or loss is determined to be substantial in consideration of, but not limited to, the following:

- Total acres and amount of woodland stand removed or disturbed, and amount retained onsite.
- Pattern of development or habitat loss onsite (e.g., clustered vs. dispersed).
- Existing habitat functions and quality (e.g., intact/high-quality, moderately degraded, or severely degraded).
- Stand age- or size-class structure.
- Rarity.
- Landscape position in relation to larger wildlife corridors, stream systems, or other important natural features.
- Loss of valley oak (*Quercus lobata*) woodland, which is a sensitive habitat.
- Proximity to other oak woodland patches and connectivity to large blocks of intact habitat.
- Contribution to a cumulative loss, degradation, or fragmentation of oak woodland across the County.

Periodically update the Tuolumne County Wildlife Handbook in accordance with changes in State and Federal laws and environmental review standards, recognizing that state and federal laws may require mitigation beyond what is adopted in the Wildlife Handbook.

Measure 16.B.l

Evaluate, on a project by project basis, the appropriateness of exempting projects in identified communities from

	Implementation Program 16.B.j to encourage development in identified communities to minimize impacts to biological resources.
Measure 16.B.m	When evaluating land development projects proposed in identified communities, recognize that there may be reduced impacts to biological resources from concentrating new development within identified communities.
Measure 16.B.n	Conserve areas, such as wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas, that provide carbon sequestration benefits and other biological functions.
Measure 16.B.o	Within identified communities, retain oak woodland habitat as much as practical, such as incorporating oak woodland into landscaped or public spaces to enhance project site aesthetics, using oak woodland as visual buffers between land uses, and using oak woodland habitat to maintain slopes and reduce on-site runoff.
Measure 16.B.p	Encourage vegetation removal for fire protection purposes or as otherwise required by the Tuolumne County Fire Department in the Open Space zoning district or other areas conserved through zoning, provided such vegetation removal is addressed in a management plan and approved following review under the California Environmental Quality Act.
Measure 16.B.q	Discourage the sale of invasive plant species and noxious weeds identified by the State. (formerly 6.J.q)
Measure 16.B.r	Support efforts to control, and where possible, eradicate, invasive plant species in the County. (formerly 6.J.p)
Measure 16.B.s	Seek grant and other funding sources for programs to eradicate invasive plant species from the County.
Measure 16.B.	Refer applications for discretionary land development entitlements to the Agricultural Commissioner to identify potential impacts from invasive plant species and recommend appropriate mitigation measures.
Measure 16.B.u	Encourage eradication of invasive plant species in biological resource conservation areas provided such eradication is addressed in a management plan prepared by a biologist on the County's list of approved environmental consultants and approved by the County following review under the California Environmental Quality Act.
Measure 16.B.v	Develop a programmatic approach to vegetation removal for the eradication of invasive plant species.

Measure 16.B.w	Develop an incentive program to encourage the eradication of invasive plant species and the removal of vegetation for fire protection.
Measure 16.B.x	Encourage the use of native species and other drought tolerant species listed on the Tuolumne County Landscape Guidelines to promote water efficiency and reduce impacts associated with the introduction of exotic species. Policy
Measure 16.C.a	Create a voluntary register of high value biological resources, such as habitat for rare, threatened and endangered species; habitats that are particularly valuable to wildlife and/or rare in the County; and undisturbed oak woodlands. Listing on the register shall only occur at the request of the property owner. Prior to listing an area on the register, the area shall be surveyed by County Staff or a biologist on the County's list of approved environmental consultants to verify the value of the biological resources thereon. Surveys conducted on private property shall occur only with prior written permission from the property owner. The register would assist in implementing voluntary preservation efforts, assist in reducing the cost of new development associated with identifying biological resources and identifying areas which may be acquired and/or managed as off-site areas to mitigate impacts of new development. Lands listed on the register may qualify the owner for incentive programs, be acquired from willing sellers, or be managed in cooperation with willing property owners. Oak woodlands listed on the register could be purchased by the County or co
Measure 16.C.b	Identify agencies to accept and/or manage land dedications, donations and conservation easements.
Measure 16.C.c	Notify owners of high value biological resources of available incentive programs including tax incentives and the California Forest Stewardship Program.
Measure 16.C.d	Assist willing property owners to enter into conservation programs through coordination with outside stewardship programs and accessing financing programs to conserve biological resources.
Measure 16.C.e	Apply for grants from local, state and federal sources to assist in funding the acquisition of high value biological resources, such as habitat for rare, threatened and endangered species, habitats that are particularly valuable to wildlife and/or rare in the County, and undisturbed oak woodlands.
Measure 16.C.f	Protect biodiversity and habitats from climate change effects by cooperating with other agencies to acquire or

<p>Measure 16.C.g Measure 16.C.h</p>	<p>otherwise protect open space areas that provide key habitat linkages and wildlife movement corridors on a regional level. Plant native trees throughout Tuolumne County. Make the Tuolumne County Oak Woodland Voluntary Management Guidelines available to property owners upon request to assist them with voluntary conservation of oak woodlands.</p>
<p>Measure 16.C.i</p>	<p>Cooperate with agencies and entities in their efforts to encourage voluntary stewardship of tree resources including:</p> <ul style="list-style-type: none"> • Providing brochures, produced by these and other interested agencies, illustrating protection methods for construction near native trees. • Distributing handouts promoting the retention of tree quality and quantity throughout the County by providing guidelines for replacing native trees removed during construction, including size and quantity. • Promoting elementary and secondary school programs providing education on the benefits of native trees and including acorn and tree planting programs

APPENDIX B

REPRESENTATIVE PHOTOGRAPHS



Photograph 1: Eastern end of Segment 1, facing south.
GPS: 38.045216, -120.231158
Photograph taken by Karissa Denney on September 15, 2021.



Photograph 2: Center of Segment 2, facing southeast.
GPS: 38.044371, -120.232730.
Photograph taken by Shannon Gleason on September 15, 2021.



Photograph 3: Center of Segment 3, facing northeast.
GPS: 38.034249, -120.234862,
Photograph taken by Karissa Denney on September 15, 2021.



Photograph 4: East end of Segment 4, facing southwest.
GPS: 38.032352, -120.238222,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 5: Intersection of Golf Club Drive and Lakeview Drive, north side of Segment 5, facing south.
GPS: 38.030799, -120.242962,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 6: Southern edge of Segment 5 along bank of Twain Harte Lake, facing northeast.
GPS: 38.028133, -120.242508,
Photograph taken by Shannon Gleason on September 15, 2021



Photograph 7: Center of Segment 6, facing southwest.
GPS: 38.031056, -120.236816,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 8: Southern end of Segment 7, facing northeast.
GPS: 38.031004, -120.235351,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 9: Midsection of Segment 8, facing south.
GPS: 38.032617, -120.232906,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 10: Midsection of Segment 8, facing southwest.
GPS: 38.032948, -120.230647,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 11: Midsection of Segment 9, facing west.
GPS: 38.040445, -120.230647,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 12: Southern end of Segment 9, facing west.
GPS: 38.039236, -120.230396,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 13: Southeastern end of Segment 10, facing northeast.
GPS: 38.039236, -120.230396,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 14: East end of Segment 11, facing south.
GPS: 38.038225, -120.233580,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 15: Southern end of Segment 12, facing north.
GPS: 38.035818, -120.235401,
Photograph taken by Karissa Denney on September 15, 2021



Photograph 16: Riparian habitat and pooled water along the unnamed creek at the northern edge of Segment 6, facing northeast.
GPS: 38.032383, -120.235712,
Photograph taken by Shannon Gleason on September 15, 2021

APPENDIX C

PLANT AND ANIMAL SPECIES OBSERVED WITHIN THE BIOLOGICAL STUDY AREA

Table C-1
Plant Species Observed within the Biological Study Area on September 15, 2021
Twain Harte Sewer Pipeline Improvements Project, Tuolumne County, California

Scientific Name	Common Name	Listing Status	Regional Status
Trees			
<i>Acer negundo</i>	boxelder	None	Native
<i>Aesculus californica</i>	California buckeye	None	Native
<i>Arbutus menziesii</i>	Pacific madrone	None	Native
<i>Calocedrus decurrens</i>	incense cedar	None	Native
<i>Cornus nuttallii</i>	Pacific dogwood	None	Native
<i>Juglans californica</i>	California black walnut	None	Native
<i>Malus domestica</i>	apple	None	Introduced
<i>Notholithocarpus densiflorus</i>	tanoak	None	Native
<i>Pinus jeffreyi</i>	Jeffrey pine	None	Native
<i>Pinus ponderosa</i>	ponderosa pine	None	Native
<i>Platanus racemosa</i>	California sycamore	None	Native
<i>Populus fremontii</i>	cottonwood	None	Native
<i>Quercus chrysolepis</i>	canyon live oak	None	Native
<i>Quercus kelloggii</i>	California black oak	None	Native
<i>Quercus wislizeni</i>	interior live oak	None	Native
<i>Salix laevigata</i>	red willow	None	Native
<i>Salix lasiolepis</i>	arroyo willow	None	Native
<i>Sequoia sempervirens</i>	coast redwood	None	Introduced
Shrubs & Vines			
<i>Actostaphylos viscida</i>	whiteleaf manzanita	None	Native
<i>Genista monspessulana</i>	French broom	None; Cal-IPC: High	Introduced
<i>Hedera helix</i>	english ivy	None; Cal-IPC: High	Introduced
<i>Hypericum calycinum</i>	St. John's wort	None	Introduced
<i>Ilex aquifolium</i>	holly	None; Cal-IPC: Limited	Introduced
<i>Rubus armeniacus</i>	Himalayan blackberry	None	Introduced
<i>Spartium junceum</i>	Spanish broom	None; Cal-IPC: High	Introduced
<i>Spiraea cantoniensis</i>	Reeve's spiraea	None	Introduced
<i>Toxicodendron diversilobum</i>	poison oak	None	Native
<i>Vitis californica</i>	California grape	None	Native
Herbs			
<i>Artemesia douglasiana</i>	California mugwort	None	Native
<i>Bidens frondosa</i>	devil's beggartick	None	Native
<i>Capsella bursa-pastoris</i>	shepherd's purse	None	Introduced
<i>Centaurea solstitialis</i>	yellow starthistle	None; Cal-IPC: High	Introduced
<i>Cirsium vulgare</i>	bull thistle	None; Cal-IPC: Moderate	Introduced
<i>Epilobium ciliatum</i>	slender willowherb	None	Native
<i>Erythranthe guttata</i>	yellow monkeyflower	None	Native

<i>Hirschfeldia incana</i>	shortpod mustard	None; Cal-IPC: Moderate	Introduced
<i>Lactuca saligna</i>	willowleaf lettuce	None	Introduced
<i>Lactuca serriola</i>	prickly lettuce	None	Introduced
<i>Lathyrus latifolius</i>	perennial pea	None; Cal-IPC: Watch	Introduced
	floating primrose		
<i>Ludwigia peploides</i>	willow	None; Cal-IPC: High	Introduced
<i>Medicago lupulina</i>	black medic	None	Introduced
<i>Melilotus albus</i>	white sweetclover	None	Introduced
<i>Mentha spicata</i>	spearmint	None	Introduced
<i>Nasturtium officinale</i>	watercress	None	Native
<i>Plantago lanceolata</i>	English plantain	None; Cal-IPC: Limited	Introduced
<i>Polygonum aviculare</i>	prostrate knotweed	None	Introduced
<i>Pteridium aquilinum</i>	bracken fern	None	Native
<i>Rumex crispus</i>	curly dock	None; Cal-IPC: Limited	Introduced
	American black		
<i>Solanum americanum</i>	nightshade	None	Native
<i>Stachys ajugoides</i>	hedge nettle	None	Native
<i>Tanacetum parthenium</i>	feverfew	None	Introduced
<i>Torilis arvensis</i>	field hedge parsley	None; Cal-IPC: Moderate	Introduced
<i>Trifolium hirtum</i>	rose clover	None; Cal-IPC: Limited	Introduced
<i>Verbascum thapsus</i>	woolly mullein	None; Cal-IPC: Limited	Introduced
<i>Veronica americana</i>	American speedwell	None	Native
Grasses & Grass-like			
<i>Avena sp.</i>	wild oat	None; Cal-IPC: Moderate	Introduced
<i>Bromus carinatus</i>	California brome	None	Native
<i>Bromus diandrus</i>	ripgut brome	None; Cal-IPC: Moderate	Introduced
<i>Bromus hordeaceus</i>	soft brome	None; Cal-IPC: Limited	Introduced
<i>Bromus madritensis</i>			
<i>ssp. rubens</i>	red brome	None; Cal-IPC: High	Introduced
<i>Cynodon dactylon</i>	Bermuda grass	None; Cal-IPC: Moderate	Introduced
<i>Cynosurus echinatus</i>	dogtail grass	None; Cal-IPC: Moderate	Introduced
<i>Cyperus eragrostis</i>	tall flatsedge	None	Native
<i>Dactylis glomerata</i>	orchard grass	None; Cal-IPC: Limited	Introduced
<i>Elymus glaucus</i>	blue wildrye	None	Native
<i>Eragrostis cilianensis</i>	lovegrass	None	Introduced
<i>Festuca sp.</i>	fescue	N/A	N/A
<i>Holcus lanatus</i>	common velvet grass	None; Cal-IPC: Moderate	Introduced
<i>Hordeum murinum</i>	foxtail barley	None; Cal-IPC: Moderate	Introduced
<i>Juncus effusus</i>	common rush	None	Native
<i>Panicum acuminatum</i>	western panicgrass	None	Native
<i>Typha latifolia</i>	broadleaf cattail	None	Native

*Cal-IPC = California Invasive Plant Council.

Rating system: **High** = several ecological impacts; **Moderate** = substantial but not severe ecological impacts; **Limited** = minor ecological impacts or not enough information to justify higher score; **Alert** = species ranked as High or Moderate with limited distribution, but potential to spread; **Watch** = could pose a high risk of becoming invasive in the future.

Table C-2
Wildlife Species Observed within the Biological Study Area on September 15, 2021
Twain Harte Sewer Pipeline Improvements Project, Tuolumne County, California

Scientific Name	Common Name	Status	Native or Introduced
Birds			
<i>Aix sponsa</i>	wood duck	None	Native
<i>Aphelocoma californica</i>	California scrub jay	None	Native
<i>Baeolophus inornatus</i>	oak titmouse	None	Native
<i>Buteo lineatus</i>	red-shouldered hawk	None	Native
<i>Callipepla californica</i>	California quail	None	Native
<i>Calypte anna</i>	Anna's hummingbird	None	Native
<i>Cathartes aura</i>	turkey vulture	None	Native
<i>Colaptes auratus</i>	northern flicker	None	Native
<i>Corvus corax</i>	common raven	None	Native
<i>Cyanocitta stelleri</i>	Steller's jay	None	Native
<i>Dryobates pubescens</i>	downy woodpecker	None	Native
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	None	Native
<i>Melanerpes formicivorus</i>	acorn woodpecker	None	Native
<i>Poecile gambeli</i>	mountain chickadee	None	Native
<i>Sitta carolinensis</i>	white-breasted nuthatch	None	Native
Mammals			
<i>Canis familiaris</i>	domestic dog	None	Introduced
<i>Felis catus</i>	domestic cat	None	Introduced
<i>Odocoileus hemonius</i>	black-tailed deer	None	Native
<i>Otospermophilus beecheyi</i>	California ground squirrel	None	Native
<i>Sciurus gresius</i>	western gray squirrel	None	Native

APPENDIX D

SPECIAL-STATUS SPECIES DATABASE SEARCH RESULTS

IPac query and 9 QUAD CNDDDB RESULTS



United States Department of the Interior



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

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-2746
Event Code: 08ESMF00-2021-E-07996
Project Name: Twain Harte Sewer Upgrade Project

September 11, 2021

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

To Whom It May Concern:

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

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

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

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

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

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

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

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

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

Attachment(s):

- Official Species List
-

Official Species List

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

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-2746

Event Code: Some(08ESMF00-2021-E-07996)

Project Name: Twain Harte Sewer Upgrade Project

Project Type: WASTEWATER PIPELINE

Project Description: Repairs to 9 stretches of buried sewer line.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.03653145,-120.22981275625821,14z>



Counties: Tuolumne County, California

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

Table D-1
Special-Status Plant Species in the Regional Vicinity of the Project Site
Twain Harte Sewer Pipeline Improvements Project, Tuolumne County, California

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Sensitive Natural Communities				
Big Tree Forest	G3/S3.2	<p>This community is very similar to Sierran Mixed Conifer forest but lacking more xeric species and with the conspicuous addition of the giant sequoia (<i>Sequoiadendron giganteum</i>), which grows up to about 100 meters tall and 12 meters DBH. Giant sequoias usually occur in discrete groves, usually intermixed with Sierran Mixed conifer forest; very isolated individual trees of this species rarely occur. Usually associated with abundant groundwater, often near springs, but rarely associated with major streams. Dependent on periodic fires for establishment of Sequoia seedlings. Other characteristic species include <i>Abies concolor</i>, <i>Calocedrus decurrens</i>, <i>Pinus lambertiana</i>, <i>P. ponderosa</i>, and <i>Pseudotsuga menziesii</i>.</p>	No	No giant sequoia specimens were observed, and this sensitive natural community is not present.
Plants				
<i>Allium tribracteatum</i> three-bracted onion	-/- 1B.2/-	<p>This is a perennial herb (bulb) that blooms from April to August. It occurs on volcanic slopes in yellow pine forest, red fir forest, and chaparral. It commonly occurs at elevations ranging from 4,265 to 6,233 feet and has been observed as high as 9,842 feet.</p>	No	Suitable habitat is absent from the Project site, and the Project is below the accepted elevational range for the species.
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	-/- 1B.2/-	<p>This is a perennial herb that blooms from March to June. It occurs in chaparral, cismontane woodland, and valley and foothill grassland habitats and sometimes on serpentinite. It occurs at elevations ranging from approximately 147 to 5,101 feet and occurrences are scattered along lower foothill and mountain regions along the perimeter of the Sacramento Valley. This species is threatened by</p>	No	Suitable habitat is absent from the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Botrychium crenulatum</i> scalloped moonwort	-/- 2B.2/-	grazing and potentially residential, recreational, and energy development. This is a perennial rhizomatous fern that does not produce flowers but produces spores June to September. It occurs in bogs, fens, meadows, seeps, marshes, and swamps, as well as lower and upper montane coniferous forests. It occurs at elevations ranging from approximately 4,160 to 10,761. This species is threatened by foot traffic, grazing, trampling, recreational activities, fuel reduction projects, road deconstruction, and vehicles.	No	Suitable habitat is absent from the Project site, and the Project is below the accepted elevational range for the species.
<i>Botrychium minganense</i> Mingan moonwort	-/- 2B.2/-	This is a perennial rhizomatous fern that does not produce flowers but produces spores from July to September. It occurs in bogs and fens, lower montane coniferous forest, meadows and seeps (edges), and upper montane coniferous forest habitats. It grows in mesic soils in open forests along streams or around seeps. It occurs at elevations ranging from approximately 4,773 to 7,152 feet. This species is threatened by grazing, trampling, fire, vehicles, habitat alteration, and logging and associated road usage.	No	Suitable habitat is absent from the Project site, and the Project is below the accepted elevational range for the species.
<i>Clarkia australis</i> Small's southern clarkia	-/- 1B.2/-	This is an annual herb that blooms from May to August. It occurs in cismontane woodland and lower montane coniferous forest. It grows in open, rocky sites in conifer forest or oak woodland. This species is endemic to California. It occurs at elevations ranging from approximately 2,625 to 6,810 feet. It is threatened by logging.	Yes	Suitable habitat is present within the BSA but not on the Project site. The nearest CNDDDB occurrence overlaps the Project buffer and documents a population on a shaded hillside in 1965 (EONDX 18855)
<i>Clarkia biloba</i> ssp. <i>australis</i> Mariposa clarkia	-/- 1B.2/-	This is an annual herb that blooms from April to July. It occurs in serpentinite soils, and in chaparral and foothill woodlands sometimes with riparian areas as well as large talus rockslides. This species	Yes	Suitable habitat is present within the BSA but not on the Project site. The nearest CNDDDB occurrence

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		is endemic to California. It occurs at elevations ranging from approximately 980 to 4,790 feet. This species is threatened by road maintenance, foot traffic, and non-native plants.		is from 1958 and approximately 1.1 miles southeast of the Project (EONDX 91125). The next nearest occurrence is from 2008, where a large population was observed over multiple years along an OHV trail approximately 2.1 miles southeast of the Project (EONDX 110557).
<i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower	-/- 1B.2/-	This is an annual herb that blooms from April to July. It occurs in vernal wet and often disturbed areas. It grows in clay, volcanic, or granitic soils. It occurs in lower montane coniferous forest, meadows and seeps. This species is endemic to California. It occurs at elevations ranging from approximately 1,970 to 6,565 feet. It is threatened by vehicles, logging, non-native plants, grazing, and potentially by development.	Yes	Suitable habitat is present in the BSA along the unnamed creek in Twain Harte, but not on the Project site. The nearest CNDDDB occurrence overlaps the north side of the Project but is from 1944 and likely extirpated due to development (EONDX 56932). The next nearest occurrence is from 1971 and approximately 0.5 mile southeast of the Project (EONDX 76169).
<i>Eryngium pinnatisectum</i> Tuolumne button-celery	-/- 1B.2/-	This is an annual or perennial herb that blooms from May to August. It occurs in vernal pools and mesic conditions in cismontane woodland and lower montane coniferous forest. It occurs at elevations from approximately 230 to 3,000 feet. It is threatened by development, agriculture, grazing, and trampling. It has been recorded in western Sierra Nevada foothills and lower mountains in	No	The Project is at elevations outside of the accepted elevational range for the species.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		Tuolumne, Calaveras, Amador, and Sacramento counties. It also occurs in Sonoma County.		
<i>Erythranthe marmorata</i> Stanislaus monkeyflower	-/- 1B.1/-	This is an annual herb that blooms from March to May. It occurs in cismontane woodland, yellow pine forest, and lower montane coniferous forest habitats. It is endemic to California and occurs at elevations from approximately 330 to 2,955 feet.	No	The Project is at elevations outside of the accepted elevational range for the species.
<i>Erythronium tuolumnense</i> Tuolumne fawn lily	-/- 1B.2/-	This perennial herb (bulb) is endemic to California and blooms between March and June. It often occurs on clay soils and on cliffs and near drainages in broadleaf upland forests, cismontane woodland, lower montane coniferous forest, and chaparral habitats. It occurs at elevations between approximately 1,675 and 4,480 feet.	Yes	Suitable habitat is present within the BSA but not on the Project site. The nearest CNDDDB occurrence is from 2003 and 1.7 miles northwest of the Project, on a steep north-facing slope above the South Fork Stanislaus River (EONDX 3378)
<i>Horkelia parryi</i> Parry's horkelia	-/- 1B.2/-	This is a perennial herb that blooms from April to September. It occurs in lone formation and other soils (has been observed in fuel breaks) in chaparral and cismontane woodland. It is endemic to California and occurs at elevations from approximately 260 to 3,510 feet. It is potentially threatened by clay mining, road maintenance, and erosion.	No	Suitable habitat is absent from the Project site.
<i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris	-/- 1B.2/-	This is a perennial herb (rhizomatous) that blooms from May to June. It occurs in dry slopes within yellow pine forest and foothill woodland. It is endemic to California and occurs at elevations from 1,770 to 4,595 feet.	Yes	Suitable habitat is present within the BSA but not on the Project site. The nearest CNDDDB occurrence is from 2006 and approximately 2.8 miles northwest of the Project, in mixed oak-conifer forest (EONDX 97839).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Lomatium stebbinsii</i> Stebbins' lomatium	-/- 1B.1/-	This is a perennial herb that blooms from March to May. It occurs in yellow pine forest and chaparral habitat on gravelly volcanic soil. It is endemic to California and occurs at elevations from 4,100 to 5,580 feet.	No	Suitable habitat is absent from the Project site, and the Project is below the accepted elevational range for the species.
<i>Navarretia miwukensis</i> Mi-Wuk navarretia	-/- 1B.2/-	This annual herb is endemic to California and blooms between May and August. It occurs in openings in lower montane coniferous forest, on pyroclastic soils and gently sloping terrain at elevations between approximately 2,625 and 4,920 feet. It is threatened by urbanization, vehicles and recreational activities, and spread of invasive species.	Yes	Suitable habitat is present within the BSA but not on the Project site. The nearest extant occurrence overlaps the south side of the Project, documenting a population observed above a road cut in 2014 (EONDX 115504).
<i>Rhynchospora capitellata</i> brownish beaked-rush	-/- 2B.2/-	This is a perennial herb that blooms from July to August. It occurs in mesic lower and upper montane coniferous forest, meadows and seeps, and marshes and swamps. It occurs at elevations from approximately 150 to 6,560 feet and is possibly threatened by grazing and development.	Yes	Suitable habitat is present within the BSA but not on the Project site. The nearest CNDDDB occurrence is from 2014 and over 10 miles southeast of the Project (EONDX 113950).
Invertebrates				
<i>Bombus crotchii</i> Crotch bumble bee	-/SC -/-	This bee occurs in relatively warm and dry environments, including the inner Coast Range of California and the margins of the Mojave Desert. It inhabits grassland and scrub habitats, where it nests in abandoned rodent burrows, occasionally nesting above ground in tufts of grass, rock piles, or cavities in dead trees. This species is classified as a short-tongued species, whose food plants include <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , and <i>Salvia</i> . The species is threatened by habitat loss and degradation, including agricultural intensification and rapid urbanization.	No	Suitable habitat is absent from the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	FT/- -/-	This beetle species is closely associated with elderberry shrubs (<i>Sambucus</i> sp.) for food and reproduction. This species usually occur along rivers and streams and eggs are laid on the bark of elderberry shrubs and larvae hatch and burrow into the stems. Adults eat elderberry leaves and flowers. Stem diameter must be a minimum of one inch and exit holes in stems are the most common methods for identification. This species ranges from southern Shasta County to Fresno County.	No	No elderberry shrubs were observed, so suitable habitat is absent from the Project site.
<i>Danaus plexippus</i> Monarch – California overwintering population	FC/- -/-	This butterfly species occurs in various open habitats including fields, meadows, weedy areas, marshes, and roadsides. Adults make massive migrations from August to October, flying thousands of miles south to hibernate along the California coast and in central Mexico. Larvae feed on plants in the Milkweed family primarily Milkweeds (<i>Asclepias</i>), but also other genera including <i>Calotropis</i> , <i>Cynanchum</i> , <i>Gonolobus</i> , <i>Sarcostemma</i> , etc.; each butterfly lives from two to six weeks.	No	Suitable habitat is absent from the Project site.
Fish				
<i>Lavinia symmetricus</i> ssp. 1 San Joaquin roach	-/- -/-SSC	The San Joaquin roach occurs within varying habitats from coastal streams to foothill streams. They prefer small, warm, intermittent streams with deep-bottomed pools, but they have also been found in cooler water streams, but populations have also been found in isolated pools. They are tolerant of high temperatures and low dissolved oxygen levels.	No	Suitable habitat is absent from the Project site.
<i>Hypomesus transpacificus</i> delta smelt	FT/- -/-	This is a small fish species endemic to the San Francisco Estuary and the larger Sacramento-San Joaquin Delta. It moves between freshwater and low salinity water throughout the year and most spawning happens in tidally influenced backwater sloughs and channel edgewater. It occurs primarily	No	The Project is outside the known range of the species.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		in main water bodies and sloughs of the Delta and Suisun Bay and is not directly associated with small stream systems. This species historical distribution does not extend beyond Mossdale on the San Joaquin River and Sacramento on the Sacramento River.		
Amphibians				
<i>Rana boylei</i> foothill yellow-legged frog	-/SE -/SSC	This frog is found in streams and rivers with rocky substrates and open, sunny banks, and sometimes isolated pools, vegetation backwaters, and deep, shaded spring-fed pools. It is also found in forests, chaparral, and woodlands. It lays eggs on downstream side of rocks in shallow, slow-moving water. The current distribution includes north coast, northern Sierra Nevada, foothills of southern Sierra Nevada mountains (almost extinct). It occurs at elevations from sea level to 6,000 feet.	No	Suitable habitat is absent from the Project site.
<i>Rana draytonii</i> California red-legged frog	FT/- -/SSC	This species occurs primarily in and near ponds in forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover, preferably with dense shrubby vegetation such as cattails and willows near deep water pools. This species occurs primarily at elevations ranging from sea level to 5,000 feet. Breeding habitat may be permanent or ephemeral and it estivates in animal burrows or other moist refuges when ephemeral habitat is dry. This frog is endemic to California and northern Baja California, found throughout coastal California from Mendocino County south. Its inland distribution includes northern Sacramento Valley and foothills of Sierra Nevada south to Tulare County (possibly Kern County).	No	Suitable habitat is absent from the Project site.
Reptiles				
<i>Actinemys [=Emys] marmorata</i>	-/-	This species is highly aquatic and diurnally active. It is found in ponds, lakes, rivers, streams, creeks,	No	Suitable habitat is absent from the Project site. The

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
western pond turtle		marshes, and irrigation ditches with vegetation and rocky or muddy bottoms in a wide variety of habitats. It needs basking areas near water (logs, rocks, vegetation mats, banks). This species may enter brackish water and even seawater and it digs a nest on land near water. It ranges from north of the San Francisco Bay area south, including the Central Valley.		man-made Twain Harte Lake does not contain any basking habitat, the banks are concrete-lined, and the lake is fenced, which would prevent the species from seeking upland nesting habitat.
Birds				
<i>Accipiter gentilis</i> northern goshawk	-/- -/SSC	This species prefers mature and old-growth forests with relatively high canopy closures. It favors large trees on moderate slopes with open understories for nesting. It builds nests in either coniferous, deciduous, or mixed-pine forests. It prefers to perch and scan for prey followed by quick bursts of speed to capture their prey.	Yes	Suitable foraging and nesting habitat is present in the vicinity of the Project. The nearest CNDDDB occurrence is approximately 2.8 miles northeast of the Project, where a nest was observed in a stand of tall conifers between the Stanislaus River and Deer Creek in 1996 (EONDX 29760).
<i>Agelaius tricolor</i> tricolored blackbird	-/ST -/-	This species is a year-round resident that is a colonial breeder. It occurs in freshwater, emergent wetlands with tall, dense cattails or tule, but also thickets of willow, blackberry, wild rose, and tall herbs. Breeding colonies consist of a minimum of approximately 50 pairs. This species forages for mostly insects and spiders and less often seeds and cultivated grains in pastures, grain fields, cropland, and similar habitats near breeding areas.	No	Suitable foraging and nesting habitat is absent from the Project site.
<i>Athene cunicularia</i> burrowing owl	-/- -/SSC	This species occupies a variety of open, semi-arid to arid habitats throughout central and southern California, including desert regions. It prefers open habitats with few shrubs or trees and low-growing vegetation. It is most active around sunrise and	No	Suitable foraging and burrowing habitat is absent from the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		<p>sunset and utilizes burrows constructed by mammals year-round for shelter and nesting. This species is well documented in urban areas where patches of undeveloped areas are present (e.g., canals, airports, drainage basins), and in areas of dense agricultural development, particularly where canals provide burrow habitat. It forages primarily for rodents and insects within several miles of its burrow, usually in open grassy habitats if available. It has been observed hunting bats and insects around parking lot lights. Threats to this species include development resulting in habitat loss/fragmentation.</p>		
<i>Haliaeetus leucocephalus</i> bald eagle	-/SE -/SFP	<p>This large raptor is a permanent resident, occurring in forested habitats near water. Nesting activity is restricted mainly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity Counties in California, with additional scattered occurrences throughout the state, excepting the high Sierra Nevada. The species is a common winter migrant near inland waters in Southern California. It feeds primarily on fish, typically hunting from a perch on the water's margins. It will also wade into shallow waters in pursuit of fish, opportunistically take small mammals, and feed on carrion. Bald eagles nest in large, old-growth trees with open branches near open water, most often in the largest tree in a stand with less than 40% canopy.</p>	No	Suitable foraging and nesting habitat is absent from the Project site.
<i>Strix nebulosa</i> great gray owl	-/SE -/-	<p>This species is a rarely seen resident that typically occurs in old-growth red fir, mixed conifer, or lodgepole pine habitats, but can occur in a wide range of habitats and elevations and always in the vicinity of wet meadows. Generally, it occurs from 4,500 to 7,500 feet in the Sierra Nevada from the vicinity of Quincy, Plumas County south to the</p>	No	Suitable foraging habitat is absent from the Project site, and the Project is below the accepted elevational range for the species.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		Yosemite region. It is occasionally reported in northwestern California in the winter and in the Warner Mountains in the summer. It feeds on meadow-dwelling rodents, especially pocket gophers and voles and occasionally eats birds. Threats include timber harvesting, grazing decreasing prey populations, and secondary strychnine poisoning of pocket gophers.		
Mammals				
<i>Antrozous pallidus</i> pallid bat	-/- -/SSC	This species occurs at low elevations throughout California in a wide variety of habitats including grasslands, shrublands, woodlands, forests, and mixed conifer. It occurs most commonly in open, dry habitats with rocky areas for roosting. It is a yearlong nocturnal resident that hibernates during winter. It forages in open areas mainly on insects and arachnids, occasionally on the ground. Day roosts occur in caves, crevices, mines, and occasionally hollow trees, buildings, and bridges and night roosts occur in more open sites. Maternity colonies form in early April with young volant by July or August. This bat species is very sensitive to disturbance of roosting sites.	No	Suitable roosting habitat is absent from the Project site.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-/- -/SSC	This species occurs in coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is correlated with the availability of caves and cave-like roosting habitat (e.g., mines, tunnels, buildings, or other manmade structures). It occurs in open areas for roosting and typically do not tuck themselves into cracks and crevices like many other bat species. It feeds primarily on moths but may also eat beetles and soft bodies insects. This species is extremely sensitive to disturbance of roosting sites.	No	Suitable roosting habitat is absent from the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Euderma maculatum</i> spotted bat	-/- -/SSC	This species occurs in a wide variety of habitats from arid deserts and grasslands through mixed conifer forests within British Columbia, Canada south through the western United States and into Mexico. It feeds almost entirely on moths foraging over water and along washes. This species needs rock crevices in cliffs or caves for roosting. Mating occurs in fall and the young are born before mid-June.	No	Suitable roosting habitat is absent from the Project site.
<i>Eumops perotis californicus</i> western mastiff bat	-/- -/SSC	This species occurs in open, semi-arid to arid habitats throughout southeastern San Joaquin Valley and Coast Ranges from Monterey County southward. It can also occur in urban areas. It feeds on insects captured in flight and roosts in cliff faces, high buildings, trees, and tunnels. The maternity season begins in March with young typically volant by September. Nursery roosts most often occur in tight rock crevices or crevices in buildings.	No	Suitable roosting habitat is absent from the Project site.
<i>Gulo gulo</i> California wolverine	-/ST -/SFP	This species occurs in tundra, remote mountains, and boreal forests. It generally occurs in areas at or above timberline but will use lower-elevation forests during the winter. Habitat requirement on a landscape scale are currently unknown and may differ substantially between populations. It is most common in regions with snow-covered ground throughout the winter. It is morphologically well suited to hunting in the snow and may rely heavily on this advantage during severe winters. There has only been one sighting of this species in California within the last 100 years. In 2008, a male wolverine was captured on camera near Tahoe National Forest.	No	Suitable habitat is absent and the Project is outside the accepted range of the species.
<i>Lepus americanus tahoensis</i>	-/- -/SSC	This species occurs in the mid-elevations of the northern and central Sierra Nevada Mountains from southeastern Shasta County south through Mono	No	Suitable habitat is absent and the Project is outside of

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Sierra Nevada snowshoe hare		and Mariposa Counties. It generally occurs in riparian communities characterized with thickets of deciduous trees and shrubs such as willows and alders. They feed on various green succulent plants such as grasses, sedges, ferns, and forbs. In the winter, they forage on bark and twigs of conifers, deciduous trees, and evergreen shrubs.		the accepted elevation range for the species.
<u>CRPR (California Rare Plant Rank):</u>			FE	Federally Endangered
1A	Presumed Extinct in California		FT	Federally Threatened
1B	Rare, Threatened, or Endangered in California and elsewhere		FC	Federal Candidate Species
2A	Plants presumed extirpated in California, but more common elsewhere		FS	Federally Sensitive
2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere		SE	State Endangered
<u>CRPR Threat Code Extension:</u>			ST	State Threatened
.1	Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)		SC	State Candidate
			SS	State Sensitive
.2	Fairly endangered in California (20-80% occurrences threatened)		SSC	State Species of Special Concern
.3	Not very endangered in California (<20% of occurrences threatened)		SFP	State Fully Protected
			SR	State Rare
			WL	Watch List

Rana boylei	footbill yellow-legged frog	Amphibians	None	Endangered	BLM_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_5-Sensitive	Aquatic C Partly-shade Needs at least some cobble sized substrate for egg laying. Needs at least 15 weeks to attain metamorphosis.	49
Rana dryophila	California red-legged frog	Amphibians	Threatened	None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	Aquatic F Lowland Requires 11-20 weeks of permanent water for larval development. Must have access to vegetation habitat. Cave temps range from 14-16 deg C, humidity, from 82-97%. Found under rocks or wandering on floor or walls.	1
Banksia melones	Melones Cave harvestman	Arachnids	None	None	IUCN_VU-Vulnerable	Limestone Limestone Limestone Limestone Caves.	1 1 1 1
Banksia tuolumne	Tuolumne cave harvestman	Arachnids	None	None			
Larca laevis	Larca's Cave pseudoscorpion	Arachnids	None	None			
Pseudoscorpionus ophreus	Musick Hall Cave pseudoscorpion	Arachnids	None	None			
Accipiter gentilis	northern goshawk	Birds	None	None	BLM_5-Sensitive CDF_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_5-Sensitive	North coast Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees. North-facing slopes with juniper perches are critical requirements. Nests usually within 275 ft of water.	9
Accipiter striatus	sharp-shinned hawk	Birds	None	None	CDFW_WL-Watch List IUCN_LC-Least Concern	Coinstantan Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	1
Agelaius tricolor	tricolored blackbird	Birds	None	Threatened	BLM_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	Freshwater Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. Nests in large, old growth, or dominant live trees with open branches, especially ponderosa pine. Roosts communally in winter.	1
Athene cunicularia	burrowing owl	Birds	None	None	BLM_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	Coastal prairie Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	1
Haliaeetus leucocapillus	bald eagle	Birds	Delisted	Endangered	BLM_5-Sensitive CDF_5-Sensitive CDFW_FF-Fully Protected IUCN_LC-Least Concern USFS_5-Sensitive USFWS_BCC-Birds of Conservation Concern	Lower mor Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy microclimate.	2
Pandion haliaetus	osprey	Birds	None	None	CDF_5-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	Rioarian to Ocean sho Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	1
Strix nebulosa	great gray owl	Birds	None	Endangered	CDF_5-Sensitive IUCN_LC-Least Concern USFS_5-Sensitive	Lower mor Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy microclimate.	4
Bryotha bedardii	Bedard's bryotha	Bryophytes	None	None	4.2 USFS_5-Sensitive	Lower mor Moss which grows on damp clay soils. Seems to colonize bare soil along creeksides, meadows, fens and springs. This species has an ephepheral nature and often has a very short life span (100-200m).	1
Stygodromus harai	Harai's Cave amphipod	Crustaceans	None	None	IUCN_VU-Vulnerable	Central Ca Also taken from a spring.	2
Balimnocheilus mucronatus	har's cave balimnocheilus	Dicots	None	None	BLM_5-Sensitive USFS_5-Sensitive	Chaparral Chacoanal Sometimes an ornamental. 35-1465 m.	1
Clarkia australis	Snail's southern clarkia	Dicots	None	None	BLM_5-Sensitive USFS_5-Sensitive	Coinstantan Open, rocky sites in conifer forest or oak woodland. 202-2015 m.	9
Clarkia blythei sub. australis	Mariopsis clarkia	Dicots	None	None	18.2 SB_CABIG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_5-Sensitive	Coinstantan On serpentine. Several sites occur in the foothill woodland/riparian ecotone. 120-1480m.	47
Diplazium pulchellum	yellow-lob parsley monkeyflower	Dicots	None	None	BLM_5-Sensitive USFS_5-Sensitive	Lower mor Vernally wet sites. Soils can be clay, volcanic, or granite. 670-1950 m.	32
Eranthis pinnatifidum	Tuolumne button-celery	Dicots	None	None	18.2	Coinstantan Volcanic soils, semi-pool and meiotic sites within other natural communities. 65-915 m.	3
Erythraea mariorata	Stanislaus monkeyflower	Dicots	None	None	18.1	Coinstantan 300-1435 m.	1
Horkelia parryi	Parry's horkelia	Dicots	None	None	18.2	Chaparral Chacoanal especially known from the lone formation in Amador County. 85-1115 m.	2
Lomatium stebbinsii	Stebbins' lomatium	Dicots	None	None	18.1	Chaparral Lower mor This, greville volcanic clay in open yellow pine forest. Grows where other vegetation is absent. 1140-2350 m.	56
Navarretia mwakensis	Mi-Wuk navarretia	Dicots	None	None	18.2	Lower mor Open, sparsely vegetated pyroclastic flows, often gently sloping terrain. 800-1500 m.	7
Betrychium ornatum	scalloped moonwort	Ferns	None	None	28.2 USFS_5-Sensitive	Moist meadows, freshwater marsh, and Bog & fen Boes and 1 near creeks. 1185-3110 m.	1
Betrychium minganense	Mingan moonwort	Ferns	None	None	28.2 USFS_5-Sensitive	Chacoanal Crested in mixed conifer forest. 1190-3295 m.	1
Laminia symmetrica sp. 1	San Joaquin moach	Fish	None	None	CDFW_SSC-Species of Special Concern	Aquatic 5 Tributaries to the San Joaquin River from the Cosumnes River	2
	Big Tree Forest	Forest	None	None		Lower montane coniferous forest.	1
Atractodes wawona	Wawona rittle beetle	Insects	None	None		Aquatic A Strong preference for inhabiting submerged aquatic mosses.	1
Bombus crotchii	Crotch bumble bee	Insects	None	Candidate Endangered			
Desmoulinia californica dmrorgth	valley elderberry longhorn beetle	Insects	Threatened	None			
Hydroscopus simplex	simple hydroscopus diving beetle	Insects	None	None			
Peltigera gowardii	western waterfern lichen	Lichens	None	None	4.2 USFS_5-Sensitive	Biparian to Riparian On rocks in cold water creeks with little or no sediment or disturbance. Often associated with rich Bryophyte flora. 1055-2275 m.	2
Antrozous pallidus	pallid bat	Mammals	None	None	BLM_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_5-Sensitive WBWG_H-High Priority	Chaparral Deserts, g Roots in open, hanging from walls and ceilings. Roosting site limiting. Extremely sensitive to human disturbance. Wide variety of coniferous and mixed woodland habitat.	2
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	None	None	BLM_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_5-Sensitive WBWG_H-High Priority	Broadleaves Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting. Roosts in crevices in cliff faces. High buildings, trees and tunnels.	7
Erethizon dorsatum	North American porcupine	Mammals	None	None	IUCN_LC-Least Concern	Chaparral Known from the central Sierra Nevada counties. Chaparral Known only from a few basalt outcrops in Tuolumne C Occurs in limestone where fractures or loose talus allow deep, sub-surface sheltering.	2
Euderma maculatum	spotted bat	Mammals	None	None	BLM_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	Chaparral Riparian w Boreal area and thickets of young conifers.	4
Eumops perotis californicus	western mastiff bat	Mammals	None	None	BLM_5-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority	Aquatic A Occurs in limestone where fractures or loose talus allow deep, sub-surface sheltering.	1
Gulo gulo	California wolverine	Mammals	None	Threatened	CDFW_FF-Fully Protected IUCN_NT-Near Threatened USFS_5-Sensitive	Alpine A Occurs in limestone where fractures or loose talus allow deep, sub-surface sheltering.	1
Lasiurus cinereus	hoary bat	Mammals	None	None	IUCN_LC-Least Concern WBWG_M-Medium Priority	Broadleaves Thickets of deciduous trees in riparian	1
Lepus americanus taibensis	Sierra Nevada snowshoe hare	Mammals	None	None	CDFW_SSC-Species of Special Concern	Rioarian w Boreal area and thickets of young conifers.	1
Megascops falca	western screech owl	Mollusks	None	None		Aquatic A Occurs in limestone where fractures or loose talus allow	2
Mondamina circumcinctata	leaved sideband	Mollusks	None	None	BLM_5-Sensitive IUCN_VU-Vulnerable	Chaparral Known from the central Sierra Nevada counties.	6
Mondamina monnorum buttoni	Burton's Sierra sideband	Mollusks	None	None		Chaparral Known only from a few basalt outcrops in Tuolumne C	1
Mondamina monnorum hirsuta	hirsute Sierra sideband	Mollusks	None	None	BLM_5-Sensitive	Chaparral Known only from a few basalt outcrops in Tuolumne C	1
Mondamina tuolumneana	Tuolumne sideband	Mollusks	None	None	BLM_5-Sensitive	Chaparral Known only from a few basalt outcrops in Tuolumne C	1
Allium vibratum	three-bracted onion	Monocots	None	None	18.2 USFS_5-Sensitive	Limestone Endemic to sheltering.	2
Erythronium toluameense	Tuolumne fawn lily	Monocots	None	None	18.2	Chaparral Chacoanal Volcanic slopes and ridges. 880-2835 m.	18
Isis barneisii sub. columbiana	Tuolumne iris	Monocots	None	None	18.2	Chaparral Chacoanal Volcanic slopes and ridges. 880-2835 m.	33
Rhynchospora capitata	brownish beaked-rush	Monocots	None	None	28.2	Lower mor Often on clay soils; on cliffs and near	3
						Lower mor Often on clay soils; on cliffs and near	1
Erym marmorata	western pond turtle	Reptiles	None	None	BLM_5-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_5-Sensitive	Aquatic F A Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg laying.	1

Bryophyte and lichen removed from consideration because 4.2 CPR - 49 species total
Add in IPAC Monarch and delta smelt = 51 species total

APPENDIX C

CLASS III INVENTORY/PHASE I SURVEY REPORT

Archaeological Survey Report

**Results of a Phase I NHPA (CEQA+)
Cultural Resource Assessment
of
The Twain Harte Sewer Upgrade Project
Tuolumne County, California**

Prepared for: **Quad Knopf, Inc.**
5080 California Avenue, Suite 220
Bakersfield, CA 93309

Prepared by: **Paleo Solutions, Inc., Now Stantec**
911 S. Primrose Ave., Unit N
Monrovia, CA 91016

Michael Macko, M.A. – Principal Investigator and Author

PSI Report: CA21TuolomneQK01R

October, 2021



This page intentionally left blank.



