

Initial Study/Proposed Mitigated Negative Declaration Yuba River North Training Wall Project



Prepared for:



Prepared by:



December 2020

Initial Study/Proposed Mitigated Negative Declaration Yuba River North Training Wall Project

Prepared for:

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December 15, 2020

Project No. 050115, 4.2



Date: December 15, 2020

To: Interested Parties

From: Paul Brunner, P.E., Executive Director, Three Rivers Levee Improvement Authority

Subject: Notice of Availability and Intent to Consider Adoption of a Proposed Mitigated Negative Declaration for the Yuba River North Training Wall Project

Enclosed for your review is an Initial Study and a proposed Mitigated Negative Declaration (IS/MND) evaluating the potential environmental effects of the proposed Yuba River North Training Wall Project (project). The Three Rivers Levee Improvement Authority (TRLIA) has prepared this IS/MND in accordance with the requirements of the California Environmental Quality Act (CEQA) and State CEQA Guidelines.

The project is located along the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County. The project would reshape the North Training Wall embankment to reduce flood risks to the Hallwood community, the City of Marysville, and portions of Reclamation District 10, and would enhance approximately 2.4 acres (5,200 linear feet) of habitat.

The IS/MND identifies potentially significant or significant impacts related to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and Tribal cultural resources. All potentially significant and significant impacts are reduced to less-than-significant levels with implementation of mitigation measures identified in the IS/MND.

The IS/MND is hereby circulated for public review and comment for a 30-day period beginning on December 15, 2020 and ending on January 14, 2021. The IS/MND and all referenced documents are available at TRLIA's Web site, <http://www.trlia.org/>. Contact Anne King at 916-382-7833 or aking@geiconsultants.com if you have questions regarding these documents or you require a hard copy of the IS/MND.

Please send written comments on the IS/MND to Mr. Paul Brunner, P.E., Executive Director, Three Rivers Levee Improvement Authority, 1114 Yuba Street, Suite 218, Marysville, CA 95901. Comments may also be sent via e-mail to pbrunner@co.yuba.ca.us. For e-mailed comments, please include the project title in the subject line, attach comments in Microsoft Word format, and include the commenter's name and U.S. Postal Service mailing address. **All written comments must be received by January 14, 2021.**

TRLIA intends to consider adoption of the proposed MND and a Mitigation Monitoring and Reporting Program at its regularly scheduled board meeting on January 19, 2021 at 2:00 p.m. This meeting is open to the public and will be held at the Yuba County Government Center Board Chambers at 915 Eighth Street, Marysville or via Zoom, depending on Covid-19 restrictions.

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PROPOSED MITIGATED NEGATIVE DECLARATION

Project: Yuba River North Training Wall Project

Lead Agency: Three Rivers Levee Improvement Authority

PROJECT LOCATION

The Yuba River North Training Wall Project (project) site is located on the north bank of the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County, California. The project site can be accessed via State Route 20 and Walnut Avenue.

PROJECT DESCRIPTION

The North Training Wall (NTW) is an approximately 2.25-mile-long cobble embankment that was constructed by the California Debris Commission in the early 1900s to confine the Yuba River and facilitate downstream movement of mining debris within the floodway. Flood control was not an authorized purpose, but the NTW has historically provided and continues to provide flood risk reduction to the surrounding area. However, the height and width of the NTW have decreased over time. This reduction and ongoing, persistent erosion from storm events have combined to increase the flood risk to the Hallwood community, the City of Marysville, and portions of Reclamation District 10 (D-10). The Three Rivers Levee Improvement Authority (TRLIA) is proposing the project to decrease the flood risk to these areas by reshaping the NTW embankment to a more stable geometry, and enhance approximately 2.4 acres of aquatic and riparian habitat in the Yuba River floodplain.

FINDINGS

TRLIA has prepared an Initial Study/proposed Mitigated Negative Declaration (IS/MND), in accordance with the requirements of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, to assess the project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed project would not result in significant adverse effects on the physical environment after implementation of proposed mitigation measures. This conclusion is supported by the following findings:

1. The proposed project would have no impacts on land use and planning, population and housing, public services, and recreation.
2. The proposed project would have less-than-significant impacts on agriculture and forestry resources, aesthetics, energy, greenhouse gas emissions, mineral resources, noise, transportation, utilities and service systems, and wildfire.
3. The proposed project would have potentially significant impacts on air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and Tribal cultural resources, but mitigation measures are proposed to avoid or reduce these effects to less-than-significant levels.