TABLE OF CONTENTS

TABLE OF CONTENTS	i
Management summary	1
PURPOSE AND SCOPE	1
DATES OF INVESTIGATION	1
FINDINGS OF THE INVESTIGATION	1
FINDING OF EFFECT	1
RECOMMENDATIONS	1
1.0 PROJECT DESCRIPTION	4
1.1 AREA OF POTENTIAL EFFECTS	4
2.0 REGULATORY SETTING	5
2.1 FEDERAL	5
2.1.1 National Register of Historic Places	5
2.2 STATE	5
2.2.1 California Register of Historical Resources	5
2.2.2 Assembly Bill 52	6
2.2.3 Human Remains	6
3.0 CULTURAL BACKGROUND	7
3.1 PREHISTORIC BACKGROUND	7
3.2 ETHNOGRAPHIC BACKGROUND	7
3.3 HISTORIC BACKGROUND	7
3.2.1 Twain Harte	8
4.0 METHODS	9
4.1 ARCHAEOLOGICAL RESOURCES RECORDS SEARCH	9
4.2 ARCHAEOLOGICAL FIELD SURVEY	9
5.0 RESULTS	9
5.1 CULTURAL RESOURCES RECORDS SEARCH RESULTS	9
5.2 ARCHAEOLOGICAL SURVEY RESULTS	11
Section 1- Surrounding Twain Harte Lake	11
55-000130 (<i>Bald Rock Rancheria</i>)	11
Potential Effects	12
55-007116 (<i>Twain Harte Lake Dam</i>)	12
Potential Effects	12
55-007117 (<i>Twain Harte Lake</i>)	12
Potential Effects	12
Section 2- Golf Club Drive (South)	12
Potential Effects	12
Section 3- Marquis Drive	12
55-001422 (<i>Gables Inn Prehistoric Site</i>)	13
Potential Effects	13
55-000054 (<i>Sonora-Mono Road</i>)	13
Potential Effects	14
Section 4- Twain Harte Drive	14



Potential Effects	14
Section 5- Golf Club Drive (North)	14
Potential Effects	14
Section 6- Twain Harte Drive to Spruce Drive	14
Potential Effects	14
Section 7- Fuller to Manzanita Drive	14
Potential Effects	14
Section 8- South of Wildwood Drive	14
Section 9- East of Tuolumne Drive	15
Potential Effects	15
Section 10- Tiffeni Drive	15
Potential Effects	15
Section 11- East of Tuolumne Drive	15
Potential Effects	15
Section 12- East of Tuolumne Drive	16
Potential Effects	16
5.3 FINDING OF EFFECT	16
5.4 RECOMMENDATIONS AND MITIGATION MEASURES	16
6.0 REFERENCES	17

Appendix A: PROJECT PHOTOGRAPHS

Appendix B: PERSONNEL QUALIFICATIONS.

Appendix C: CONFIDENTIAL- CCIC RECORDS SEARCH MAP RESULTS



MANAGEMENT SUMMARY

PURPOSE AND SCOPE

This report is prepared for federal compliance with the National Historic Preservation Act (NHPA) of 1966, as amended. The project involves use of a funds from the California Regional Water Quality Control Board Twain Harte Community Services District Sewer Upgrade Project (Project). This document has been prepared to satisfy Section 106 of the National Historic Preservation Act (NHPA) and Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines with respect to the identification and preservation of cultural resources. Paleo Solutions was retained by Quad Knopf, Inc. to provide cultural resource services for the Project.

The Project Area of Potential Effects (APE) (Figures 1 and 2) is located in the Community of Twain Harte, California. Within the APE ground disturbance will occur in areas where existing sewer lines occur, so it is assumed that all areas where construction will occur have been disturbed previously. Trenching to replace or repair sewer lines will be roughly 2 to 3 feet wide and excavated up to 6-feet deep for the new sewer pipe placement.

DATES OF INVESTIGATION

The background research and preparation of this report were conducted by Michael E. Macko, MA, RPA, Principal Investigator at Paleo Solutions. The field survey was conducted by Karen Brehm, MS, Field Director for Paleo Solutions. Resumes are provided in (Appendix B). A cultural resources records search was requested on September 14, 2021 from the California Historical Resources Information System (CHRIS) facility at the Central California Information Center (CCIC) at California State University Stanislaus. The results were provided by the CCIC on September 24, 2021 and are appended here as Confidential Appendix C. Field surveys were conducted by Karen Brehm on September 29, 2021 and Michael Macko on November 18-19, 2021.

FINDINGS OF THE INVESTIGATION

The records on file at the CCIC indicate that six cultural resources are present in the APE. These resources include four historic resources and two prehistoric resources. Only two historic resources, Twain Harte Lake (P-55-007117) and Twain Harte Dam (P-55-007116), are recommended as potentially eligible for the NRHP under criteria A and B and CRHR under criteria 1 and 2 as significant contributors to the development of the Twain Harte Community. A prehistoric encampment (P-55-001422) is also recommended potentially eligible for inclusion in the NRHP under criterion D and the CRHR under criterion 4.

FINDING OF EFFECT

A determination of **No Adverse Effect** is recommended four cultural resources in the APE, including Twain Harte Dam (P-55-007116), Twain Harte Lake (P-55-007117), the Sonora-Mono Road (P-55-000054) and Bald Rock (P-55-000130) A determination of **Potential Adverse Effect** is recommended for two cultural resources within the APE. These include P-55-001422 (Prehistoric Encampment) and P-55-006544 (Wildwood Ditch).

RECOMMENDATIONS

Avoidance of adverse effects is recommended by incorporating non-destructive sewer repairs using appropriate lining techniques on existing lines in Sections 3A and 3B and Section 8C. Additional investigation is recommended for P-55-001422 should excavation be required in Sections 3A and 3B to repair/improve the existing sewer line.



Page Center: 119°3'39"W 37°28'8"N; Coordinate System: NAD 1983 2011 UTM Zone 10N

Scale: 1:145,000

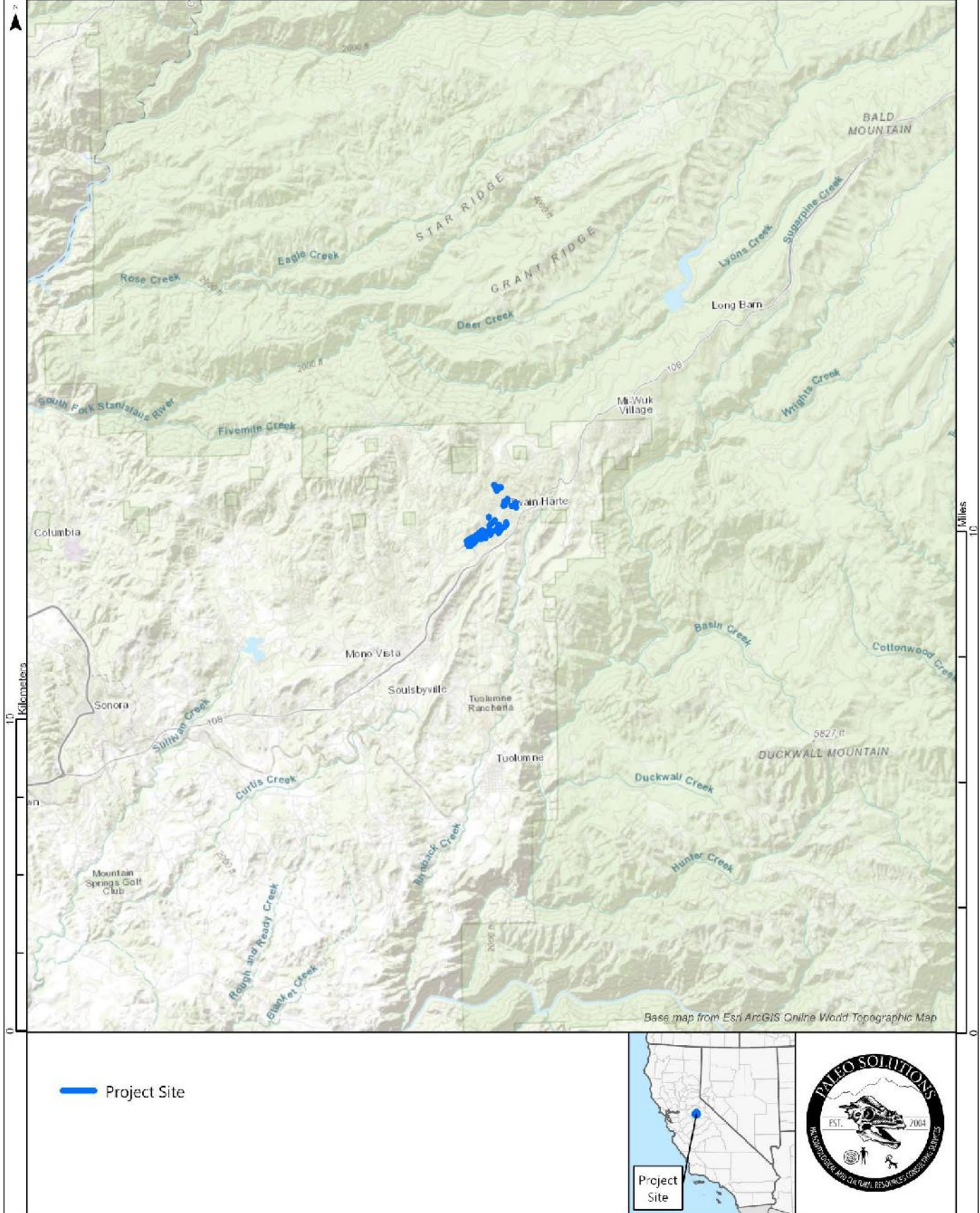


Figure 1- Project Location



Page Center: 120°14'5"W 38°2'11"N; Coordinate System: NAD 1983 2011 UTM Zone 10N

Scale: 1:10,000

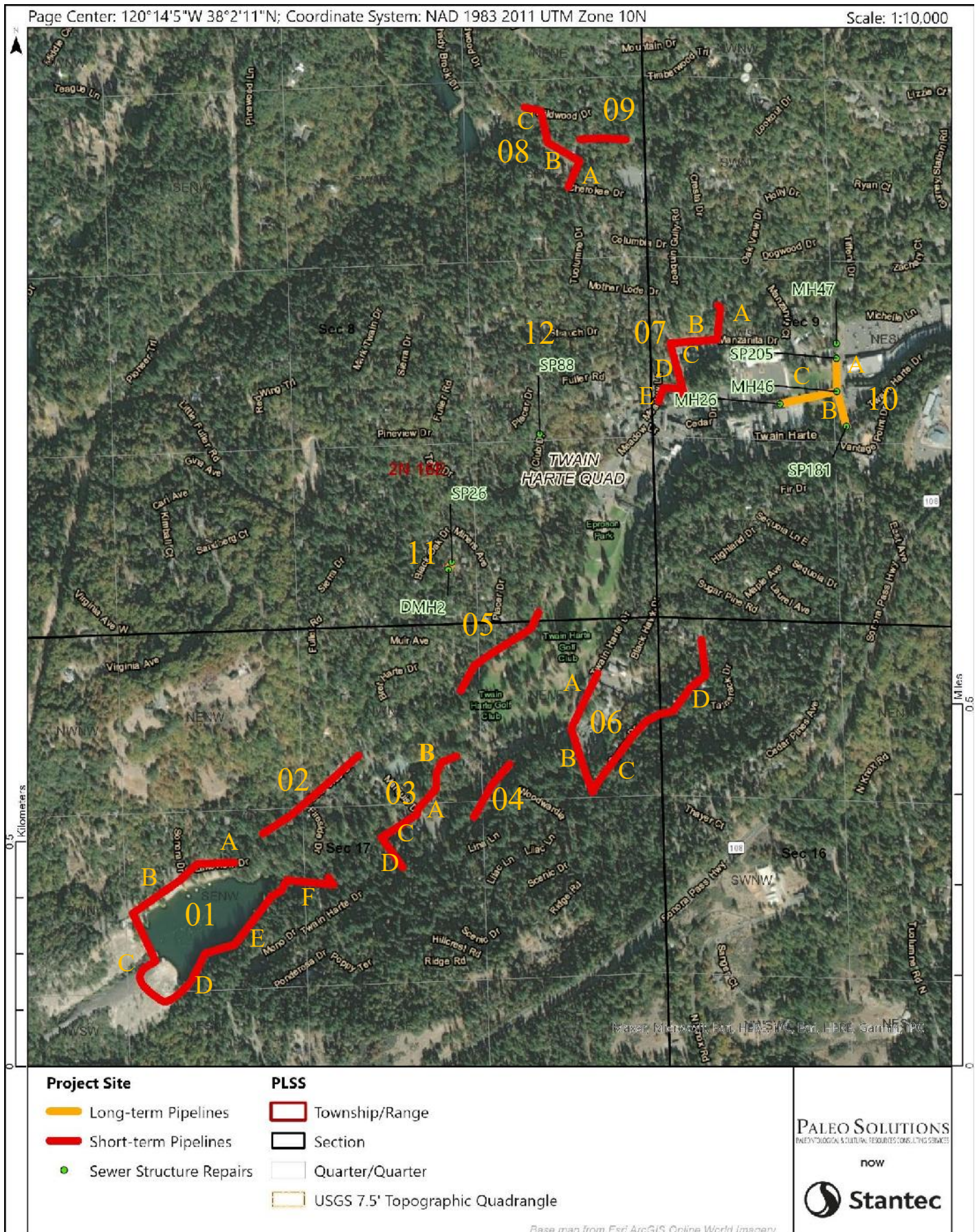


Figure 2- Twain Harte Sewer Improvement Sections (01-12) and Subsections (A-F).



1.0 PROJECT DESCRIPTION

1.1 AREA OF POTENTIAL EFFECTS

The Project is located within the boundaries of the Twain Harte Community Service District (District). The District serves the unincorporated community of Twain Harte, Tuolumne County, California.

The District provides water, parks, recreation, and fire protection services and operates and maintains the sewer collection system serving the community with an estimated population of 2,500, which includes a total of 1,607 equivalent single-family resident units and 1,436 physical connections (1,347 residential, 84 commercial and 5 public facilities). The proposed project consists of the replacement or repair of existing 6-inch to 10-inch diameter sewer pipelines within approximately 2.15 miles (11,430.5 feet) of existing rights-of-way (ROW). Most of the sewer lines to be repaired or replaced were installed in 1965. As of this reporting the designs are at 30% completion. The types of replacements and repair could include combinations of lining existing pipes, removing and replacing pipes, or abandoning existing lines in place and placing new lines within the same ROW. Table 1 lists these Project areas that are also identified on Figure 2:

Project Area (see Figure 2)	Location in Twain Harte	Length (feet)
1	Surrounding Twain Harte Lake	3,169.0
2	Golf Club Drive (South)	908.5
3	Marquis Drive	133.2
4	Twain Harte Drive	472.4
5	Golf Club Drive (North)	821.0
6	Twain Harte Drive to Spruce Drive	2,513.7
7	Fuller to Manzanita Drive	1,245.3
8	South of Wildwood Drive	835.9
9	East of Tuolumne Drive	334.2
10	Tiffeni Drive	937.2
11	Bret Harte Drive	60.1
12	Golf Club Drive	NA
		11,430.5

The District is seeking funding through the California's Clean Water State Revolving Fund (CWSRF) for the areas listed above. The CWSRF is a federally funded program through the Environmental Protection Agency. Implementation of the proposed project will allow the District to maintain, replace, and upgrade its collection system so that it can continue to comply with regulations, avoid sanitary sewer overflows into critical waterways, provide adequate capacity, and protect groundwater and surface water quality.

Construction is expected to take approximately five months, with construction anticipated to start in Quarter 2 of 2023 (depending on funding). The construction will require approximately 10 crew members. Construction equipment will include a backhoe, bobcat, trencher, generator, grader, dump truck, concrete truck, and three pickup trucks. Construction will include exposing the existing pipeline for removal and replacement.

The depth of ground excavation or trenching will be no more than six feet below grade.

Figure 2 shows an aerial photograph depicting the APE boundaries of the 12 Project sections listed in Table 1.



2.0 REGULATORY SETTING

This section contains a discussion of the applicable laws, ordinances, regulations, and standards that govern cultural resources and must be adhered to both prior to and during project implementation. Because the project is a federal action under the National Environmental Policy Act (NEPA) due to partial funding by the U.S. Environmental Protection Agency, cultural resources analysis under Section 106 of the National Historic Preservation Act (16 United States Code [USC] 470f) and its implementing regulations (36 Code of Federal Regulations [CFR] 800, Protection of Historic Properties) is required.

2.1 FEDERAL

Cultural resources are considered during federal undertakings chiefly under Section 106 of the NHPA of 1966 (as amended) through one of its implementing regulations (36 Code of Federal Regulations [CFR] 800, Protection of Historic Properties). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d) (6) (A) of the NHPA.

Section 106 of the NHPA (16 United States Code [USC] 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce the impacts to a less than significant level. Significant cultural resources (i.e., historic properties) are those that are listed in or are eligible for listing in the NRHP in accordance with the criteria stated at 36 CFR 60.4.

2.1.1 National Register of Historic Places

Eligibility for inclusion in the NRHP considers whether the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and,

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history.

2.2 STATE

2.2.1 California Register of Historical Resources

CEQA requires a lead agency to determine whether a project would have a significant effect on one or more historical resources. A "historical resource" is defined as a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (California Public Resources Code [PRC], Section 21084.1); a resource included in a local register of historical resources (14 California Code of Regulations [CCR], Section 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (14 CCR 15064.5[a][3]).

Section 5024.1 of PRC, Section 15064.5 of the State CEQA Guidelines (14 CCR), and Sections 21083.2 and 21084.1 of the CEQA Statutes were used as the basic guidelines for the cultural resources study. PRC 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purposes of the CRHR are to maintain listings of the State's historical resources and to indicate which



properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with criteria developed for listing in the National Register of Historic Places (NRHP) (per the criteria listed in the Code of Federal Regulations [CFR], Title 36, Section 60.4) and include those listed below.

A resource may be listed as an historical resource in the California Register if it meets any of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values or
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

According to Section 15064.5(a)(3)(A-D) of the State CEQA Guidelines (14 CCR), a resource is considered historically significant if it meets the criteria for listing in the NRHP (per the criteria listed at 36 CFR 60.4, previously discussed). Impacts that affect those characteristics of the resource that qualify it for the NRHP or that would adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered to have a significant effect on the environment. Impacts to cultural resources from the proposed project are thus considered significant if the project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource that contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

The purpose of a Phase I cultural resources investigation is to evaluate whether any cultural resources are present in or near the Project or can reasonably be expected to exist in subsurface contexts. If resources are discovered, management recommendations would be included that require evaluation of the resources for NRHP or CRHR eligibility.

2.2.2 Assembly Bill 52

This project is subject to Assembly Bill (AB) 52. AB52 is applicable to projects that have filed a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) or notice of a Mitigated Negative Declaration (MND) or Negative Declaration (ND) on or after July 1, 2015. AB 52 requires lead agencies to initiate consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project and have requested such consultation prior to determining the type of CEQA documentation is applicable to the project (i.e, EIR, MND, ND). Significant impacts to Tribal cultural resources are considered significant impacts to the environment. AB52 allows Tribes 30 days after receiving notification to request consultation.

2.2.3 Human Remains

Section 7050.5 of the California Health and Safety Code provides for the disposition of accidentally discovered human remains. Section 7050.5 states that, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

Section 5097.98 of the PRC states that, if remains are determined by the County Coroner to be of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours which, in turn, must identify the person or persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.



3.0 CULTURAL BACKGROUND

The Project area's location in the foothills on the western slope of the Sierra Nevada Mountains is associated with many thousands of years of native occupation and use as well as being near the center of American Period mining and settlement. Known cultural resources identified in and near the Project are associated with these cultural contexts.

3.1 PREHISTORIC BACKGROUND

The prehistory of the Project area is summarized in the comprehensive overview of the Stanislaus National Forest by Miksic et al. (1999). Prehistoric populations in the Sierra Nevada Foothills likely made seasonal incursions into the region as early as 10,000 years ago, but archaeological evidence is sorely lacking. More permanent settlements are known between 3,000 and 4,000 years ago based on the voluminous research of Moratto (1984) and Moratto et al. (1988). Among the evidence of early human occupation in the Stanislaus River Basin are village sites, material procurement and food processing (bedrock milling) and ritual sites exhibiting petroglyphs.

3.2 ETHNOGRAPHIC BACKGROUND

Contemporary archaeological studies in California are profoundly influenced by ethnological research conducted in the late 19th and early 20th centuries by the Anthropologists associated with the University of California Berkeley, particularly Franz Boas, Edward Gifford, and Alfred Kroeber. Ethnographic studies provide the interpretive models to address archaeological remains.

The Project is located a few miles south of the Stanislaus River Canyon, the latter being a rough border between the Central and Northern Sierra Me-Wuk. In 1840, just prior to the start of the gold rush, the Central Sierra Me-Wuk Indians were the primary inhabitants of the Stanislaus River Basin. The Northern, Central, and Southern Sierra Me-wuk languages, their material, and their cultural practices were closely related. Linguistic data suggest that the Me-Wuk languages began separating into dialects about 2,000 years ago. These data suggest that the ancestral Me-wuk have been present in central California for several thousand years (Levy 1978:398).

Twain Harte was within Central Sierra Miwok territory. Several locations are known where the Me-Wuk had settled, the best known and commemorated location being at their 19th century village of Bald Rock Rancheria, along Twain Harte Creek. According to ethnographer C.H. Merriam (1967) ten Me-Wuk families were living at the Rancheria in late summer 1903. Structures noted there include roundhouse, several traditional Indian houses and a half-dozen or more ordinary rough board houses. William Fuller was identified as the leader of the small group. William was born to Alfred Fuller, a native of Ohio, and his Me-Wuk wife Jenita. William became the leader of the area Me-Wuk in 1888 at the age of 15. By 1933 William and many other Me-Wuk relocated to the Tuolumne Rancheria near Tuolumne.

3.3 HISTORIC BACKGROUND

The surge of American settlers and miners beginning in the 1840s brought tremendous changes to the landscape. The mining operations that developed required numerous support services and facilities, and the logging, farming, ranching and irrigation industries grew rapidly along with other commercial and residential development. Water companies diverted water for use by miners. Rail lines and highways coursed into the Sierras to improve transportation and communication. In the 1890's utility companies began generating hydroelectric power on the Stanislaus River, much of which they sent outside the area to places such as Twain Harte. The early 1900's saw development of several irrigation districts to serve local farmers and the many orchards being planted to apples and pears. In 1926, the Oakdale and South San Joaquin Irrigation Districts built the Melones Dam and Powerplant. The peak of construction by irrigation districts came in the 1950's with construction of the Tri-Dam Project. That consisting of the Donnell and Beardsley Dams on the upper Stanislaus River, Tulloch Dam on the lower Stanislaus River, and the enlargement of Goodwin Dam, also on the lower river.



3.2.1 Twain Harte

The history of Twain Harte begins with the trans-sierran route across the 9,624-foot Sonora Pass. Beginning as a native trail, which some assert was used by Jedediah Smith in 1827 during his exploits in the Sierras, the route developed rather quickly into a wagon road. The earliest emigrant crossing was by the Bidwell-Bartleson party in late 1841 followed 10 years later by the numerous miners and settlers heading west.

The Sonora-Mono Road was surveyed to Bridgeport, Mono County in 1860, the road was completed in 1864, when a six-horse team took three weeks for the round trip between Sonora and Bridgeport. A monument to the toll house is located on Twain Harte Drive (See Appendix A, Photo 33) with the following inscription:

Located 100 feet west of this marker, the toll road started in the mid 1860's and continued until the state took it over in 1901. The road was built because of the need for a route between Sonora and Bodie. Under state franchise, tolls did not exceed 3 dollars for a horse or mule & rider, a stage 6 dollars, a buggy 5 dollars, cows 50 cents & sheep 25. The adjacent spring was used for watering stock. Alfred Fuller, father of Chief William Fuller, was toll collector. Many streets and roads were named after the Fuller family. A barn housing the toll collector's office, later became the first Waltz home which burned in 1980 & since rebuilt on present site.

Several early settlers of Twain include the 1854 arrival of the Calvin Williams family. The Williams family acquired land in the valley for farming and ranching. Apples and pears were main crops, and they ran a small number of cattle. Calvin Williams was the first toll taker, followed by Alfred Fuller.

Other early settlers arriving in the 1860s included William Calder, Austin Abbott, the Jasper brothers, and the Hiatts, who all pursued farming, ranching, timber and milling. The pursuit of gold did not occur in Twain Harte to any appreciable degree, and what little placer and hydraulic mining that did occur fizzled out quickly. The primary concerns of the early settlers were those related to supplying the bustling mining areas to the east and west of the valley with lumber and food. As the mining operations required substantial water for hydraulic mining and sluicing, so did the orchards and farms in the valley. Numerous ditches were constructed in the 1850s to accommodate this need, the Soulsbyville Ditch being a prominent local conduit through Twain Harte.

The fruit business became a large economic focus alongside lumber in the late 19th century, and with its growth came greater needs for shipping. The Sugar Pine Railroad arrived in the early 1900s and provided the necessary transportation of goods to market and mills.

Williams continued his lumber and other interests until selling his ranch to Alonzo and Keturah Wood in 1921. The original intent was for Alonzo to continue the timber business but sinking market conditions for lumber forced them to reconsider. The Woods alternate plan was to establish a summer resort community in the valley with recreational grounds including a lake. Mrs. Wood named the new community Twain Harte after her favorite authors, Mark Twain and Bret Harte, and the name Twain Harte Lodge was registered for the community with the State of California in 1924. The Woods' plans were soon dashed due to financial problems, and in 1926 they sold their holdings to Albert L. Nevins and Dr. R. E. Turner, successful developers with several projects under their belt including the coastal community of Pismo Beach. Nevins and Turner proceeded with a widespread marketing effort and initiated plans for a dam that would realize the Woods' original plan for the lake. Edward M. Marquis provided the funding for the dam, and it was dedicated on July 4, 1929. Marquis became the owner after of the holdings after default by Nevins and Turner.

The Twain Harte Improvement Association was formed in the late 1930s. The latter group bought Twain Harte Lake and dam from Marquis for \$10 in 1939. In 1943 Nevins and Eproson purchased the Marquis holdings, which included the subdivision, a hotel, service station, and some outbuildings. By this time the identity of the Twain Harte development as a recreational colony of seasonal cabins had been established and took hold as the main contextual character of community.

In the mid-1930s community services were provided by Twain Harte Fire Protection District, Twain Harte Recreation and Park District, and the Tuolumne County Water District No. 1. The latter installed the current sewer system, the subject of this report, in 1965. The Twain Harte Community Services District was formed



in 1996 to provide water, sewer, park and recreation, fire protection and hydroelectric services to the Twain Harte community.

4.0 METHODS

4.1 ARCHAEOLOGICAL RESOURCES RECORDS SEARCH

A records search and literature review of documents on file at the Central California Information Center (CCIC) at California State University Stanislaus was requested on August 14, 2021 (Appendix C). It was reviewed by Paleo Solutions prior to the field survey. The review also consisted of an examination of the U.S. Geological Survey's (USGS) 7.5-minute Twain Harte Quadrangle to determine if any sites are recorded on or if any cultural resources studies have been conducted previously within the Project or within 500-feet of the Project. Additional data sources consulted at the CCIC included archaeological records, Archaeological Determinations of Eligibility (DOE), historic maps, and the Historic Property Data File (HPDF) maintained by the Office of Historic Preservation (OHP). The HPDF contains listings for the CRHR and/or the NRHP, California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI).

Other records of importance include historic aerial and map data at a number of repositories and online sources.

4.2 ARCHAEOLOGICAL FIELD SURVEY

A pedestrian archaeological survey of the Project site and APE was conducted on September 29, 2021, by Paleo Solutions Field Director Karen Brehm, MS. A follow up recordation and documentation of resources was conducted by Principal Investigator Michael E. Macko, MA, RPA on November 18-19, 2021. Much of the APE is within or adjacent to improved roadways. Though the entire APE was examined on foot, most all ground surfaces were obscured completely by various covers from pavement to vegetation.

The survey involved careful visual inspection of exposed ground surfaces within the APE where visible. Documentation of the survey included photographic details of all Project sections (Figure 2) and compiling location details and notes using the ESRI Collector data collection app.

5.0 RESULTS

5.1 CULTURAL RESOURCES RECORDS SEARCH RESULTS

The record search at the CCIC showed that 19 cultural resource studies have been conducted within 500-feet of the Project (Table 2). None of these studies provide CRHR or NRHP evaluations of resources within the APE.

Table 2- Historic Resource Reports Conducted for Projects Within Properties Identified Within 500 feet of the APE

Report No.	Author(s)	Date	Title	Company
TO-01059	Davis-King, Shelly	1989	Cultural Resources Investigations for the Twain Harte Improvement Association	Infotec Research Incorporated for Twain Harte Improvement Association
TO-01060	Davis-King, Shelly	1989	Cultural Resources Investigations for the Twain Harte Improvement Association Project.	Shelly Davis-King
TO-01297	Peak & Associates, Inc.	1987	Cultural Resource Assessment of the Tuolumne County Ditch Improvement Project, California.	Peak and Associates, Inc.; for Engineering-Science, Inc., Berkeley, CA
TO-01321	Van Bueren, T.	1986	Letter Report: Lorick Enterprises.	Infotec Research Inc.
TO-02268	Davis-King, S. and J. Marvin	1994	Contextual History of Tuolumne County.	Davis-King & Associates (and) Foothill Resources, Ltd.; prepared for The County of Tuolumne
TO-02681	Davis-King, Shelly and Ozbirn, R.	1995	Sugar Pine Railroad: Archaeological and Global Positioning Survey, Ralph Station to Lyons Dam.	Davis-King & Associates (and) Golden State Surveying Engineering; for Tuolumne Co.Planning Dept.
TO-02757	Davis-King, S. and C. De Ferrari	1990	Archaeological and Historical Investigation for the Twain Harte Elementary School Project.	Davis-King & Associates



Table 2- Historic Resource Reports Conducted for Projects Within Properties Identified Within 500 feet of the APE

Report No.	Author(s)	Date	Title	Company
TO-02917	Turner, Kelly and Daniel R. Elliot	1995	Evaluation of Significance for the Sonora-Mono Road, CA-TUO-1629H (FS 05-16-53-450); Summit Ranger District, Stanislaus National Forest.	Stanislaus National Forest
TO-05425	Napoli, Donald S.	2000	Twain Harte Townsite Cultural Resource Survey.	Donald Napoli for Community Development Department, County of Tuolumne
TO-05710	Francis, Charla Meacham	2005	Cultural Resources Assessment of the Twain Harte Community Services District Trail Project.	Francis Heritage Services
TO-06050	Pitsenberger, Tina and Trish Fernandez	2004	Cultural Resources Inventory and Evaluation, Twain Harte Forest Fire Station, Tuolumne County, California	Pacific Legacy, Inc.
TO-06150	Francis, Charla Meacham	2006	Addendum No. 1, Twain Harte Community Services District Trail Project	Francis Heritage Services
TO-07521	Foothill Resources, Ltd. and Francis Heritage, LLC	2012	Tuolumne Utilities District Ditch Sustainability Project Historic Resource Evaluation Report.	Foothill Resources, Ltd. (and) Francis Heritage, LLC, for Stantec Consulting Services, and for TUD
TO-07521	Francis, C. M.	2020	Cultural Resources Investigation for Tuolumne Utilities District Ditch Meters Small-Scale Water Efficiency Project, Tuolumne County, California; Project Tracking Number 19-CCAO-256.001, WaterSMART Grants	Francis Heritage for Tuolumne Utilities District
TO-07619	Frese, Adam (RPF)	2012	An Archaeological Survey Report for the Twain Harte Lake CFIP Tuolumne County, California	CAL FIRE
TO-07751	Grijalva, Daniel	2011	Field Office Report of Cultural Resources Ground Survey Findings. Contract No. 749104113NF. NRCS-USDA.	NRCS
TO-08337	Francis, Charla Meacham	2015	Twain Harte Community Services District Bald Rock Project	Francis Heritage, LLC
TO-08776	Baker, Scott	2002	Appendix: Archaeological Survey Report for the Final Report: Twain Harte Reconnaissance Survey Phase III	Consultant for Tuolumne County Community Development Department and Guerra and McBane LLC
TO-08789	Francis, Charla Meacham	2018	Memo from Francis Heritage to Augustine Planning Associates, Inc., RE: Upper Shadybrook Emergency Draft, Twain Harte Community Services District Record Search, Native American Consultation and Field Review	Francis Heritage, LLC

Table 3- Cultural Resources Previously Identified within 500 Feet of the APE

Primary No.	Trinomial	Resource Name	Age	Notes
P-55-000006	CA-TUO-001456H	Sugar Pine Railroad, FS 05-16-53-0281	Historic	
P-55-000054*	CA-TUO-001629H	Sonora-Mono Road; Sonora-Mono Toll Road; CHL 422	Historic	Physically overlaps or intersects 55-002502
P-55-000130*		Bald Rock Rancheria, TCH-69	Prehistoric, Historic	No precise location of features or deposits that would indicate a rancheria
P-55-001422*	CA-TUO-000399	4-TUO-S399	Prehistoric, Historic	Large Me-Wuk encampment with several milling features (40+ mortar locations. A buried hearth and artifacts of obsidian and jasper noted. Likely a major settlement.
P-55-005959		Soulsbyville Ditch	Historic	Is an element of district 55-008270
P-55-006544*		Wildwood Ditch	Historic	
P-55-007116*		Twain Harte Dam	Historic	
P-55-007117*		Twain Harte Lake	Historic	
P-55-007404		Twain Harte Forest Fire Station; Twain Harte CDF Station	Historic	



P-55-008270	Tuo Co. Water Co Ditch and Flume System; Tuolumne Utilities District Ditch and Flume System	Historic	Is a district with elements 55-000980; 55-001011; 55-003161; 55-003505; 55-003751; 55-003845; 55-005959; 55-006362; 55-006364; 55-006538; 55-006539; 55-008208; 55-008221
P-55-008307	Twain Harte Lake Road Trace	Historic	

*In APE

5.2 ARCHAEOLOGICAL SURVEY RESULTS

The following resource descriptions have been supplemented with excerpts from the CA DPR 523 forms provided by the CCIC Records Search. The results are presented for each survey section (see Figure 2).

Section 1- Surrounding Twain Harte Lake

See Appendix A, Photos 1-15.

Section 1 is the longest of the 12 project sections examined. The sewer easement includes a 10-inch pipeline that follows the perimeter of Twain Harte Lake and is exposed where it is suspended near the top of the downstream side of Twain Harte Dam. Three cultural resource sites are within the Section 1 APE

55-000130 (Bald Rock Rancheria)

This resource has been identified as the possible former Bald Rock Rancheria about which little is known. The records search from CCIC identifies an arbitrary area with a 0.35-mile radius around Twain Harte Lake as the suspected location of the Bald Rock Rancheria, or its being somewhere within the designated 0.4 square mile area (Appendix C). No other details are recorded.

First documented in 1903 by Merriam (1967), the rancheria may have been the extended household of Chief William Fuller. At least one roundhouse, three burial areas, a melon patch, and houses had been identified by Me-Wuk who either lived at or were familiar with the site area.

The precise location of the "rancheria" is not certain. [The site record] mentions the "real" Bald Rock settlement as being located in Crystal Falls, slightly northwest beneath the large expanse of granite [there]; other suggestions are that the portion of the Calder Ranch purchased by William Fuller was actually Bald Rock Rancheria.

According to Dorothy Stanley, Fuller's granddaughter by marriage, Fuller lost the ranch in 1928 but lived in the house for another five years or so until moving to the Tuolumne Rancheria in 1933. Mrs. Stanley also suggested that other Me-Wuk left Bald Rock because it cost money to live there, where the Tuolumne Rancheria didn't cost money. She notes that Fuller grew a number of fruits and vegetables on his ranch. Magwood (1977) mentions that Fuller grew potatoes near the spot where his father had collected tolls on the Mono Highway.

According to Merriam (1967 :334) about ten Me-Wuk families were living at Bald Rock Rancheria in August of 1903, where there was a roundhouse, several Indian houses, and "a half a dozen or more ordinary rough board houses." All of the Me-Wuk were gone from Bald Rock Rancheria by 1933. While ceremonial gatherings were held on Bald Rock (up by the present dam) as late as 1898 (Hodge 1961), Mrs. Stanley notes that there was a round house across the road from Chief Fuller's ranch house. Presumably this is where many ceremonial gatherings were held during the years from 1900-1933, and it may be the round house observed by Merriam.

The current survey did not find any indications of a settlement around the periphery of Twain Harte Lake. Twelve bedrock mortars were recorded within a small area on the downstream side of the dam, but over 20 meters from the APE and on granite bedrock. The current APE in the vicinity of P-55-000130 shows no signs of surface cultural resources.



Potential Effects

A determination of no potential adverse effects is recommended for project construction at P-55-000130 in Section 1.

55-007116 (Twain Harte Lake Dam)

This low concrete buttress dam extends across the bed of Twain Harte Creek to form Twain Harte Lake. The dam has two sections. The larger part stretches south southeast about 240 feet from the north shore to Bald Rock. The smaller part continues from the rock east southeast for about another 60 feet to the south shore. The lake obscures the structure's upstream face. The downstream facade, which rises about 20 from the creek bed, contains an evenly spaced set of openings separated by concrete posts. A walkway atop the dam leads from the beach to Bald Rock on the southeast. The dam was altered in 1965 with the addition of a 10-inch sewer line near the top of the downstream face (Appendix A, Photo 8).

The creation of Twain Harte Dam, and the ensuing lake behind it, is a primary contributing factor to the historical significance of Twain Harte as an early recreational community. As such the dam is potentially eligible under criteria a and b of the NRHP and criteria 1 and 2 of the CRHR. The suspension of the 10-inch sewer line on the face of the dam in 1965 altered the dam's visual appearance and its integrity at the time, but it has been a part of the resource for the last 55 years. Replacing the sewer line in place would have no adverse effect on the physical or visual integrity of the resource.

Potential Effects

A determination of no potential adverse effects is recommended for project construction at P-55-007116 in Section 1.

55-007117 (Twain Harte Lake)

This artificial lake has a roughly triangular shape, with its base formed primarily by the Twain Harte Dam. The lake measures approximately 1,075 feet from the base on the southwest to its apex on the northeast. Its maximum breadth is about 600 feet. At its deepest point the lake is 35 to 40 feet deep. A sandy beach forms part of the northwest shore. Benches line the beach. A cyclone fence borders much of the lake. The lake is identified as a focus of the recreational character of Twain Harte since the lake's creation in 1929. As such the lake, like the dam discussed above, is potentially eligible under criteria a and b of the NRHP and criteria 1 and 2 of the CRHR. Replacing the sewer line in place would have no adverse effect on the physical or visual integrity of the resource.

Potential Effects

A determination of no potential adverse effects is recommended for project construction at P-55-007117 in Section 1.

Section 2- Golf Club Drive (South)

See Appendix A, Photos 16-17.

The western reach of Section 2 extends into the arbitrary boundary of P-55-000130 discussed above. No indications of cultural resources were evident during the survey. The entire alignment in this section is paved asphalt concrete.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 2.

Section 3- Marquis Drive

See Appendix A, Photos 17-28.



55-001422 (Gables Inn Prehistoric Site)

This poorly known prehistoric resource has been recorded as a large bedrock mortar/milling complex with at least 35 mortar holes of various sizes between 1 and 7-inches deep being noted in 1968. The site has not been recorded or updated since 1968. The site was considered part of a much larger resource that included abundant obsidian and jasper artifacts, ashy soils, and at least one buried hearth. The 1968 site record provides little information on extent other than the site is estimated at ¾-acre but "...part of a larger encampment of Mi-Wuk Indians...[covering] about one sq. mile." This large size could be taken to indicate that the recorder in 1968 considered the entire valley a "large encampment."

The current survey identified the bedrock milling features as previously recorded (Appendix A, photos 20-22). The survey documented the milling features as greater than 20 meters from the APE. The property owner attested to finding various artifacts on the property, including an old horseshoe stamped Pony Express, but no corroboration or inspection was allowed.

The size of the bedrock milling feature is suggestive of those associated with large settlements. The denial of permissions to investigate the property since 1968 precludes a sufficient evaluation. With the absence of such large features elsewhere in the valley, it is plausible to assume this resource was a central habitation of the Me-Wuk in prehistoric times if not part of the Bald Rock Rancheria in historic times. The site is located at the mid-point between Bald Rock and the Sonora-Mono Toll House operated by William Fuller.

The field survey did not produce any artifacts or other remains in association with the milling features. Nor were soils visible due to dense vegetation cover and a combination of oak and redwood/cedar leaf duff. No soil probing was conducted to ascertain the presence, types, and quantities of artifacts or other remains that may be present in the sewer line easement.

Potential Effects

The soils in the area of Section 3B occur adjacent to a substantial bedrock milling feature and where obsidian and jasper artifacts had been identified previously. No professional excavations have ever occurred here, and the presence of such a large bedrock milling feature strongly suggests substantial habitation nearby. The resource may be potentially eligible under criterion d of the NRHP and criterion 4 of the CRHR. Excavations involving trenching for pipeline replacement could adversely impact this resource. *A determination of potential adverse effects is recommended for project construction at P-55-001422 in Section 3B.*

55-000054 (Sonora-Mono Road)

The Sonora-Mono Road was officially opened in October of 1864, with contractor J. D. Patterson making the trip by wagon from Strawberry Flat to Aurora, Nevada between October 19 and 21. It was completed as a joint project between San Joaquin, Stanislaus, and Tuolumne Counties, who granted rights to the Sonora-Mono Toll Road Company. This was a one-track road with turnouts; it was widened out the next year. Segments within the Project are found in or near Project Sections 3, 4, and 6 (Figure 2). The segment(s) in this area parallel with Twain Harte Drive which may overlap the old road in parts. In 1968, this segment was relinquished as state highway, being replaced by the new highway 108 located to the south. An earlier alignment of the historic road may be represented by Mono Drive, which appears to have the same characteristics as other segments recorded within the Stanislaus National Forest. The Sonora-Mono Road was integral to the settlement of the Central Sierras in general and Twain Harte in particular.

The records search plot of the old road in Section 3D places it approximately 80-90 feet north of Twain Harte Drive. Field survey did not identify any trace of a road grade where it is plotted. (Appendix A, Photo 27).



Potential Effects

A determination of no potential adverse effects is recommended for project construction at P-55-000054 in Section 3.

Section 4- Twain Harte Drive

See Appendix A, Photo 29.

This short section follows Twain Harte Drive and the assumed alignment of the Sonora-Mono Road (P-55-000054). The records search results provide a plot of the Sonora-Mono Road route that parallels the north edge of Twain Harte Drive, and in Section 4 the old road appears to be within 10-20 feet of the road shoulder (Appendix C). The sewer easement is located along the south shoulder of Twain Harte Drive. Twain Harte Drive has been improved and paved numerous times since the first few decades of the 20th century. The old dirt road from the 1860s is nowhere in evidence.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 4.

Section 5- Golf Club Drive (North)

See Appendix A, Photos 30-31.

No previously recorded resources occur within this section, and no cultural resources were noted during survey.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 5.

Section 6- Twain Harte Drive to Spruce Drive

See Appendix A, Photos 32-35.

No previously recorded resources occur within this section, and no cultural resources were noted during survey. The Sonora-Mono Road (P-55-000054) is recorded adjacent to section 6B but beyond the 20-foot buffer.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 6.

Section 7- Fuller to Manzanita Drive

See Appendix A, Photos 36-40.

No previously recorded resources occur within this section, and no cultural resources were noted during survey.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 7.

Section 8- South of Wildwood Drive

See Appendix A, Photos 41-47.

55-006544 (Wildwood Ditch)



Integral to the successful mining operations around Twain Harte was the redirection of water through a series of ditches and flumes. Water was redirected from the Stanislaus and Tuolumne Rivers to the valley and mines throughout the area. The Wildwood Ditch, named for its proximity to Wildwood Drive, is an offshoot of the larger water diversion structures mapped by USGS in the 20th century. The site record states:

This resource is an earthen ditch segment contouring the slope of hill parallel to Wildwood Drive. It is well formed with a six-foot berm on its downhill side. Most of ditch is choked with vegetation and only 25 feet length is visible. It is located on private land, so it was not investigated further, but it looks to continue to the southeast. It could be associated with early mining or ranching in Twain Harte.

The ditch was relocated as mapped, and it was confirmed that it indeed continued to the southeast. An extension of 65 feet was identified, and the sewer easement runs within 2 meters of the ditch. There is a section between the new extension identified and the previously recorded section that shows severe erosion from landslide. It is not known whether this erosion occurred before or after the original recording in 2002.

Potential Effects

A determination of potential adverse effects is recommended for project construction at P-55-006544 in Section 8.

Section 9- East of Tuolumne Drive

See Appendix A, Photo 48.

No previously recorded resources occur within this section, and no cultural resources were noted during survey.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 9.

Section 10- Tiffeni Drive

See Appendix A, Photos 49-53.

The sewer alignment in this section crosses Twain Harte Drive in an area where the Sonora-Mono Road (P-55-00054) has been previously recorded. Photo 51 in Appendix A shows the sewer alignment crosses beneath the recorded location of the resource within this section, but the original Sonora-Mono Road surface is not visible in this section. No cultural resources were noted during survey in section 10.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 10.

Section 11- East of Tuolumne Drive

See Appendix A, Photo 54.

No previously recorded resources occur within this section, and no cultural resources were noted during survey.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 11.



Section 12- East of Tuolumne Drive

See Appendix A, Photo 55.

No previously recorded resources occur within this section, and no cultural resources were noted during survey.

Potential Effects

A determination of no potential adverse effects is recommended for project construction in Section 12.

5.3 FINDING OF EFFECT

Six cultural resources, two prehistoric and four historic, were identified in the project APE. The historic resources include:

- P-55-007116 (Twain Harte Dam)
- P-55-007117 (Twain Harte Lake)
- P-55-000054 (The Sonora-Mono Road)
- P-55-006544 (Wildwood Ditch)

The project will have no adverse effects on Twain Harte Lake, Twain Harte Dam, or the Sonora-Mono Road. The Wildwood Ditch is very close to intersecting the sewer line easement and may suffer adverse impacts from equipment transport and excavation.

The prehistoric resources include:

- P-55-000130 (Bald Rock)
- P-55-001422 (Prehistoric Encampment)

The project will have no adverse effects on Bald Rock. There are no indications of prehistoric settlement or use within the APE in Section 1.

The Section 3 sewer line easement is within the recorded boundary of P-55-001422 east of Marquis Drive. No documented features at the site are within the APE, but soils in Sections 3A and 3B may contain artifacts and buried features which may suffer adverse effects from equipment transport and excavation.

5.4 RECOMMENDATIONS AND MITIGATION MEASURES

Avoidance is the preferred measure for mitigating adverse effects to cultural resources. With both P-55-001422 (Sections 3A and 3B) and P-55-006544 (Section 8C), avoidance would be achieved by lining the existing pipes in the corresponding sections. If excavation is required to replace existing pipe, then the following mitigation measures are recommended:

P-55-006544 (Wildwood Ditch): This resource easily visible and is roughly parallel to the existing sewer line in section 8C. At its closest point the ditch is within 5 feet of the easement. This should be sufficient distance to avoid impacts from construction. It is recommended that the ditch be substantially flagged as an Environmentally Sensitive Area (ESA) prior to construction and carefully monitored to ensure avoidance.

P-55-001422 (Prehistoric Encampment):

Prior to any excavation in Sections 3A and 3B, a Phase II test excavation program should be implemented to determine whether significant artifacts or features occur in the proposed locations for sewer line improvements. Significant features would include, but not limited to, house and round house floors and other structural remains, human burials, cooking hearths, other stone features, storage pits, food processing areas and tool manufacturing loci.



6.0 REFERENCES

Kroeber, Alfred

- 1925 Handbook of the Indians of California. *Bureau of American Ethnology Bulletin 78*. Washington, D.C.

Magwood, James T.

- 1977 Saga of Twain Harte. *Chispa* 17:569-576. Tuolumne County Historical Society. Sonora, California.

Merriam, C. Hart

- 1967 Ethnographic notes on California Indian Tribes, III, Ethnological Notes on Central California Indian Tribes. Reports of the University of California Archaeological Survey 68 (3).

Miksicek, Charles, Kristina Roper, Dwight Simons, Jennifer Farquhar, Karen Loeffler, Jeffrey Hall, Thomas L. Jackson and Robert J. Jackson

- 1996 Overview of the Prehistory of the Stanislaus National Forest. BioSystems Analysis, Inc. Santa Cruz, California.

Moratto, M.J.

- 1984 California Archaeology. Academic Press, Orlando and London.

Moratto, M. J. and Roberta S. Greenwood

- 1982 New Melones Archeological Project, California: Research Background. Bureau of Reclamation and National Park Service, U.S. Department of Interior.

Moratto, M.J., Judith D. Tordoff, and Laurence H. Shoup

- 1988 *Culture Change in the Central Sierra Nevada 8000 B.C.-A.D. 1950*. Final Report of the New Melones Archeological Project 9. Submitted to the National Park Service, Washington, D.C.

Napoli, Donald S.

- 2000 Final Report: Twain Harte Townsite Cultural Resource Survey. Community Development Department, County of Tuolumne.

Twain Harte Design Review/Planning Advisory Committee

- 2007 Design Review/Planning Advisory Committee Guidelines. Adopted by the Tuolumne County Board of Supervisors April 18, 2006, Amended March 20, 2007

TO REVIEW THE APPENDICES, GO TO:

<https://www.twainhartecsd.com/files/fa100b4f9/Twain+Harte+Sewer+Replacement+Draft+IS-MND+final-OCR.pdf>



TUOLUMNE UTILITIES DISTRICT

18885 Nugget Blvd. | Sonora, CA 95370
(209) 532-5536 | www.tudwater.com

3/16/2022

Quad Knopf, Inc
Atten: Jaymie Brauer
5080 California Avenue, Ste 220
Bakersfield CA 93309

RE: LETTER OF SUPPORT TWAIN HARTE PROJECT PIPELINE IMPROVEMENT PROJECT

Greetings Mr. Brauer:

The Tuolumne Utilities District (District) offers this letter of support for the Twain Harte Pipeline Improvement Project. The District's Twain Harte Wastewater Treatment Facility (THWWTF) receives flows from Twain Harte Community Services District (THCSD) collection system. Flows from the THWWTF are then conveyed to the District's Regional WWTF located in the City of Sonora and then to the District's Reclamation System. The proposed Pipeline Improvement Project would reduce the amount of inflow and infiltration the District receives from THCSDs collection system and thereby reducing impacts to the District's THWWTF and downstream facilities.

Additionally, a stated purpose of the project is to protect surface and ground water quality. Twain Harte lake feeds into Twain Harte Creek which in turn feeds into the District's Phoenix Lake Reservoir. This reservoir is the primary water storage for the District's Sonora Water Treatment. The proposed Pipeline Improvement Project would result in improvement to the watershed above the Phoenix Lake Reservoir and thereby result in safer raw water supply for the Community of Sonora.

If you have any questions, please feel free to contact me.

Regards,

Antonio J. Ramirez
Engineering Services Technician
(209) 532-5536 Ext. 511

California Department of Transportation

OFFICE OF THE DISTRICT 10 PLANNING
P.O. BOX 2048 | STOCKTON, CA 95201
(209) 948-7325 | FAX (209) 948-7164 TTY 711
www.dot.ca.gov



March 8, 2022

Mr. Jeff Black
Twain Harte
Community Services District
Twain Harte, CA 95383

TUO-108-PM R11.396
Twain Harte Sewer
Replacement IS-MND
(SCH2022020345)

Mr. Black,

The California Department of Transportation (Caltrans) appreciates the opportunity to review and comment on the Initial Study. The proposed project consists of the replacement of existing deteriorating 4- to 10-inch diameter sewer pipelines within existing road rights of way and utility easements. In addition, severely damaged manhole covers will also be replaced. These areas include the following locations:

- Adjacent to Twain Harte Lake
- Two located around Marquis Drive
- Twain Harte Drive to Spruce Drive
- Fuller to Manzanita Drive
- Golf Club Drive (South)
- Sewer crossing of inlet to Twain Harte Lake
- Willowood Drive and Tuolumne Drive
- Golf Club Drive

Based on the information provided, this project is not expected to be Vehicle Miles Traveled (VMT) intensive or have any impacts to State Route (SR) 108 in Tuolumne County. Caltrans has no further comments at this time.

Encroachment Permits

If any future project construction activities encroach into Caltrans Right of Way (ROW), the project proponent must submit an application for an Encroachment Permit to the Caltrans District 10 Encroachment Permit Office. Appropriate environmental studies must be submitted with this application. These studies will include an analysis of potential impacts to any cultural sites, biological resources, hazardous waste locations, and/or other resources within Caltrans ROW at the project site(s). For more information please visit the Caltrans Website at:

<https://dot.ca.gov/programs/traffic-operations/ep/applications>

Mr. Jeff Black
March 8, 2022
Page 2

If you have any questions or would like to discuss these comments, please contact Michael Casas at (209) 986-9830 (Email: michael.casas@dot.ca.gov) or me at (209) 483-7234 (Email: gregoria.ponce@dot.ca.gov).

Sincerely,

Gregoria Ponce'

Gregoria Ponce', Chief
Office of Rural Planning

c: State Clearinghouse

Central Valley Regional Water Quality Control Board

16 March 2022

Jeff Black
Twain Harte Community Service District
22912 Vantage Pointe Drive
Twain Harte, CA 95383
info@twainhartecsd.com

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, TWAIN HARTE PIPELINE IMPROVEMENT PROJECT, SCH#2022020345, TUOLUMNE COUNTY

Pursuant to the State Clearinghouse's 15 February 2022 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Twain Harte Pipeline Improvement Project, located in Tuolumne County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore, our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of

Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:

https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_2018_05.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at:

https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at:

https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board’s Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage

under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at:

https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit


If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: <https://www.waterboards.ca.gov/centralvalley/help/permit/>

If you have questions regarding these comments, please contact me at (916) 464-4684 or Peter.Minkel2@waterboards.ca.gov.



Peter G. Minkel
Engineering Geologist

cc: State Clearinghouse unit, Governor's Office of Planning and Research,
Sacramento

**TWAIN HARTE COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 22-09**

**ADOPTION OF A MITIGATED NEGATIVE DECLARATION FOR THE TWAIN HARTE
PIPELINE REPLACEMENT PROJECT**

WHEREAS, The Twain Harte Community Services District (District) desires to construct the Twain Harte Pipeline Replacement Project (Project) to repair deteriorating sewer lines that regularly experience elevated risk of sanitary sewer overflows due to large volumes of inflow and infiltration (I&I); and

WHEREAS, the Project proposes to replace approximately two miles of deteriorated 4- to 10-inch diameter sewer lines within existing road rights of way and utility easements in the following areas:

- Adjacent to Twain Harte Lake
- Near Marquis Drive
- Twain Harte Drive to Spruce Drive
- Golf Club Drive
- Tiffeni Drive
- Wildwood Drive and Tuolumne Drive; and

WHEREAS, the implementation of the Project necessitates environmental review pursuant to the California Environmental Quality Act (CEQA); and

WHEREAS, an Initial Study for the Project (Initial Study) has been prepared to ascertain whether the Project may have significant impacts on the environment;

WHEREAS, the Initial Study indicated that the Project may have one or more potentially significant impacts on the environment, but that each potentially significant impact can be reduced to a level of insignificance by the adoption of mitigation measures incorporated in the Project; and

WHEREAS, District staff determined that an Initial Study/Mitigated Negative Declaration should be prepared and a Mitigation Monitoring and Reporting Program implemented for the Project; and

WHEREAS, the Initial Study/Mitigated Negative Declaration was prepared pursuant to CEQA and the State CEQA Guidelines; and

WHEREAS, the District held a public hearing to consider the Project's Initial Study/Mitigated Negative Declaration on March 23, 2023, at 9:00 a.m., via remote teleconferencing in accordance to California Government Code §54953(e); and

WHEREAS, in accordance with CEQA Guideline §15073 (a) and §15202 a Notice of Intent to Adopt an Initial Study/Mitigated Negative Declaration and Notice of Public Hearing was published in the Union Democrat, and posted in the office of the Tuolumne County Clerk, twenty days prior to any public hearings on the proposed Project; and

WHEREAS, the District received, considered and responded to comments received from the public and other interested agencies regarding the Initial Study/Mitigated Negative Declaration; and

WHEREAS, in accordance with CEQA Guidelines §15074, the Initial Study/Mitigated Negative Declaration was considered for adequacy, completeness, and a good faith effort was made at full disclosure in accordance with CEQA Guidelines.

NOW THEREFORE, BE IT RESOLVED, by the Board of Directors of Twain Harte Community Services District that:

1. All of the recitals set forth above are true and correct; and
2. Pursuant to State CEQA Guidelines §15074, the Board reviewed and considered the information contained in the Initial Study/Mitigated Negative Declaration, comments from the public and interested agencies, and District responses to such comments.
3. The Board makes the following specific findings with respect to the Project's Initial Study/Mitigated Negative Declaration:
 - a. It has been completed in compliance with CEQA and State CEQA Guidelines;
 - b. It reflects the District's independent judgment and analysis;
 - c. It contains a complete and accurate reporting of the environmental impacts associated with the Project;
 - d. On the basis of the whole record before the Board, including the Initial Study, Technical Reports, and any comments received, the Project may have one or more significant impacts on the environment, but each potentially significant impact can be reduced to a level of insignificance by the adoption of the mitigation measures incorporated in the Project, as described in the Initial Study/Mitigated Negative Declaration; and
4. The District's main office shall be the location and custodian of records with respect to all of the relevant documents and any other material which constitutes the administrative record for the Mitigated Negative Declaration; and
5. The Initial Study/Mitigated Negative Declaration for the Twain Harte Pipeline Replacement Project is hereby adopted; and

6. District staff is directed to file a notice of determination with the County of Tuolumne and State of California within five working days of adoption of the Initial Study/Mitigated Negative Declaration.

PASSED AND ADOPTED, by the Board of Directors of Twain Harte Community Services District, County of Tuolumne, State of California at their Special Meeting held on March 23, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Gary Sipperley, Board President

Kimberly Silva, Board Secretary

**TWAIN HARTE COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 22-10**

**AUTHORIZING APPLICATION TO THE STATE WATER RESOURCES CONTROL
BOARD FOR FINANCIAL ASSISTANCE FOR THE TWAIN HARTE PIPELINE
REPLACEMENT PROJECT**

WHEREAS, The Twain Harte Community Services District's ("District") sewer collection system is deteriorating due to age and regularly experiences high volumes of inflow and infiltration ("I&I") in the system, which considerably increases the threat of sanitary sewer overflows ("SSO's") within the District; and

WHEREAS, the District recently completed the THCSD Inflow/Infiltration Identification and Reduction Project ("I&I Project"), which included a complete condition assessment and evaluation of its sewer system, identification of system deficiencies, and development of capital projects to correct deficiencies and reduce I&I; and

WHEREAS, the I&I Project resulted in the development of the Twain Harte Pipeline Replacement Project ("Project") which includes replacement of approximately two miles of deteriorated sewer line throughout the District; and

WHEREAS, the Project will greatly reduce I&I, prevent SSO's, and protect public and environmental safety; and

WHEREAS, in order to accomplish this Project, the District Board of Directors wishes to apply for financial assistance from the State Water Resources Control Board.

NOW THEREFORE, BE IT RESOLVED, by the Board of Directors of Twain Harte Community Services District as follows:

1. The District's General Manager (the "Authorized Representative") or designee is hereby authorized and directed to sign and file, for and on behalf of the District, a Financial Assistance Application for a financing agreement from the State Water Resources Control Board for the planning, design, and construction of the Twain Harte Pipeline Replacement Project (the "Project"); and
2. The Authorized Representative, or his/her designee, is designated to provide the assurances, certifications, and commitments required for the Financial Assistance Application, including executing a financial assistance agreement from the State Water Resources Control Board and any amendments or changes thereto; and
3. The Authorized Representative, or his/her designee, is designated to represent the District in carrying out the District's responsibilities under the financing agreement, including certifying disbursement requests on behalf of the District and compliance with applicable state and federal laws.

PASSED AND ADOPTED, by the Board of Directors of Twain Harte Community Services District, County of Tuolumne, State of California at their Special Meeting held on March 23, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Gary Sipperley, Board President

Kimberly Silva, Board Secretary

CERTIFICATION

I do hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the Board of Directors of Twain Harte Community Services District on March 23, 2022.

Kimberly Silva, Board Secretary

9 CWSRF Funding and CEQA

THCSD is seeking funding through the California’s Clean Water State Revolving Fund (CWSRF) for the projects listed in **Table 5**. **Table 5** combines the short-term CIPs identified in **Table 3** into a singular project identified as the THCSD I&I Reduction Project. The proposed project will require CEQA work and approval by the State. It is estimated that the construction cost for the project is \$3.43 million. Additional funds should be allotted for 10% contingencies and engineering design assistance during bidding, construction management and services during construction. It is estimated these associated expenses will result in a total \$4.49 million. The CIPs included in the THCSD I&I Reduction Project are shown in red on **Figure 7**.

Table 5: Proposed THCSD I&I Project

Item	Description	Replace ex MH (ea)	New MH (ea)	Lateral Conn. (ea)	Asphalt Rest. (ft ²)	Pipe (ft)	Construction / Total Cost Est.
THCSD I&I Reduction Project	Short term CIPs combined into a single large project for which THCSD is seeking CWSRF funding.	60	9	172	28,022	11,534	\$ 3,428,000/ \$ 4,491,000

**TWAIN HARTE COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 22-11**

**APPROVAL OF A FISCAL YEAR 2021-22 FIRE CERT FUND BUDGET
ADJUSTMENT TO REALLOCATE \$11,000 FOR PURCHASING EQUIPMENT**

WHEREAS, Twain Harte Community Services District (District) is the sponsoring agency for the Twain Harte Area Community Emergency Response Team (CERT); and

WHEREAS, on February 9, 2022, the District Board adopted Resolution #22-06, which adjusted the Fire CERT Fund budget to account for receipt of the following two grants:

- Tuolumne County Hospital/Healthcare Preparedness Program - \$13,850
- Tuolumne County Community Grants Program - \$15,000; and

WHEREAS, said budget adjustment anticipated that all equipment purchases related to said grants would be considered operational expenses (less than \$5,000); and

WHEREAS, the cost of one of the pieces of equipment required to complete the grant is more than anticipated and must be budgeted as a capital item (greater than \$5,000); and

WHEREAS, although the overall grant expenses remain unchanged, the Fiscal Year 2021-22 Fire CERT Fund budget needs to be adjusted to reallocate funds from the operational expense budget to capital outlay budget so that the equipment purchase can be made.

NOW, THEREFORE, BE IT RESOLVED, by the District Board of Directors that the Fiscal Year 2021-22 Fire CERT Fund Budget be adjusted as follows:

1. Decrease the CERT Equipment Under \$5,000 expense line item in the amount of \$11,000, from \$24,550 to \$13,550; and
2. Add an "Emergency Response Vehicle Equipment" line item to the CERT Capital Outlay budget category in the amount of \$11,000.

PASSED AND ADOPTED, by the Board of Directors of Twain Harte Community Services District at their Special Meeting on March 23, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Gary Sipperley, Board President

Kimberly Silva, Board Secretary

**TWAIN HARTE COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 22-12**

**APPROVING A CONTRACT WITH WATERSHED PROGRESSIVE FOR THE
DESIGN, BUILD, AND CONSTRUCTION MANAGEMENT OF A PORTION OF TWAIN
HARTE MEADOWS PARK FOR AN AMOUNT NOT TO EXCEED \$1,251,795**

WHEREAS, on February 16, 2021, the Twain Harte Community Services District (“District”) was awarded a Proposition 1 Storm Water Grant Program grant (“Stormwater Grant”) by the State Water Resources Control Board (“Water Board”) in the amount of \$3,748,732 for the Twain Harte Community Stormwater Enhancement Project (“Stormwater Project”), a collaborative regional project made up of four sub-projects:

1. **Twain Harte Meadows Park** – A new, innovative stormwater education park (owned and operated by the District).
2. **Twain Harte CSD Parking Lot** – New parking lot improvements at the District’s main office with state of the art stormwater management for use as a public demonstration site.
3. **Tuolumne County Storm Drain Rehabilitation** – Rehabilitation of an old storm drain system that runs through the District (owned and operated by Tuolumne County).
4. **Twain Harte School Stormwater Enhancement** – New stormwater and rainwater capture tanks on school grounds used to water the school’s athletic field (owned and operated by Twain Harte School District, and managed by Tuolumne County Resource Conservation District); and

WHEREAS, a Stormwater Grant funding agreement has been drafted, but is not anticipated to be finalized and executed until June 2023; and

WHEREAS, the Water Board has provided written verification that, upon execution of the Stormwater Grant funding agreement, all eligible Stormwater Project expenses incurred by the District after July 1, 2021 will be reimbursed; and

WHEREAS, design work on the Twain Harte Meadows Park project (“Park Project”) must be initiated immediately, and before the finalization of the Stormwater Grant funding agreement, in order to complete the Park Project within the mandatory Stormwater Grant timelines; and

WHEREAS, the Park Project and its associated Stormwater Grant funding have unique requirements, including but not limited to the following:

- The Stormwater Grant only covers stormwater-related improvements of the Park Project – funding for the proposed outdoor pavilion, restrooms and parking lot has not yet been obtained. The vast majority of the work consists of “outdoor discovery labs” - detailed stormwater improvements specially designed and built to be integrated with interactive demonstration sites that are operable, functional, and educational.

- The Park Project’s “outdoor discovery labs” are so innovative and detailed that a portion of their design must be accomplished in the field to account for unknown or unforeseen conditions and comprehensive integration of hands-on educational components that design documents cannot detail sufficiently.
- The Park Project requires significant community and volunteer involvement, including workshops and undertaking of actual construction work that requires close coordination and experienced oversight.
- The Park Project requires that a portion of its stormwater improvements be constructed by volunteer participants taking part in a certification training conducted by California Onsite Water Association certified trainers.
- The State Water Resources Control Board requires specific assurance that the District will be able to contract with a contractor that has expertise and experience constructing the specific types of stormwater improvements required by the Park Project to ensure that the improvements will function as designed.
- The Stormwater Grant requires a match contribution from the District of at least ten percent; and

WHEREAS, the proposed designer, construction manager and contractor (Watershed Progressive) has the unique experience and knowledge necessary to ensure the District complies with the Stormwater Grant requirements related to the portion of the Park Project involving stormwater improvements and “outdoor discovery labs.” These unique qualifications include but are not limited to:

- Expertise in the design, construction and education of standard and innovative stormwater management improvements.
- Extensive experience designing and constructing interactive, educational discovery labs that are uniquely integrated with stormwater management improvements. These educational exhibits have been included in multiple similar projects across the state, some of which were funded by Water Board grants.
- Experience conducting multiple project workshops, which involved gathering, coordinating and training community volunteers to participate in the construction of stormwater management improvements.
- Staff includes certified California Onsite Water Association trainers, qualified and experienced in providing certification trainings.
- Committed to providing Stormwater Grant match contributions through in-kind services of approximately \$54,559; and

WHEREAS, the portion of the Park Project involving stormwater improvements and “outdoor discovery labs” is exempt from the competitive bidding requirements pursuant to the established common-law doctrine articulated in the case of *Graydon v. Pasadena Redevelopment Agency* (1980) 104 Cal.App. 3d 631, because a contract with Watershed Progressive is determined to be necessary to serve the best interests of the District; and

WHEREAS, California Public Contract Code Section 3400(c)(3) and District Code section 3040.71.2, permits the District to award this project to Watershed

Progressive because no other firm has the unique knowledge, skill, and expertise to execute and complete the portion of the Park Project involving stormwater improvements and “outdoor discovery labs”; and

WHEREAS, the portion of the Stormwater Grant funded Park Project involving general construction activities, such as rough grading and underground utilities, will be let for competitive bidding; and

WHEREAS, on March 17, 2022, the District received a proposal from Watershed Progressive in the amount of \$1,251,795 to design, act as the construction manager, and construct the portions of the Park Project involving stormwater improvements and “outdoor discovery labs”; and

WHEREAS, District staff reviewed the proposal and finds it acceptable; and

WHEREAS, the Stormwater Grant funding is sufficient to pay for the proposed work and the District’s Park Fund is sufficient to cover Park Project design costs until the Stormwater Grant is finalized.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Twain Harte Community Services District that:

1. The Board finds the above recitals to be true and correct, incorporated hereto and made a part herein, including but not limited to that the Board finds *Graydon v. Pasadena Redevelopment Agency* (1980) 104 Cal.App. 3d 631 applies to the award of this project; and
2. The Board makes the finding that a sole source procurement is necessary under California Public Contract Code section 3400(c)(3) and District Code section 3040.71.2 because Watershed Progressive is the only firm that has the requisite expertise, knowledge and skill to successfully design, build, manage, and complete the Twain Harte Meadows Park Project; and
3. The Board approves and does hereby authorize the Board President to enter into an agreement with Watershed Progressive in an amount not to exceed \$1,251,795 for the design, construction management, and construction of a portion the Twain Harte Meadows Park project.

PASSED AND ADOPTED, by the Board of Directors of Twain Harte Community Services District at their Special Meeting on March 23, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Gary Sipperley, Board President

Kimberly Silva, Board Secretary

**TWAIN HARTE COMMUNITY SERVICES DISTRICT
PROJECT DOCUMENTS FOR**

TWAIN HARTE MEADOWS PARK

**DISTRICT PROJECT
150-57-0001**

TWAIN HARTE COMMUNITY SERVICES DISTRICT

P.O. Box 649
Twain Harte, CA 95383

PROJECT DOCUMENTS

for design, construction management and partial construction of

DISTRICT PROJECT 150-57-0001

TWAIN HARTE MEADOWS PARK

Approved for Construction:



Tom C. Trott, P.E.
General Manager

Gary Sipperley
Board President

March 2022

**TABLE OF CONTENTS
PROJECT DOCUMENTS**

PART I	NOT USED
PART II	NOT USED
PART III	PROPOSAL
PART IV	CONTRACT AND BOND
PART V	GENERAL CONDITIONS - CONSTRUCTION
PART VI	SPECIAL CONDITIONS - CONSTRUCTION
PART VII	GENERAL CONDITIONS – DESIGN & CONSTRUCTION MANAGEMENT
PART VIII	CONCEPTUAL PROJECT DRAWINGS

**PART I
NOT USED**

**PART II
NOT USED**

PART III PROPOSAL

INDEX

Section	Title
1	Contractor's Proposal
2	Not Used
3	Bidder's License Certification and Department of Industrial Relations Registration

PART III PROPOSAL

SECTION 1 – Contractor's Proposal

The undersigned hereby proposes to the Twain Harte Community Services District, sometimes referred to as "District," to furnish all plant, labor, technical and professional services, supervision, materials, and equipment (other than materials and equipment specified as furnished by the District), and to perform all services and operations necessary and required for design, construction management, and partial construction of District Project 150-57-0001150-57-0001, Twain Harte Meadows Park, in accordance with the Project Documents, Parts I through VIII for District Project 150-57-0001, and at the prices stated in the following Contractor Proposal.

The Contractor hereby certifies that it has examined and is fully familiar with all of the provisions of the Project Documents and records of geotechnical investigations, where applicable; has carefully checked all of the words and figures shown on its Proposal; has carefully reviewed the accuracy of all statements in its Proposal; and understands and agrees that the District will not be responsible for any errors or omissions on the part of the Contractor in preparing this Proposal.

The Contractor has, by careful examination of the Project Documents and records of geotechnical investigations, where applicable, and by examination of the actual site conditions, satisfied itself as to the nature and location of all work, the general and local conditions to be encountered in the performance of any work, the requirements of the Contract, and all other matters that can in any way affect the work or the cost thereof.

The Contractor certifies that it is now registered with the Department of Industrial Relations (DIR) to do public work pursuant to California Labor Code Section 1725.5. The District reserves the right to require proof of registration.



Twain Harte Community Stormwater Enhancement Project (THCSEP): The Meadows Proposal

PROPOSAL for Design, Construction, Monitoring and Outreach

DATE: 17 March 2022
 CLIENT: Twain Harte CSD ADDRESS: P.O. Box 649 | Twain Harte, CA 95383
 VOICE: (209) 586-3172 EMAIL: ttrott@twainhartecsd.com

SUMMARY and PROJECT UNDERSTANDING

This proposal addresses the design, construction, construction management, monitoring and outreach elements for the Twain Harte Meadows site. The project is at the heart of the Twain Harte Community, as well as critical for addressing and treating stormwater concerns as identified by the T-Stan IRWM Stormwater Plan. As a multiple benefit-based technical stormwater project with the intention provide the demonstration of Low Impact Tools, as well as certified workforce development and youth engagement, this integrated proposal requires a special project understanding and unique qualifications to provide the deliverables in the THCSEP Scope of Work. These unique qualifications and approach is outlined in this brief proposal in Table 1, as well as tied to the THCSEP Scope of Work.

Watershed Progressive (Contractor) will perform all administration and coordination efforts needed to meet the requirements of the State Water Resources Control Board (SWRCB) Storm Water Grant Program Funding Agreement (Funding Agreement) for the Twain Harte Community Stormwater Enhancement Project (THCSEP), Watershed Progressive (Professional Landscape Architect License No. 6640, Landscape Contractor License No. C27-925678) proposes the following tasks and phases listed in this proposal.

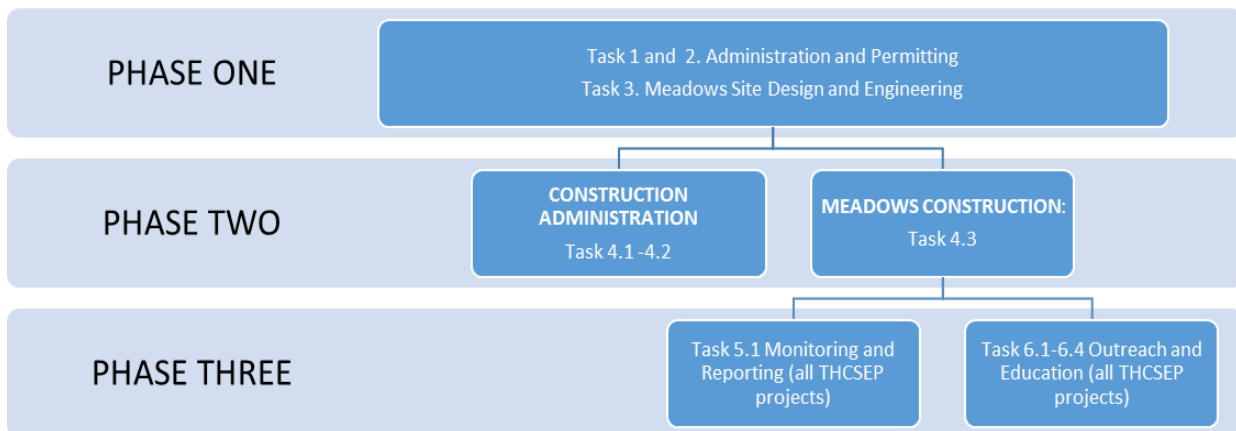


Figure 1. Phase Sequence of Twain Harte Meadows Stormwater Enhancement Project: Meadows Proposal

Phasing will occur to organize project by three primary elements, as shown by Figure 1. Initial administration and all project design elements for the Twain Harte Meadows site will be initialized in Phase One. After final adoption of 100% design plans and Bidding Package is final, then a Notice

to Proceed will initiate Phase Two: Construction. At this time, Phase Three: General Elements of outreach and monitoring will begin for the Meadows site, and subsequently, the additional sites, as other timelines for these sites become available.