4. The proposed project would not have the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.
5. The proposed project would have beneficial impacts by reducing the flood risk in the local area, enhancing approximately 2.4 acres of aquatic and riparian habitat in the Yuba River floodplain, and indirectly making available approximately 300,000 cubic yards of aggregate materials for production.
6. The proposed project would not have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
7. The proposed project would not have possible environmental effects that are individually limited but cumulatively considerable and contribute to a significant cumulative impact. "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.
8. The environmental effects of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly, and would reduce flood risks to the Hallwood Community, the City of Marysville, and portions of D-10.

Following are the proposed mitigation measures that would be implemented to avoid or minimize potentially significant and significant environmental impacts. Implementation of these mitigation measures would reduce the potentially significant and significant environmental impacts of the proposed project to less-than-significant levels. The responsibility for implementation of each mitigation measure is identified; however, TRLIA is ultimately responsible for ensuring each measure is implemented.

Mitigation Measure AQ-1: Reduce Average Daily NO_x Emissions during Construction or Contribute to Off-site Mitigation Program.

TRLIA and its construction contractor(s) will implement one or more of the following measures to reduce average daily nitrogen oxide (NO_x) emissions during NTW reshaping and excess material removal to below Feather River Air Quality Management District thresholds and/or compensate for emissions that exceed thresholds:

- Increase the number of working days for NTW reshaping and excess material removal, combined, from 70 days to 120 days and reduce the number of scrapers working each day from four to two.

- Evaluate and implement other feasible emissions reduction measures. Effectiveness of potential alternative measures shall be estimated using the Roadway Construction Emissions Model to confirm emissions would be reduced to below FRAQMD thresholds. Alternative measures may include the following:
 - Use a conveyor system, rather than heavy equipment, to transport some or all of the excess material to the potential stockpile area or an existing stockpile at the Hallwood Facility.
 - Use heavy equipment with engines that meet California Air Resources Board Tier 4 emissions standards to complete NTW reshaping and excess material removal.
 - Use single-engine scrapers or other alternative equipment that may have lower emissions to complete NTW reshaping and excess material removal.
- Contribute to the FRAQMD Off-site Mitigation Program.

Timing: During project construction activities.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure BIO-1: Minimize Water Quality Impacts and Direct Injury and Mortality of Special-status Fish during Boulder Cluster Installation.

TRLIA and its construction contractor(s) will implement the following measures to avoid and minimize direct injury and mortality of special-status fish.

- Before project activities begin, worker awareness training shall be provided by a qualified biologist to inform on-site project personnel of the need to avoid and minimize potential impacts on special-status fish and the possible penalties for not complying with these requirements. The training shall include, at a minimum, a discussion of the relevant species and measures to be implemented for their protection. An appointed representative shall be identified and available to project personnel to ensure that questions regarding avoidance and protection measures are addressed in a timely manner.
- A biological monitor approved by the California Department of Fish and Wildlife (CDFW) and National Marine Fisheries Service (NMFS) shall be present onsite to monitor in-water construction activities and confirm proper implementation of water quality protection measures and other impact avoidance and minimization measures.
- During in-water work and dewatering, monitoring shall be conducted in compliance with all relevant permits, including the Clean Water Act (CWA) Section 404 permit, CWA Section 401 Water Quality Certification, CDFW Streambed Alteration Agreement, and NMFS authorization. Such requirements are likely to include monitoring of turbidity levels. If appropriate, silt curtains shall be used to capture

floating materials or sediments mobilized during construction activities and minimize water quality impacts.

- All dewatering pump intakes shall be screened and pumping rates shall be controlled according to CDFW and NMFS requirements.
- Cofferdam bulk bags/super sacks shall be installed in collaboration with an on-site qualified fisheries biologist and in a manner that facilitates movement of fish out of the dewatering area during installation. Before cofferdam installation is complete, the fisheries biologist shall determine if fish remain in the dewatering area and if relocation is necessary.
- If the fisheries biologist determines fish relocation is necessary, the biologist shall determine which fish relocation method is most appropriate for the conditions and will supervise relocation efforts. If feasible, relocation shall initially be attempted by herding the fish out of the work area to minimize impacts and avoid handling and transportation.
- If fish relocation using herding is not successful or the fisheries biologist decides it is not appropriate to attempt, fish capture and relocation shall be conducted. Before fish relocation begins, a qualified fisheries biologist shall identify the most appropriate release location(s).
- The method used to capture fish will depend on the nature of the work site and shall be selected and supervised by a qualified fisheries biologist with fish capture and handling experience. Electrofishing shall only be used if seining and/or dip netting is not feasible and shall only be conducted by properly trained personnel following NMFS guidelines.
- Fish shall not be anesthetized or measured. However, they shall be visually identified to species level, and year classes shall be estimated and recorded.
- Reports on fish relocation activities shall be submitted to CDFW and NMFS within 30 days after ecological enhancement activities are completed at each site.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure BIO-2: Minimize Impacts on Valley Elderberry Longhorn Beetle.

TRLIA and its construction contractor(s) will implement the following measures to avoid and minimize impacts on elderberry shrubs and compensate for unavoidable impacts:

- Before project activities begin, worker awareness training shall be provided by a qualified biologist to inform on-site project personnel of the need to avoid and minimize

potential impacts on elderberry shrubs and the possible penalties for not complying with these requirements. The training shall include, at a minimum, a discussion of valley elderberry longhorn beetle and its habitat and measures to be implemented for its protection. An appointed representative shall be identified and available to project personnel to ensure that questions regarding avoidance and protection measures are addressed in a timely manner.

- Before project activities near elderberry shrubs begin, stakes and/or flagging (substrate and slopes preclude use of fencing) shall be placed to clearly delineate the extent of NTW excavation and reshaping and ecological enhancement areas. A buffer shall be provided around each elderberry shrub to prevent accidental damage during construction activities. To the maximum extent feasible, buffers shall be a minimum of 20 feet from the dripline of elderberry shrubs.
- A qualified biological monitor shall supervise buffer establishment and conduct periodic inspections of the construction area to ensure that impact avoidance and minimization measures are properly implemented.
- To the maximum extent feasible, trimming of elderberry shrub branches and stems shall occur between November and February and shall avoid removal of branches and stems greater than 1 inch in diameter.
- The three elderberry shrubs that must be removed to accommodate NTW reshaping shall be transplanted, if feasible to safely do so, given potential access challenges related to their location on the relatively steep slope. The transplant location shall be suitable for elderberry growth and reproduction and as close as possible to the shrubs' original location. Transplanting shall be implemented as follows:
 - If feasible, elderberry shrubs shall be transplanted when they are dormant (November through the first 2 weeks in February) and after they have lost their leaves.
 - A qualified biologist shall conduct an exit hole survey immediately before transplanting and shall be onsite during transplanting activities. The biologist shall record the number of exit holes found on each shrub, the precise location of each shrub that is removed, and the precise transplant location for each shrub. This information shall be reported to U.S. Fish and Wildlife Service (USFWS) and the California Natural Diversity Database.
 - Transplanting shall follow the most current version of the American National Standards Institute A300 (Part 6) guidelines. If possible, the entire root ball shall be removed.
 - The transplanted shrubs shall be protected to ensure they become reestablished.

- Compensatory mitigation shall be provided for elderberry shrub removal. An appropriate mitigation ratio shall be determined in consultation with USFWS. The ratio shall be a minimum of one credit at a USFWS-approved mitigation bank or one 1,800-square-foot area at an approved mitigation site for each removed shrub.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure BIO-3: Avoid and Minimize Potential to Destroy or Result in Failure of Active Bird Nests.

TRLIA and its construction contractor(s) will implement the following measures to minimize potential to destroy an active bird nest or result in failure of a special-status bird nest during project implementation:

- A qualified biologist shall conduct a survey of suitable nesting habitat that would be removed by project activities during the nesting season (February-August). A minimum of one survey shall be conducted no more than 7 days before project activities begin.
- If an active bird nest is found, removal or direct disturbance of habitat in which the nest is located shall be delayed until the biologist confirms the nest is no longer active.
- A qualified biologist also shall conduct a survey of suitable nesting habitat for Swainson's hawk, white-tailed kite, and common raptors adjacent to project activities that would occur during the nesting season (February-August). Surveys shall be conducted within 14 days before project activities begin near suitable raptor nesting habitat.
- If an active raptor nest is found, a protective buffer shall be established and implemented until a qualified biologist confirms the nest is no longer active. A qualified biologist shall monitor the nest during project activities to confirm effectiveness of the buffer. The size of the buffer will depend on the type and intensity of project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the nest to failure.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure CR-1: Conduct Cultural Resources Awareness Training.