Table 1 Twain Harte Community Stormwater Enhancement Project (THCSEP): Meadows Proposal				
Task	Title	Staff Project Leads	Specialized Qualifications	Project References and Examples
1	Admin	Financial Director, Executive Director, Operations Director, Design Lab	Final Reporting, Multiple-site, Multiple Benefit Reporting	Reporting and administration for various Resource Conservation Districts, Water Districts, Mutual Water Companies, Private Corporations on State Funded multi-site grants.
2.1	CEQA, Permitting	Technical Hub, Permit Specialist, Senior Planner	"Cut the Green Tape", Stormwater Exemptions, CEQA multiple benefit projects, Programmatic CEQA	Ventura River Instream Flow (WCB) Phase 1 and 2 planning, Santa Rosa Creek, Cambria (WCB), Twin Peaks Ranch, Ojai Valley Inn
3.1	Design Coordination, Design Report, Design 60%, 100% Design Plans, Bid Documents	Creative Design Director, Water Resource Mechanical Engineer, Stormwater Civil Engineer	Landscape Architect, Architecture, Ecological Water Design, Stormwater Design, Regenerative Stormwater Conveyance, Stormwater Reuse, Interpretive Design, Youth and Community Centered Design, Water Resource Mechanical Engineer, Stormwater/Civil Engineer, Soils Analyst, GIS Spatial Analyst, GeoDesign Analyst, Installation Water Resource Field Analyst, Construction Advisors, Monitoring Specialists, Bid Project Managers	Tuolumne County Resource Conservation District, Mosaic Camp, Rush Creek Lodge, Evergreen Lodge, Berkley Tuolumne Camp, Ventura River Instream Flow (WCB) Phase 1 and 2 planning, Land Resilience Partnership Ventura River Water District, Thacher School Rainwater Dormitory Project, Rancho El Chorro School Stormwater Project, Cal Poly University Bull Unit Rainwater Project, San Luis Obispo National Guard Bioswale Street Project
4.1	Construction Mgmt, Operations and Maintenance Plan, Construction	Installation Director, Construction Advisor, Creative Design Director, Water Resource Mechanical Engineer, Stormwater Civil Engineer	Installation Director, Water Resource Specialist I and II, Foreman, Greywater, Rainwater and Stormwater Certified Installers, Landscape Design Install Lead, Plant Ecologist, Soils Ecologist, Soils Remediation, QWEL Certified Irrigation Installers, Monitoring Specialists, COWA Certified Installers, BioNOVA and AquaScape Certified Installers, Headwaters Institute Partners	Tuolumne County Resource Conservation District, Rush Creek Lodge, Evergreen Lodge, Berkley Tuolumne Camp, Land Resilience Partnership Ventura River Water District, Thacher School Rainwater Dormitory Project, Rancho El Chorro School Stormwater Project, Cal Poly University Bull Unit Rainwater Project, MotherLode Fairgrounds, USBR New Melonies, Tenaya School Raintank, Ventura-Ojai Bike Path Bioswale, California Conservation Corp Stormwater Building 1533 Project
5.1	Monitoring and Reporting Plan, Project Monitoring	Water Resource Mechanical Engineer, Stormwater Civil Engineer	Installation Lead, Water Resource Specialist I and II, Greywater, Rainwater and Stormwater Certified Installers, Landscape Design Install Lead, Plant Ecologist, Soils Ecologist, Soils Remediation, Monitoring Specialists, COWA Certified Installers, BioNOVA and AquaScape Certified Installers	Land Resilience Partnership Ventura River Water District, Thacher School Rainwater Dormitory Project, Rancho El Chorro School Stormwater Project, Cal Poly University Bull Unit Rainwater Project, Tenaya School Raintank, Ventura-Ojai Bike Path Bioswale, California Conservation Corp Stormwater Building 1533 Project, Senior Canyon Mutual Water Company
6.1	Interpretive Signage	Creative Design Director	Graphic Designer, Interpretative Designer, User-Interface Specialist	Ojai Valley Inn, Camp Mosaic, Ventura River Instream Flow Framework, Twain Harte Community Services District, Tuolumne County Resource Conservation District, Rush Creek Lodge, Evergreen Lodge, Berkley Tuolumne Camp, Land Resilience Partnership Ventura River Water District, Thacher School Rainwater Dormitory Project, Rancho El Chorro School Stormwater Project, Cal Poly University Bull Unit Rainwater Project, MotherLode Fairgrounds, USBR New Melonies, Tenaya School Raintank, Ventura-Ojai Bike Path Bioswale, California Conservation Corp Stormwater Building 1533 Project
6.2	Stormwater Training Curriculum	COWA Certified Instructor, Schools Outreach Coordinator	Graphic Designer, Interpretative Designer, User-Interface Specialist	Ojai Unified School District, Green Valley Partnership, Thacher School Rainwater Dormitory Project, Rancho El Chorro School Stormwater Project, California Conservation Corp Stormwater Building 1533 Project and GED Program
6.3	2 COWA Community Workshops and Trainings	COWA Certified Instructor, Schools Outreach Coordinator	Graphic Designer, Interpretative Designer, User-Interface Specialist	Localizing CA Waters, Rush Creek Lodge, Land Resilience Partnership Thacher School Rainwater Dormitory Project, Rancho El Chorro School Stormwater Project, California Conservation Corp Las Padres, Americorp Water Steward Partners, Malibu City, Los Angeles County Department of Public Health, Madera County Public Health, Tuolumne County Department of Environmental Health, California Association of Environmental Health Directors, Sonoma Water Agency, Next Generation Water Summit
6.4	Online Stormwater Ed/Dashboard	GIS Analyst II, Website Designer	Graphic Designer, Interpretative Designer, User-Interface Specialist, Website Designer	Ventura River Instream Flow (WCB) Phase 1 and 2 planning, Integrated Water Strategies and Toolkit Quantification, Land Resilience Partnership,

PHASE 1 - SCOPE OF WORK (Meadows Design, Engineering, Permitting)

Task 1. Project Administration and Coordination

This scope of work includes the following tasks:

Perform all administration and coordination efforts needed to meet the requirements of the State Water Resources Control Board (SWRCB) Storm Water Grant Program Funding Agreement (Funding Agreement) for the Twain Harte Community Stormwater Enhancement Project (THCSEP). Among other tasks, this includes coordinating with SWRCB to respond to inquiries; providing documentation needed to satisfy SWRCB requirements; coordinating design and construction details with other THCSEP subprojects to ensure the overall THCSEP Funding Agreement goals are met and to ensure consistency of elements and education among the subprojects; working with the District's Project Manager to create and update project schedules, budgets, progress reports and invoices; and assisting the District with the creation of final Project reports required by the Funding Agreement.

Task 2. Environmental Compliance and Permitting

The District will be responsible for completing CEQA for the project. During the design process, the Contractor will be responsible for determining if any permits are required to construct the Project. If any permits are required, the Contractor will assist the District in preparing the permit applications and answering any questions raised by the permitting agency. The District will be ultimately responsible for obtaining required permits (if any).

Task 3. Planning, Design and Engineering

Time is of the essence per the current constraints of the state funding.

Watershed Progressive will start immediately to generate 100% Design and Construction documents for outside excavator to follow, as well as for Watershed Progressive and THCS D to use as Design to Build specifications for refined install elements. These design elements are listed in the scope of work below, and will also include integrated approaches to bring the experience of the site and the nine learning lab components together, as a whole, while meeting and exceeding the expectations of the THCS D board and community.

Task 3.1. Design Coordination

Coordinate all Project design activities, including but not limited to: management of design activities, including invoicing and internal staff management; providing design status updates to the District; any necessary design-related meetings with the District, SWRCB, subconsultants, subcontractors and other parties; and coordination with other District designers. Design coordination activities shall be sufficient to ensure that the Project design meets SWRCB requirements, the portion of the Project funded by the SWRCB Funding Agreement can be constructed within the limits of allotted funding, and design of future Project components are fully incorporated.

Task 3.2. Preliminary Design

Perform all Project preliminary design activities, including, but not limited to rough design

calculations, quantification of benefits, 50% plans and specifications, THCSEP process flow diagram, design exhibit and other necessary preliminary design tasks.

Deliverables:

- 50% Design Plans
- Twain Harte Meadows Park Conceptual Plan
- THCSEP Process Flow Diagram

Task 3.3. Design Report

Prepare a Design Report that includes a hydrology or hydraulics study and soils investigation or geotechnical analysis to support the design plans and specifications. The Design Report shall include sufficient detail and design calculations to provide a clear basis of design and to justify the measurable benefits provided by the Project.

Work shall include preparation of a draft Design Report for comment by the District and SWRCB, response to comments, and completion of a final Design Report.

At a minimum, the Project design shall include the following components:

- a. A minimum of five (5) rainwater collection tanks with a combined minimum design storage capacity of thirty-six thousand (36,000) gallons, to capture runoff from rooftops for irrigation of project bioswales, bioretention basins, landscaping and trees.
- b. A minimum of twenty-eight thousand (28,000) square feet of bioswales.
- c. A minimum of nine hundred (900) square feet of bioretention basins.
- d. A minimum of one thousand nine hundred (1,900) square feet of permeable pavement.
- e. A minimum of five hundred (500) square feet of landscaping with native vegetation.
- f. A minimum of thirty-three (33) trees.
- g. A minimum of seven (7) hands-on educational exhibits demonstrating the natural processes involved in the management of stormwater and benefits of the Project. At a minimum, the hands-on educational exhibits shall include:
 - Rainwater Harvesting Discovery Lab
 - Stormwater Discovery Lab
 - Water Play Bioretention Discovery Lab
 - Soils Discovery Lab
 - Magic of Plants/Pollinators Discovery Lab
 - Me-Wuk Tribal Stormwater Garden Discovery Lab
 - Living Bioswale Food Fence Discovery Lab
 - Basic design and requirements of future components to be constructed by others – Pavilion, Restrooms and Entrance Parking Lot.

The Project shall be designed so that, when combined with the other THCSEP sub-projects, the THCSEP shall capture, treat, infiltrate, and/or re-use a minimum of 69 acre-feet per year of storm water runoff collected from a minimum of 334 acres of drainage area.

Deliverables:

- Draft Design Report
- Final Design Report

Task 3.4. 60% Design Plans

Prepare 60% design level plans and specifications based on the Design Report. Plans shall include sufficient detail to enable SWRCB to clearly understand the various Project design components and benefits derived by each component.

This task shall also include topographic site surveying and any soils testing or geotechnical work required for design.

Project plans shall include an easily separable grading plan that incorporates all rough grading, trenching and underground utilities, including those required for future Project components to be constructed by others – Outdoor Pavilion, Restrooms and Entrance Parking. The design shall also include Project components that were previously designed and constructed, such as the Bocce Rainwater Capture and Bioswale.

Project design shall substantially conform to the conceptual design drawing in Part VIII – Project Drawings. All pathways shall be accessible per ADA.

Deliverables:

- 60% Design Plans & Specifications

Task 3.5. Discovery Lab Design

Design details of each discovery lab with exhibits that clearly demonstrate how each exhibit will invite hands-on learning and engagement. Design exhibits or drawings should have sufficient detail to clearly communicate its connection to Project benefits. Draft discovery lab designs will be subject to review and comment by the District and SWRCB prior to completion of design. Work will include addressing comments and revising design as needed.

Deliverables:

- Draft Discovery Lab Design

Task 3.6. 100% Design Plans

Prepare 100% design level plans and specifications based on the Design Report, SWRCB and District comments, and engineering. 100% plans and specifications shall clearly illustrate that the minimum Project quantities and benefits required in the Funding Agreement are met. Draft 100% plans and specifications shall include a written summary identifying any changes from the 60% plans and specifications submittal, including any changes that may affect required Project quantities and benefits.

Project plans shall include sufficient detail for Contractor's construction. The grading plans, specifications and estimate shall be easily separable for inclusion in a bidding package and shall include sufficient detail for bidding. All other plans necessary for construction (i.e. landscaping, irrigation, LID, etc.) shall be included in the 100% plans and specification submittal.

100% plans shall include design of pavilion, restroom and entrance parking. The District will be responsible for structural design of the pavilion and Contractor shall incorporate said design into the 100% plans. Restroom and entrance parking design may be shown on the plans as "Future Improvements". Bocce Rainwater Capture and Bioswale should be shown on the plans as "Previously Constructed Improvements".

Work shall include preparation of draft 100% plans, specifications and estimate for comment by the District and SWRCB, response to comments, and completion of final 100% plans, specifications and estimate.

It will be the Contractor's responsibility to design the Project so that it can be constructed within the confines of the construction budget.

Deliverables:

- Summary of Changes from 60% Plans
- Draft 100% Plans & Specifications
- Final 100% Plans, Specifications
- Engineer's Construction Cost Estimate

Task 3.7. Bid Documents

Separate and provide final grading plans, specifications and estimate to District for inclusion in a bid package to be assembled and advertised by the District. At a minimum, grading plans shall include rough grading, trenching and underground utilities for all current and future Project components. Preparation of bid documents may require information beyond that required for the 100% plans and specifications in order to provide sufficient information to bidders.

Assist the District in responding to any bidder inquiries during advertisement for bids. Conduct a pre-bid meeting with prospective bidders. The District will be responsible for preparing Contract Award and Notice to Proceed.

Deliverables:

- Grading Plans, Specifications and Estimate
- Summary of Bidder Inquiries and Responses
- Pre-Bid Meeting Attendance Sheet

PHASE 2 - CONSTRUCTION

This scope of work includes the following tasks:

Task 4. Construction and Implementation

Task 4.1. Construction Management

Contractor will be responsible to oversee and manage the work of the contractor who will perform rough grading, trenching and underground utility work. The contract with said contractor will be with the District. Contractor will also be responsible to direct, oversee and manage its own work, which will include all work to complete the remainder of the project, excluding future Project components, based on its expertise in creating functional, hand-on stormwater education exhibits. Contractor shall also be responsible for overseeing and managing the work of any of its subcontractors and any work performed by other contractors to construct future components, should the District receive funding to perform such work.

Work for this task shall include provision of all technical and administrative services needed for completion of Project construction, including, but not limited to: monitoring and directing construction activities in the field; quality assurance and inspection; interpreting design details and

responding to contractor requests for information; coordinating construction budget and schedule; managing any necessary changes to the design, schedule and budget with approval from the District and SWRCB (if necessary); conducting photo monitoring (pre-, during and post-construction); reviewing and recommending contractor invoices for approval; conducting periodic site visits and updates with the District and SWRCB; performing final inspection and punch lists; preparing as-built drawings; and other tasks required to ensure Project construction is completed in a manner that provides maximum functionality from a stormwater management perspective, with quality, within budget and schedule, in accordance with approved design plans and Funding Agreement requirements, and in accordance with all laws and regulations.

Deliverables:

- Proposed Construction Changes
- Construction Photo Documentation
- As-Built Plans and Summary of Changes

Task 4.2. Operations and Maintenance Plan

Prepare an Operations and Maintenance Plan that addresses operation and maintenance of all Project components for its useful life. The Operations and Maintenance Plan shall be written simply for District staff's ease of use and continued Project operations. All manuals for equipment and other components of the Project shall be included as an appendix to the plan.

Deliverables:

- Operations and Maintenance Plan

Task 4.3. Construction

After completion of rough grading and underground utility construction. Contractor shall be responsible for completing the remainder of Project construction, which will mostly include detailed construction of the Project's stormwater and rainwater management components and interactive discovery labs.

Contractor's construction shall substantially conform to the approved design plans and specifications, but the details are anticipated to be field directed to maximize benefits, enhance the interactive educational component of the discovery labs, and to best conform to field conditions.

Contractor's work shall include all necessary work to complete the Project beyond the rough grading and underground utility construction. This is anticipated to include the complete construction of the following Project components:

1. Mobilization/Demobilization
Mobilize and demobilize all equipment required for Contractor's construction. Coordinate and manage all construction activities, which may include submittals, invoicing, bonding, general project signage and other construction-related requirements of the Contract.
2. Rehydration/Infiltration Meadow
Minimum 30,147 SF stormwater infiltration meadow plantings, minimum 30 trees, fine grading, drain rock, boulders, soil amendment, irrigation, exploratory hands-on exhibit, and other necessary items to complete construction.
3. Rainwater Harvesting Discovery Lab

- Minimum 7 rainwater capture tanks connected to the roof of the outdoor pavilion, fine grading, tank piping and appurtenances, tank pumps, irrigation controllers, solar panels and electrical for stormwater re-use, exploratory hands-on exhibit, and other necessary items to complete construction.
4. [Stormwater Discovery Lab](#)
Minimum 500 SF native stormwater plantings, fine grading, drain rock, boulders, soil amendment, irrigation, exploratory hands-on exhibit, and other necessary items to complete construction.
 5. [Water Play Bioretention Discovery Lab](#)
Minimum 1,000 SF native stormwater plantings, fine grading, drain rock, cobble, boulders, stormwater disinfection, pumps, piping and appurtenances, water table, electrical, exploratory hands-on exhibit, and other necessary items to complete construction.
 6. [Magic of Plants Discovery Lab](#)
Minimum 85 SF native stormwater/pollinator plantings, fine grading, drain rock, soil amendment, irrigation, exploratory hands-on exhibit, and other necessary items to complete construction.
 7. [Permeable Historic Stories Pathway](#)
Minimum 2,171 permeable path, fine grading, drain rock, boulders, permeable path foot bridge over bioswale, historic storm water story signs on boulders, and other necessary items to complete construction.
 8. [Me-Wuk Tribal Stormwater Garden Discovery Lab](#)
Minimum 100 SF bioswale plantings, fine grading, drain rock, soil amendment, irrigation, exploratory hands-on exhibit, and other necessary items to complete construction.
 9. [Living Food Bioswale Fence Discovery Lab](#)
Minimum 100 SF bioswale plantings, fine grading, drain rock, soil amendment, irrigation, trellis exploratory hands-on exhibit, and other necessary items to complete construction.
[Bocce Rainwater Capture and Bioswale](#)
Minimum 1 rainwater capture tank, minimum 385 SF bioswale plantings, minimum 7 trees, fine grading, tank piping and appurtenances, tank pump, irrigation controllers, electrical, exploratory hands-on exhibit, and other necessary items to complete construction. *This task has been previously completed and used for match only.*

PHASE 3 – MONITORING AND OUTREACH

This scope of work includes the following tasks:

Task 5. Monitoring and Performance

Task 5.1. Monitoring and Reporting Plan

Prepare a Monitoring and Reporting Plan for the Project and all other subprojects of the THCSEP. If Contractor is not performing design of other THCSEP subprojects, Contractor will be responsible for gathering all necessary information for the creation of the report. Monitoring activities required by the MRP shall be simple and easy for District staff and subproject sponsors to perform on an ongoing basis.

The MRP will consist of the following:

- A Project Assessment and Evaluation Plan (PAEP), which describes the manner in which the overall THCSEP project will be assessed, evaluated, and reported. The PAEP shall detail the methods of measuring and reporting THCSEP benefits. The District and other THCSEP subproject sponsors will be responsible for developing PAEP's for each subproject with some assistance from the Contractor.
- A Monitoring Plan in a format provided by SWRCB. Contractor shall be responsible for preparing the Monitoring Plan, which will be coordinated with the THCSEP subproject sponsors for confirmation of monitoring feasibility.

This work will include submittal of a draft MRP, response to SWRCB comments, and preparation of a final MRP.

Deliverables:

- THCSEP Monitoring and Reporting Plan

Task 5.2. Project Monitoring

Procure and install wireless monitoring equipment to enable the District to remotely monitor and measure benefits of the Project and all other subprojects of the THCSEP. Monitoring equipment shall, at a minimum, include:

- Wireless gages on all rain and storm water capture tanks
- Remote flow gages
- Wireless rain gage at Twain Harte Meadows Park

Work will include training District staff to read and interpret monitoring data remotely.

Task 6. Education and Outreach

Task 6.1. Interpretive Signage

Design, procure and install a minimum of twenty-two interpretive educational signage, describing the benefits of the Project and all other subprojects of the THCSEP. Work will include submittal of draft signage design submittal to the District and SWRCB for comment prior to installation. Signs will be in same format as Bocce Ball sign (see Figure 3).

Deliverables:

- Draft Signage Designs
- Photo Documentation of Installed Signage

Task 6.2. Stormwater Training Curriculum

Develop grade-appropriate educational curriculum and low impact development guidebook for the THCSEP. Curriculum may discuss broad stormwater strategies, but shall also be focused on the THCSEP, including, at a minimum, benefits, construction activities, and long-term maintenance requirements.

Work shall include obtaining a letter from the Superintendent or County Office of Education, whichever is appropriate, certifying that the plan meets State standards.

Deliverables:

- Stormwater Training Curriculum & Number of Participating Students
- Superintendent Certification Letter

Task 6.3. Community Workshops and Trainings

Develop a public participation/outreach strategy. Perform and coordinate all THCSEP public participation and outreach, with some assistance from the District.

Prepare, advertise and conduct four (4) community workshops/trainings with certified California Onsite Water Association (COWA) trainers. Workshops/trainings shall be incorporated into the Contractor's construction work with the intent to:

- Involve the community in construction of the Project;
- Teach participants the principles of stormwater management; and
- Provide hands-on training to residents to empower them to implement simple, effective rain and stormwater management solutions on their own properties.

Prepare, advertise and conduct two (2) workforce development and certification trainings/workshops with certified COWA trainers. The trainings shall be incorporated into the THCSEP construction activities with the intent to increase implementation of local stormwater management practices by providing workforce development training that will result in COWA certifications for the participants.

Deliverables:

- Workshop/Training Materials
- Workshop Attendance Sheets

Task 6.4. Online THCSEP Stormwater Education and Dashboard

Design and launch an interactive website and dashboard for the entire THCSEP. The website shall include interactive, detailed stormwater education directly related to the stormwater and rainwater management practices constructed throughout the THCSEP. The website will be easily accessible through QR codes on interpretive educational signage and other methods. The website shall include an online dashboard that simply communicates the actual measured THCSEP benefits and shall also inform the public of the THCSEP purpose, construction activities, timelines, associated closures and long-term maintenance.

Deliverables:

- Website

MATCH REQUIREMENT

Contractor agrees to perform a portion of its work as match. This may include in-kind labor and/or donation of materials to satisfy the Funding Agreement match requirement. Contractor shall submit all necessary documents to the District to verify performance of in-kind labor, donation of material and other work to SWRCB. The District will not make any payment for said labor, materials or work, nor will the Contractor be eligible to receive any payment for said labor.

Contractor will be responsible to provide a minimum of \$54,559 in match contributions. This is

anticipated to be provided in the following categories, but may be transferred to other categories if needed:

- Project Administration and Coordination - \$4,800
- Preliminary Design - \$9,025
- Discovery Lab Design - \$10,000
- 60% Design Plans - \$14,600
- Interpretive Signage - \$10,000
- Workshop Participation - \$6134

EXCLUSIONS AND ADDITIONAL SERVICES

This Scope of Work does NOT include the following items although they may be added as additional services:

- Equipment costs or Installation of equipment for grading/underground utilities construction work.
- Parking lot and Pavilion design. Although may be show on plans and include design elements to integrate into the scope of work herein, these elements will not be the included in this scope of work. Pads for each site will be included in grading and site plans as work by others.
- CEQA as noted in Task 2
- Permitting

Additional tasks, services, or studies not specifically included in the above contract can be added to this contract under the terms of a written change order.

- 1.0 If authorized in writing by District, WATERSHED PROGRESSIVE shall furnish or obtain from others Additional Services which are not considered normal or customary Basic Services except to the extent provided otherwise in the Scope of Work. These will be paid for by District as indicated in Rate Schedule.
- 2.0 Services resulting from significant changes in extent of the Project or its design, including but not limited to changes in size, complexity, District’s schedule, character of construction or method of financing; and revising previously accepted documents or Contract Documents when such revisions are due to causes beyond WATERSHED PROGRESSIVE’S control.
- 3.0 Furnishing the services of special consultants for other than identified TEAM.
- 4.0 Additional services in connection with the Project stated, including services normally furnished by District and services not otherwise in this Proposal.

RATE SCHEDULE

Unless otherwise agreed, compensation for additional services shall be on a Time and Materials basis.

Landscape Architect, Engineering	\$175.00/hr
Water Resource Project Manager	\$120.00/hr
Graphic Designer	\$150.00/hr

Reimbursables (materials, printing, etc.)	AT COST, will be expensed towards budget in Table 2.
---	--

PHASE 1-3 FEE AND DELIVERABLE SCHEDULE SUMMARY

Upon receipt or written notice to proceed and signed contract, WATERSHED PROGRESSIVE will proceed with proposed, agreed upon scope, fee, and schedule as shown in Table 2.

Table 2 Twain Harte Community Stormwater Enhancement Project (THCSEP): Meadows Proposal								
Task	Title	Deliverables	Hourly Rate	Hours Estimated	Material Costs	Total Budget	Match	Estimated Completion Date
1	Admin	n/a	\$ 175	68.57	\$ -	\$ 12,000	\$ 4,800	ongoing
2.1	CEQA, Permitting	n/a	\$ -	0.00	\$ -	\$ -		August-22
3.1	Design Coordination	n/a	\$ 175	85.71	\$ -	\$ 15,000		September-22
3.2	Prelim Design	50% Design Plans	\$ -	0.00	\$ -	\$ -	\$ 9,025	April-22
		Twain Harte Meadows Park Conceptua	\$ -	0.00	\$ -	\$ -		April-22
		THCSEP Process Flow Diagram	\$ -	0.00	\$ -	\$ -		April-22
3.3	Design Report	Draft Design Report	\$ 175	59.11	\$ -	\$ 10,345		May-22
		Final Design Report	\$ 175	11.89	\$ -	\$ 2,082		May-22
3.4	Design Plans 60%	60% Design Plans & Specifications	\$ 175	393.49	\$ -	\$ 68,860	\$ 14,600	June-22
3.5	Design Lab Design 60%	60% Design Plans & Specifications	\$ 175	77.14	\$ -	\$ 13,500	\$ 10,000	June-22
3.6	100% Design Plans	Summary of Changes from 60% Plans	\$ 120	21.41	\$ -	\$ 2,569		July-22
		Draft 100% Plans & Specifications	\$ 175	196.90	\$ -	\$ 34,458		July-22
		Final 100% Plans, Specifications	\$ 175	44.83	\$ -	\$ 7,845		July-22
		Engineer's Construction Cost Estimate	\$ 175	18.35	\$ -	\$ 3,211		August-22
3.7	Bid Documents	Grading Plans, Specifications and Estim	\$ 175	139.20	\$ -	\$ 24,360		August-22
		Summary of Bidder Inquiries and Respo	\$ 120	13.38	\$ -	\$ 1,606		August-22
		phase 1 design total	\$1,990		\$0	\$195,835		
4.1	Construction Mgmt	Proposed Construction Changes	\$ 175	1085.94	\$ -	\$ 190,040		September-23
		Construction Photo Documentation	\$ 120	33.33	\$ -	\$ 4,000		September-23
		As-Built Plans and Summary of Changes	\$ 120	183.33	\$ -	\$ 22,000		September-23
4.2	Operations and Maintenance Plan	Operations and Maintenance Plan	\$ 175	57.14	\$ -	\$ 10,000		September-23
4.3	Construction				SUBTOTAL	\$ 696,680		September-23
		Mobilization/Demobilization				\$ 8,000		September-23
		Rehydration/Infiltration Meadow				\$ 150,880		
		Rainwater Harvesting Discovery Lab				\$ 210,850		September-23
		Stormwater Discovery Lab				\$ 41,500		September-23
		Water Play Bioretention Discovery Lab				\$ 149,600		October-23
		Magic of Plants Discovery Lab				\$ 23,750		October-23
		Permeable Historic Stories Pathway				\$ 88,800		October-23
		Me-Wuk Tribal Stormwater Garden Discovery Lab				\$ 14,400		October-23
		Living Food Bioswale Fence Discovery Lab				\$ 8,900		October-23
		Bocce Rainwater Capture and Bioswale				\$ -		October-23
		phase 2 construction total			\$0	\$922,720		
5.1	Monitoring and Reporting Plan	THCSEP Monitoring and Reporting Plan	\$ 175	78.86	\$ -	\$ 13,800		September-22
5.2	Project Monitoring	Remote flow gages, wireless rain gage, r	\$ 175	149.57	\$ 11,075	\$ 37,250		May-22
6.1	Interpretive Signage	Draft Signage Designs	\$ 150	93.33	\$ -	\$ 14,000	\$ 10,000	May-22
		Signs Printed	\$ 150	16.00	\$ 9,600	\$ 12,000		
		Photo Documentation of Installed Signa	\$ 150	6.67	\$ -	\$ 1,000		June-22
6.2	Stormwater Training Curriculum	Stormwater Training Curriculum & Num	\$ 120	104.17	\$ -	\$ 12,500		October-22
		Superintendent Certification Letter	\$ 150	3.33	\$ -	\$ 500		October-22
6.3	2 COWA Community Workshops	Workshop/Training Materials	\$ 100	182.90	\$ -	\$ 18,290	\$ 6,134	October-22
		Workshop Attendance Sheets	\$ 50	10.00	\$ -	\$ 500		October-22
6.4	Online Stormwater Ed/Dashboard	Website	\$ 120	195.00	\$ 9,000	\$ 23,400		October-22
		phase 3 outreach monitoring total		839.83	\$29,675	\$133,240		
		TOTALS			\$ 29,675	\$ 1,251,795	\$ 54,559	

PROJECT TEAM

Regina Hirsch - Executive Director. Regina Hirsch is dedicated to bringing appropriate best management solutions to the public. After getting the watershed monitoring bug at the Central Coast Regional Water Quality Board and the Morro Bay National Estuary Program, she moved to the Sierra Nevada for a different approach to reaching people and assessing effectiveness of non-point source pollution treatments. Regina founded Watershed Progressive, the consulting/contracting firm which focuses on onsite water best management practices aimed at rehydrating watersheds. Since 2009, Watershed Progressive has helped design and install projects that restore habitat and increase watershed hydrologic recharge through water conservation and re-use. In addition, Regina is an executive board member of various organizations, such as The Telele Foundation and the California Water Reuse Policy Council.

Sean Hembree - COWA Program Director and Project Developer. Sean manages water resource and development projects, leads operations at the California Onsite Water Association, and supports the Land Resilience Partnership in the Central Sierra region. Sean focused his problem-solving abilities toward building wildfire-resilient strategies, especially for wildland and rangeland settings. He believes this is a key opportunity for water and land stewards to come together and create innovative solutions to shared problems. He is a forming member of the Motherlode Prescribed Burn Association engages with other coalitions pioneering innovative on forest and rangeland solutions.

Tony Madrone - Technical Director. Tony Madrone is a sustainable landscape designer/builder specializing in water management. With over 20 years of experience in the industry, Tony is a water sense partner, EPA certified water auditor, board member of Re-Scape California and California Onsite Water Association. Tony has designed and installed many groundbreaking on-site water reuse systems and sustainable landscapes throughout the Bay Area. Tony leads a technical team of engineers and GIS analysts with expertise that include designing water reuse systems, environmental impact assessment, urban planning research, and data interpretation and visualization.

Aja Bulla-Richards - Associate Creative Director. Aja Bulla-Richards is an experienced architectural and landscape architectural designer, as well as an educator. She has three masters degrees in architecture with an emphasis on designing for arid regions and adapting cities to climate change. Her research focus is on engaging communities in creating vibrant public space, with optimized ecological, hydrological, and cultural performance through a process that: Initiates new shared narratives of resilience, connects everyday life to vast natural and constructed systems, reawakens our engagement with our environment, and fosters stewardship of place. Aja works on regenerative site design, and demonstration projects that perform across scales, catalyzing a paradigm shift that reimagines our relationship with natural and constructed water cycles helping adapt communities and regions to build a more resilient future. She is also part time faculty at USC teaching design research in the graduate landscape architecture and urbanism program.

Kayla Meyer - Regenerative Agricultural Project Manager. Kayla holds a Bachelor's in Law with a minor in Interdisciplinary Environmental Studies, a Master of Law in Environmental Law and Policy with a concentration on Food and Agriculture Law and is currently in pursuit of her Doctorate (PhD) in Sustainability Studies with a concentration on sustainable and regenerative

systems. Her career spanned the fields of Resource Conservation District management, water resource planning and floodplain management, both at the state and federal level, renewable energy policy, sustainable agriculture, public outreach and environmental education in California, Nevada, and Vermont. Kayla's work at Watershed Progressive includes lead project development, analysis and management, especially related to regenerative agriculture.

Joel Hawley - Senior Project Manager. Joel has 13+ years of experience in Wetland Bioremediation, Water Reuse and Landscape Irrigation Auditing. His list of certifications includes Portland Cement Inspector, BIONOVA, Aquascape, and CLIA. He is interested in long term public outreach regarding technical trainings and LID/BMP Installation and Monitoring.

Sydney Laudenslager - Water Resource Engineer. Sydney studied Water Resource Engineering at Penn State University. She is a licensed Mechanical and Plumbing Engineer and has designed plumbing and water reuse systems and for commercial buildings and campuses. Her work focuses on the intersection of built environments, native landscapes, wonderful people, and vast ecological diversities of California.

Paige Brue - Water Resources Engineer. Paige has over six years of stormwater engineering experience and is a licensed California Professional Engineer (PE). She has been involved in numerous bank protection design projects and sediment transport studies for large residential development projects throughout Los Angeles County, California and Riverside County, California. For these projects, she generated hydrologic and hydraulic models, performed design calculations, and wrote technical design reports. She has also prepared large two-dimensional hydraulic models for several dam-break inundation studies throughout California. In addition to her work in California, Paige has been involved in stormwater Best Management Practice (BMP) design projects and watershed planning projects in North Carolina. She has also aided in developing the Stormwater BMP Inspection and Maintenance Manual for the North Carolina Department of Transportation (NCDOT) and prepared the Georgia Department of Transportation's Monitoring Implementation Plan (MIP) for two years. Paige holds a BS in Environmental and Natural Resources Engineering from Purdue University and MS in Biological Engineering from North Carolina State University.

Joe Madden - Water Resource Project Manager and Construction Advisor. Joe takes Watershed Progressive projects from conception to fruition—leading project teams, performing site analysis, conducting technical design and advising while engaging directly with clients. He joined Watershed Progressive in 2018, previously lending his talents to water-brethren Greywater Corps and Water LA, among others. Joe has designed, facilitated, and built numerous residential and community water projects across California over the past eight years. Joe attained a Permaculture Design Certification from the Regenerative Design Institute, professional accreditation from the American Rainwater Catchment Systems Association, Water Harvester Certification from the Watershed Management Group, and his Qualified Water Efficiency Landscaper certification from the EPA.

Nicole Stern - Water and Landscape Architect. Nicole is a landscape architect focused on regenerative design, green infrastructure, and integrated water systems. Over the past two decades, she has worked on watershed planning, ecological restoration, innovative stormwater management, constructed wetlands for wastewater filtration and reuse, native xeriscaping, urban ecology, and environmental justice projects in the US and internationally. Many of her team projects have achieved LEED Platinum, Living Building Challenge and SITES certifications.

Ryan Silsbee - Water Resources Agricultural Analyst. Ryan is dedicated to encouraging the widespread adoption of sustainable and regenerative agricultural practices in today's food system. After years managing orchards and perennial crops in the Central Coast region, his focus turned to helping growers with climate and water resiliency. He is passionate about bringing best management practices to farms and orchards in critical watersheds and inspired by the growing interest to build resiliency into agricultural systems in California. Ryan's studies in Political Science and Economics for his B.A. at UC Berkeley and Agroecology for his Cert. in Ecological Horticulture from UC Santa Cruz have provided a good background for working at the crossroads of organic agriculture and water resource management. His work at Watershed Progressive includes water resource data analysis, evaluating best management practices for water efficiency, water resilience management plans, and regenerative land-use strategies.

Eli Loughmiller - Field Manager. Eli's career has spanned the fields of education, recreation, landscaping, and horticulture. He can think of no better focus for the future sustainability of the region than to work with Watershed Progressive to educate the community, mitigate stormwater damage, harvest rainwater, implement greywater systems, and repopulate our native plant species.

Jami Wolf – Landscape Design Specialist. Jamie studied environmental studies at Eckerd College and began research on plant traits and as an ecological function. She focused on how plants communities can restore degraded habitat and maintain the health ecosystems at the Tampa Bay Aquatic Preserve. When she first moved to California in 2009 she focused on desert botany at Joshua Tree National Park, after which she moved to San Francisco and began addressing environmentally sustainable business and ways to strengthen green economy. She is focused on learning the most efficient strategies to meet human demands for clean water, waste disposal, landscape, natural biodiversity and overall ecosystem health.

Ashley Brown – Water Resource Field Specialist. Ashley installs greywater + rainwater systems and drought-tolerant landscapes to enhance community resilience. As a member of the monitoring team, she also creates and implements plans to measure post-installment performance and quality. Ashley earned a Bachelor of Science in Environmental Science, Technology, and Policy from Cal State University Monterey Bay in 2015. Prior to Watershed Progressive, Ashley worked as a biologist for environmental consulting firms, where she ensured adequate environmental protections for major construction projects.

Vincent Burnard – Water Resource Field Specialist. Vince joined Watershed Progressive in 2022 after working for five years as a greywater installer, designer, and foreman in Los Angeles. He brings a wealth of construction, plumbing, and electrical experience, with a passion for organization and establishing best practices in a relatively new and "un-standardized" industry.

SECTION 2 – NOT USED

SECTION 3 – CONTRACTOR'S LICENSE CERTIFICATION AND DEPARTMENT OF INDUSTRIAL RELATIONS REGISTRATION

Pursuant to the Business and Professions Code of the State of California, Section 7030:

"Contractors are required by law to be licensed and regulated by the Contractor's State License Board. Any questions concerning a contractor may be referred to the Registrar, Contractor's State License Board, 3132 Bradshaw Road, Sacramento, California, Mailing Address: P.O. Box 26000, Sacramento, California 95826."

Contractor certifies that it is now licensed in accordance with the provisions of the Contractor's License Law of the State of California, and license information is as follows:

License Number: _____

License Classification: _____

License Expiration: _____

Pursuant to California Labor Code section 1725.5, a contractor shall be registered to be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any public work contract.

By executing its bid, Bidder certifies that it is now registered in accordance with the provisions of California Labor Code section 1725.5, and has received the following number:

DIR Registration Number: _____

PART IV CONTRACT AND BONDS

INDEX

Section	Title
1	Contract
2	Performance Bond
3	Payment Bond
4	Workers Compensation Certification

**PART IV
CONTRACT AND BONDS**

SECTION 1 – CONTRACT

This Contract is entered into as of the _____ day of _____, 2022, between Mountain Sage Landscapes, DBA Watershed Progressive (Contractor) and the Twain Harte Community Services District (District). For and in consideration of the payment to be made to Contractor, as hereinafter provided, Contractor shall perform all work specified below in accordance with all the provisions of the Contract, consisting of the following documents, which comprise the entire agreement between the District and Contractor, concerning the work, herein:

- Part I – Not Used
- Part II – Not Used
- Part III – Proposal
- Part IV – Contract and Bonds
- Part V – General Conditions - Construction
- Part VI – Special Conditions - Construction
- Part VII – General Conditions – Design & Construction Management
- Part VIII – Conceptual Project Drawings

1. **WORK TO BE PERFORMED:** Except as specified elsewhere in this Contract, Contractor shall furnish all plant, labor, materials, chemicals, tools, supplies, equipment, transportation, technical and professional services and supervision, and to perform all operations necessary and required to satisfactorily perform the work specified herein; all in accordance with the specifications contained herein.
2. **COMPENSATION:** As full consideration for satisfactory performance by Contractor of this Contract, the District will pay Contractor compensation in an amount not to exceed **\$1,251,795** in accordance with the prices set forth in Part III, Proposal, and with the payment provisions of this Contract.
3. **TIME OF PERFORMANCE:** Time is of the essence for this Contract. Contractor agrees to complete all work by **January 31, 2024**, and to substantially complete construction by **December 15, 2023**.
4. **AUTHORIZATION:** Both the District and Contractor do covenant that each individual executing this document by and on behalf of each part is a person duly authorized to execute contracts for that party.
5. **REPORTING REQUIREMENTS:** If Contractor is an individual or sole proprietor, Contractor must furnish its Social Security Number (SSN). If Contractor is a corporation or partnership, Contractor must furnish its Federal Employer Identification Number (FEIN). Complete the Taxpayer I.D. Number section below. If the work under this contract is subject to the payment of prevailing wages, Contractor must furnish its Department of Industrial Relations registration number.
6. **LIQUIDATED DAMAGES:** Contractor agrees to pay liquidated damages to the District at the rate of \$500 per calendar day under conditions defined in Part VI, Special Conditions - Construction, SC-5 Liquidated Damages.

In witness whereof, the District and Contractor have executed this Contract on the date first above written.

MOUNTAIN SAGE LANDSCAPES, DBA WATERSHED PROGRESSIVE

P.O. Box 1063
Groveland, CA 95321
(209) 732-0018

By: _____

Name Printed: Regina Hirsch

Title: President

Date: _____

DIR registration: 1000575723

Taxpayer I.D:

FEIN: 26-3487001

TWAIN HARTE COMMUNITY SERVICES DISTRICT:

By: _____

Name/Title: Gary Sipperley, Board President

Date: _____

ATTEST:

By: _____

Name/Title: Kimberly Silva, Board Secretary

SECTION 2 – PERFORMANCE BOND

We, _____, as Principal, and _____, as Surety, are jointly and severally held and bound unto the Twain Harte Community Services District, organized and existing under the laws of the State of California, sometimes referred to as the District, in the sum of _____ Dollars (\$_____) for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators and assigns, and successors and assigns, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, on the _____ day of _____, the said _____, Principal herein, executed a certain Contract with the District, by the terms, conditions, and provisions of which Contract the said _____, Principal herein, agrees to construct Twain Harte Meadows Park, at 22945 Meadow Drive, Twain Harte, CA, all as set forth in said Contract, which Contract as so executed is attached hereto and by reference is incorporated herein and made a part hereof as fully for all purposes as if here set forth at length.

NOW, THEREFORE, if the Principal herein shall faithfully and truly observe and comply with the terms, conditions, and provisions of said Contract in all respects, and shall well and truly and fully do and perform all matters and things undertaken to be performed under said Contract, upon the terms set forth therein, and within the time prescribed therein, and shall indemnify the District against any direct or indirect damages that shall be claimed for injuries to persons or property during the course of any work performed by or on behalf of Principal under said Contract, and until all work under said Contract is accepted and for an additional period of one (1) year after completion and acceptance of said work by the District, and shall apply all laborers, mechanics, subcontractors, materialmen, and all persons who shall supply such Contractor or subcontractor with services or supplies for carrying on such work, and shall perform said Contract according to laws, and shall complete in a satisfactory manner all repairs or replacements resulting from or caused by defective materials and/or faulty workmanship in the prosecution of the work during the one-year warranty period, then this obligation shall be void, otherwise it shall remain in full force and effect. No prepayment or delay in payment and no change, extension, addition, or alteration of any provision of said Contract agreed to between the Principal and the District, and no forbearance on the part of the District, shall operate to relieve any Surety from liability on this Bond, and consent to make such changes, extension, additions, and alterations without further notice to or consent by any Surety is hereby given.

In the event suit is brought upon this Bond by the District and judgment is entered in its favor, the Surety or Sureties shall pay all costs incurred by the District in such suit, including attorneys' fees to be fixed by the court.

Date

Company Name

Principal (Authorized Signature)

Business Address

City

State

ACKNOWLEDGEMENT OF PRINCIPAL'S SIGNATURE:

<p>A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.</p>	
<p>State of California } County of _____ } ss _____ On _____ before me _____, a Notary Public, _____ personally appeared _____ Signer(s) Name(s) of</p>	<p>CAPACITY CLAIMED BY SIGNER</p> <p><input type="checkbox"/> INDIVIDUAL(S) <input type="checkbox"/> CORPORATE OFFICER(S) _____ Title(s)</p> <p><input type="checkbox"/> PARTNER(S) <input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> TRUSTEE(S) <input type="checkbox"/> OTHER _____ Describe</p> <p><input type="checkbox"/> SUBSCRIBING WITNESS (for) _____ _____ _____</p>
<p>who proved to me on basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument, the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.</p>	<p>SIGNER IS REPRESENTING: Name(s) of Person(s) or Entity(ies) _____ _____ _____</p>
<p>I certify under PENALTY AND PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.</p> <p>_____ Notary</p> <p>_____ Signature of</p> <p>WITNESS my hand and official seal</p>	

Date

Company Name

Surety (Authorized Signature)

Business Address

City

State

ACKNOWLEDGEMENT OF SURETY'S SIGNATURE:

<p>A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.</p>	
<p>State of California } County of _____ } ss</p>	<p>CAPACITY CLAIMED BY SIGNER</p>
<p>On _____ before me _____, a Notary</p> <p>Public, personally appeared _____ Name(s) of Signer(s)</p>	<p><input type="checkbox"/> INDIVIDUAL(S) <input type="checkbox"/> CORPORATE OFFICER(S) _____ Title(s) <input type="checkbox"/> PARTNER(S) <input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> TRUSTEE(S) <input type="checkbox"/> OTHER _____ Describe</p>
<p>who proved to me on basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument, the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.</p>	<p><input type="checkbox"/> SUBSCRIBING WITNESS (for) _____ _____ _____</p>
<p>I certify under PENALTY AND PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.</p> <p>_____ WITNESS my hand and official seal</p> <p>_____ Notary Signature of</p>	<p>SIGNER IS REPRESENTING: Name(s) of Person(s) or Entity(ies) _____ _____ _____</p>

SECTION 3 – PAYMENT BOND

We, _____, as Principal, and _____, as Surety, are jointly and severally held and bound unto the Twain Harte Community Services District, organized and existing under the laws of the State of California, sometimes referred to as the District, in the sum of _____ Dollars (\$_____) for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators and assigns, and successors and assigns, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, on the _____ day of _____, the said _____, Principal herein, executed a certain Contract with the District, by the terms, conditions, and provisions of which Contract the said _____, Principal herein, agrees to construct Twain Harte Meadows Park, at 22945 Meadow Drive, Twain Harte, CA, all as set forth in said Contract, which Contract as so executed is attached hereto, and by reference is incorporated herein and made a part hereof as fully for all purposes as if here set forth at length.

AND WHEREAS, said Contractor is required by the provisions of Section 9550, California Civil Code, to furnish a bond in connection with said Contract, as hereinafter set forth.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Contractor, its heirs, executors, administrators, successors, or assigns, or subcontractors, shall fail to pay any of the persons with respect to work or labor performed by any such claimant, or for any amount required to be deducted, withheld, and paid over to the California Franchise Tax Board from the wages and employees of the Contractor, with respect to such Contract and warranty work and labor that the Surety or Sureties will pay for the same, in an amount not exceeding the sum specified in this Bond, and also, in case suit is brought upon the Bond, a reasonable attorney’s fee, to be fixed by the court.

This Bond shall inure to the benefit of any and all of the persons as to give a right of action to such persons or their assigns in any suit brought upon this Bond in accordance with Section 9550 et seq. of the California Civil Code.

In the event suit is brought upon this Bond and judgment is recovered, the Surety shall pay all costs incurred by the District in such suit, including reasonable attorney’s fees to be fixed by the court.

No prepayment or delay in payment and no change, extension, addition, or alteration of any provision of said Contract agreed to between the Contractor and the District, and no forbearance on the part of the District, shall operate to relieve any Surety from liability of this Bond, and consent to make such changes, extensions, additions, and alterations without further notice to or consent by such Surety is hereby given.

Date

Company Name

Principal (Authorized Signature)

Business Address

City

State

ACKNOWLEDGEMENT OF PRINCIPAL'S SIGNATURE:

<p>A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.</p>	
<p>State of California } County of _____ } ss On _____ before me _____, a Notary Public, personally appeared _____ Signer(s) Name(s) of</p>	<p>CAPACITY CLAIMED BY SIGNER</p> <p><input type="checkbox"/> INDIVIDUAL(S) <input type="checkbox"/> CORPORATE OFFICER(S) _____ Title(s) <input type="checkbox"/> PARTNER(S) <input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> TRUSTEE(S) <input type="checkbox"/> OTHER _____ Describe <input type="checkbox"/> SUBSCRIBING WITNESS (for) _____ _____ _____</p>
<p>who proved to me on basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument, the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.</p>	<p>SIGNER IS REPRESENTING: Name(s) of Person(s) or Entity(ies) _____ _____ _____</p>
<p>I certify under PENALTY AND PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.</p> <p>WITNESS my hand and official seal</p> <p>_____ Signature of Notary</p>	

Date

Company Name

Surety (Authorized Signature)

Business Address

City

State

ACKNOWLEDGEMENT OF SURETY'S SIGNATURE:

<p>A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.</p>	
<p>State of California } County of _____ } ss On _____ before me _____, a Notary Public, personally appeared _____ Signer(s) Name(s) of</p>	<p>CAPACITY CLAIMED BY SIGNER</p> <p><input type="checkbox"/> INDIVIDUAL(S) <input type="checkbox"/> CORPORATE OFFICER(S) _____ Title(s)</p> <p><input type="checkbox"/> PARTNER(S) <input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> TRUSTEE(S) <input type="checkbox"/> OTHER _____ Describe</p> <p><input type="checkbox"/> SUBSCRIBING WITNESS (for) _____ _____ _____</p>
<p>who proved to me on basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument, the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.</p>	<p>SIGNER IS REPRESENTING: Name(s) of Person(s) or Entity(ies) _____ _____ _____</p>
<p>I certify under PENALTY AND PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.</p> <p>_____ WITNESS my hand and official seal</p> <p>_____ Signature of Notary</p>	

SECTION 5 – WORKERS' COMPENSATION CERTIFICATION

AS REQUIRED BY SECTIONS 1861 OF THE CALIFORNIA LABOR CODE

I am aware of the provisions of Section 3700 of the California Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the California Labor Code, and I will comply with such provisions before commencing the performance of the work of this Contract for District Project 150-57-0001, Twain Harte Meadows Park.

Contractor: Mountain Sage Landscapes, DBA Watershed Progressive

By: _____

Name/Title: Regina Hirsch, President

Date: _____

**PART V
GENERAL CONDITIONS - CONSTRUCTION**

INDEX

Section	Title
GC-1	Entire Agreement
GC-2	Independent Contractor
GC-3	Authorized Representatives
GC-4	Meetings
GC-5	Notices
GC-6	Discovery of Errors, Omissions or Discrepancies
GC-7	Laws, Regulations, and Prevailing Wages
GC-8	Permits, Licenses, Easements and Taxes
GC-9	Publications
GC-10	Waiver
GC-11	Indemnity
GC-12	Patent Indemnity
GC-13	Subcontracts and Subcontractors
GC-14	Assignments
GC-15	Termination of Right to Proceed
GC-16	Optional Termination
GC-17	Suspension of Work
GC-18	Contractor-Furnished Drawings and Data
GC-19	Substitutions and Equal Alternatives
GC-20	Quality of Equipment, Materials, Products, and/or Workmanship
GC-21	Inspections and Samples
GC-22	Project Documents and Record Drawings
GC-23	Safety Requirements
GC-24	Cleaning Up
GC-25	Contaminated Soils/Materials
GC-26	Existing Utilities and Interferences
GC-27	Differing Site Conditions

GC-28	Changes
GC-29	Delays and Time Extensions
GC-30	Extra Work Payment
GC-31	Protest Procedure
GC-32	Records and Accounts
GC-33	Progress Payments
GC-34	Liens and Stop Notice
GC-35	Acceptance of Contract and Final Payment
GC-36	Survival
GC-37	Warranty
GC-38	Not Used
GC-39	Not Used
GC-40	No Discrimination
GC-41	Dependent on Funding
GC-42	Not Used
GC-43	Not Used
GC-44	Not Used
GC-45	Not Used
GC-46	Not Used
GC-47	Not Used
GC-48	Not Used
GC-49	Not Used

**PART V
GENERAL CONDITIONS - CONSTRUCTION**

GC-1 ENTIRE AGREEMENT

This Contract embodies the entire agreement between the District and Contractor. The parties shall not be bound by or be liable for any statement, representation, promise, inducement, or understanding of any kind or nature not set forth herein. No changes, amendments, or modifications of any of the terms or conditions of the Contract shall be valid unless reduced to writing and signed by both parties.

GC-2 INDEPENDENT CONTRACTOR

Contractor represents that it is fully experienced and properly qualified to perform the class of work provided for herein, and that it is properly licensed, equipped, organized, and financed to perform such work. Contractor shall act as an independent contractor and not as the agent of the District in performing the Contract, maintaining complete control over its employees and all of its subcontractors. Nothing contained in this Contract or any subcontract awarded by Contractor shall create any contractual relationship between any such subcontractor and the District. Contractor shall perform all work in accordance with its own methods subject to compliance with the Contract.

Contractor shall employ only competent and skilled personnel to perform the work. Contractor shall, if requested to do so by the District in writing, remove from the jobsite any personnel of Contractor. Contractor is responsible for maintaining satisfactory conduct of its employees and those of its subcontractors and maintaining labor relations in such manner as shall provide for harmony among the workers.

Contractor shall comply with and shall cooperate with the District in enforcing jobsite conditions which affect the performance of the work including but not limited to starting and quitting time, smoking regulations, check-in and check-out procedures, jobsite safety regulations, and daily clean-up.

GC-3 AUTHORIZED REPRESENTATIVES

Before starting work, Contractor shall designate a competent, authorized representative acceptable to the District to represent and act for Contractor and shall inform the District in writing of the name and address of such representative together with a clear definition of the scope of his/her authority to represent and act for Contractor and shall specify any and all limitations of such authority. Contractor shall keep District informed of any subsequent changes in the foregoing. All notices, determinations, instructions, and other communications given to the authorized representative by the District shall be binding upon Contractor.

The District's representative (sometimes referred to as "District") is the District's General Manager or the General Manager's authorized designee. All questions and requests of the Contractor as to compensation (including additional compensation), interpretation of the Contract, instructions, or extensions of time, otherwise shall be submitted in writing to the District's representative for determination. The District's representative is authorized to:

1. Determine the amount, quality, acceptability, and fitness of all work, materials, and equipment required by the Contract.
2. Make the final decision on all questions that may arise as to the quality or acceptability of materials furnished and work performed and as to the manner of performance and rate of progress of the work.
3. Make the final decision on all questions that may arise as to the coordination, interpretation and acceptable fulfillment of the Contract and its plans and Specifications.
4. Make the final decision on all questions as to measurement and payment and amounts owed to the Contractor.
5. Reject defective work and materials whenever such rejection may be necessary to assure execution of the Contract in accordance with the intent of the Contract.
6. Prepare and/or issue Contract Change Orders for all authorized changes or approved extra work in the Contract.
7. Monitor Project schedules and to enforce Project schedule requirements, and to take such measures as may be necessary to maintain overall Project schedules.
8. Enforce and to make effective such decisions and orders that the Contractor fails to carry out promptly.

GC-4 MEETINGS

A preconstruction meeting will be held after the award of the Contract to review the Contractor's preconstruction submittals as required by the Contract and to discuss various safety and administrative items. The Contractor shall also be prepared to discuss the construction schedule and methods of implementing the various work items.

The District may notice other meetings at which attendance by the Contractor and subcontractors may be required.

GC-5 NOTICES

Any written notice to be given to Contractor by the District, may be delivered in person to Contractor's authorized representative or mailed to the address last given in writing by Contractor.

Notices to District:

Twain Harte Community Services District
P.O. Box 649
Twain Harte, CA 95383

Administrative Representative: Tom Trott, General Manager
Contract No.: 150-57-0001
Telephone: (209) 586-3172

Technical Representative: Regina Hirsch
Telephone: (209) 732-0018

GC-6 DISCOVERY OF ERRORS, OMISSIONS OR DISCREPANCIES

If the Contractor discovers any errors, omissions, discrepancies, or conflicts in the Contract, it shall immediately so inform the District in writing. The District will promptly clarify such matters by issuing Addenda or Change Orders. Failure or delay to act on the part of the District shall not constitute a waiver of any right afforded the District by the Contract or constitute an implied approval. Any work affected by such discoveries that is performed by the Contractor prior to authorization by the District shall be at the Contractor's risk.

Unless otherwise noted below, conflicts or inconsistencies between parts of the Contract will be resolved by the District with a Change Order or with an Addendum, if required. Addenda and Change Orders bearing the most recent date shall prevail over Addenda or Change Orders bearing earlier dates. Any reference to Addenda-changed Specifications or drawings shall be considered to have been changed accordingly.

In resolving conflicts, errors, or discrepancies, the order of precedence shall be as follows:

1. Change Orders/Addenda (most recent in time takes precedence)
2. Contract and Bond Forms
3. Technical Specifications
4. Special Conditions
5. Project Drawings
6. General Conditions
7. Instructions to Bidders
8. Bid Forms
9. Notice to Contractors

Reference specifications shall have the same order of precedence as the document in which it is referenced. For example, a reference to the District's Standard Specifications contained in the Technical Specifications will have the same order of precedence as that Technical Specification. A reference to an Appendix contained in the Technical Specifications will have the same order of precedence as that Technical Specification. If a reference specification is mentioned in more than one part of the Contract, the part with the highest order of precedence shall govern.

With reference to the Project Drawings:

1. Figures govern over scaled dimensions.
2. Project-specific drawings govern over general and typical drawings.
3. Addenda/Change Order drawings govern over Project Drawings.
4. Project Drawings govern over standard drawings.

It shall be the Contractor's responsibility to resolve any conflicts between the requirements contained on permits from other agencies and the Contract to the satisfaction of the District. When there is a conflict between the requirement(s) as specified in the Contract and as required by other agencies, the more restrictive requirement(s) shall prevail.

By execution of the Contract, the Contractor agrees that no request for additional compensation, and/or claim under Government Code Section 900 et seq. will be made against the District for any damages in excess of the aggregate sum of \$50,000 or five percent (5%) of the

construction costs (whichever is greater) for alleged damage that it or its subcontractors may suffer due to the inadequacy of the Contractor's bid on account of any alleged errors, omissions, or other deficiencies in the Contract. This limitation shall not apply to compensation for extra work authorized by the District as provided for in this Section GC-30, Extra Work Payment, and Section GC-27, Differing Site Conditions.

GC-7 LAWS, REGULATIONS, AND PREVAILING WAGES

This Contract shall be in accordance with the laws of the state of CALIFORNIA. Parties further stipulate that this Contract was entered into in the state of CALIFORNIA and the state of CALIFORNIA is the only appropriate forum for any litigation as a result of breach hereof or any questions risen herefrom.

Contractor shall keep itself fully informed of, and shall observe and comply with, all laws, ordinances, and regulations which in any manner affect those engaged or employed on any work, or the materials and equipment used in any work, or in any way affect the performance of any work, and of all orders and decrees of agencies having any jurisdiction or authority over work performed under the Contract.

Contractor shall comply with all applicable federal, state, and local laws, ordinances, rules, and regulations; and lawful orders of all authorities having jurisdiction for the safety of persons and protection of property.

If any discrepancy or inconsistency should be discovered between the Contract and any such law, ordinance, regulation, order, or decree, Contractor shall immediately report the same in writing to the District. Contractor shall be responsible for the compliance by subcontractors of all tiers with the above provisions of this Section. Contractor shall post all job site notices as required by law or regulation.

- A. Prevailing Wages: Special attention is directed to Part 7, Chapter 1, Article 2, Sections 1770 et seq. of the California Labor Code. Reference is hereby made to the provisions for minimum per diem wages contained in Part I, Notice to Contractors. . This Contract will be subject to compliance monitoring and enforcement by the California Department of Industrial Relations, pursuant to Labor Code Section 1771.4.

The Contractor and each subcontractor engaged in the work shall pay each respective employee thereof an amount not less than the general prevailing rate of per diem wages established in compliance with Section 1770 et seq. of the California Labor Code and as determined by the State of California Director of Industrial Relations to be effective and applicable for the various crafts, trades, or type of worker needed or required to execute the Contract. In accordance with Section 1770 of said Labor Code, nothing otherwise provided under Article 2 of said Labor Code shall prohibit the payment of wage rates to any worker in excess of such prevailing rates of wages as determined by the Director of the Department of Industrial Relations. However, should the Contractor or a subcontractor have a contractual relationship with workers whereby per diem rates of wages are paid in excess of such determined prevailing rates of wages, the Contractor or subcontractor shall identify and submit a certified listing of such workers and the amounts payable prior to beginning construction operations applicable thereto in accordance with this General Condition.

Failure of the Contractor or any subcontractor to certify and list workers and actual wages in excess of those effective as determined by the State of California Director of Industrial Relations shall be deemed an express statement by the Contractor or such subcontractor that actual wages shall be as determined by the Director of Industrial Relations and such will be paid all workers and be applicable to all work required and ordered under the Contract.

The possibility of labor cost increases within the periods of time established and specified for completion of the Project is one of the elements to be considered by bidding Contractors and its subcontractors. The District will not consider any increase in labor costs as a basis of a request for additional compensation for work bid as specified and shown regardless of the cause of the increase.

It is stipulated that the provisions of Article 2, Chapter 1, Part 7, Division 2 (commencing with Section 1770), of the California Labor Code, and in particular, Sections 1775 and 1776, shall be complied with. In accordance with said Section 1775, the Contractor and any subcontractor under the Contractor, shall forfeit to the District or to the Division of Labor Standards, as a penalty, up to fifty dollars (\$50) per each day or portion thereof, for each worker paid less than the prevailing rates for such work or craft in which such worker is employed for any work done under the Contract by him/her or by any subcontractor under the Contractor in violation of the provisions of the Labor Code and in particular, California Labor Code Sections 1770 to 1780, inclusive. The amount of the daily penalty shall be as determined by the Labor Commissioner in accordance with Section 1775. In addition to said penalty and pursuant to said Section 1775, the difference between the prevailing wage rates and the amount paid to each worker by the Contractor or subcontractor for each day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor or subcontractor.

If a worker employed by a subcontractor is not paid the general prevailing per diem wages by the subcontractor, the prime contractor or the project is not liable for any penalties unless the prime contractor had knowledge of that failure to pay specified prevailing rate of wages to those workers or unless the prime contractor fails to comply with the California Labor Code, Section 1775(b) (1)-(4).

Where prevailing wage determinations have been predetermined to change during the Contract (beyond expiration dates as indicated on the forms), the Contractor shall obtain such changes from the Prevailing Wage Unit, Division of Labor Statistics and Research, Department of Industrial Relations, 525 Golden Gate Avenue, San Francisco, California 94102, telephone (415) 557-0561, and deliver copy of such to the District.

If a Contractor or subcontractor intends to use a craft or classification not shown on the general prevailing wage determinations, the Contractor or subcontractor may be required to pay the wage rate of the craft or classification most closely related to it as shown in the general determinations effective at the time of bid opening.

- B. Payroll Records: The Contractor and subcontractor's attention is directed to the provisions of Section 1776 of the California Labor Code and to the requirements therein pertaining to the keeping, availability, and filing of accurate payroll records of all journeymen, apprentices, and other workers performing work under this Contract. The Contractor agrees to comply with the requirements of said section.

Prior to each monthly progress payment, the Contractor shall deliver to the District copies of certified payrolls of its and all subcontractors' forces performing work at the job site (or sites established primarily for the work) for labor compliance purposes and extra/force account considerations. Such records shall be kept current on an effective day or period basis. The certified payroll records shall be kept on forms provided by the Division of Labor Standards Enforcement, or shall contain the same information as the forms provided by the Division in addition to the above-listed information.

The Contractor shall also furnish the records specified in California Labor Code Section 1776, including but not limited to the certified payrolls, directly to the Labor Commissioner.

Each payroll record shall contain or be verified by a written declaration that is made under penalty of perjury stating:

1. The information contained in the payroll is true and correct;
2. The employer has complied with the requirements of California Labor Code Sections 1771, 1811, and 1815 for any work performed by its employees on the Project.

The Contractor shall inform the District of the location of the above payroll records, including the street address, city and county, and shall, within five (5) working days, provide a notice of change of location and address.

The Contractor or subcontractor has 10 days in which to comply subsequent to receipt of a written notice requesting certified payroll records. In the event that the Contractor or subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the District, forfeit one hundred dollars (\$100) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. The Contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District shall be marked or obliterated in accordance with California Labor Code Section 1776.

Compliance with the above provisions of this Section and California Labor Code, Section 1776, shall be the responsibility of the Contractor or subcontractor. Pursuant to Labor Code Section 1771.4, Contractor is required to post all job-site notices prescribed by law or regulation that include, but are not limited to, payment of prevailing wages.

- C. Labor Discrimination: Attention is directed to Section 1735 of the Labor Code, which reads as follows:

No discrimination shall be made in the employment of persons upon public works because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, or sex of such persons, except as provided in Section 12940 of the Government Code, and every contractor for public works violating this Section is subject to all the penalties imposed for violation of this Chapter.

- D. Apprentices: The Contractor shall comply with the provisions of Sections 1777.5 and 1777.6, of the California Labor Code in regard to employment of apprentices.
- E. Work Hours: Contractor stipulates and agrees that pursuant to the provisions of Labor Code, Sections 1810 through 1815, eight (8) hours labor shall constitute a legal day's work, and no worker shall be required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) calendar week, except as provided for under Section 1815. Nothing in this provision shall be construed to relate to wage determination or in any way affect contractual provisions related to compensation. The contractor or subcontractor shall, as a penalty to the District, forfeit twenty-five dollars (\$25) for each worker employed in the execution of the contract by the respective contractor or subcontractor for each calendar day during which the worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of this article.

Notwithstanding the Labor Code provisions set forth above, pursuant to Labor Code, Section 1815, work performed by employees of Contractor in excess of eight (8) hours per day and forty (40) hours during any one (1) week shall be permitted provided that compensation shall be made for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1-1/2) times the basic rate of pay.

- F. Travel: As required by Section 1773.8 of the California Labor Code, the Contractor shall pay travel and subsistence payments to each worker needed to execute the work, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with this Section.
- G. Chemical Exposure: Contractor shall comply with Sections 12101 through 12901 of Title 22, California Administrative Code. Contractor shall warn all persons at the work site of their exposure to chemicals known to the state to cause cancer or birth defects or other reproductive harm. Contractor shall be responsible for compliance by its subcontractors with this article.
- H. Air Pollution: The Contractor shall so perform its work as not to discharge into the atmosphere from any source whatsoever smoke, dust, or other air contaminants in violation of the laws, rules, and regulations of the governmental entities having jurisdiction.
- I. Asbestos: The Contractor shall comply with all state laws and regulations regarding asbestos and asbestos-related work including, but not limited to, the provisions of California Labor Code, Sections 6501.5 through 6511.
- J. Human Remains: The Contractor's attention is directed to the provisions of Health and Safety Code, Section 7050.5, relating to the discovery of human remains. Upon any such discovery, there shall be no further excavation or disturbance of the site. The Contractor shall immediately notify the District and the Tuolumne County Sheriff-Coroner's Office of any such find and shall comply with all other applicable laws and regulations.
- K. Cultural Resources: The Contractor's attention is directed to the provisions of Health and Safety Code, Section 7050.5, and Public Resources Code, Sections 5098.5, 5097.94, 5097.98, and 5097.99, and the California Environmental Quality Act (CEQA), Appendix K, relating to the excavation, removal, destruction, injury, and defacement of historic or prehistoric ruins, burial grounds, archeological or vertebrate paleontological sites, or any

other archeological, paleontological or historical feature. The Contractor shall immediately stop work in the area of the archeological discovery and notify the District and comply with all other laws and regulations upon discovery of any such remains in the construction site. Compensation to the Contractor, if any, for lost time or changes in construction to avoid the find shall be determined in accordance with changed conditions or Change Order provisions of the Contract. The Contractor shall have no property right in such sites or features.

In the event that any Indian relics or items possessing archaeological or historical value are discovered by the Contractor or any of its subcontractors or any of their representatives or employees, the Contractor shall immediately notify the District and await the District's decision before proceeding with any work. The Contractor shall have no property right in such relics and items.

L. License: Contractor shall be licensed under the provisions of Chapter 9, Division 3, of the Business and Professions Code of the State of California to do the type of work contemplated in the Project and shall be skilled and regularly engaged in the general class or type of work called for under the Contract.

M. Agreement to Assign (Contractors and Subcontractors): Agreement to Assign (Contractors and Subcontractors): The Contractor's and subcontractors' attention is directed to the provisions of Government Code, Section 4551, which requires that, in entering into a public works contract or subcontract, contractors and subcontractors agree to assign to the purchasing body all rights arising from violations of antitrust regulations. In pertinent part, Government Code, Section 4551, reads as follows:

In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professional Code) arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor without further acknowledgement by the party

N. Claims and Actions Against Public Entities and Employees: The Contractor's and subcontractors' attention is directed to Government Code Section 900 et seq. dealing with claims and actions against public entities and employees. Nothing contained in the Contract, including but not limited to Section GC-28, Changes, is intended to modify or remove the requirements set forth in these Government Code sections.

1. If the Contractor files any claim with the District for compensation in excess of the Contract amount or return of liquidated damages, the claim shall be in writing and include the documents necessary to substantiate the claim. Said documents may include invoices, cost breakdowns, and other documentation explaining the details of the Contractor's calculations of the amount claimed. Such claim must be filed on or before the date of final payment. Nothing in this subsection is intended to extend the time limit or supersede notice requirements otherwise provided by the Contract relating to requests for extra compensation or extensions of time. The presentation

of any claim by the Contractor shall be accompanied by a signed personal certification as set forth below.

PERSONAL DECLARATION AND CERTIFICATION OF CLAIM

I, _____, BEING THE _____ (MUST BE AN OFFICER) OF _____ (CONTRACTOR), DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA, AND DO PERSONALLY CERTIFY AND ATTEST THAT: I HAVE THOROUGHLY REVIEWED THE ATTACHED CLAIM AND KNOW ITS CONTENTS, AND SAID CLAIM IS MADE IN GOOD FAITH; THE SUPPORTING DATA IS TRUTHFUL AND ACCURATE; THAT THE AMOUNT REQUESTED ACCURATELY REFLECTS THE CONTRACT ADJUSTMENT FOR WHICH THE CONTRACTOR BELIEVES THE DISTRICT IS LIABLE; AND, FURTHER THAT I AM FAMILIAR WITH CALIFORNIA GOVERNMENT CODE SECTION 12650, ET SEQ. PERTAINING TO FALSE CLAIMS, AND FURTHER KNOW AND UNDERSTAND THAT SUBMISSION OR CERTIFICATION OF A FALSE CLAIM MAY LEAD TO FINES, IMPRISONMENT AND/OR OTHER SEVERE LEGAL CONSEQUENCES.

Signed: _____

Date: _____

2. For claims of less than fifty thousand dollars (\$50,000), the District will respond in writing within 45 days of its receipt of the claim, or may request, in writing, within 30 days of its receipt of the claim, submission of additional documentation supporting the claim or relating to defenses or claims the District may have against the Contractor.
 - a. If such additional documentation is requested by the District, it shall be provided by the Contractor within 20 days of its receipt of the request from the District or as otherwise mutually agreed upon by the District and the Contractor.
 - b. Following the Contractor's submission of all requested additional documentation, the District will respond to the claim within 15 days or within the period of time taken by the Contractor in producing the additional documentation, whichever is longer.
3. For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the District will respond in writing within 60 days of its receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, submission of additional documentation supporting the claim or relating to defenses or claims the District may have against the Contractor.
 - a. If such additional documentation is requested by the District, it shall be provided by the Contractor within 30 days of its receipt of the request or as otherwise mutually agreed upon by the District and the Contractor.
 - b. Following the Contractor's submission of all requested additional documentation, the District will respond to the claim within 30 days, or within

the period of time taken by the Contractor in producing the additional documentation, whichever is longer.

4. If the Contractor disputes the District's written response, or if the District fails to respond within the time prescribed, the Contractor may so notify the District, in writing, either within fifteen (15) days of receipt of the District's response or within fifteen (15) days of the District's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon receiving such a demand, the District shall schedule a meet and confer conference within thirty (30) days.
5. If, following the meet and confer conference, the claim or any portion remains in dispute, the Contractor may file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the Contractor submits its written claim pursuant to paragraph 2 above until the time said claim is denied pursuant to the procedures set forth herein, including any period of time utilized by the meet and confer conference.

GC-8 PERMITS, LICENSES, EASEMENTS AND TAXES

- A. Permits and Licenses: Contractor shall, unless otherwise provided elsewhere in the Contract, at its expense, obtain all permits and licenses and pay all charges and fees necessary for the performance of the Contract, and shall give all public notices necessary for the lawful performance of the Contract.

Attention is directed to the Project Documents and to any permits that may have been acquired by or imposed upon the District that contain requirements related to performance of the work, including but not limited to encroachment permits and storm water pollution prevention. All work within public properties and rights of way shall be accomplished in conformance with any specific conditions, instructions, and/or requirements contained in permits issued by the agencies having jurisdiction over such property and rights of way.

Where permits and/or licenses require subsequent contingent permits, inspections, or other actions, the Contractor shall comply with these requirements at no additional cost to the District, except that the inspection fees charged by regulatory and/or permitting agencies shall be paid for by the District. However, if the inspection fee is due to noncompliance of the permit requirements, such inspection fee shall be paid for by the Contractor.

- B. Easements: The District may provide easements for work under the Contract. District-provided easements are shown in the Project Documents. All work within private and public properties shall be accomplished in conformance with any specific conditions, instructions, and/or requirements of the respective easements.

The District may provide additional easements for use of public or private property for working space, haul roads, and for storage of materials and equipment. District-provided easements are shown in the Project Documents. The Contractor may use such property so provided for working space, haul roads, and for storage of materials and equipment. Should the Contractor find it necessary or advantageous to use any land, over and above

that land that is provided, for any purpose whatever, the Contractor shall, at its expense, obtain a written agreement with the property owner and obtain approval from the District for the use of such land. A copy of any such agreement shall be submitted to the District prior to implementation.

Nothing in the Contract shall be construed as allowing the Contractor to make any arrangements with any person to permit occupancy or use of any land, structure, or building for any Contract purpose whatsoever, either with or without compensation, in conflict with any agreement between the District and any owner, former owner, or tenant of such land, structure, or building.

- C. Taxes: Contractor shall pay all taxes, levies, duties, and assessments of every nature due in connection with any work under the Contract, shall make any and all payroll deductions required by law, and shall indemnify and hold harmless the District from any liability on account of any and all such taxes, levies, duties, assessments, and deductions.

GC-9 PUBLICATIONS

No publications or advertisements concerning the subject matter of the Contract shall at any time be made by or on behalf of Contractor, its subcontractors, or suppliers, unless prior written authorization is obtained from the District.

No advertising signs shall be erected at the site of the work.

GC-10 WAIVER

Neither the inspection by the District, nor any order, measurement, approval, determination, decision, or certificate by the District, nor any order by the District for the payment of money, nor any payment for or use, occupancy, possession, or acceptance of the whole or any part of the work by the District, nor any extension of time, nor any other act or omission of the District shall constitute, or be deemed to be acceptance of any defective or improper work, materials, or equipment nor operate as a waiver of any requirement or provision of the Contract, nor of any remedy, power, or right of or herein reserved to the District nor of any right to damages for breach of Contract. Any and all rights and/or remedies provided for in the Contract are intended and shall be construed to be cumulative; and, in addition to each and every other right and remedy provided for herein or by law, the District shall be entitled, as a right, to a writ or injunction against any breach or threatened breach of the Contract by Contractor, by its subcontractors, or by any other person or persons.

None of the provisions of the Contract shall be considered waived by the District unless such waiver is expressly given in writing by the District. No such waiver shall be a waiver of any past or future default, breach, or modification of any of the terms, provisions, conditions, or covenants of the Contract unless expressly set forth in such waiver.

GC-11 INDEMNITY

Contractor shall indemnify, defend, and hold harmless the District and its officers, agents, servants, employees and any other District representatives, and each of them, from and against any and all suits, actions, legal or administrative proceedings, claims, demands, consequential damages, liabilities, interest, attorneys' fees, costs and expenses of whatsoever kind or nature whether arising before or after final acceptance of the work hereunder and in any manner

directly or indirectly caused, occasioned, or contributed to or claimed to be caused, occasioned, or contributed to in whole or in part by reason of any act, omission, fault, or negligence whether active or passive of Contractor, or of anyone acting under its direction, control, or on its behalf including subcontractors in connection with or incident to the performance of this Contract without limiting the generality of the foregoing, the same shall include injury to or death of any person or persons and damage to any property, regardless of where located, including without limitation the property of the District, Contractor's employees, and all other persons. Contractor's aforesaid indemnity and hold harmless agreement shall not be applicable to any liability caused by the active negligence or willful misconduct of the District or its officers, agents or employees.

To the extent permitted by law, the Contractor agrees to indemnify, defend, and hold harmless the State Water Board, and any trustee, and their officers, employees, and agents for the Bonds, if any (collectively, "Indemnified Persons"), against any loss or liability arising out of any claim or action brought against any Indemnified Persons from and against any and all losses, claims, damages, liabilities, or expenses, of every conceivable kind, character, and nature whatsoever arising out of, resulting from, or in any way connected with (1) the Project or the conditions, occupancy, use, possession, conduct, or management of, work done in or about, or the planning, design, acquisition, installation, or construction, of the Project or any part thereof; (2) the carrying out of any of the transactions contemplated by this Contract or any related document; (3) any violation of any applicable law, rule or regulation, any environmental law, rule or regulation or the release of any toxic substance on or near the Project; or (4) any untrue statement or alleged untrue statement of any material fact or omission or alleged omission to state a material fact necessary to make the statements required to be stated therein, in light of the circumstances under which they were made, not misleading with respect to any information provided by the Contractor for use in any disclosure document utilized in connection with any of the transactions contemplated by this Contract, except those arising from the gross negligence or willful misconduct of the Indemnified Persons. To the fullest extent permitted by law, the Contractor agrees to pay and discharge any judgment or award entered or made against Indemnified Persons with respect to any such claim or action, and any settlement, compromise or other voluntary resolution. The provisions of this section survive the term of this Contract.

Contractor shall include in each agreement with each of its subcontractors at all tiers, a provision requiring that the subcontractor indemnify the District and State Water Board as stated in this Section.

GC-12 PATENT INDEMNITY

The Contractor shall pay all licenses, copyrights, fees, and royalties and assume all costs incident to the use and performance of the work, or the incorporation in the work, of any invention, design, process, product, or device that is the subject of patent rights or copyrights held by others. The Contractor shall indemnify, defend, and save harmless the District, its officers, directors, employees, representatives, and agents, and each of them from and against all claims, losses, costs, damages, consequential damages, and expenses, including attorneys' fees, incurred by the District, its officers, directors, employees, representatives, and agents as a result of or in connection with any claims or actions based upon infringement or alleged infringement of any patent and/or copyright and arising out of the use of the materials, equipment, and/or products furnished under the Contract by the Contractor, or out of the processes or actions employed by, or on behalf of, the Contractor in connection with the performance of the Contract. The Contractor shall, at its expense, promptly defend against any such claim or action, whether or not well founded in fact or in law, provided that the District shall

have notified the Contractor upon becoming aware of such claims or actions, and provided further that the Contractor's aforementioned obligations shall not apply to equipment, materials, and/or products furnished or specified by the District. The Contractor shall have the right, in order to avoid such claims or actions, to substitute at its expense noninfringing equipment, materials, and/or products, or to modify at its expense such infringing equipment, materials, and/or products so they become noninfringing, provided that such substituted and modified equipment, materials, and/or products shall meet all the requirements and be subject to all the provisions of the Contract.

GC-13 SUBCONTRACTS AND SUBCONTRACTORS

No subcontract shall be entered into and Contractor shall not substitute any person as subcontractor in place of a subcontractor so listed in the Contract provided that the District, at its discretion, may consent to a subcontractor substitution if (1) the subcontractor listed fails or refuses to execute a written contract, or (2) the substitution is otherwise necessary to the efficient construction of the work. In either case, Contractor shall obtain the District's prior written consent. No subcontracts at any tier shall relieve Contractor of any of its liabilities or obligations under the Contract, and Contractor agrees that it is fully responsible to the District for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by them in the performance of the Contract. Contractor shall assure that each subcontractor at all tiers fully complies with the provisions of any applicable Worker's Compensation Act or similar law having application to subcontractor's employees. Failure of Contractor or any of its subcontractors to comply with this provision will be considered as grounds for termination of the Contract at Contractor's expense in accordance with Section GC-15 Termination of Right to Proceed.

Nothing contained in the Contract shall create any contractual relationship between any subcontractor and the District.

The Contractor shall, at all times, be responsible for the safety of its subcontractors' employees at any tier and for its subcontractors' plants and equipment at any tier; and the method of prosecuting the work and shall ensure the compliance, by all subcontractors' employees at any tier, with all local, state, and federal safety regulations and the District Safety Requirements as may be applicable to the performance of the work.