TRLIA shall provide a cultural resources sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training shall be developed in coordination with an archaeologist meeting Secretary of the Interior Professional Qualifications Standards for Archaeology. TRLIA shall invite Native American representatives from interested culturally affiliated Native American Tribes to participate. The training shall be conducted before any project-related

construction activities begin on the project site and shall include relevant information regarding sensitive cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating Federal and State laws and regulations.

The training shall also describe what to do and who to contact if any potential cultural resources are encountered. The training shall emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and shall discuss appropriate behaviors and responsive actions, consistent with Native American Tribal values.

Timing: Before project construction activities begin.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure CR-2: Implement Procedures for Inadvertent Discovery of Cultural Material.

If an inadvertent discovery of buried or otherwise previously unidentified historical resources, including archaeological resources (e.g., unusual amounts of shell, animal bone, any human remains, bottle glass, ceramics, building remains), is made at any time during project-related construction activities or project planning, TRLIA, with input from other interested parties, will develop and implement appropriate protection and avoidance measures, where feasible. If such resources are discovered during project construction, all work within a 100-foot radius of the find shall cease. TRLIA shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Culturally affiliated Native American Tribes will also be contacted concerning resources of Native American origin. Avoidance is the preferred CEQA mitigation measure for cultural resources. If avoidance is not possible, any necessary treatment/investigation shall be developed in coordination with interested Native American Tribes providing recommendations to TRLIA and shall be completed before project activities continue in the vicinity of the find. An inadvertent discovery plan shall be developed before construction begins and shall be implemented in the event of a discovery during project construction.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure CR-3: Avoid Potential Effects to Previously Unknown Human Remains.

If an inadvertent discovery of human remains is made at any time during project planning or project-related construction activities, TRLIA will implement the procedures listed below. If human remains are identified on the project site, the following performance standards shall be met prior to implementing or continuing actions, such as construction, that may result in damage to or destruction of human remains:

- In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, TRLIA will immediately halt potentially damaging excavation in the area of the burial and notify the Yuba County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of TRLIA for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code (PRC) Section 5097.9 et seq.

- Upon the discovery of Native American human remains, TRLIA will require that all construction work within 100 feet of the discovery stop, until consultation with the MLD has taken place. The MLD will have 48 hours to complete a site inspection and make recommendations to the landowner after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. PRC Section 5097.98(b)(2) suggests that the concerned parties may mutually agree to extend discussions beyond the initial 48 hours to allow for the discovery of additional remains.

- If agreed to by the MLD and the landowner, TRLIA or its authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. If the NAHC is unable to identify an MLD, or if the MLD fails to make a recommendation within 48 hours after being granted access to the site, TRLIA or its authorized representative may also reinter the remains at a location not subject to further disturbance if recommendation of the MLD is rejected and mediation by the NAHC fails to provide measures acceptable to TRLIA.

- If the human remains are of historic age and are determined not to be of Native American origin, TRLIA will follow the provisions of the California Health and Safety Code Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

Timing: During project construction activities
Responsibility: TRLIA and construction contractor(s)

Mitigation Measure GEO-1: Implement a Stormwater Pollution Prevention Plan and Associated Best Management Practices.

TRLIA shall prepare and implement the appropriate Stormwater Pollution Prevention Plan (SWPPP), or Stormwater Management Plan (SWMP), as needed, to prevent and control pollution and to minimize and control runoff and erosion in compliance with State and local laws. The SWPPP or SWMP shall identify the activities that may cause pollutant discharge (including sediment) during storms, techniques to control pollutant discharge, and an erosion control plan. Regardless of the need for a SWPPP or SWMP, construction techniques and Best Management Practices (BMPs) shall be identified and implemented, as appropriate, to reduce the potential for erosion and sedimentation. These may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, water bars, or other methods appropriate to the site conditions.

The SWPPP or SWMP shall also include a spill prevention, control, and countermeasure plan, and applicable hazardous materials business plans. The SWPPP or SWMP shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), measures to prevent hazardous material and waste spills, and materials available to clean up hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to spills.

The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions.

TRLIA and all contractors will abide by regulations governing hazardous materials transport included in California Code of Regulations (CCR) Title 22, the California Vehicle Code (CCR Title 13), and the State Fire Marshal Regulations (CCR Title 19). Transport of hazardous materials can only be conducted under a registration issued by the California Department of Toxic Substances Control. Construction contractors shall be required to use, store, and transport hazardous materials in compliance with all Federal, State, and local regulations.

Timing: Before and during project construction activities.
Responsibility: TRLIA and construction contractor(s).

Mitigation Measure TCR-1: In the Event that Tribal Cultural Resources are Discovered Before or During Construction, Implement Procedures to Evaluate Tribal Cultural Resources and Implement Avoidance and Minimization Measures to Avoid Significant Impacts.

California Native American Tribes that are traditionally and culturally affiliated with the geographic area in which the project is located may have expertise concerning their Tribal Cultural Resources (TCRs). Consistent with PRC Section 21080.3.1, culturally affiliated

Tribes shall be consulted concerning TCRs that may be impacted, if these types of resources are discovered before or during construction. Consultation with culturally affiliated Tribes shall focus on identifying measures to avoid or minimize impacts on any such resources discovered during construction. If TCRs are identified on the project site, before or during construction, the following performance standards will be met before proceeding with project activities that may result in damage to or destruction of TCRs:

- Each identified TCR shall be evaluated for California Register of Historic Resources (CRHR) eligibility through application of established eligibility criteria (CCR 15064.636), in consultation with interested Native American Tribes.
- If a TCR is determined to be eligible for listing in the CRHR, TRLIA shall avoid damaging the TCR in accordance with PRC Section 21084.3, if feasible. If TRLIA determines that the project may cause a substantial adverse change to a TCR, and measures are not otherwise identified in the consultation process, the following are examples of mitigation steps capable of avoiding or substantially lessening potential significant impacts to a TCR or alternatives that would avoid significant impacts to a TCR. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which mitigation specifically addresses inadvertent discovery of TCRs:
 - i. Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - ii. Treat the resource with culturally appropriate dignity, taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - a. Protect the cultural character and integrity of the resource.
 - b. Protect the traditional use of the resource.
 - c. Protect the confidentiality of the resource.
 - d. Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
 - e. Protect the resource.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure TCR-2: Conduct Tribal Cultural Resources Awareness Training.

TRLIA shall provide TCR sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training shall be developed in coordination with an archaeologist meeting Secretary of the Interior Professional Qualifications Standards for Archaeology, as well as culturally affiliated Native American Tribes. TRLIA shall invite Native American representatives from interested culturally affiliated Native American Tribes to participate. The training shall be conducted before any project-related construction activities begin on the project site and shall include relevant information regarding TCRs, including applicable regulations, protocols for avoidance, and consequences of violating Federal and State laws and regulations.

The training shall also describe what to do and who to contact if any potential TCRs are encountered. The training shall emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and shall discuss appropriate behaviors and responsive actions, consistent with Native American Tribal values.

Timing: Before project construction activities begin.

Responsibility: TRLIA and construction contractor(s).

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INITIAL STUDY

PROJECT INFORMATION

1. Project title:	Yuba River North Training Wall Project
2. Lead agency name and address:	Three Rivers Levee Improvement Authority 9274 Highway 70 Marysville, CA 95901
3. Contact person and phone number:	Paul Brunner, P.E. Executive Director 530.749.5679 pbrunner@co.yuba.ca.us
4. Project location:	3331 Walnut Avenue Marysville, Yuba County, CA 95901
5. Project sponsor's name and address:	See #2, above.
6. General plan designation:	Natural Resources
7. Zoning:	EX (Extractive District)
8. Description of project:	<p>The project would reshape the approximately 2.25-mile-long North Training Wall embankment to a more stable geometry to reduce flood risk to the Hallwood community, City of Marysville, and portions of Reclamation District 10, and enhance approximately 2.4 acres of aquatic and riparian habitat along the Yuba River.</p> <p>See Chapter 2, "Project Description."</p>
9. Surrounding land uses and setting:	<p>The project site is located on the north bank of the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County. The project site can be accessed via State Route 20 and Walnut Avenue.</p> <p>Surrounding land uses are aggregate mining and open space. See "Environmental Setting" under each issue area in Chapter 3, "Environmental Checklist."</p>
10. Other public agencies whose approval may be required or requested (e.g., permits, financing approval, or participation agreement):	U.S. Army Corps of Engineers U.S. Fish and Wildlife Service California Department of Fish and Wildlife Central Valley Regional Water Quality Control Board

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Yes. Consultation is described in more detail in Sections 3.5, "Cultural Resources," and 3.18, "Tribal Cultural Resources."