The Contractor shall, at all times, be responsible for the adequacy, efficiency, and sufficiency of its subcontractor at any tier or persons employed by the subcontractors. All workers shall have sufficient knowledge, skill, and experience to properly perform the work assigned to them.

When a portion of the work that has been subcontracted by the Contractor is not being prosecuted in a manner satisfactory to the District, the Contractor shall cause such subcontractor forces to be removed immediately upon the request of the District, and such subcontractor forces shall not again be employed on the work.

Any assignment of the performance of this Contract without prior written consent of the District shall be voidable. Consent will not be given to any proposed assignment which would relieve the original Contractor or its Surety of their responsibilities under the Contract. Contractor may assign monies due or to become due it under the Contract, to the extent permitted by law, and such assignment will be recognized by the District, if written notice thereof is given to the District at least ten (10) working days before a payment is due, but any assignment of monies shall be subject to all proper set-offs in favor of the District and to all deductions or retentions provided

for in the Contract and particularly all money withheld, whether assigned or not, shall be subject to being used by the District for the completion of the work in the event that Contractor should be in default therein or for the payment of claims or liens.

GC-14 ASSIGNMENTS

No assignment of any performance of work under this Contract shall be made by the Contractor, its heirs, executors, administrators, or successors without prior written consent of the District. Consent for any proposed assignment will not be considered that would, by any instrument, relieve the original Contractor or its Surety of the responsibilities under the Contract.

The Contractor may assign monies due or to become due under the Contract, to the extent permitted by law, and such assignment will be recognized by the District, if written notice thereof is given to the District at least ten (10) days before a payment is due. Any assignment of monies shall, however, be subject to all proper set-offs in favor of the District and to all deductions provided for in the Contract. All monies withheld, whether assigned or not, shall be subject to being used by the District for the completion of the work in the event that the Contractor should be in default therein or for the payment of claims or liens against the work from any source.

GC-15 TERMINATION OF RIGHT TO PROCEED

If Contractor should refuse or fail, except in cases for which extension of time is provided, to supply enough properly skilled workers, proper equipment and proper appliances or proper materials, or if it should fail to make prompt payments to subcontractors or for material or labor, or disregard laws, ordinances, or the instructions of the District, or otherwise be guilty of a substantial violation of any provision of this Contract, then the District may without prejudice to any other right or remedy, serve written notice upon Contractor and Surety, if any, of the District's intention to terminate the performance of Contractor, such notices to contain the reasons for such termination, and unless within seven (7) calendar days after the serving of such notice upon Contractor and Surety, if any, such cause shall cease and satisfactory arrangement for correction shall be made, the performance of Contractor shall cease and terminate. In the event of any such termination, or should Contractor be adjudged as bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the District shall serve notice thereof upon Contractor and Surety, if any, and the Surety shall have the right to perform the Contract; provided, however, that if the Surety does not commence performance thereof within seven (7) calendar days from the date of service of notice of termination upon the Surety, the District may take possession of the premises and of all materials, tools, equipment, and appliances thereon and finish the work by whatever method the District may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract price shall exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to Contractor. If such expense shall exceed such unpaid balance, Contractor and Surety, if any, shall pay the difference to the District. The expense incurred by the District as herein provided, and the damage incurred through Contractor's default, shall be certified by the District. Service of any notices hereunder shall be deemed complete upon the deposit in the United States mail, postage prepaid, addressed to the address of Contractor and Surety, if any, as shown on records on file with the District.

Said termination shall be without prejudice to any other remedies available to the District.

Upon receipt of any such written notice of termination of right to proceed, Contractor shall, at its expense, for that work affected by any such termination:

- A. Assist the District in making an inventory of all materials and equipment in storage at the site, enroute to the site, and on order from suppliers.
- B. Assign to the District subcontracts, supply contracts, and equipment rental agreements all as designated by the District.
- C. Remove from the site all construction materials, equipment, and plant listed in said inventory other than such construction materials, equipment, and plant which are designated in writing by the District to be used by the District in completing such work.

GC-16 OPTIONAL TERMINATION

Including, but not limited to, provisions for termination in the event of national emergency under Section 4410 et. seq. of the Government Code of the State of California, the District may, at its option, cancel and terminate the Contract in whole or in part at any time by written notice thereof to Contractor, whether or not Contractor is in default.

Upon any such cancellation and termination, Contractor shall waive any claims for damages, including loss of anticipated profits, on account thereof, but as the sole right and remedy of Contractor and the District, the District shall pay Contractor in accordance with subparagraph B., below, provided, however, that the provisions of the Contract, which by their very nature survive final acceptance under the Contract, shall remain in full force and effect after such cancellation and termination to the extent provided in such provisions.

- A. Upon receipt of any such notice, Contractor shall, unless the notice requires otherwise:
 - 1. Immediately discontinue work on the date and to the extent specified in the notice.
 - 2. Place no further orders or subcontracts for materials, services, or facilities, other than as may be necessary or required for completion of such portion of work under the Contract that is not terminated.
 - 3. Promptly make every reasonable effort to obtain cancellation upon terms satisfactory to the District of all orders and subcontracts to the extent they relate to the performance of work terminated.
 - 4. Assist the District as specifically requested, in writing, in the maintenance, protection, and disposition of property acquired by the District under the Contract.
- B. Upon any such termination, the District will pay to Contractor an amount determined in accordance with the following (without duplication of any item):
 - 1. All amounts due and not previously paid to Contractor for work completed in accordance with the Contract prior to such notice, and for work thereafter completed as specified in such notice.
 - 2. The cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in subparagraph A.3., above.
 - 3. The reasonable costs incurred pursuant to subparagraph A.4., above.

4. Any other reasonable costs incidental to such termination of work.
5. The foregoing amounts shall include a reasonable sum, under all of the circumstances, as profit for any work performed by Contractor.

GC-17 SUSPENSION OF WORK

The District may, at any time and in its sole discretion, for the District's convenience, by notice in writing to the Contractor, suspend the performance of all or any portion of the work being or to be performed under the Contract. Work that is suspended shall not be resumed until the District issues a written notice to resume suspended work. Upon issuing the notice to suspend work, the District will designate the amount and type of plant, labor, and equipment to be committed to the Project. During the period of suspension, the Contractor shall use its best efforts to utilize its plant, labor, and equipment in such a manner as to minimize the costs associated with suspension.

- A. Upon receipt of any notice to suspend work, the Contractor shall, unless the notice requires otherwise:
 1. Immediately discontinue work on the date and to the extent specified in the notice; and
 2. Place no further orders or subcontracts for material, services, or facilities with respect to suspended work other than as required in the notice; and
 3. Promptly make every reasonable effort to obtain suspension of all orders, subcontracts, and rental agreements to the extent they relate to performance of work suspended upon terms satisfactory to the District; and
 4. Unless otherwise specifically stated in the notice, the Contractor shall continue to protect and maintain the Project, including those portions of work that have been suspended.
- B. As full compensation, the Contractor will be reimbursed for the following costs, reasonably incurred, without duplication of any item, to the extent that such costs directly result from such suspension of work:
 1. A standby charge to be paid to the Contractor during the period of suspension of work, which standby charge shall be sufficient to compensate the Contractor for keeping, to the extent required in the notice, its organization and equipment committed to the Project in a standby status.
 2. All reasonable costs associated with mobilization and demobilization of the Contractor's plant, forces, and equipment.
 3. An equitable amount to reimburse the Contractor for the cost of maintaining and protecting that portion of the Project upon which work has been suspended.
 4. If the costs associated with subsequently performing work is increased or decreased as a result of any such suspension of work, an equitable adjustment reflecting either an increase or decrease in such cost will be established by Change Order in accordance with Section GC-28, Changes.

Upon receipt of notice to resume suspended work, the Contractor shall immediately resume the suspended work to the extent required in the notice. The Contractor shall also submit a revised construction schedule for the District's review and approval.

In cases where other governmental agencies or authorities suspend the performance of the work, and such suspension is not due to the failure of the Contractor to comply with the requirements of the Contract, the suspension will be considered a suspension for convenience by the District and the provisions of this Section shall apply.

Notwithstanding the provisions for convenience stated above, the District may partially or entirely suspend the work for an indefinite period of time for the failure of the Contractor to comply with the Contract. Under such suspension, the Contract completion date will not be extended and the Contractor shall not be entitled to recover resulting costs or damages including, but not limited to, acceleration costs.

GC-18 CONTRACTOR-FURNISHED DRAWINGS AND DATA

Contractor shall promptly submit within the time specified at its own expense all submittals, shop drawings and details required by the plans and specifications. The District's favorable review shall be obtained before any such items are manufactured or used in the work. The favorable review of drawings by the District shall apply in general design only and shall in no way relieve Contractor from responsibility for errors or omissions contained therein. Favorable review by the District shall not relieve Contractor of its obligation to meet safety requirements and all other requirements of laws.

Submittals and coordination are the responsibility of Contractor; this responsibility shall not be delegated in whole or in part to subcontractors or suppliers. Any designation of work "by other," shown on submittals, shall mean that the work will be the responsibility of Contractor rather than the subcontractor or supplier who has prepared the shop drawings.

Submittals shall be prepared in such form that data can be identified with the applicable specification paragraph. The data shall demonstrate clearly compliance with the project drawings and specifications and shall relate to the specific equipment to be furnished. Where manufacturer's standard drawings are employed, they shall be marked clearly to show what portions of the data are applicable to this project.

Review of shop drawing submittals by the District has as its primary objective the completion for the District of a project in full conformance with the project drawings and specifications, unmarred by field corrections, and within the time provided. In addition to this primary objective shop drawing review as a secondary objective will assist Contractor in its procurement of equipment that will meet all requirements of the project drawings and specifications, will fit the structures detailed on the drawings, will be complete with respect to piping, electrical, and control connections, will have the proper functional characteristics, and will become an integral part of a complete operating facility. Acceptance of shop drawings and submittals does not constitute a change order to the Contract requirements.

Within ten (10) business days after receipt by the District of three (3) copies each of Contractor's submissions and all appurtenant data required for their review, the appropriate number of copies will be returned to Contractor with one of the following notations:

1. Resubmittal not required; correction, if any noted.

2. Correct and resubmit; corrections noted.

Returned copies of drawings marked with notation "1" authorize Contractor to proceed with the operations covered by such returned copies, provided that such operations shall be subject to the comments, if any, shown on such returned copies

Returned copies of drawings marked with notation "2" shall be corrected, as necessary and required, and shall be submitted in the same manner as before.

Submittals which do not have all the information required to be submitted, including deviations, are not acceptable and will be returned without review.

When submittals are favorably reviewed, the District will retain two (2) copies and will return all other copies to Contractor. When submittals are not favorably reviewed, the District will retain only one (1) copy and will return all others to Contractor.

It is considered reasonable that Contractor shall make a complete and acceptable submission to the District at least by the second submission of data. The District reserves the right to deduct monies from payments due Contractor to cover additional costs of the District's review beyond the second submission.

Favorable review by the District will not constitute acceptance by the District of any responsibility for the accuracy, coordination, and completeness of the shop drawings or the items of equipment represented on the drawings. Accuracy, coordination, and completeness of shop drawings shall be the sole responsibility of Contractor, including responsibility to backcheck comments, corrections, and modifications from the District's review before fabrication.

Supplemental, specific requirements for shop drawings and details are contained in the applicable technical sections of these specifications.

Copies of schedules and shop drawings submitted to the District for review shall be such as to provide two (2) for the District's files, and such additional copies as Contractor may desire for its own office files and/or for distribution by it to subcontractors or vendors. Exceptions will be noted in specific sections of this Contract.

All submittals and supporting data, catalogs, and schedules, shall be submitted as the instruments of Contractor, who shall be responsible for their accuracy and completeness. These submittals may be prepared by Contractor, subcontractors, or suppliers, but Contractor shall ascertain that submittals meet all of the requirements of the Contract while conforming to structural, space, and access conditions at the point of installation. Contractor shall check all submittals before submitting them to the District.

The District shall check and review schedules, drawings, etc., submitted by Contractor only for general design conformance with the concept of the project and compliance with the information given in the Contract.

Shop drawings shall not be used to order products' fabrication or delivery for construction or installation unless submitted to and favorably reviewed by the District.

Acceptance by the District of any drawings, method of work, or any information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for any errors therein and shall not be regarded as an assumption of risks or liability by the District, or its representatives, or any officer or employee thereof, and Contractor shall have no claim under the Contract on account of the failure or partial failure or inefficiency or insufficiency of any plan or method of work or material and equipment so accepted. Such acceptance shall be considered to mean merely that the District has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the materials and equipment proposed.

GC-19 SUBSTITUTIONS AND EQUAL ALTERNATIVES

The work, unless otherwise permitted or approved by the District, shall be completed with the incorporated use of trade-named materials and equipment where such are specified. Substitutions and equal alternatives will be permitted as provided in this Section; however, neither the request for substitution nor the offer of alternatives shall in any way by their submittal obligate the District to assent to any request or offer. Failure of Contractor to submit proposed substitutions for review in accordance with this Section will be considered as evidence that the work shall be accomplished with trade-named materials and equipment as identified in the Technical Specifications and shall be cause for rejection by the District of any other proposed substitutions.

Except when the specifications prohibit the substitution of a similar or equivalent material or article, Contractor may make written request to the District for approval of the use of alternative equipment or materials. Such request shall contain complete data intended to show that such alternative item is of a quality equal to or better than that specified and has the required characteristics for the intended use. Upon request, Contractor shall furnish to the District such additional information relating to such alternative items as the District may require.

Contractor shall submit written requests for substitutions to the District, within thirty-five (35) days of Contract award and prior to placing any purchase orders, but at least thirty (30) days before it requires approval of any such alternative item.

The burden of proof as to the quality and suitability of alternatives shall be upon Contractor, and it shall furnish all necessary information requested and required by the District. The District will be the sole judge as to the quality and suitability of alternative articles or materials, and its decision shall be final.

GC-20 QUALITY OF EQUIPMENT, MATERIALS, PRODUCTS, AND/OR WORKMANSHIP

The Contractor shall furnish all equipment, materials, and/or products required to complete the work, except equipment, materials, and/or products that are designated to be furnished by the District. Materials that are identified as District-furnished materials on the Project Drawings or in Part VI, Special Conditions - Construction, Section SC-15, District-Furnished Materials or Equipment, will be available to the Contractor free of charge, upon request, at the locations designated.

Only equipment, materials, and/or products meeting the requirements of the Contract shall be incorporated in the work. The equipment, materials, and/or products furnished and used shall be new and shall be manufactured, handled, and installed in a workmanlike manner to ensure a completed Project in accordance with the Contract. Manufacturers' warranties, guarantees,

instruction sheets, and parts lists that are furnished with certain equipment, materials, and/or products incorporated in the work shall be delivered to the District before the Contract will be accepted.

If no detailed specifications are set forth, the Contractor shall furnish equipment, materials, and/or products in conformance with the latest standards, specifications, manuals or codes of an acceptable technical society, organization or association, or to the laws or regulations of any applicable governmental authority, whether such reference be specific or by implication, in effect at the time of opening of bids.

GC-21 INSPECTIONS AND SAMPLES

Unless otherwise provided in the Contract, all equipment, materials, and work shall be subject to inspection and testing by the District. The District shall have the right to reject equipment, materials, and work not in accordance with the Contract. Rejected work shall be satisfactorily corrected; rejected equipment shall be satisfactorily repaired or replaced with satisfactory equipment; and rejected material shall be satisfactorily replaced with satisfactory material, all in accordance with the Contract. The Contractor shall promptly segregate and remove rejected materials and equipment from the premises. All such correcting, repairing, replacing, and removing shall be by and at the expense of the Contractor.

The District will perform inspections in such manner as not to delay the work unreasonably, and the Contractor shall perform its work in such manner as not to delay inspection unreasonably. The Contractor shall give the District reasonable advance notice of operations requiring special inspections or tests, and it may request inspection of a portion of any work at any time by reasonable advance notice to the District. The Contractor shall, at its expense, furnish promptly all facilities, labor, and materials necessary and required for such inspection and tests.

Contractor shall provide work area access at all reasonable times to the District and its officers, agents, employees, and any other duly authorized representatives and employees, and all duly authorized representatives of governmental agencies having jurisdiction over work areas or any part thereof for the purpose of determining compliance with Contract requirements. The Contractor shall also arrange for the District, and its officers, agents, employees, and any other duly authorized representatives and employees, to have access at all reasonable times to all places where equipment or materials are being manufactured, produced, or fabricated for use under the Contract.

The Contractor shall furnish the District all reasonable facilities for the District's safety and convenience in inspecting work, at all times and at all places where inspection may take place. If the District finds that conditions are unsafe for inspection at a particular location, he may, upon notice to the Contractor, refuse to inspect in that location until such conditions are corrected. The Contractor shall bear any additional costs resulting from such action, including any costs incurred to permit subsequent inspection of any portion of work covered or completed at the location before correction of the conditions, whether or not such portion of work is found to meet Contract requirements.

The Contractor shall bear any additional inspection costs resulting from its failure to have a portion of work ready for inspection at the time requested by it for inspection, or from reinspection of any previously rejected portion of work where the defects requiring such rejection were due to the Contractor's fault or negligence. Such costs may be deducted, in

whole or in part, from any monies due or that may become due to the Contractor under the Contract.

Inspection of materials and finished articles to be incorporated into any work may be made by the District at the place of production, manufacture, or shipment. When such inspection is to be performed, no such materials or finished articles shall be shipped from such place of inspection or incorporated in any work prior to inspection or without the written approval of the District. Equipment, materials, and work not in conformity with the Contract shall be corrected or replaced with satisfactory equipment and materials by and at the expense of the Contractor so as to conform to the Contract as determined by the District.

No acceptance of equipment, materials, or work shall be construed to result from such inspections by the District. Any inspections or tests or waivers thereof shall not relieve the Contractor of its responsibility for meeting the requirements of the Contract.

Where so required in the Contract, or whenever requested by the District, the Contractor shall, at its expense, promptly furnish to the District sample specimens of materials to be incorporated into any work. Samples shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the work. Samples of material from natural sources shall be taken in the presence of the District; otherwise, the sample will not be considered for testing. Samples shall be tagged or labeled securely and fully identified as to manufacturer, type, size or capacity, lot, and date, all as applicable and by reference to the applicable section and paragraph of the Contract. Materials for which samples are required shall not be used in any work until approved in writing by the District. Materials incorporated in any work shall conform to such samples as the District, in his discretion, determines meet the requirements of the Contract. Samples will be returned to the Contractor only at the discretion of the District.

GC-22 PROJECT DOCUMENTS AND RECORD DRAWINGS

The Contractor shall keep on the work site a copy of the Project Documents and shall at all times give the District access thereto. Any drawings included in the detailed Specifications shall be regarded as part thereto and of the Contract. Anything mentioned in these Specifications and not shown on the Project Drawings, or shown on the Project Drawings and not mentioned in these Specifications, shall be of like effect as though shown or mentioned in both. The District will furnish from time to time such detail drawings, plans, profiles, and information as he may consider necessary for the Contractor's guidance. It shall be the duty of the Contractor to see that the provisions of the Contract are complied with in detail irrespective of the inspection given the work during its progress by the District. Any failure on the part of the Contractor to observe the requirements contained in the Contract will be sufficient cause for the rejection of the work at any time before its acceptance.

The Contractor shall maintain, at the job site, one record set of Project Drawings in good order and clearly marked to show any deviations that have been made from the Project Drawings, including concealed construction and utility features that are revealed during the course of construction. Marked prints shall be updated at least once each week and shall be available to the District for review as to currency prior to developing partial payment estimates. Upon completion of the work, the marked set of prints shall be delivered to the District.

In the case of those drawings that depict the detail requirement for equipment to be assembled and wired in the factory, such as motor control centers and the like, the Record Drawings shall

be updated by indicating those portions that are superseded by Change Order drawings or final shop drawings and by including appropriate reference information describing the Change Orders by number and the shop drawings by manufacturer, drawing, and revision numbers.

Requests for partial payments will not be approved if the updated set of drawings is not in good order or is not kept current. Request for final payment will not be approved until the complete and correct Record Drawings are delivered to the District.

GC-23 SAFETY REQUIREMENTS

In accordance with generally accepted construction practices and state law, Contractor shall be solely and completely responsible direction and control of the work and for conditions on the jobsite, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours.

Contractor shall take all necessary precautions and provide all necessary safeguards to prevent personal injury and property damage. Contractor shall provide protection for all persons including, but not limited to, its employees and employees of other contractors or subcontractors; and employees, agents, and representatives of the District and regulatory agencies that may be on or about the work. Contractor shall also take such measures as may be necessary or required to assure that the safety and health of the employees and of the public may be safeguarded.

Contractor shall provide and maintain all necessary safety equipment such as fences, barriers, signs, lights, walkways, guards, and fire prevention and fire-fighting equipment and shall take such other action as is required to fulfill its obligations under this Section. It is the intent of the District to provide a safe working environment under normal conditions.

All work and materials shall be in strict accordance with all applicable state, city, county, and federal rules, regulations, and codes, and attention is drawn to the requirements of OSHA. Contractor shall be solely responsible for compliance with all city, county, and state explosive transport, storage, and blasting requirements and for any damages caused by its operations.

Contractor shall promptly and fully comply with and carry out safety, sanitary, and medical requirements as prescribed by federal, state, or local laws or regulations and industry standards. Contractor shall keep adequate first aid facilities and supplies available and instruction in first aid shall be given.

The services of the District in conducting review and inspection of Contractor's performance is not intended to include review of the adequacy of Contractor's work methods, equipment, bracing or scaffolding, or safety measures, in, on, or near the construction site. However, The District reserves the right to stop work if the District believes that there is an imminent danger to persons or property. Even though the District reserves such rights, the exercise of such rights is at the District's sole discretion, and such reservations will not be construed as an obligation of the District to monitor or enforce the Contractor's safety program. The District's exercise of these rights shall not provide a basis for delay damages, extra compensation, and/or additional compensation to complete the work.

All costs in connection with meeting the requirements of this Section shall be borne by Contractor.

GC-24 CLEANING UP

Contractor shall, at all times, keep the premises occupied by it and access to such premises in a neat, clean, and safe condition. During the progress of work, the Contractor shall, at a minimum:

1. Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of material.
2. Provide adequate storage of all items awaiting removal from the job site, observing all requirements for fire protection and protection of the environment.
3. Remove any accumulation of scrap, debris, waste material, and other items not required for construction of this work.
4. Dispose of existing materials and equipment to be demolished and removed and all trash, such as broken concrete, wood blocking, shipping containers, etc., resulting from the contract work off the premises occupied by the Contractor, including District property, at the Contractor's expense. District-leased dumpsters and other disposal containers on District's property, unless specifically provided by the Contractor, shall not be used by the Contractor.
5. Maintain all work areas within Contract work limits free from dust, as determined by the District. Industry-accepted methods of dust control, suitable for the area involved, will be permitted. No separate payment will be made to Contractor for dust control.

Upon completion of any portion of any work, Contractor shall promptly remove all of its equipment, temporary structures, and surplus construction and other materials not to be used at or near the same location during later stages of work. Upon completion of any work and before final payment is made, Contractor shall, at its expense, satisfactorily dispose of all plant, buildings, rubbish, unused materials, concrete forms, and other equipment and materials belonging to it or used in the performance of work; and Contractor shall leave the premises in a neat, clean, and safe condition.

The Contractor shall, as a minimum, conduct daily inspections to verify that requirements of this Section are being met. If the Contractor fails to comply with any of the foregoing, the District will transmit written notification of noncompliance. If, within five (5) days of the written notification, the Contractor fails to comply, cleanup may be undertaken by the District at the expense of the Contractor.

GC-25 CONTAMINATED SOILS/MATERIALS

Contaminated soils and materials shall include, but not be limited to, pollutants and/or materials defined as hazardous substances or hazardous wastes under the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), the Hazardous Substances Control Act (Health and Safety Code Section 25300 and following), the Hazardous Waste Control Act (Health and Safety Code Section 25100 and following), or as defined as pollutants or contaminants under any other applicable state and federal laws and regulations. Said materials shall include, but not be limited to, friable asbestos, PCBs, petroleum products and its byproducts, and waste oil, among other substances.

Contractor shall notify the District by person or by telephone within two hours of discovery as to any contaminated soil or materials on or beneath the job site, including in buildings and related

structures that could be impacted by the construction Project so discovered by the Contractor, its personnel, agents, representatives, consultants, or any other persons working under the direction and control of the Contractor. In addition, written notice shall be delivered to the District by the Contractor within 24 hours of discovery. Contractor shall require that like provisions be inserted in all contracts with its subcontractors and tiers of subcontractors. This shall not relieve the Contractor from the obligation and responsibility to ensure that the provisions of this General Condition are complied with.

The Contractor and its subcontractors shall immediately cease any and all work at the location of the discovery of the contaminated soils or materials until further notice from the District.

However, if the Contractor is specifically directed to conduct appropriate cleanup operations with respect to the contaminants discovered, the Contractor shall proceed with these operations. In addition, the Contractor shall notify the District of the discovery of said contaminants in the manner set forth above. Further, if the contaminants substantially vary from the description in the Contract as to type of material, quality of materials, level of concentration or toxicity, location, as to the materials' affect on groundwater, or vary in any other substantial manner from the description as set forth in the Contract, the Contractor shall immediately cease operations and notify the District in the manner set forth above.

All work done by the Contractor with respect to cleanup, removal, and remedial actions concerning the contaminated soils or materials shall be done according to law. All required notices shall be given by the Contractor to the County Environmental Health Hazard Materials Section and other appropriate governmental agencies, including the State Department of Toxic Substances Control and Regional Water Quality Control Board, among others. The Contractor or any subcontractor doing such work on behalf of the Contractor shall have the appropriate certification, licenses, and permits prior to commencing any such cleanup, removal, and/or remedial work. The District shall not be responsible for the negligence of or violation of any laws, rules, regulations, or ordinances by the Contractor or any of the Contractor's subcontractors, agents, consultants, employees, or representatives in doing such cleanup, removal, and remedial work.

If any of the cleanup, removal, containment, and remediation work substantially impacts upon the community, including, but not limited to, traffic, odor, and health issues, the District reserves the right to direct that the manner of operations by the Contractor be revised accordingly to reduce or eliminate the adverse effects.

GC-26 EXISTING UTILITIES AND INTERFERENCES

The locations of known existing utilities and pipelines are shown on the Project Drawings in their approximate locations. Some of the locations include multiple conduits. The Contractor shall exercise care in avoiding damage to those facilities that are to remain in service subsequent to the construction of the particular new facility involved, and it will be held responsible for their repair if damaged. The Contractor shall also exercise care in maintaining those pipes and facilities required for continuing operation of the existing facilities until such time as they can be abandoned. There is no guarantee that all utilities or obstructions are shown or that the locations indicated are accurate.

The Contractor shall be responsible for discovery of all existing underground installations in advance of excavating or trenching by contacting all local utilities 48 hours in advance and by

prospecting. Contractor shall notify Underground Service Alert 48 hours prior to any excavation work.

The Contractor shall uncover and completely expose all piping where crossings, interferences, or connections are shown on the Project Drawings, prior to trenching or excavating for any pipe or structures, to determine actual elevations. New pipelines shall be laid to such grade as to clear all existing facilities that are to remain in service for any period subsequent to the construction of the run of pipe involved. If the Contractor does not expose all required utilities, it shall not be entitled to additional compensation for work necessary to avoid interferences or for repair to damaged utilities. Excavations around underground electrical ducts and conduits shall be performed using extreme caution to prevent injury to workers or damage to the electrical ducts or conduits.

Notwithstanding any other provision of this Contract between the District and the Contractor:

- A. In accordance with the provisions of Section 4215 of the California Government Code, in any contract to which the District is a party, the District shall assume the responsibility between the parties to the contract for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the site of any construction project and that are a subject of the Contract if such utilities are not identified by the District in the Project Drawings and Specifications; provided, however, that nothing herein shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the site of the construction project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes on or adjacent to the site of construction. The District will compensate the Contractor for the costs of locating and repairing damage and removing or relocating such utility facilities that are not indicated in the Project Drawings and Specifications, provided that the Contractor exercises due reasonable care.
- B. The owner of the utility shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a reasonable price.
- C. The Contractor shall not be assessed liquidated damages for delay in completion of the Project when such delay was caused by the failure of the District to show existing utilities or other existing facilities, excluding service laterals.

If interferences between existing utilities and proposed work occur at locations other than those shown on the Project Drawings, the Contractor shall notify the District, and a method for correcting said interference will be supplied by the District. Payment for correction of interferences not shown on the Project Drawings will be in accordance with the provisions of Section GC-27, Differing Site Conditions.

GC-27 DIFFERING SITE CONDITIONS

The Contractor shall promptly, and before the following conditions are disturbed, notify the District in writing of any:

- 1. Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

2. Subsurface or latent physical conditions at the site differing materially from those indicated in the Project Documents and/or geotechnical report.
3. Unknown physical conditions at the site of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

Actions by the Contractor to disturb or cover the above conditions before the District is notified or has had the opportunity to investigate the conditions shall be deemed a waiver by the Contractor of any and all rights that the Contractor may have for additional compensation for increases in the Contractor's cost of, or the time required for, performance of any part of the work.

The District will promptly investigate the conditions; and if the District finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work, the District will issue a Change Order in accordance with the provisions of Section GC-28, Changes.

In the event that a dispute arises between the District and Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by Contract or by law that pertain to the resolution of disputes and protests between the contracting parties.

GC-28 CHANGES

District may, at any time, by written change order make changes in the work, or extend the time to complete the work, as deemed necessary by District. The Contractor shall perform the work when so ordered. Any such change or request will be authorized in writing by the District, provided that in the event of an emergency, which the District determines endangers life or property, any work required by reason of such an emergency shall be performed in accordance with oral orders from the District, which will be confirmed in writing as soon as practicable. Any such authorization, whether written or oral, may be accompanied by drawings and data as are necessary to show the extent of such change or extra work.

If the District does not issue a written change order and the Contractor believes he is entitled to compensation or time in excess of the Contract amount arising out of the conduct of the work, Contractor may submit a written request for change to the District. Such requests for change will not be considered by the District unless the Contractor complies with the notification requirements of this paragraph. Contractor shall notify the District immediately upon learning of a condition, occurrence or circumstance that potentially will give rise to a request for change. If the initial notification is oral, Contractor shall confirm the notification in writing within five (5) days of the oral notification. The Contractor shall not proceed with the work involving the potential request for additional compensation without notifying the District of the subject conditions, occurrence, or circumstance unless an emergency exists or unless it is impossible to notify the District without creating an unreasonable delay in the work.

When changes in the work are required by the District or requested by Contractor, Contractor shall promptly estimate their effect on the cost or time of performance of this Contract and so notify the District. If requested by the District, Contractor shall supply any information to support Contractor's estimate of cost and/or time. No change shall be implemented by Contractor unless it is approved by the District in writing, and, unless otherwise agreed to in writing, the provisions of this Contract shall apply to all changes in the work.

If the District determines that any change materially affects the cost or time of performance of this Contract as a whole, Contractor and the District will mutually agree, in writing, to an equitable adjustment as specified in Section GC-29, Delays and Time Extensions and/or Section GC-30, Extra Work Payment. In the event of disagreement, the District will fix such adjustment that, in its opinion, be reasonable and proper, regard being had to all material and relevant factors including Contractor's direct costs and overhead. The Contractor may protest terms of such a change order in accordance with Section GC-31, Protest Procedure.

Contract change orders which affect the cost or term of performance shall be processed through the District's designated administrative representative, as shown in Section GC-5, Notices.

The District reserves the right to engage another contractor to perform the work if such engagement is in the District's best interest.

GC-29 DELAYS AND TIME EXTENSIONS

The time limits stated in the Contract are of the essence to the Contract. By executing the Contract, the Contractor confirms that the time limits set forth in the Contract, including interim or milestone dates, are reasonable periods for the performance of the work. The Contractor shall not be entitled to extensions of time limits at any time in the progress of the work unless the delay is occasioned by an act or neglect of the District or unless the delay in the completion of the work arises from unforeseeable causes beyond the control and without fault or negligence of both the Contractor and subcontractors or suppliers. Such unforeseeable causes may include: acts of God; acts of a public enemy; acts of a governmental entity not occasioned by the Contractor's, subcontractor's, or supplier's conduct; acts of another contractor in performance of a contract with the District; fires; floods; epidemics; quarantine restrictions; freight embargoes; unusually severe weather; or other delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers.

If the Contractor seeks an extension of time for the completion of any phase of the work, the Contractor shall submit a written request to the District for an extension of time for the portion of the work so delayed within five (5) days of the onset of such delay, and such request shall fully state the reasons for such delay. When such a request is received, the District will ascertain the reasons for and the extent of such delay. If the District determines that the facts justify an extension of time, the Contract will be modified accordingly, through a written change order. If the District determines that the facts do not justify an extension of time, such request will be denied. The District's finding of fact of either determination will be given to the Contractor, and such findings shall be final unless the Contractor files a protest under Section GC-31, Protest Procedure. No extension will be granted for any portion of any delay unless the required written request is made by the Contractor as specified herein and the District finds justification for the request.

In any event, the Contractor expressly waived any right to delay damages from the District where a reasonable extension is granted, except when the District is responsible for the delay of the Contractor's performance of the work and which delay is unreasonable under the circumstances involved and not within the contemplation of the parties.

No time extensions will be granted nor extended overhead paid until a delay occurs which:

1. Impacts the Project's critical path,
2. Consumes all available float, slack time, or schedule contingency within the construction schedule (the time between the Contractor's scheduled early completion date and the Contract completion date), and
3. Extends work beyond the Contract completion date.

Float, slack time, or schedule contingency within the construction schedule is not for the exclusive use or benefit of the District or the Contractor but is a resource available to both parties as needed.

Except as limited by Section 7102 of the Public Contract Code, should the Contractor sustain any loss, damage, or delay through any act or omission of any other contractor or entities, the Contractor expressly waives any rights and any claims against the District, other than for an extension of time.

GC-30 EXTRA WORK PAYMENT

If the District determines that any change in the work materially affects the cost of this Contract as a whole, there shall be an equitable adjustment in the payment price. The price adjustment shall be determined by one of the following methods in the order of preference listed:

- A. Unit Price Change: Based on the unit prices or hourly rates contained in Part III, Proposal.

If there is a variation in the estimated Bid quantity listed in Part III, Proposal by more than one hundred fifty percent (150%) or less than fifty percent (50%) of the Bid quantity, either the District or the Contractor may notify the other party of their desire to renegotiate the Contract unit price with respect to those quantities outside of the permitted range of fifty percent (50%) below to one hundred fifty percent (150%) above the Bid quantity.

- B. Agreed Price Change: Mutually agreed-upon lump sum or unit price adjustment.

- C. Cost Plus Change (Construction Only): Contractor's actual cost of labor (wages and benefits), materials (actual purchase price, sales tax, freight and delivery) and equipment/tools (at actual or fair/prevaling rental rates) directly engaged in the performance of the extra work plus a fifteen percent (15%) mark-up for overhead and profit. A five percent (5%) mark-up will be added to the cost of extra work performed by subcontractors.

For cost plus changes, Contractor shall provide to District an itemized breakdown of the quantities and prices used in the extra work, and it shall make available all source documents for itself and any subcontractors, including but not limited to payroll

records, invoices, purchase orders, contracts and lease agreements. Contractor shall keep accurate records that clearly delineate the extra work from other Contract work.

The total payment made as provided above shall be deemed to be the actual cost of such work, including overhead costs, and shall constitute full compensation therefore.

When extra work is performed by subcontractor forces, Contractor shall reach agreement with such other forces as to the distribution of the payment made by the District for such work. No additional payment will be made by the District by reason of the performance of the work by a subcontractor.

GC-31 PROTEST PROCEDURE

If the Contractor objects to any direction, instruction, determination or decision provided by the District, the Contractor may submit a written protest. All such written protests must be submitted within ten (10) days after such direction, instruction, determination or decision is delivered to the Contractor in writing. If the direction, instruction, determination or decision is oral, Contractor must request that the District provide said oral direction, instruction, determination or decision within five (5) days of receiving the oral direction, instruction, determination or decision. The Contractor shall proceed without delay to perform work as directed, instructed, determined, or decided by the District and shall comply promptly with such directions, instructions, determinations, or decisions.

Written protests shall clearly state in detail the Contractor's objections, the reasons therefor, and the nature and amount of additional compensation or extension of time, if any, to which the Contractor contends it will be entitled thereby. It shall also include, if possible, Contract specification references, quantities, costs and any related detailed records.

The District will issue a decision upon each protest. If the District determines that the facts support the protest, the Contract will be modified accordingly, in writing. If the District determines that the facts do not support the protest, such request will be denied. The District's finding of fact of either determination will be given to the Contractor and such findings shall be final and conclusive.

If the Contractor disagrees with any terms or conditions set forth in an approved contract change order which it has not executed, and does not submit a written protest within the time specified above, payment will be made as set forth in the approved contract change order, and such payment shall constitute full compensation for all work included therein or required thereby.

The Contractor shall be deemed to have waived all grounds for protest of direction, instruction, determination, or decision and all claims for additional compensation, extensions of time, or damages occasioned thereby for which protest could have been made under this Section, and shall further be deemed to have accepted such direction, instruction, determination, or decision as being fair, reasonable, and determinative of the Contractor's obligations and rights under the Contract.

GC-32 RECORDS AND ACCOUNTS

The Contractor shall, at its expense, keep and maintain such records and accounts and shall require its subcontractors and suppliers to keep records and accounts in connection with the

performance of the Contract. The Contractor shall maintain, in a businesslike manner, records, accounts, and other evidence directly pertinent to the performance of work under this Contract in accordance with Generally Accepted Accounting Principles and practices consistently applied and applicable under California and federal law. The Contractor shall also maintain the financial information and data used by the Contractor in the preparation or support of cost submissions required for this Contract or any Change Order. The District, or its authorized representatives, shall have access, at all times during normal business hours, to such records, accounts, and other evidence for the purpose of inspection, audit, and copying. The Contractor shall provide proper business facilities for such access, inspection, and copying at no cost to the District.

The Contractor shall furnish to the District, upon request, an accurate written allocation of the total amount of the price paid for performance of work under the Contract to the various elements of the work, as may be required by the District for accounting purposes and for public record. If the District determines that any price (including profit) negotiated in connection with this Contract, Change Order, or any cost reimbursable under this Contract, was increased by any significant sum because the Contractor, subcontractor, or supplier furnished incomplete or inaccurate cost or pricing data or data not current, then such price or cost or profit shall be reduced accordingly and the Contract shall be modified in writing to reflect such reduction. Failure to agree on a reduction under this Section shall be subject to Section GC-31, Protest Procedure.

Such records and accounts shall remain accessible to the District for a period of not less than thirty-six (36) years beyond the date of formal acceptance as provided under Section GC-35, Acceptance of the Contract and Final Payment. The Contractor shall agree to include this Section in all its contracts, subcontracts, and purchase orders with suppliers in excess of \$10,000.

GC-33 PROGRESS PAYMENTS

- A. Monthly Progress Payments: Monthly progress payments will be made as the work proceeds. Such payments will be made according to estimates of the amount and value of work satisfactorily performed by the Contractor up to the time of each estimate.

Progress payment estimates shall be made by the Contractor and submitted to the District for review and concurrence. Once the District has agreed to the items of cost, the Contractor shall prepare a progress payment request and submit the request for payment. The burden of requesting payment is on the Contractor. The District has no obligation to pay for a separate item of cost unless that item of cost is included in a progress payment request by the Contractor.

Contractor's progress payment requests shall be made in writing on or about the twenty-fifth (25th) day of each calendar month, and payment will be made within twenty-one (21) days after the District verifies that the request has been properly filed and submitted. Progress estimates will not be required to be made by strict measurement, but may be by measurement or by estimation or partly by one method and partly by another.

Pursuant to Section 20104.50 of the Public Contract Code, the District will pay interest on progress payments held over thirty (30) days from the date of submission, as long as the request for payment by the Contractor is deemed properly filed and submitted. A request for payment by the Contractor will not be deemed properly filed or submitted

until such time as the Record Drawings are reviewed and found to be current. The date of submission is the date the District's representative signs the progress payment request form in the space provided for the District. This signature will verify that the request has been properly filed and submitted.