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Abbreviations and Acronyms

AFB	Air Force Base
AT&T	American Telephone and Telegraph
B.C.E.	Before Common Era
BMPs	best management practices
CAAQS	California Ambient Air Quality Standards
cal	calibrated radiocarbon date
CARB	California Air Resources Board
CCR	California Code of Regulations
CDC	California Debris Commission
CDFW	California Department of Fish and Wildlife
C.E.	Common Era
CEQA	California Environmental Quality Act
CNDDDB	California Natural Diversity Database
CRHR	California Register of Historical Resources
CSD	Community Services District
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
cy	cubic yard
D-10	Reclamation District 10
dB	decibels
DTSC	California Department of Toxic Substance Control
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FGC	California Fish and Game Code
FRAQMD	Feather River Air Quality Management District
GEI	GEI Consultants, Inc.
GHG	greenhouse gas
Goldfields	Yuba Goldfields
Hallwood Facility	Teichert Aggregates Hallwood Facility
Hallwood Restoration Project	Hallwood Side Channel and Floodplain Restoration Project

IS/MND	Initial Study/proposed Mitigated Negative Declaration
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
NO _x	nitrogen oxide
NRHP	National Register of Historic Places
NTW	North Training Wall
O&M	operations and maintenance
OHWM	ordinary high-water mark
PG&E	Pacific Gas and Electric Company
PM ₁₀	particulate matter less than 10 microns in diameter
PRC	California Public Resources Code
project	Yuba River North Training Wall Project
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District
SR	State Route
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TCRs	Tribal Cultural Resources
TRLIA	Three Rivers Levee Improvement Authority
UAIC	United Auburn Indian Community
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles travelled

Chapter 1. Introduction

The Three Rivers Levee Improvement Authority (TRLIA) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) to address the potentially significant and significant environmental impacts of the proposed Yuba River North Training Wall Project (project) in Yuba County, California. TRLIA is the lead agency under CEQA.

To satisfy CEQA requirements, this document includes:

- a Notice of Intent to adopt an MND for the proposed project
- an IS
- a proposed MND

After the required public review of this document is complete, TRLIA will consider adopting the MND, adopting a Mitigation Monitoring and Reporting Program, and approving the proposed project at a public hearing.

1.1 Purpose of the Initial Study

This document is an IS prepared in accordance with CEQA (California Public Resources Code [PRC], Section California Code of Regulations [CCR] 21000 et seq.) and the State CEQA Guidelines (Title 14, Section 15000 et seq. of the CCR). The purpose of this IS is to (1) determine whether project implementation would result in potentially significant or significant impacts on the physical environment; and (2) implement mitigation measures, as necessary, to eliminate the project's potentially significant or significant project impacts or reduce them to a less-than-significant level. An MND is prepared if the IS identifies potentially significant impacts, and: (1) feasible measures are available to mitigate the potentially significant impacts to less-than-significant levels; and (2) there is no substantial evidence, in light of the whole record before the lead agency, that the proposed project, with mitigation, may have a potentially significant or significant impact on the physical environment.

An IS presents environmental analysis and substantial evidence in support of its conclusions regarding the significance of environmental impacts. Substantial evidence may include expert opinion based on facts, technical studies, or reasonable assumptions based on facts. An IS is neither intended nor required to include the level of detail provided in an Environmental Impact Report (EIR).

CEQA requires that all State and local government agencies consider the potentially significant and significant environmental impacts of projects they propose to carry out or over which they

have discretionary authority, before implementing or approving those projects. The public agency that has the principal responsibility for carrying out or approving a project is the lead agency for CEQA compliance (State CEQA Guidelines, CCR Section 15367). TRLIA has principal responsibility for carrying out this project and is therefore the CEQA lead agency for this IS/MND.

If there is substantial evidence (including the analyses in an IS) that a project, either individually or cumulatively, may have a significant or potentially significant impact on the physical environment, the lead agency must prepare an EIR (State CEQA Guidelines, CCR Section 15064[a]). If the IS concludes that impacts would be less than significant, or that mitigation measures committed to by the project proponent would reduce impacts to a less-than-significant level, a Negative Declaration or MND may be prepared.