- B. Detailed Cost Breakdown: Prior to preparation of the first progress payment request by the Contractor, the Contractor shall submit to the District a detailed cost breakdown of the work under each bid item awarded. If the initial detailed cost breakdown is not accepted by the District, additional cost breakdowns shall be submitted by the Contractor until the District determines that the cost breakdown is acceptable. Upon acceptance by the District, the breakdown will then become the basis for partial payment determination. Bond and insurance costs shall not be considered a separate item of cost for this purpose but shall be included in mobilization/demobilization.
- C. Retainage: In making progress payments, the District shall retain five percent (5%) of the cumulative estimated amount until final acceptance of all work under the Contract as set forth under Section GC-35, Acceptance of Contract and Final Payment. The Contractor shall be allowed to substitute securities for any monies withheld to ensure performance under this Contract, or the Contractor may request that the District have such funds, which the District would otherwise withhold from progress payments to ensure performance, deposited in an escrow account pursuant to Section 22300 of the California Public Contract Code. The Contractor may exercise the option of substituting securities or depositing funds in an escrow account by executing the Escrow Agreement for Security Deposits in Lieu of Retention in the form supplied by the District upon request.
- D. Withholding Payment: Any payments otherwise payable under the Contract may be withheld, in whole or in part, by the District, if in the discretion of the District, it is necessary to protect the District from loss due to the following:
1. Defective work that is not remedied; or
 2. Third-party claims filed or reasonable evidence indicating probable filing of such claims; or
 3. Contractor's failure to make payments to subcontractors for labor, equipment, materials, or products to which a subcontractor is entitled; or
 4. Evidence that the work cannot be completed for the unpaid balance of the Contract sum; or
 5. Contractor's failure to submit an acceptable construction schedule or failure to update the schedule; or
 6. Any and all damage to the District, or another contractor, resulting from the Contractor's action or inaction; or
 7. Contractor's failure or inability to maintain insurance coverage and bonds as required by the Project Documents throughout the course of the job; or
 8. Contractor's repeated failure to carry out the work in accordance with the Project Documents; or
 9. Contractor's failure to provide copies of certified payrolls, as specified in this Section GC-7, Laws, Regulations and Prevailing Wages; or

10. Contractor's failure to comply with the laws or regulations of any federal, state, or local government; or
11. Untimely repair of any damage resulting from the Contractor's operations or untimely restoration of property, affected by the construction, to a preconstruction condition.

In addition, the District may deduct from any progress payment due the Contractor any amount the District may be currently, or in the future, authorized to retain pursuant to federal, state, or local laws or regulations, any amount due the District from the Contractor, and any other amount that the District is otherwise authorized to retain as specified in Part VI, Special Conditions.

The District will withhold an amount from any progress payment due the Contractor, which will not exceed twice the value of any necessary repairs, corrections, or replacements, to assure that the Contractor completes all repairs, corrections, or replacements for which the Contractor is responsible. The Contractor shall receive payments of said retained amount after the repairs, corrections, or replacements are completed.

Any amount withheld for the reasons stated above shall be based on estimates made by the District and shall be in addition to any amount previously withheld. The Contractor may avoid withholding of amounts from a progress payment by eliminating the cause of the withholding to the satisfaction of the District.

If the Contractor fails to meet the obligations set forth above, upon written notice by the District, the District may discharge such obligations and deduct all costs in connection with the District's discharge of Contractor's obligations from any payments that may become due to the Contractor. If the amount withheld from payment(s) is insufficient to meet such costs, or if any claim or charge against the Contractor shall be discharged by the District after the final Contract payment is made, Contractor and its Sureties shall promptly pay the District all costs incurred thereby, regardless of when such claim arose or whether such claim constitutes a lien upon the Project or the real property upon which the Project is situated.

In the event that District finds Contractor in default, such that the District calls upon the Contractor's surety to perform the remainder of the project, including but not limited to entering into a takeover agreement with Contractor's surety, Contractor shall execute all documents as necessary to transfer or assign the Escrow Agreement called for herein. Contractor shall notify the District of such assignment and transfer such that District shall be fully informed.

- E. Ownership and Waiver: All equipment, materials, products, and work covered by progress payments will, upon payment, become the property of the District. However, this provision shall neither be construed as constituting acceptance of any work or as relieving the Contractor from the sole responsibility for all equipment, materials, products, and work upon which payments have been made, including the restoration of any damaged work until final acceptance thereof, unless specifically provided for elsewhere. The payment for any equipment, material, products, and work covered by a progress payment does not constitute a waiver of the District's right to require fulfillment of all of the terms of the Contract.

The Contractor's acceptance of any payment made under the terms of this Contract shall operate as, and shall be, a release to the District and a waiver of all claims by the Contractor against the District that may arise from the completed work for which payment has been made, except those claims previously submitted to the District in writing pursuant to Government Code Section 901 et seq., which are disputed at the time of the payment.

- F. Subcontractor Payments: The District informs Contractor, and Contractor by execution of the Contract takes cognizance of the following: Contractor must pay progress payments to subcontractors no later than seven (7) days after receipt from the District. If Contractor fails to make progress payments to subcontractors within seven (7) days, then Contractor is subject to penalties of 2% per month, disciplinary action, and attorneys' fees of subcontractors.
- G. Payment for Equipment, Materials, and Products: Generally, the Contractor will not be compensated for equipment, materials, and/or products delivered to the site until after they are incorporated in the work. However, if the District determines that the progress of the work will benefit by the delivery to the site of certain equipment, materials, and/or products in advance of their actual requirement, and if such equipment, materials, and/or products are delivered, a portion of the cost of the equipment, materials, and/or products may be included in progress payments.

GC-34 LIENS AND STOP NOTICE

If at any time any notices of lien are filed for labor performed or materials or equipment manufactured, furnished, or delivered to or for the work, the Contractor shall, at its own cost and expense, promptly discharge, remove, or otherwise dispose of the same; and until such discharge, removal, or disposition, the District shall have the right to retain from any monies payable to the Contractor an amount that, in the District's sole judgment, the District deems necessary to satisfy such liens and pay the costs and expenses, including attorneys' fees, of defending any actions brought to enforce the same, or incurred in connection therewith or by reason thereof.

If, at any time prior to the expiration of the period for service of a Stop Notice, there is served upon the District a Stop Notice as provided in Sections 3179 through 3210 of the Civil Code of the State of California, the District shall, until the discharge thereof, withhold from the monies under its control so much of said monies due or to become due the Contractor under this Contract as shall be sufficient to answer the claim stated in such Stop Notice and to provide for the reasonable cost of any litigation thereunder, provided that, if the District shall, in the District's discretion, permit the Contractor to file with the District the bond referred to in Section 3196 of the Civil Code of the State of California, said monies shall not thereafter be withheld on account of such Stop Notice. The monies that the District withholds shall be a minimum of one hundred twenty-five percent (125%) of the face value of the Stop Notice.

GC-35 ACCEPTANCE OF CONTRACT AND FINAL PAYMENT

- A. Final Acceptance: Whenever the Contractor deems that its obligations under the Contract have been fulfilled, the Contractor shall, in writing, so notify the District. This notification shall include a request for the District to make a final inspection. Upon receipt of such notice, the District will, in company with the Contractor, inspect the work

that has been performed. If the District determines that the request is appropriate, the District will make a final inspection.

If any deficiencies are discovered by the District during the final inspection of the work, a "punch list" stating the deficiencies will be prepared and transmitted to the Contractor for correction. Upon correction of the deficiencies, the Contractor shall notify the District. The District will reinspect the corrected work. If the District determines that all work is completed except for minor punch-list items, and that all other requirements of the Contract have been met, the District will recommend acceptance of the Contract work to the District's General Manager.

Immediately upon acceptance by the General Manager and without further acknowledgement by the parties, the Contractor is relieved of the duty of maintaining and protecting the Contract work as a whole except as required by the warranty, guaranty, insurance, indemnity, and all other conditions of the Contract that are intended to continue after acceptance of the Contract. Guaranty and warranty periods required by the Contract and the statutory period for the filing of liens and Stop Notices shall commence on the date of acceptance by the General Manager.

Additionally, upon the General Manager's acceptance of the Contract work, the District will cause a Notice of Completion of all work under the Contract to be filed in the office of the District and the office of the County Recorder of Contra Costa County, in accordance with Section 4005 of the Government Code of the State of California. Upon expiration of the statutory period for filing of liens and Stop Notices and provided no liens or Stop Notices have been filed, the District will authorize release or release the retention, less all such amounts the District may be authorized or required to reserve or retain.

- B. Release of Claims and Subcontractor Payments: The Contractor shall provide a release of all claims arising out of work related to undisputed Contract amounts. Final payment shall be subject to the Contractor's execution of a release in favor of the District, its directors, officers, representatives, agents, and employees, as to all claims arising out of the Contract work and District liability to the Contractor, or any third party, for anything done in relation to or furnished for any work related to undisputed Contract amounts. Such release shall include claims for any act or omission of the District, its directors, officers, representatives, agents, and employees, respectively, or of any person relating to or affecting any work related to such final payment. All prior progress payments, being estimates, will be subject to adjustment in the final payment.

Claims by the Contractor for additional compensation or damages remaining in dispute, as set forth in the final payment release, shall be excluded from the terms of the release. The District may withhold from the final payment up to one hundred fifty percent (150%) of the estimated value of claims by the District, or third parties against the Contractor, including but not limited to, claims regarding amounts previously paid to the Contractor by the District.

The release signed by the Contractor as part of the final payment shall be in substantially the following form:

Final Payment and Release

District Project Name _____

District Project Number _____

The acceptance by Contractor of the final Contract payment in the sum of \$ _____ covering undisputed Contract amounts shall operate as, and shall be a release to the Central Contra Costa Sanitary District (District), the District's directors, officers, representatives, agents, and employees, respectively, from all claims of and liability to the Contractor (except as set forth below), including claims of the Contractor as the successor in interest by assignment or otherwise, to claims of laborers, mechanics, subcontractors, consultants, and materialmen, and including claims by laborers, mechanics, subcontractors, consultants, and materialmen as successors in interest by assignment or otherwise, arising out of the work performed under the Contract which are related to said undisputed Contract amounts. This Release shall be effective as to all claims of the Contractor arising out of or in connection with the performance of the work under this Contract with respect to said undisputed Contract amounts, including tort claims, which are known to the Contractor or reasonably should have been known to the Contractor at the date of the signing of this Release. The acceptance by Contractor of the final Contract payment described above shall operate as a waiver of all claims described herein and of any entitlement to additional payment arising out of the Contract, except as to those claims by the Contractor and their respective estimated dollar amounts listed herein below. It is understood that the amounts set forth below are good faith estimates and may be subject to some reasonable modification. It is intended that this Release be construed in accordance with the limitations set forth in California Public Contract Code, Section §7100.

<u>DESCRIPTION OF DISPUTED CLAIM</u>	<u>ESTIMATED AMOUNT OF DISPUTED CLAIM</u>
_____	\$ _____

Signed: _____

By: _____
(typed or printed)

Title: _____

Company Name: _____

Date: _____

The District, at its discretion, may elect to issue final payments directly to certain of the subcontractors, or to issue joint check payments, payable to the Contractor and subcontractor involved. Contractor agrees to verify the correctness of any final payments to be made to subcontractors by the District and acknowledge the same in writing to the District within five (5) days of written request from the District. If the Contractor disputes the correctness of any final payment to be made to a subcontractor, the Contractor shall so notify the District in writing of the matters in dispute and the

amounts thereof. The notice shall be in writing delivered to the District within five (5) days of the above-written request from the District. Said payments shall be made in accordance with estimates made by the Contractor and/or subcontractor and approved by the District of the amount and value of work satisfactorily performed by the subcontractor. Amounts so paid to the subcontractor shall be deducted from any amounts due to the Contractor under the terms of the Contract and any Change or Extra Work Orders. However, to the extent that the Contractor disputes any portion or all of the estimated payment due a subcontractor, an amount not to exceed one hundred fifty percent (150%) of the disputed amount will be withheld from the payment to the subcontractor. If the entire amount due to the subcontractor is disputed by the Contractor, then up to one hundred fifty percent (150%) of this entire amount may be deducted from payments to the Contractor until the dispute is resolved.

If, as stated above, the District elects to issue final payments to a subcontractor or subcontractors or to issue joint check payments, the District may request, as part of its payment to the subcontractor or subcontractors involved, that said subcontractor or subcontractors sign a Conditional Waiver and Release Upon Final Payment to the subcontractor, which shall be in substantially the following form:

Conditional Waiver and Release Upon Final Payment to Subcontractor

Upon receipt by the undersigned of a check from Central Contra Costa Sanitary District (District) in the sum of \$_____ payable to _____ and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, Stop Notice, or bond right the undersigned has on the Contract. This release covers the final payment of the undersigned for all labor, services, equipment, or material furnished on the job, except for disputed claims for additional work described in the attached sheet, if any, in the amount of \$_____.

Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.

Date: _____
By: _____
Title: _____
_____ Company Name

GC-36 SURVIVAL

Notwithstanding the District's acceptance of the work and payment, Contractor shall remain obligated under all clauses of this Contract, which expressly or by their nature extend beyond and survive such acceptance and payment or termination.

GC-37 WARRANTY

Contractor warrants that the work performed pursuant to the Contract shall be of the quality specified or of the highest quality if no quality is specified, and shall conform to the

specifications, drawings, samples, and other descriptions set forth in the Contract. Contractor warrants all equipment and materials furnished by it and all work performed by it under the Contract against defective design (unless furnished by the District), materials, and workmanship for a period of one (1) year from and after final acceptance regardless of whether the same were furnished or performed by Contractor or by any of its subcontractors or suppliers of any tier. Performance and Payment Bonds, if any, shall remain in full force and effect during such warranty periods.

If, after installation and acceptance, the operation or use of the material or equipment furnished under this Contract proves to be unsatisfactory to the District, the District shall have the right to operate and use such materials and equipment until it can, without damage to the District, be taken out of service for correction or replacement by Contractor at its expense. The warranty period for the materials or equipment which are replaced shall be one (1) year from and after the replacement materials or equipment are satisfactorily installed.

Upon receipt of written notice from the District of any breach of warranty during the applicable warranty period, the affected item shall be redesigned, repaired, or replaced by Contractor and it shall perform such tests as the District may require to verify that such redesign, repairs, and replacement comply with the requirements of the Contract. As to the redesigned, repaired, or replaced work, Contractor warrants such redesigned, repaired, or replaced work against defective design, materials, and workmanship for a period of one (1) year from and after the date of acceptance of such work. The District reserves the right to require that Contractor perform such repair or replacement work.

The District also reserves the right to make such repairs or replacements, if, within seven (7) calendar days after mailing of a notice in writing to Contractor and Surety, if any, Contractor shall neglect to make or undertake with due diligence the aforesaid repairs or replacements and that Surety, if any, within seven (7) calendar days after mailing of a notice in writing of such negligence of Contractor shall neglect to make or undertake with due diligence the aforesaid repairs or replacements itself, provided, however, that in the case of an emergency where in the opinion of the District delay would cause hazard to health or serious loss or damage, repair may be made without notice being sent to Contractor or Surety, and Contractor shall pay the cost thereof.

All costs, including manpower and materials incidental to such redesign, repair, replacement, and testing, including the removal, replacement, and reinstallation of equipment necessary to gain access and all other costs incurred as the result of a breach of warranty shall be borne by Contractor whether performed by the District or Contractor.

Nothing in this section shall be construed to limit, relieve or release Contractor's, subcontractor's, and equipment supplier's liability to the District for damages sustained as the result of latent defects in the equipment furnished caused by the negligence of the supplier's agents, employees or subcontractors.

The Performance Bond shall extend for a period of one (1) year after acceptance of the Contract by the District and shall cover the Contractor's obligations resulting from the warranty requirements herein specified.

GC-38 NOT USED

GC-39 NOT USED

GC-40 NO DISCRIMINATION

The Contractor must comply with Government Code section 11135 and the implementing regulations (Cal. Code Regs, tit. 2, § 11140 et seq.) including, but not limited to, ensuring that no person is unlawfully denied full and equal access to the benefits of, or unlawfully subjected to discrimination in the operation of, the Project on the basis of sex, race, color, religion, ancestry, national origin, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, or sexual orientation as such terms are defined under California law, for the duration of this Contract.

Contractors and its subcontractors must not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, sexual orientation, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40), marital status, denial of family care leave, or genetic information, gender, gender identity, gender expression, or military and veteran status.

The Contractor and its subcontractors must ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment.

The Contractor and its subcontractors must comply with the provisions of the Fair Employment and Housing Act and the applicable regulations promulgated thereunder. (Gov. Code, §12990, subs. (a)-(f) et seq.; Cal. Code Regs., tit. 2, § 7285 et seq.) Such regulations are incorporated into this Agreement by reference and made a part hereof as if set forth in full.

The Contractor and its subcontractors must give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

The Contractor must include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this Contract.

GC-41 Dependent on Funding

The undertaking of this Project is completely dependent on the District's receipt of grant funding from the State Water Resources Control Board's Storm Water Grant Program. If the Project's Funding Agreement for said grant program is not executed, cancelled or modified to reduce Project funding, Contractor's work, as specified in this Contract, may be terminated or reduced by the District in accordance with the provisions of this Contract.

GC-42 NOT USED

GC-43 NOT USED

GC-44 NOT USED

GC-45 NOT USED

GC-46 NOT USED

GC-47 NOT USED

GC-48 NOT USED

GC-49 NOT USED

**PART VI
SPECIAL CONDITIONS - CONSTRUCTION**

INDEX

Section	Title
SC-1	Insurance
SC-2	Beginning and Prosecution of the Work
SC-3	Hours of Work
SC-4	Not Used
SC-5	Liquidated Damages
SC-6	Substantial Completion and Project Milestones
SC-7	Shutdowns and Connections
SC-8	Use of Completed Portions of Work
SC-9	Special Safety Precautions
SC-10	Contractor Facilities
SC-11	Security
SC-12	Storage of Materials and Equipment
SC-13	Use, Salvage and Disposal of Materials
SC-14	Use of District-Owned Equipment
SC-15	District-Furnished Materials or Equipment
SC-16	Access and Cooperation
SC-17	Protection and Restoration of Property
SC-18	Storm Water Pollution Prevention
SC-19	Cultural Resources
SC-20	Not Used
SC-21	General Project Signage

**PART VI
SPECIAL CONDITIONS - CONSTRUCTION**

SC-1 INSURANCE

A. Contractor shall, at its expense, procure and maintain insurance provided by insurance companies with an A.M. Best's Insurance Rating of "A:VII" or better on all of its operations under this Contract for the duration of the Project and the warranty period, except for the liability insurance for the Products-Completed Operations Hazard as specified in Subsection A.2, as follows:

1. Workers' Compensation and Employer's Liability Insurance: Workers' Compensation Insurance shall be provided as required by any applicable law or regulation. Employer's Liability Insurance shall be provided in amounts not less than \$1,000,000 per accident, \$1,000,000 per each employee for disease, and \$1,000,000 policy limit.

The insurer shall waive all rights of subrogation against the District, its officers, directors, and employees.

2. General Liability Insurance: Contractor shall carry general liability insurance covering all operations by or on behalf of Contractor for the following limits of liability:
 - a. Minimum combined single limit of liability of \$2,000,000 or the limits required by law, whichever is greater for each occurrence for bodily injury and property damage;
 - b. Minimum limit of liability of \$2,000,000 each person for personal and advertising injury liability;
 - c. Minimum limit of liability of \$2,000,000 each occurrence for products/completed operations liability;
 - d. General aggregate limit of not less than \$2,000,000, which shall be provided on a per project basis.

Contractor's General Liability Insurance shall be written on an "occurrence" form and provide coverage at least as broad as the most recent version of Insurance Services Office Commercial General Liability form CG 0001.

Coverage shall include, or be endorsed to include:

- a. Coverage for personal injury liability assumed under contract;
- b. Liability arising out of the use and operation of any District-furnished equipment by the Contractor, its personnel and others;
- c. XCU coverage for claims arising from explosion, collapse and underground damage;
- d. Accidental spillage, cleanup and other related costs;

- e. Contractual liability coverage for all oral and written contracts including indemnity provisions contained herein;
- f. Cross Liability and Severability of Inter

The District, its officers, directors, and employees shall be named as additional insureds on the Contractor's policies by a provision or endorsement providing coverage at least as broad as Insurance Services Office's Additional Insured - Owners, Lessees, or Contractors (Form B) endorsement Number CG 2010 11/85.

The required additional insured coverage for the District shall be primary and specify that any other insurance or self-insurance maintained by the District shall not be called upon to contribute with Contractor's insurance.

Contractor shall maintain liability insurance for the "Products-Completed Operations Hazard" for three (3) years following completion of Contractor's work under this Contract and acceptance by the District. Contractor shall provide updated Certificates of Insurance to the District during these subsequent three (3) years as evidence of continued coverage.

- 3. Automobile Liability Insurance: The Contractor shall carry Automobile Liability Insurance at least as broad as the most recent version of Insurance Services Office Business Automobile Liability (form Number CA 0001) on all owned, non-owned, and hired autos, with a single limit for bodily injury and property damage of \$1,000,000 per occurrence. The coverage shall remain in force during the warranty period. The policy shall also include liability arising out of the use and operation of District-furnished vehicles by the Contractor, its personnel, and others.

The insurance shall not contain provisions for automatic termination or reduction in coverage should the District make use of or take possession of any completed or partially completed portion of the work performed under this Contract prior to the District's recording of the Notice of Completion.

B. The following provisions shall also apply:

- 1. Each required insurance policy shall be endorsed to state that coverage shall not be canceled or reduced without thirty (30) days' prior written notice to the DISTRICT. Ten (10) days' notice shall be provided for cancellation for nonpayment of premiums.
- 2. Deductibles shall not exceed \$5,000 per occurrence with a deductible aggregate of \$5,000. The Contractor shall be solely responsible for payment of deductibles.
- 3. CONTRACTOR shall furnish the DISTRICT with original, signed certificates and original, signed amendatory endorsements. All such certificates and endorsements shall be received and reviewed by the DISTRICT before any work begins under this agreement. The certificates and amendatory endorsements shall be signed by an individual who is authorized to sign on behalf of the insurer covering the CONTRACTOR.

4. The DISTRICT reserves the right to require complete, certified copies of all required insurance policies at any time.
5. CONTRACTOR shall include all SUBCONTRACTORS as insureds under its policies or shall cause each SUBCONTRACTOR employed by CONTRACTOR to purchase and maintain insurance of the types and limits specified in this section. Upon the DISTRICT's request, CONTRACTOR shall furnish copies of certificates and endorsements evidencing coverage for each SUBCONTRACTOR.
6. All insurance correspondence, notices, certificates, and endorsements shall each separately reference "All DISTRICT Operations" or "All DISTRICT Projects."
7. In the event CONTRACTOR fails to comply with this Section, the DISTRICT may take such action as the DISTRICT deems necessary to protect the DISTRICT's interest. Such action may include but is not limited to termination of the Contract, withholding of payments, or other actions as the DISTRICT deems appropriate.

SC-2 BEGINNING AND PROSECUTION OF THE WORK

Contractor shall be authorized to begin work upon receipt of the Notice to Proceed for construction work, and shall begin work as soon after receipt as possible to ensure all work is completed within the Time of Performance set forth in this Contract. Receipt of a Notice to Proceed for Design or Construction management work shall not constitute authorization of the Contractor to begin any construction work.

Contractor shall notify the District in writing of its intent to begin work at least one working day before work is actually begun. Contractor shall also promptly notify the District of any Contractor-initiated suspensions and resumptions of work during the contract period, allowing as much advance warning as possible. The notice to resume work shall be given to the District not less than one working day in advance of resuming work.

Contractor shall prosecute the work with sufficient forces, construction plant, and equipment and shall work such hours, including extra shifts and overtime operations as may be necessary to ensure the completion of the work in accordance with the construction schedule and specified time of performance.

If at any time during the progress of work, the Contractor's actual progress, as determined by the District, is inadequate to meet the requirements of the Contract, the District may notify the Contractor of such imminent or actual noncompliance with the Contract. The Contractor shall thereupon take such steps as may be necessary to improve its progress including, but not limited to, an increase in the labor force, the number of shifts, and/or overtime operations, days of work and/or the amount of construction equipment, all without additional cost to the District. Neither such notice by the District nor the District's failure to issue such notice shall relieve the Contractor from its obligations to achieve the quality of work and rate or progress required by the Contract.

Failure of the Contractor to comply with the instructions of the District under these provisions may be grounds for determination by the District that the Contractor is not prosecuting work with such diligence as will assure completion within the times specified. Upon such determination, the District may terminate the Contractor's right to proceed with the performance of the Contract, or any separable part thereof, in accordance with Part V, General Conditions -

Construction, Section GC-15, Termination of Right to Proceed, herein. Said termination shall be without prejudice to any other remedies available to the District.

SC-3 HOURS OF WORK

- A. Hours of Work: 7:00 a.m. to 7:00 p.m.
- B. Weekend Work: No work shall be done on weekends unless specifically authorized by the District.
- C. Night Work: If night work is required by provisions of the Contract, no additional compensation will be made. If night work is done at the option of the Contractor, no additional compensation will be allowed therefor, and the Contractor shall pay the District for the additional costs of the inspection.

The Contractor will also be permitted to work at night with approval of the District if the need therefor, in order to maintain the required progress or protect the work from the elements. The Contractor may also be required to prosecute the work at night if, at any time, the District shall deem it necessary for the progress of the work or if emergencies arise. The Contractor shall promptly comply with any such requirements made in writing by the District. When required by the District, the Contractor will be compensated in accordance with Part V, General Conditions - Construction, Section GC-30, Extra Work Payment. However, if the Contractor is required to work at night or on weekends to meet the time limits contained in the construction schedule and is not pursuing the work diligently, no additional compensation will be allowed.

Should any of the work be performed at night or where daylight is obscured or too dark, the Contractor shall, at its expense, provide artificial light sufficient to permit work to be carried on efficiently, satisfactorily, and safely, and to permit thorough inspection. The access to the place of work shall also be clearly illuminated. All wiring for electric light and power shall be installed and maintained in accordance with all applicable standards, securely fastened in place at all points, and shall be kept as far as possible from other electrical wires, telephone wires, signal wires, and wires used for firing blasts. For night work, if any be performed, the Contractor shall employ a crew organized and prepared for regular and continuous night work.

SC-4 NOT USED

SC-5 LIQUIDATED DAMAGES

The time limits stated in the Contract are of the essence. It is agreed by the parties to the Contract that in case all the work called for under the Contract is not substantially completed before or upon the expiration of the time limits set forth in the Contract, damage will be sustained by the District, and that it is and will be impracticable to determine the actual damage which the District will sustain in the event of and by reason of such delay.

It is therefore agreed that Contractor shall pay to the District the following amount per day for each calendar day in excess of each milestone completion date required by the Contract, and the date the District deems the milestone work to be completed by the Contractor:

MILESTONE

LIQUIDATED DAMAGE

Substantial Completion

\$500/day

It is further agreed that the amounts stipulated are reasonable estimates of the damages that would be sustained by the District and Contractor agrees to pay such liquidated damages as herein provided as liquidated damages and not as penalty. In case the liquidated damages are not paid, Contractor agrees that the District may deduct the amount thereof from any money due to or that may become due Contractor by progress payments or otherwise under the Contract, or if said amount is not sufficient, recover the total amount from Contractor or its surety.

The assessment of liquidated damages under this provision shall not preclude recovery by the District of other damages subject to reasonable quantification, including consequential damages. Consequential and other damages not provided for by this liquidated damages provision may include, but are not limited to, first- and third-party claims for personal injuries and/or property damages, inverse condemnation, environmental claims, or regulatory fees or fines imposed in whole or in part due to Contractor's acts or failures to act.

SC-6 SUBSTANTIAL COMPLETION AND PROJECT MILESTONES

When construction is sufficiently complete in accordance with the Contract so that the District can occupy or utilize all portions and all systems of the work for all of the uses for which said work was intended, and when Contractor has furnished the "as-built" drawings, operations and maintenance manuals, test and compliance certificates, equipment and system warranties, and all other documents required by the Contract, the work will be considered substantially complete.

When the Contractor considers that the work is substantially complete, the Contractor shall request an inspection for substantial completion. When the District determines, on the basis of the inspection, that all portions and all systems of the work are substantially complete, the District will prepare a Certificate of Substantial Completion that will establish the date of substantial completion of the work; shall state the responsibilities of the District and the Contractor for security, maintenance, operation, and insurance; and shall list the items remaining to be completed or corrected. Failure to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract.

The District will have the right to restrict Contractor's use of the occupied portions of the work after the date of substantial completion, but the District will allow the Contractor reasonable access to complete or correct items required by the Contract.

The issuance of the Certificate of Substantial Completion for the work shall not relieve the Contractor of its obligation to promptly remedy any omissions and latent or unnoticed defects in the work covered by the Certificate of Substantial Completion.

A Certificate of Substantial Completion will not constitute acceptance of the work. A Certificate of Substantial Completion will fix the date for lowering the amount of liquidated damages to the value specified in the Contract for the period after substantial completion and before completion.

SC-7 SHUTDOWNS AND CONNECTIONS

The Contractor shall, at all times, conduct its operation so as to interfere as little as possible with existing District facilities and/or processes.

The Contractor shall connect to existing facilities and/or processes as necessary to complete the Project. The Contractor shall give five (5) working days' advance notice and receive prior written approval from the District for all connections to existing facilities and/or processes, whether such connections are "live" or "inactive."

All work on connecting with, cutting into, and reconstructing existing pipes, electrical, roadways, or structures shall be planned to interfere with the operation of the existing facilities for the shortest possible time when the demands on the facilities best permit such interference. In some cases, it may be necessary to work outside of normal working hours to meet these requirements. Before starting work that will interfere with the operation of existing facilities, the Contractor shall do all possible preparatory work and shall see that all tools, materials, and equipment are made ready and located at the job site. No connections shall be made without the District's prior approval.

SC-8 USE OF COMPLETED PORTIONS OF WORK

Whenever, as determined by the District, any portion of work performed by Contractor is in a condition suitable for use, the District may take possession of or use such portion.

Such use by the District will in no case be construed as constituting final acceptance and shall neither relieve Contractor of any of its responsibilities under the Contract, nor act as a waiver by the District of any of the conditions thereof, provided that Contractor shall not be liable for the cost of repairs, rework, or renewals which may be required due to ordinary wear and tear resulting from such use. However, if such use increases the cost or delays the completion of remaining portions of work, Contractor shall be entitled to an equitable adjustment.

If, as a result of Contractor's failure to comply with the provisions of the Contract, such use proves to be unsatisfactory to the District, the District will have the right to continue such use until such portion of work can, without injury to the District, be taken out of service for correction of defects, errors, omissions, or replacement of unsatisfactory materials or equipment, as necessary for such work to comply with the Contract, provided that the period of such operation or use pending completion of appropriate remedial action shall not exceed four months unless otherwise mutually agreed upon in writing between the parties. The completion of corrections or replacements shall occur before acceptance of the Contract, unless otherwise mutually agreed upon in writing between the parties.

SC-9 SPECIAL SAFETY PRECAUTIONS

Contractor is hereby informed that work on this Project could be hazardous. Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instructions as are necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to work underground.

The Project site is located adjacent to a working groundwater drinking well. Contractor shall not interfere with any of the District's well facilities without prior permission from the District.

The Project site is located adjacent to public park facilities that will remain in operation for the duration of the Contractor's work. Contractor shall take every precaution to keep the public safe from Contractor's construction activities.

SC-10 CONTRACTOR FACILITIES

Contractor shall, at all times, maintain all portions of the jobsite in a neat, clean, and sanitary condition at all times. The Contractor shall, as a minimum, conduct daily inspections to verify that requirements of this Section are being met.

Contractor may use public restrooms located in the adjacent park during Construction.

The District will provide Contractor with access to water for construction activities. District will also provide Contractor with access to limited power – One 120V outlet – for construction activities. All other power shall be provided by the Contractor.

SC-11 SECURITY

The Project site is located adjacent to an operational park in the center of a busy downtown business district. If needed for safety and security, Contractor, at its cost, shall construct temporary fencing to prevent unauthorized access to the work area. No existing fence or other existing enclosure about existing facilities shall be assumed by the Contractor to provide appropriate security for equipment, plant, or materials intended to be employed or incorporated in the work.

SC-12 STORAGE OF MATERIALS AND EQUIPMENT

The Contractor shall, at its expense, store and maintain all materials and equipment as specified in the Contract or, where not specified, in such a manner as to assure the preservation of their quality and fitness, including warehousing if required by the District, and so as to facilitate job-site safety and convenient inspection by the District. The Contractor shall not dispose, remove, or otherwise encumber any of the materials or equipment so stored except as authorized in writing by the District.

The Contractor shall be responsible for, and shall bear any and all risk of loss of, or damage to, any work and all materials and equipment until final acceptance under the Contract, unless such loss or damage results from the active negligence of the District or any act of God as defined herein.

SC-13 USE, SALVAGE AND DISPOSAL OF MATERIALS

- A. Use: The Contractor, with the written permission of the District, may use in the proposed construction such stone, gravel, sand, or other material suitable in the opinion of the District as may be found at the Project site. The Contractor shall satisfy itself as to the quantity of materials that meet the Specifications, which may be produced or obtained at local sources, and the District will not assume any responsibility as to the quantities or quality of materials available.

The following materials currently on the Project site may be used to complete work:

1. Stockpiled mulch.
2. Stockpiled boulders.

Unless otherwise provided in the Contract, the title and interest in the right to the use of all water, and the title to all soil, stone, gravel, sand, minerals, timber, and all other materials developed or obtained within the Project limits from operations by the Contractor or any of its subcontractors, or any of their representatives or employees, and the right to use or dispose of the same, are hereby expressly reserved to the District; and neither the Contractor nor any of its subcontractors nor any of their representatives or employees shall have any right, title, or interest in or to any part thereof.

- B. **Salvage:** Existing items to be salvaged shall remain the property of the District. Items to be reinstalled in the work shall be refurbished as required before reinstallation. Items to be salvaged shall be carefully removed and handled in such a manner as to avoid damage and shall be delivered to storage at a location designated by the District.

The following items may be required to be salvaged for reinstallation or reuse in the Project construction:

1. Stockpiled boulders.
2. Split-rail fencing near well house.
3. Bollard and chain fencing around site.

- C. **Disposal:** Existing materials and equipment to be demolished, removed, and disposed as noted on the drawings and all trash such as broken concrete, broken asphalt, wood blocking, shipping containers, etc., resulting from the Contract work shall be disposed off District property at Contractor's expense. All materials not deemed suitable for use in the Project shall be removed and disposed off District property at the Contractor's expense. District-leased dumpsters and other disposal containers on the District's property shall not be used by Contractor.

Since the Project site is the former site of a hotel, which burned and was demolished, Contractor shall anticipate significant amounts of broken asphalt, broken concrete, old piping, old pool improvements, and other leftover demolition debris remaining on the Project site.

The District will be responsible for removing and disposing of all existing piles of cut slash and vegetation.

SC-14 USE OF DISTRICT-OWNED EQUIPMENT

No District-owned equipment is anticipated to be available for Contractor's use on this Project.

SC-15 DISTRICT-FURNISHED MATERIALS OR EQUIPMENT

The following listed materials or equipment will be furnished to the Contractor by the District without charge. All other materials or equipment necessary and required for the work under this Contract, including bolts, nuts, gaskets, and miscellaneous items, shall be furnished by the Contractor.

<u>Item</u>	<u>Scheduled Availability Date</u>
Outdoor Pavilion for rainwater capture	August 2023
Large Christmas Tree	As requested (30 day notice)

Water History Table (Water Play Discovery Lab)	As requested (30 day notice)
History Signs (Historic Stories Path)	As requested (60 day notice)
All Bocce Rainwater Capture Materials & Equipment	Already provided

The Contractor shall verify the conditions of District-furnished materials or equipment and shall submit to the District within seven (7) days after delivery date a statement listing all defective items. The District shall be notified of delivery and may conduct its own inspection. The list shall include the cost and extension to the Contract time that the Contractor estimates for the correction and repair of each defective item and a statement of the Contractor's opinion as of the cause of the defective items.

If the Contractor makes no submittal within the time period specified, it shall be understood that the equipment or District-furnished materials are in satisfactory condition and that the Contractor's acceptance has occurred as of the date of delivery.

If Contractor chooses to store or locate District-furnished materials and equipment off site, they shall be transported from their storage location to the site of the work by the Contractor at its expense, including any necessary loading and unloading that may be involved.

The Contractor and the manufacturer of the District-furnished materials or equipment each have individual responsibilities regarding delivery, installation, testing, and acceptance of the materials or equipment, which must be carefully coordinated to assure successful completion. The Contractor shall, as the principal on-site party, be responsible for informing the manufacturer of the progress of the work and factors affecting the scheduling of required visits to the site by the manufacturer's field representative.

The Contractor, upon taking possession of District-furnished materials or equipment, shall be responsible for all such material or equipment and shall pay all demurrage and storage charges that may be incurred due to delay in taking possession beyond specific time limits designated in these Special Conditions. The proposed storage site shall be subject to approval by the District.

District-furnished materials or equipment lost or damaged from any cause whatsoever and including, but not limited to, use in defective work after the Contractor has taken possession shall be replaced by the Contractor at its expense. The Contractor shall be liable for the cost of replacing lost or damaged District-furnished materials or equipment in its possession, for related demurrage and storage charges, and for replacement of destroyed items designated as salvage. Such costs may be deducted from any monies due or to become due to the Contractor.

Where equipment or District-furnished materials have been subjected to rough handling by the Contractor and damage is not visually apparent, the District shall have the right to deduct the full cost of the materials or equipment from any monies due the Contractor and to retain such monies until final acceptance of the equipment. If an item of District-furnished materials or equipment is partially damaged by the Contractor, the Contractor shall repair the damaged portion to the satisfaction of the District or replace all of the materials or replace the entire piece of equipment.

SC-16 ACCESS AND COOPERATION

The Contractor's attention is drawn to the fact that during the course of the work of this Contract, existing facilities adjacent to the Project site will be used and maintained by District's

personnel, Tuolumne County personnel, and the public. The Contractor shall coordinate its work in such a way as to interfere as little as possible with the routine work and use of existing facility operation. The intent of this item is also that the Contractor's work force shall be excluded from access to and use of existing facilities except in direct pursuit of the work of this Contract, unless approved by the District. The Contractor shall provide safe access at all times to all existing facilities for operating personnel and equipment and for public use. Existing facilities include, but are not limited to:

1. District well house and related appurtenances and equipment.
2. District Bocce Courts and related facilities.
3. Eproson Park and related facilities.
4. Meadow Drive road facilities (owned and operated by Tuolumne County).

There will be other contractors or forces of the District working in the same area where work under the Contract will be performed. Contractor must anticipate that its work may be interfered with or suspended from time to time on account of the concurrent performance of work by the District or other contractors, and Contractor shall fully cooperate with other contractors to avoid any delay or hindrance of their work. The District may require that certain facilities be used concurrently by Contractor and other persons. It shall be noted that Contractor, through its construction management services provided through this Contract shall serve as the primary coordinator of all Project construction activities, including those performed by other contractors. This includes the following construction activities that may be performed during the course of Contractor's work:

1. Rough grading and installation of underground utilities.
2. Construction of Outdoor Pavilion.
3. Construction of Restrooms.
4. Construction of Entrance Parking Area.

Should Contractor sustain any loss, damage, or delay through any act or omission of any other contractor or any subcontractor of any such contractor, Contractor shall have no claim against the District other than an extension of time, but shall have recourse solely to such other contractor or subcontractor.

SC-17 PROTECTION AND RESTORATION OF PROPERTY

Contractor shall provide protection for all public and private property including, but not limited to, structures, pipes, hardscape, roadways, landscaping, and utilities, above and below the ground.

Project work will occur on District property and County road right-of-way. Contractor shall take all measures necessary to protect all existing public and private facilities. Damage to any property or facilities resulting from Contract work shall be repaired by the Contractor, at its sole cost. In as much as it is reasonably possible, Contractor, at its sole cost, shall restore the area affected by Project work to its condition prior to construction.

The Contractor shall so conduct its operations as not to close or obstruct any portion of any road or other property until permits therefor have been obtained from the governmental or other authorities having jurisdiction thereof. If any of the above are required to be kept open and are damaged or rendered unsafe by the Contractor's operations, the Contractor shall, at its

expense, make such repairs and provide such temporary guards, bridges, lights, and other signals as necessary or required for public safety and as will be acceptable to the governmental or other authorities having jurisdiction thereof. Fences that interfere with any work may, upon prior written approval of the District, be removed by the Contractor but must then be restored to their original condition prior to final acceptance. Such removing and restoring shall be by and at the expense of the Contractor.

Care shall be exercised by the Contractor to prevent damage to adjacent walks, streets, culverts, and gutters; where equipment will pass over these obstructions, suitable planking shall be placed.

The Contractor shall preserve and protect all cultivated and planted areas, and vegetation such as trees, plants, shrubs, and grass on or adjacent to the premises, which, as determined by the District, do not reasonably interfere with the performance of work. The Contractor will be held responsible for damage to any such areas and vegetation and for unauthorized cutting of trees and vegetation, including without limitation, damage arising from the performance of its work through operation of equipment or stockpiling of materials. All costs in connection with any repairs or restoration necessary or required by reason of any such damage or unauthorized cutting shall be borne by the Contractor.