TRLIA has prepared this IS to evaluate the potential environmental impacts of the project and has identified mitigation measures to reduce or eliminate any potentially significant project-related impacts. Therefore, an MND has been prepared for this project.

1.2 Summary of Findings

Chapter 3, Environmental Checklist, of this document contains the analysis and discussion of potential environmental impacts of the project. Based on the issues evaluated in that chapter, it was determined that:

The proposed project would result in no impacts on the following issue areas:

- Land use and planning
- Population and housing
- Public services
- Recreation

The proposed project would result in less-than-significant impacts on the following issue areas:

- Aesthetics
- Agriculture and forestry resources
- Energy
- Greenhouse gas emissions
- Noise
- Transportation
- Utilities and service systems
- Wildfire

The proposed project would result in less-than-significant impacts *after* mitigation implementation on the following issue areas:

- Air quality
- Biological resources
- Cultural resources
- Geology and soils
- Hazards and hazardous materials
- Hydrology and water quality
- Tribal Cultural Resources
- Mandatory findings of significance (including cumulative impacts)

The proposed project would result in the following specific beneficial impacts:

- Hydrology and water quality – reduce flood risk to the Hallwood community, the City of Marysville, and portions of Reclamation District 10
- Biological resources – enhance approximately 2.4 acres (5,200 linear feet) of anadromous fish habitat on the north and south banks of the lower Yuba River
- Mineral resources – indirectly make approximately 300,000 cubic yards (cy) of aggregate materials available for production

1.3 Document Organization

This document is divided into five key sections:

Chapter 1, “Introduction,” describes the purpose of the IS/MND, summarizes findings, and describes the organization of the IS.

Chapter 2, “Project Description,” describes the project location, project purpose, project components, construction activities, project operations, and discretionary actions and approvals that may be required.

Chapter 3, “Environmental Checklist,” presents an analysis of environmental issues identified in the CEQA Environmental Checklist and determines whether project implementation would result in a beneficial impact, no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, potentially significant impact, or significant impact, on the physical environment in each issue area. For this project, mitigation measures have been developed to reduce all potentially significant and significant impacts to less-than-significant levels.

Chapter 4, “References Cited,” lists the references used to prepare this IS.

Chapter 5, “Report Preparers,” identifies individuals who helped prepare or review this IS.

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Chapter 2. Project Description

This chapter describes the project location and background, along with the project objectives, project components and characteristics, construction activities, project operations, and discretionary actions and approvals that may be required.