SC-18 STORM WATER POLLUTION PREVENTION

Contractor shall implement any best management practices necessary to ensure no contamination of Twain Harte Creek.

In addition to the above, Contractor shall take the following measures:

A. General

1. **Prevention:** The Contractor shall prevent the pollution of storm drain systems and creeks on or near the construction Project site(s) resulting from the construction. The Contractor shall keep pollutants out of storm drains by reducing the possibility of accidental discharge of materials and wastes, by reducing erosion and sedimentation, and by any action as required. The Contractor shall train all employees and subcontractors on the storm water pollution prevention requirements contained in these Specifications and ensure that all employees and subcontractors are aware of the consequences as described in paragraph A.3. below. The Contractor shall include appropriate subcontract provisions to ensure that these requirements are met by all subcontractors.
2. **Notification:** If the Contractor causes or permits the spillage or overflow of any oil, or petroleum product, hazardous substance, contaminant, waste or wastewater, including overflows or releases of untreated or treated (partially or fully) wastewater, and backups into buildings and on private property, the Contractor shall notify the District as soon as possible to the extent notification can be provided without substantially impeding cleanup or other emergency measures. In no event shall such notification be later than one (1) hour after knowledge of the occurrence.

3. Cleanup: Immediately upon gaining knowledge of such spillage, overflow, or discharge, the Contractor shall eliminate the cause of the spillage, overflow, or discharge and take action to minimize any damages. The Contractor shall also immediately implement a cleanup program. The cleanup, including sampling and testing required by regulatory agencies to determine the nature and level of contamination, shall be performed and completed to the satisfaction of the various regulatory agencies involved and the District, at the expense of the Contractor. If the Contractor's response is not satisfactory to the District, the District may, at its own discretion, mobilize to eliminate the cause of the overflow and implement a cleanup program, including any necessary sampling and testing. District costs of cleanup efforts shall be at the Contractor's expense and collected at the discretion of the District. Any fines, penalties, and/or subsequent actions imposed upon the District and/or the Contractor by regulatory agencies related to the spillage, overflow, or discharge and any subsequent monitoring, testing, and reporting, as required by regulatory agencies, shall also be at the expense of the Contractor. The Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on site. The quantity of cleanup materials shall be appropriate in consideration of the risk of an occurrence of a spill, overflow, or discharge.

B. Management of Nonhazardous Material and/or Waste

1. Designated Area: The Contractor shall propose designated areas of the Project site, for approval by the District, suitable for material delivery, storage, and waste collection that to the maximum extent practicable are near construction entrances and away from catch basins, gutters, drainage courses, and creeks.
2. Backfill or Excavated Material: The Contractor shall not allow backfill or excavated material to enter the storm drains or creeks. When rain is forecast within 24 hours or during wet weather, the Contractor may be required to cover such material with a tarpaulin and to surround the material with sand bags.
3. Disposal: At the end of each working day, the Contractor shall collect all scrap, debris, and waste material, and dispose of such materials properly. The materials may be stored in the Contractor's yard in stockpiles or placed in dumpsters. The Contractor shall inspect dumpsters for leaks and replace or repair dumpsters that leak. The Contractor shall not discharge water from cleaning dumpsters on site. The Contractor shall arrange for regular waste collection before dumpsters overflow.

C. Management of Hazardous Material and/or Waste

1. Storage: The Contractor shall label and store all hazardous materials, such as pesticides, paints, thinners, solvents, and fuels, and all hazardous wastes, such as waste oil and antifreeze, in accordance with all applicable state and federal regulations. The Contractor shall store all hazardous materials and all hazardous wastes in accordance with secondary containment regulations. All such materials and wastes shall be covered, as needed, to avoid rainwater becoming polluted with hazardous constituents, which could result in potential management of collected rainwater as hazardous waste. The Contractor shall keep an

accurate, up-to-date inventory, including Material Safety Data Sheets (MSDS), of hazardous materials and hazardous wastes stored on site.

2. Usage: When rain is forecast within 24 hours or during wet weather, the Contractor shall refrain from applying chemicals in outside areas. The Contractor shall follow material manufacturer's instruction regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals. The Contractor shall post warning signs in areas treated with chemicals.
3. Disposal: The Contractor shall arrange for regular hazardous waste collection to comply with time limits on storage of hazardous wastes. The Contractor shall dispose of hazardous waste in accordance with Part V, General Conditions - Construction, Section GC-25, Contaminated Soil/Materials. The Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials. The Contractor shall report any hazardous material spills to the District in accordance with paragraph A.2 above.

D. Vehicle/Equipment Cleaning, Maintenance, and Fueling

1. General: The Contractor shall inspect vehicles and equipment arriving on site for leaking fluids and shall promptly repair leaking vehicles and equipment. Drip pans shall be used to catch leaks until repairs are made.
2. Cleaning: The Contractor shall perform vehicle or equipment cleaning with water only in a designated, bermed area that will not allow rinse water to run off site into streets, gutters, storm drains, or creeks. Soaps, solvents, degreasers, steam-cleaning equipment, or equivalent methods shall not be allowed.
3. Maintenance and Fueling: The Contractor shall perform maintenance and fueling of vehicles or equipment in areas that will not allow run-on of storm water or runoff of spills to storm drains and that provide for confined cleanup. Examples are working in bermed areas or utilizing drip pans. The Contractor shall not contaminate the soils or groundwater with such maintenance and fueling activities.

The Contractor shall use secondary containment, such as a drip pan, to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured, and shall clean up leaks and spills of vehicle or equipment fluids immediately and dispose of the waste and cleanup materials as hazardous waste, as described in paragraph C.3 above.

G. Concrete, Grout, and Mortar Waste Management

1. Concrete Truck/Equipment Washout: The Contractor shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks. The Contractor shall perform washout of concrete trucks or equipment off site or in a designated area on site where the water will flow onto dirt or into a temporary pit in a dirt area. The Contractor shall let the water percolate into the soil and dispose of the hardened concrete in a trash container. If a suitable dirt area is not available, the Contractor shall collect the wash water and remove it off site.

2. Exposed Aggregate Concrete Wash Water: The Contractor shall avoid creating runoff by draining water from washing of exposed aggregate concrete to a dirt area. If a suitable dirt area is not available, the Contractor shall filter the wash water through straw bales or equivalent material before discharging to a storm drain. The Contractor shall collect sweepings from exposed aggregate concrete for disposal.

SC-19 CULTURAL RESOURCES

If unanticipated cultural resources are encountered during construction activities:

- A. The person discovering the cultural resource shall notify the District by telephone within 4 hours of the discovery or the next working day if the department is closed.
- B. When the cultural resource is located outside the area of disturbance, a qualified professional shall be allowed to photodocument and record the resource and construction activities may continue during this process. The area of disturbance includes staging areas and vegetation removal areas plus 300 feet.
- C. When the cultural resource is located within the area of disturbance, all activities that may impact the resource shall cease immediately upon discovery of the resource. All activity that does not affect the cultural resource as determined by a qualified professional may continue. A qualified professional, such as an archaeologist or a historian, shall be allowed to conduct an evaluative survey to evaluate the significance of the cultural resource.
- D. When the cultural resource is determined to not be significant, the qualified professional shall be allowed to photodocument and record the resource. Construction activities may resume after authorization from the qualified professional.
- E. When a resource is determined to be significant, the resource shall be avoided with said resource having boundaries established around its perimeter by a qualified professional or a cultural resource management plan shall be prepared by a qualified professional to establish measures formulated and implemented in accordance with Sections 21083.2 and 21084.1 of the California Environmental Quality Act (CEQA) to address the effects of construction on the resource. The qualified professional shall be allowed to photodocument and record the resource. Construction activities may resume after authorization from the qualified professional. All further activity authorized by this permit shall comply with the cultural resources management plan.
- F. For the purposes of implementing this measure, a "qualified professional" is an individual (e.g., historian or archaeologist) determined to be a qualified professional by the District and a "cultural resource" is any building, structure, object, site, district, or other item of cultural, social, religious, economic, political, scientific, agricultural, educational, military, engineering or architectural significance to the citizens of Tuolumne County, the State of California, or the nation which is 50 years of age or older or has been listed on or is eligible for

listing on the National Register of Historic Places, the California Register of Cultural Resources, or any local register.

- G. If human remains are discovered during subsurface excavations on the project site, work shall stop and no further disturbance shall occur until the County Coroner has made the necessary determination as to the origin and disposition of the remains, including notification of the Native American Heritage Commission (NAHC) within 24 hours if remains are determined to be Native American, pursuant to Public Resources Code, Section 5097.98 and State Health and Safety Code, Section 7050.5.

SC-20 NOT USED

SC-21 GENERAL PROJECT SIGNAGE

Contractor shall design and install a minimum 4'x8' sign made of 3/4-inch thick exterior grade plywood or other approved material in a prominent location on the Project site. The sign shall visually and verbally illustrate the Project that will be constructed, providing the public of an understanding of what's to come. At a minimum, it shall also include the Proposition 1 and State Water Resources Control Board logos and the following statement: "Funding for this project has been provided in full or in part by Proposition 1 – the Water Quality, Supply, and Infrastructure Act of 2014 through an agreement with the State Water Resources Control Board."

PART VII
GENERAL CONDITIONS – DESIGN & CONSTRUCTION MANAGEMENT

INDEX

Section	Title
GC-50	Entire Agreement
GC-51	Notices
GC-52	Commencement of Work
GC-53	Standard of Performance and Responsibility for Work
GC-54	Assignment of Personnel
GC-55	Public Works Requirements
GC-56	Invoices
GC-57	Monthly Payment
GC-58	Final Payment
GC-59	Excess Payment
GC-60	Hourly Fees and Reimbursable Expenses
GC-61	Payment upon Termination
GC-62	Total Payment
GC-63	Facilities and Equipment
GC-64	Insurance Requirements
GC-65	Indemnification
GC-66	Independent Contractor
GC-67	Contractor not an Agent
GC-68	Governing Law
GC-69	Compliance with Applicable Laws
GC-70	Other Governmental Regulations
GC-71	Licenses and Permits
GC-72	No Discrimination
GC-73	Termination and Suspension of Work
GC-74	Amendments
GC-75	Assignment and Subcontracting
GC-76	Survival
GC-77	Options upon Breach by Contractor

- GC-78 Records Created as Part of Contractor's Performance
- GC-79 Contractor's Books and Records
- GC-80 Attorneys' Fees
- GC-81 Venue
- GC-82 Severability
- GC-83 No Implied Waiver of Breach
- GC-84 Successors and Assigns
- GC-85 Conflict of Interest
- GC-86 Professional Endorsement
- GC-87 Dependent on Funding

**PART VII
GENERAL CONDITIONS – DESIGN & CONSTRUCTION MANAGEMENT**

GC-50 ENTIRE AGREEMENT

Refer to Section GC-1, Entire Agreement, in Part V, General Conditions – Construction.

GC-51 NOTICES

Refer to Section GC-5, Notices, in Part V, General Conditions – Construction.

GC-52 COMMENCEMENT OF WORK

Design work may commence upon full execution of this Contract. The Contractor shall not perform any Construction Management work until a written Notice to Proceed is issued for said work.

For the purposes of this Contract, Design work shall include the following Tasks from Part III, Proposal:

1. Task 1 – Project Administration and Coordination
2. Task 2 – Environmental Compliance and Permitting
3. Task 3 – Planning, Design and Engineering
4. Task 5 – Monitoring and Performance
5. Task 6 – Outreach and Education

For the purposes of this Contract, Construction Management work shall include the following Tasks from Part III, Proposal:

1. Task 4.1 – Construction Management
2. Task 4.2 – Operations and Maintenance Plan

GC-53 Standard of Performance and Responsibility for Work

Contractor shall perform all services required pursuant to this Contract in the manner and according to the standards observed by a competent practitioner of the profession in which Contractor is engaged. Contractor shall devote such time to the performance of services pursuant to this Contract as reasonably necessary to meet standards of performance. The Contractor shall be solely responsible for the Design and Construction Management work described in Part III - Proposal.

1. The District is under no duty or obligation to review or verify the appropriateness, quality or accuracy of any of the Contractor's work. The District's review, approval, and/or adoption of any designs, plans, specifications or any other work shall be in reliance on the Contractor's specialized expertise and shall not relieve the Contractor of its sole responsibility for the work.
2. The Contractor understands that review or approval of Project plans and specifications by the State Water Board is for administrative purposes only, including conformity with

application and eligibility criteria, and expressly not for the purposes of design defect review or construction feasibility, and does not relieve the Contractor of its responsibility to properly plan, design, and construct the Project.

3. All information which the Contractor receives from the District should be independently verified by the Contractor. The Contractor shall not rely upon such information, unless otherwise stated by the District in writing, until it has independently verified its accuracy.
4. If Contractor ever has reason to believe that any of its general or professional duties of care conflict with any requirements of this Agreement, the Contractor shall promptly notify the District in writing.

GC-54 Assignment of Personnel

All work performed under this Contract shall be performed by the personnel identified in the Contractor's Proposal in Part III, Proposal. Contractor shall assign only competent personnel to perform services pursuant to this Contract. In the event that District, in its sole discretion, at any time during the term of this Contract, desires the reassignment of any such persons, Contractor shall, immediately upon receiving notice from District of such desire of District, reassign such person or persons.

GC-55 Public Works Requirements

Because the Design and Construction Management services include "work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work," the services constitute a public works within the definition of Section 1720(a)(1) of the California Labor Code. As a result, Contractor is required to comply with prevailing wage rates and their payment in accordance to the provisions of the Labor Code applicable to public works. Contractor will comply, or cause its subcontractors to comply, with the provisions of Labor Code Section 1774.

GC-56 Invoices

Contractor shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall be based on the Cost Proposal contain the following information:

1. Invoice number;
2. The beginning and ending dates of the billing period;
3. A Task Summary containing the original contract amount, the amount of prior billings, the total due this period, the balance available under the Contract, and the percentage of completion;
4. The total number of hours of work performed under the Contract by Contractor and each employee, agent, and subcontractor of Contractor performing services hereunder;

GC-57 Monthly Payment

District shall make monthly payments, based on invoices received, for actual services satisfactorily performed, and for authorized reimbursable costs incurred, as set forth in Part III -

Proposal. District will pay Contractor no later than 30 days from the receipt of a compliant invoice.

GC-58 Final Payment

Contractor shall only submit a final invoice for Design or Construction Management services upon completion of all services. The final 10% of the total sum due to pursuant to this Contract will only be paid if all services required have been satisfactorily performed.

GC-59 Excess Payments

District shall pay only for the services to be rendered by Contractor pursuant to this Contract and shall not pay any additional sum for any expense or cost whatsoever incurred by Contractor for said services or for any other services, unless the Contract is modified per Section GC-74, Amendments to include said additional costs or services.

In no event shall Contractor submit any invoice for an amount in excess of the maximum amount of compensation provided above either for a task or for the entire Contract, unless the Contract is modified prior to the submission of such an invoice.

GC-60 Hourly Fees and Reimbursable Expenses

Fees for work performed by Contractor shall be on an hourly basis and shall not exceed the amounts shown on the hourly rate schedule in Part III, Proposal.

Reimbursable expenses shall not exceed the amount specified in Part III, Proposal. Reimbursable expenses are included in the total amount of compensation provided under this Contract that shall not be exceeded.

GC-61 Payment upon Termination

Refer to Section GC-16, Optional Termination, in Part V, General Conditions – Construction.

GC-62 Total Payment

Contractor and District acknowledge and agree that compensation paid by District to Contractor under this Contract is based upon Contractor's estimated costs of providing the services required hereunder, including salaries, taxes, employment taxes and benefits of employees and subcontractors of Contractor. Consequently, the parties further agree that compensation hereunder is intended to include the costs of contributions to any pensions and/or annuities to which Contractor and its employees, agents, and subcontractors may be eligible. District therefore has no responsibility for such contributions beyond compensation required under this Contract.

GC-63 Facilities and Equipment

Except as set forth herein, Contractor shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the services required by this Contract. District shall make available to Contractor only the facilities and equipment listed in this section, and only under the terms and conditions set forth herein.

District shall furnish physical facilities such as desks, filing cabinets, and conference space, as may be reasonably necessary for Contractor's use while: (1) consulting with District employees, (2) reviewing records and the information in possession of the District, (3) meeting or coordinating with contractors and subcontractors while performing Construction Management services. The location, quantity, and time of furnishing those facilities shall be in the sole discretion of District. In no event shall District be obligated to furnish any facility that may involve incurring any direct expense, including but not limited to computer, long-distance telephone or other communication charges, vehicles, and reproduction facilities.

GC-64 Insurance Requirements

Contractor, at its own cost and expense, unless otherwise specified below, shall procure the types and amounts of insurance listed below against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Contractor and its agents, representatives, employees, and subcontractors. Contractor shall maintain the insurance policies required by this section throughout the term of this Contract and for any additional period required below.

1. All Policies Requirements

- a. Acceptability of insurers. All insurance required by this section is to be placed with insurers with a Best's rating of no less than A:VII.
- b. Verification of coverage. Prior to beginning any work under this Contract, Contractor shall furnish District with complete copies of all policies, in a form satisfactory to the District, including complete copies of all endorsements attached to those policies. If the District does not receive the required insurance documents prior to the Contractor beginning work, it shall not waive the Contractor's obligation to provide them at the request of the District.
- c. Deductibles and Self-Insured Retentions. Contractor shall disclose to and obtain the District's written approval for the self-insured retentions and deductibles before beginning any of the work called for in this Contract. At the option of the District, the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the District, its officers, employees, and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the District guaranteeing payment of losses and related investigations, claim administration and defense expenses.
- d. Wasting Policies. No policy required by this Section 4 shall include a "wasting" policy limit (i.e. limit that is eroded by the cost of defense).
- e. Waiver of Subrogation. Contractor hereby agrees to waive subrogation which any insurer or contractor may require from vendor by virtue of the payment of any loss. Contractor agrees to obtain any endorsements that may be necessary to affect this waiver of subrogation.
- f. Subcontractors. Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the

requirements stated herein. Contractor shall not allow any subcontractor to commence work on any subcontract until Contractor has obtained all insurance required herein for the subcontractor(s) and provided evidence that such insurance is in effect to District.

2. **Workers Compensation.** Contractor shall, at its sole cost and expense, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Contractor. The Statutory Workers' Compensation Insurance and Employer's Liability Insurance shall be provided with limits of not less than **\$1,000,000** per accident. In the alternative, Contractor may rely on a self-insurance program to meet those requirements, but only if the program of self-insurance complies fully with the provisions of the California Labor Code. Determination of whether a self-insurance program meets the standards of the Labor Code shall be solely in the discretion of the Contract Administrator. The insurer, if insurance is provided, or the Contractor, if a program of self-insurance is provided, shall provide an endorsement waiving all rights of subrogation against the District and its officers, officials, employees, and volunteers for loss arising from work performed under this Contract.

3. **Commercial General and Automobile Liability Insurance.**

- a. General requirements. Contractor, at its own cost and expense, shall maintain commercial general and automobile liability insurance for the term of this Contract in an amount not less than **\$1,000,000** per occurrence, combined single limit coverage for risks associated with the work contemplated by this Contract. If a Commercial General Liability Insurance or an Automobile Liability form or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work to be performed under this Contract or the general aggregate limit shall be at least twice the required occurrence limit. Such coverage shall include but shall not be limited to, protection against claims arising from bodily and personal injury, including death resulting therefrom, and damage to property resulting from activities contemplated under this Contract, including the use of owned and non-owned automobiles.
- b. Minimum scope of coverage. Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (most recent edition) covering comprehensive General Liability on an "occurrence" basis. Automobile coverage shall be at least as broad as Insurance Services Office Automobile Liability form CA 0001, Code 1 (any auto). No endorsement shall be attached limiting the coverage.
- c. Additional requirements. Each of the following shall be included in the insurance coverage or added as a certified endorsement to the policy:
 - The Insurance shall cover on an occurrence or an accident basis, and not on a claims-made basis.
 - District, its officers, officials, employees, and volunteers are to be covered as insureds as respects: liability arising out of work or operations performed by or on behalf of the Contractor; or automobiles owned, leased, hired, or borrowed by the Contractor

- For any claims related to this Contract or the work hereunder, the Contractor's insurance covered shall be primary insurance as respects the District, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the District, its officers, officials, employees, or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
- Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after 30 days' prior written notice has been provided to the District.

4. Professional Liability Insurance

- a. General requirements. Contractor, at its own cost and expense, shall maintain for the period covered by this Contract professional liability insurance for licensed professionals performing work pursuant to this Contract in an amount not less than **\$1,000,000** covering the licensed professionals' errors and omissions. Any deductible or self-insured retention shall not exceed \$150,000 per claim.
 - b. Claims-made limitations. The following provisions shall apply if the professional liability coverage is written on a claims-made form:
 - i. The retroactive date of the policy must be shown and must be before the date of the Contract.
 - ii. Insurance must be maintained and evidence of insurance must be provided for at least five years after completion of the Contract or the work, so long as commercially available at reasonable rates.
 - iii. If coverage is canceled or not renewed and it is not replaced with another claims-made policy form with a retroactive date that precedes the date of this Contract, Contractor shall purchase an extended period coverage for a minimum of five years after completion of work under this Contract.
 - iv. A copy of the claim reporting requirements must be submitted to the District for review prior to the commencement of any work under this Contract.
 - c. Additional Requirements. A certified endorsement to include contractual liability shall be included in the policy
5. Remedies. In addition to any other remedies District may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, District may, at its sole option, exercise any of the following remedies:
- a. Obtain such insurance and deduct and retain the amount of the premiums for such insurance from any sums due under the Contract;
 - b. Order Contractor to stop work under this Contract or withhold any payment that becomes due to Contractor hereunder, or both stop work and withhold any payment, until Contractor demonstrates compliance with the requirements hereof; and/or

- c. Terminate this Contract.

GC-65 Indemnification

Contractor shall, to the fullest extent allowed by law, with respect to all work performed in connection with this Contract, defend with counsel acceptable to District, indemnify, and hold District, its officers, employees, agents, and volunteers, harmless from and against any and all claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Contractor, ("Claims"). Contractor will bear all losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such Claims, whether directly or indirectly ("Liability"). Such obligations to defend, hold harmless and indemnify the District shall not apply to the extent that such Liabilities are caused by the sole negligence, active negligence, or willful misconduct of the District.

To the extent permitted by law, the Contractor agrees to indemnify, defend, and hold harmless the State Water Board, and any trustee, and their officers, employees, and agents for the Bonds, if any (collectively, "Indemnified Persons"), against any loss or liability arising out of any claim or action brought against any Indemnified Persons from and against any and all losses, claims, damages, liabilities, or expenses, of every conceivable kind, character, and nature whatsoever arising out of, resulting from, or in any way connected with (1) the Project or the conditions, occupancy, use, possession, conduct, or management of, work done in or about, or the planning, design, acquisition, installation, or construction, of the Project or any part thereof; (2) the carrying out of any of the transactions contemplated by this Contract or any related document; (3) any violation of any applicable law, rule or regulation, any environmental law, rule or regulation or the release of any toxic substance on or near the Project; or (4) any untrue statement or alleged untrue statement of any material fact or omission or alleged omission to state a material fact necessary to make the statements required to be stated therein, in light of the circumstances under which they were made, not misleading with respect to any information provided by the Contractor for use in any disclosure document utilized in connection with any of the transactions contemplated by this Contract, except those arising from the gross negligence or willful misconduct of the Indemnified Persons. To the fullest extent permitted by law, the Contractor agrees to pay and discharge any judgment or award entered or made against Indemnified Persons with respect to any such claim or action, and any settlement, compromise or other voluntary resolution. The provisions of this section survive the term of this Contract.

Notwithstanding the forgoing, to the extent this Contract is a "construction contract" as defined by California Civil Code section 2783, as may be amended from time to time, such duties of Contractor to indemnify shall not apply when to do so would be prohibited by California Civil Code Section 2782.

Contractor shall include in each agreement with each of its subcontractors at all tiers, a provision requiring that the subcontractor indemnify the District and State Water Board as stated in this Section.

GC-66 Independent Contractor

At all times during the term of this Contract, Contractor shall be an independent contractor and shall not be an employee of District. District shall have the right to control Contractor only insofar as the results of Contractor's services rendered pursuant to this Contract and assignment of personnel; however, otherwise District shall not have the right to control the means by which Contractor accomplishes services rendered pursuant to this Contract.

Notwithstanding any other District, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing services under this Contract shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by District, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of District and entitlement to any contribution to be paid by District for employer contributions and/or employee contributions for PERS benefits.

GC-67 Contractor Not an Agent

Except as District may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of District in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to this Contract to bind District to any obligation whatsoever.

GC-68 Governing Law

The laws of the State of California shall govern this Contract.

GC-69 Compliance with Applicable Laws

Contractor and any subcontractors shall comply with all federal, state and local laws, ordinances and regulations applicable to the performance of the work hereunder. Contractor's Failure to comply with any law(s) or regulation(s) applicable to the performance of the work hereunder shall constitute a breach of contract.

The Contractor's Design must comply with the federal American with Disabilities Act of 1990 and implementing regulations as required by Government Code section 11135(b).

GC-70 Other Governmental Regulations

To the extent that this Contract may be funded by fiscal assistance from another governmental entity, Contractor and any subcontractors shall comply with all applicable rules and regulations to which District is bound by the terms of such fiscal assistance program.

GC-71 Licenses and Permits

Contractor represents and warrants to District that Contractor and its employees, agents, and any subcontractors have all licenses, permits, qualifications, and approvals of whatsoever nature that are legally required to practice their respective professions. Contractor represents and warrants to District that Contractor and its employees, agents, any subcontractors shall, at their sole cost and expense, keep in effect at all times during the term of this Contract any licenses, permits, and approvals that are legally required to practice their respective professions. In addition to the foregoing, Contractor and any subcontractors shall obtain and maintain during the term of this Contract valid Business Licenses.

GC-72 No Discrimination

Refer to Section GC-40, No Discrimination, in Part V, General Conditions – Construction.

GC-73 Termination and Suspension of Work

Refer to Sections GC-16, Optional Termination and GC-17, Suspension of Work in Part V, General Conditions – Construction.

GC-74 Amendments

The District reserves the right to delete, add to, or modify the requirements or scope of work in the Contract by amending the Contract. Refer to Sections GC-28, Changes, GC-29, Delays and Time Extensions, and GC-30, Extra Work Payment, in Part V, General Conditions – Construction

GC-75 Assignment and Subcontracting

District and Contractor recognize and agree that this Contract contemplates personal performance by Contractor and is based upon a determination of Contractor's unique personal competence, experience, and specialized personal knowledge. Moreover, a substantial inducement to District for entering into this Contract was and is the professional reputation and competence of Contractor. Contractor may not assign this Contract or any interest therein without the prior written approval of the District. Contractor shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors noted in the proposal, without prior written approval of the District.

GC-76 Survival

Refer to Section GC-36, Survival, in Part V, General Conditions – Construction.

GC-77 Options upon Breach by Contractor

If Contractor materially breaches any of the terms of this Contract, District's remedies shall include, but not be limited to, the following:

1. Immediately terminate the Contract;
2. Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Contractor pursuant to this Contract;
3. Retain a different Contractor to complete the Design and Construction Management work described in Part III, Proposal, not finished by Contractor; or
4. Charge Contractor the difference between the cost to complete the Design and Construction Management work that is unfinished at the time of breach and the amount that District would have paid Contractor pursuant if Contractor had completed the work.

GC-78 Records Created as Part of Contractor's Performance

All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, whether complete or in process, that Contractor prepares or obtains pursuant to this Contract and that relate to the matters covered hereunder shall be the property of the District. Contractor hereby agrees to deliver those documents to the District upon termination of the Contract. The Contractor shall assume no responsibility for the unintended use by others of any

such documents. District and Contractor agree that, until final approval by District, all data, plans, specifications, reports and other documents are confidential and will not be released to third parties without prior written consent of both parties.

GC-79 Contractor's Books and Records

Refer to Section GC-32, Records and Accounts, in Part V, General Conditions – Construction.

GC-80 Attorneys' Fees

If a party to this Contract brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Contract, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

GC-81 Venue

In the event that either party brings any action against the other under this Contract, the parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Tuolumne or in the United States District Court for the Eastern District of California.

GC-82 Severability

If a court of competent jurisdiction finds or rules that any provision of this Contract is invalid, void, or unenforceable, the provisions of this Contract not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Contract shall not void or affect the validity of any other provision of this Contract.

GC-83 No Implied Waiver of Breach

The waiver of any breach of a specific provision of this Contract does not constitute a waiver of any other breach of that term or any other term of this Contract.

GC-84 Successors and Assigns

The provisions of this Contract shall inure to the benefit of and shall apply to and bind the successors and assigns of the parties.

GC-85 Conflict of Interest

Contractor may serve other clients, but none whose activities within the corporate limits of District or whose business, regardless of location, would place Contractor in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Contractor shall not employ any District official in the work performed pursuant to this Contract. No officer or employee of District shall have any financial interest in this Contract that would violate California Government Code Sections 1090 *et seq.*

Contractor hereby warrants that it is not now, nor has it been in the previous 12 months, an employee, agent, appointee, or official of the District. If Contractor was an employee, agent,

appointee, or official of the District in the previous twelve months, Contractor warrants that it did not participate in any manner in the forming of this Contract. Contractor understands that, if this Contract is made in violation of Government Code §1090 *et seq.*, the entire Contract is void and Contractor will not be entitled to any compensation for services performed pursuant to this Contract, including reimbursement of expenses, and Contractor will be required to reimburse the District for any sums paid to the Contractor. Contractor understands that, in addition to the foregoing, it may be subject to criminal prosecution for a violation of Government Code § 1090 and, if applicable, will be disqualified from holding public office in the State of California.

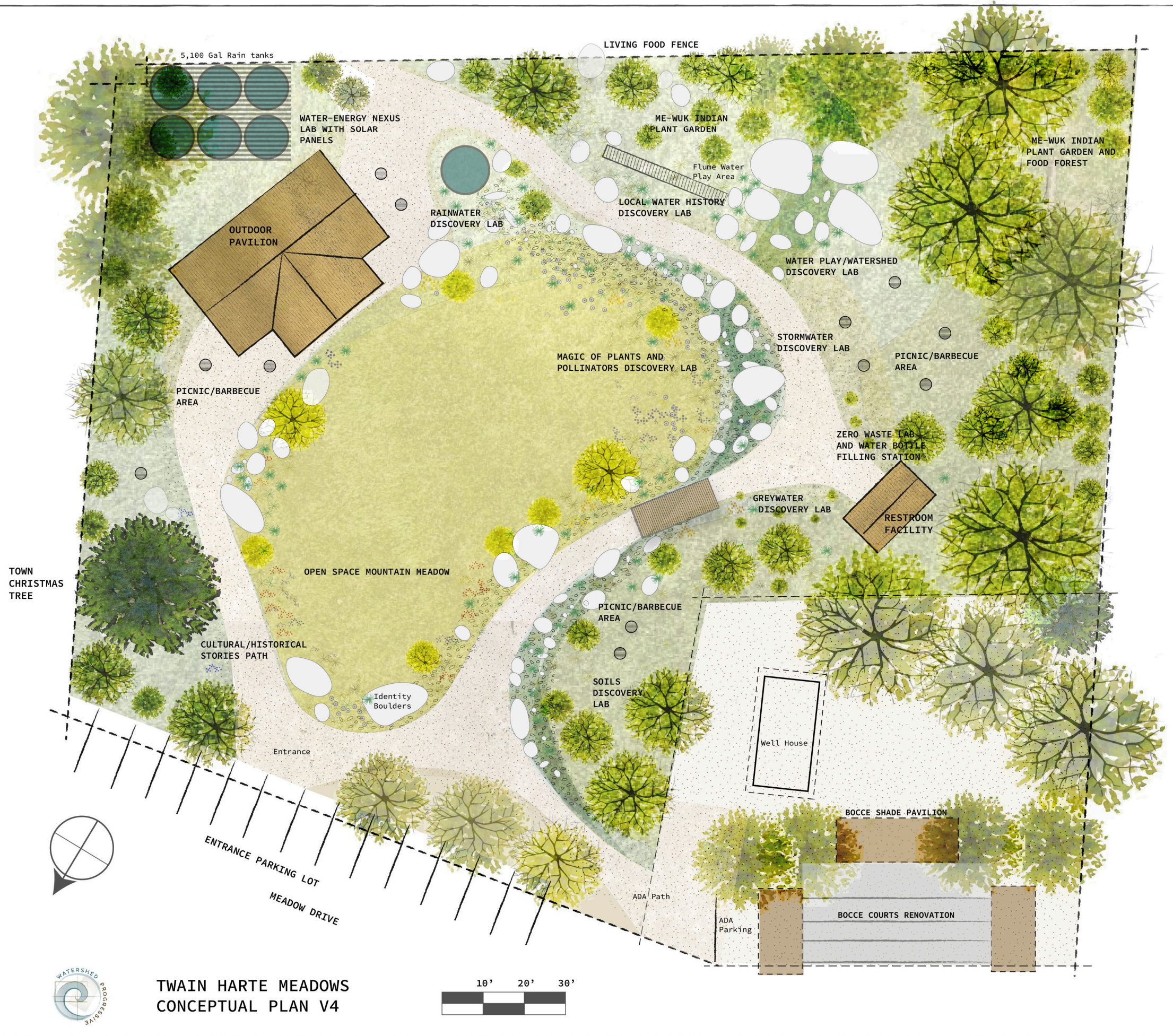
GC-86 Professional Endorsement

The Contractor shall endorse all reports, maps, plans, documents, materials and other data in accordance to the laws of the State of California.

GC-87 Dependent on Funding

The undertaking of this Project is completely dependent on the District's receipt of grant funding from the State Water Resources Control Board's Storm Water Grant Program. If the Project's Funding Agreement for said grant program is not executed, cancelled or modified to reduce Project funding, Contractor's work, as specified in this Contract, may be terminated or reduced by the District in accordance with the provisions of this Contract.

**PART VIII
CONCEPTUAL PROJECT DRAWINGS**



TWAIN HARTE MEADOWS
CONCEPTUAL PLAN V4

RECREATION FEATURES

- OPEN SPACE MOUNTAIN MEADOW
- OUTDOOR PAVILION WITH LIGHTING
- PICNIC/BARBECUE AREAS
- BOCCE SHADE PAVILION WITH LIGHTING
- TOWN CHRISTMAS TREE
- LIVING FOOD FENCE
- ZERO WASTE LAB AND BOTTLE FILLING STATION
- WATER PLAY/WATERSHED DISCOVERY LAB
- RAINWATER DISCOVERY LAB
- BOCCE COURTS RENOVATION
- GREYWATER DISCOVERY LAB
- STORMWATER DISCOVERY LAB
- SOILS DISCOVERY LAB
- MAGIC OF PLANTS/POLLINATORS DISCOVERY LAB
- CULTURAL/HISTORICAL STORIES PATH W/LIGHTING
- ME-WUK INDIAN PLANT GARDEN
- WATER-ENERGY NEXUS LAB WITH SOLAR PANELS
- LOCAL WATER HISTORY DISCOVERY LAB

MAJOR SUPPORT AMENITIES

- RESTROOM FACILITY
- ENTRANCE PARKING LOT WITH LIGHTING
- LANDSCAPING

Educational Stories

Cultural and Historical
Narratives are on boulders and embedded in the paving to be discovered walking through the site.

Ecological
Local ecotones and plant communities from forest to meadows and riparian zones are experienced in the garden.

Water Cycle
The various forms water takes are expressed on-site and connected through the learning labs.

Tom Trott

From: Charleston, Danielle@Waterboards <Danielle.Charleston@Waterboards.ca.gov>
Sent: Wednesday, March 09, 2022 2:42 PM
To: Tom Trott
Subject: RE: Written Verification of Eligible Work Start Date Approval

Hi Tom,

The eligible work date for the Twain Hart Community Stormwater Enhancement Project is currently set for July 1st, 2021. There is no intention of this eligible start date being different on the executed agreement. I will note that the standard eligible start date for Round 2 projects is October 1st, 2021 – so there is no possibility of an eligibility date later than that. Though, I currently see no reason why the drafted start date will change.

Typically, no funds are disbursed until CEQA, permitting, access negotiations, other access approvals are submitted. Since Twain Harte CSD has received the DAC Disbursements waiver, the agreement will include language (provided below) that instead only prohibits construction/implementation funds to be disbursed prior to the submittal of these documents.

Project Funds for implementation/construction will not be disbursed until California Environmental Quality Act (CEQA) documents, permitting, access negotiations and other required approvals are complete.

Please let me know if this email counts as sufficient written verification or if this information should be provided differently.

Thank you,
Danielle

From: Tom Trott <ttrott@twainhartecsd.com>
Sent: Wednesday, March 9, 2022 8:24 AM
To: Charleston, Danielle@Waterboards <Danielle.Charleston@Waterboards.ca.gov>
Subject: Written Verification of Eligible Work Start Date Approval

EXTERNAL:

Good morning Danielle,

I wanted to check in to see if you were able to get written verification of our approval for an eligible work start date of 7/1/21. We are moving forward with preparing agreements for design of Twain Harte Meadows Park so that we can meet the grant deadlines. After looking at the schedule, we have to proceed now to be able to meet the timelines.

Our board will be considering the design agreement on 3/23. Is it possible to get written verification that we are approved for the 7/1/21 Eligible Work Start Date before that board meeting? I know nothing is guaranteed, but the board is willing to take the risk, knowing that we will be eligible for reimbursement once a funding agreement is finalized.

Thanks,
Tom

Tom Trott, P.E.
General Manager

Twain Harte Community Services District
P.O. Box 649, Twain Harte, CA 95383
PH: (209) 586-3172 FAX: (209) 586-0424

**TWAIN HARTE COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 22-13**

**PROCLAIMING A LOCAL EMERGENCY PERSISTS, RE-RATIFYING THE
PROCLAMATION OF A STATE OF EMERGENCY BY GOVERNOR NEWSOM'S
ORDER DATED MARCH 4, 2020, AND RE-AUTHORIZING REMOTE
TELECONFERENCE MEETINGS FOR THE PERIOD OF MARCH 23, 2022 TO APRIL
22, 2022**

WHEREAS, the Twain Harte Community Services District ("District") is committed to preserving and nurturing public access and participation in meetings of the Board of Directors; and

WHEREAS, all meetings of the District's legislative bodies are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch the District's legislative bodies conduct their business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the District's boundaries, caused by natural, technological, or human-caused disasters; and

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, the Board of Directors previously adopted Resolution #22-08 on March 9, 2022, finding that the requisite conditions exist for the legislative bodies of the District to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, as a condition of extending the use of the provisions found in section 54953(e), the Board of Directors must reconsider the circumstances of the state of emergency that exists in the District, and the Board of Directors has done so; and

WHEREAS, emergency conditions persist in the District, specifically, with the current state of emergency declared by Governor Newsom on March 4, 2020, due to COVID-19; and

WHEREAS, Tuolumne County Public Health strongly encourages the continued practice of preventive actions like wearing a mask in public, keeping your distance, avoiding crowds, washing hands, and staying home when sick will help slow the spread attributable to the rise in SARS-CoV-2 Omicron Variant.; and

WHEREAS, the Board of Directors hereby finds that the rise in SARS-CoV-2 Omicron Variant has caused, and will continue to cause, conditions of peril to the safety of persons within the District that are likely to be beyond the control of services, personnel, equipment, and facilities of the District, and desires to proclaim a local emergency and ratify the proclamation of state of emergency by the Governor of the State of California; and

WHEREAS, as a consequence of the local emergency, the Board of Directors hereby finds that the District's legislative bodies may conduct their meetings remotely via teleconference without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that such legislative bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953; and

WHEREAS, the Board of Directors adopted alternate meeting locations and virtual meeting protocols on April 1, 2020, which include options for public participation.

NOW, THEREFORE, BE IT RESOLVED, by the District Board of Directors that:

1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference; and
2. Affirmation that the Local Emergency Persists. The Board hereby considers the conditions of the state of emergency in the District and proclaims that a local emergency persists throughout the District, and COVID-19 has caused, and will continue to cause, conditions of peril to the safety of persons within the District that are likely to be beyond the control of services, personnel, equipment, and facilities of the District; and
3. Re-ratification of Governor's Proclamation of a State of Emergency. The Board hereby ratifies the Governor of the State of California's Proclamation of State of Emergency, effective as of its issuance date of March 4, 2020; and
4. Remote Teleconference Meetings. The General Manager and District staff are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act; and
5. Effective Date of Resolution. This Resolution shall take effect immediately upon its adoption on March 23, 2022 and shall be effective until the earlier of (i) April 22, 2022, or such time the Board of Directors adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the District's legislative bodies may continue to

teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

PASSED AND ADOPTED, by the Board of Directors of Twain Harte Community Services District on March 23, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Gary Sipperley, Board President

Kimberly Silva, Board Secretary