2.1 Project Location and Background

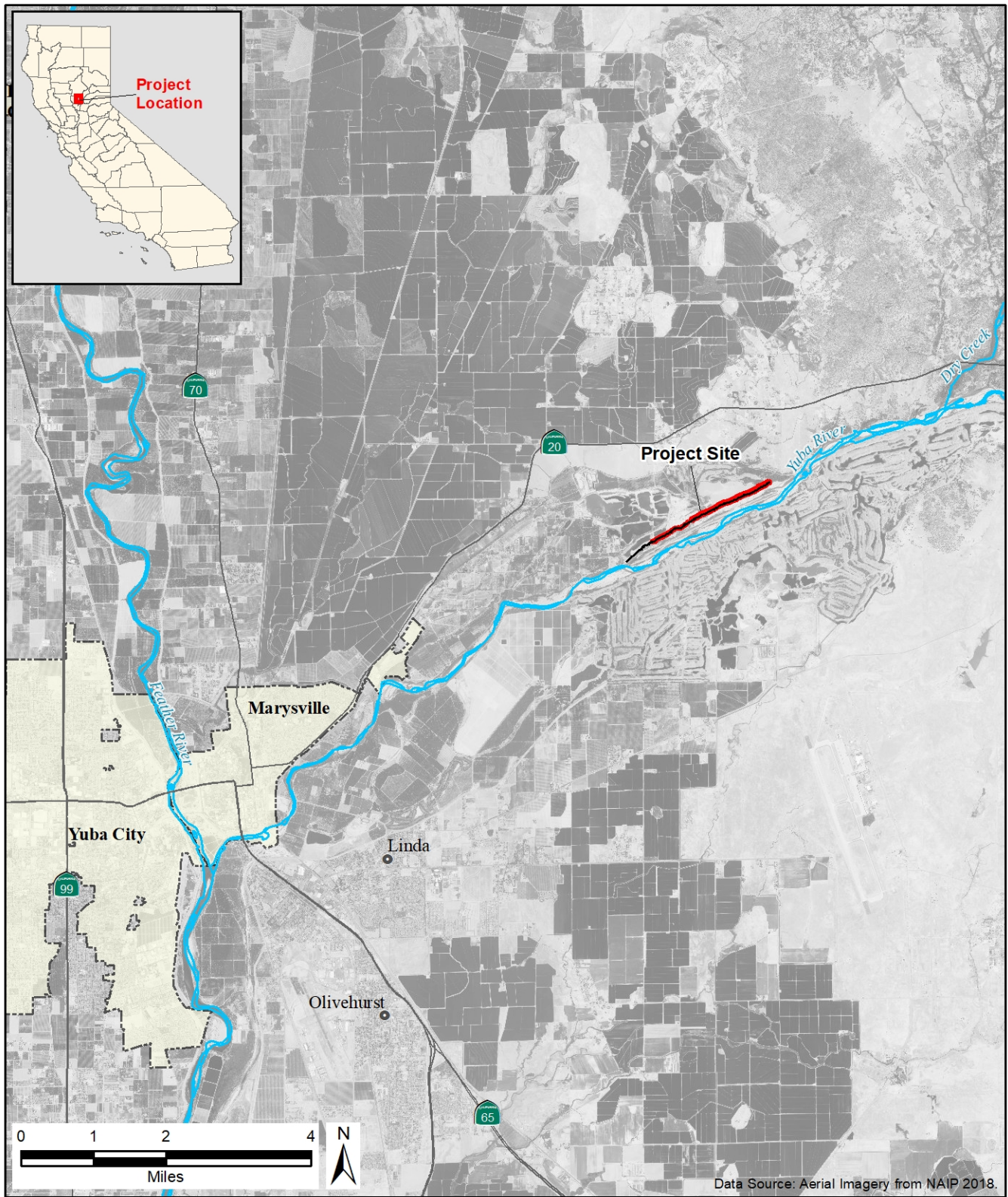
The approximately 2.25-mile-long North Training Wall (NTW) is located on the north bank of the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County (**Figure 2-1**). It forms the southern boundary of the Teichert Aggregates Hallwood Facility (Hallwood Facility) and is immediately north of the Yuba River and Yuba Goldfields (Goldfields). The NTW is a cobble embankment that was constructed by the California Debris Commission (CDC) in the early 1900s to confine the Yuba River and facilitate migration of mining debris within the floodway. Flood control was not an authorized purpose, but the NTW has historically provided and continues to provide flood protection to the surrounding area. However, the height and width of the NTW have decreased over time. This reduction and ongoing, persistent erosion from storm events have combined to create a flood risk to the Hallwood community, the City of Marysville, and portions of Reclamation District 10 (D-10).

The overall project is anticipated to include two phases. The first phase is the focus of this document, because it is a distinct action with independent utility, its design is underway, and funding has been provided. This phase would reshape the NTW embankment to a more stable geometry to improve flood protection for the City of Marysville and portions of D-10 and substantially reduce flood risk to the Hallwood community. An additional component is ecological enhancement of juvenile anadromous salmonid rearing habitat at several locations along the adjacent portion of the Yuba River. If implemented, the second phase would include a tie-in to high ground and ecological enhancements immediately upstream of the NTW.

2.2 Project Purpose and Objectives

The primary purpose of the NTW Project is to meet Federal Emergency Management Agency (FEMA) 100-year flood protection certification requirements for the Hallwood community. A secondary purpose is to improve availability of rearing, high-flow refugia, and other habitats for salmonids in this reach of the Yuba River.

Figure 2-1. North Training Wall Location.



Z:\Projects\050115_TRLIA\050115_NorthTrainingWall\G006_050115_NTW_ProjectLocation.mxd
28Oct2020 RS

Source: GEI Consultants, Inc. 2020

Figure 2-2. North Training Wall Project Footprint.



Sources: FlowWest 2020, Wood Rogers 2020

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 Data Source: GEI (2020), CBEC (2018/2019), NAIP 2018

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The project objectives are as follows:

- meet FEMA 100-year flood protection certification requirements for the Hallwood community;
- reduce flood risk for the City of Marysville and portions of D-10;
- improve availability of rearing, high-flow refugia, and other habitats for salmonids in this reach of the lower Yuba River;
- initiate project construction in the 2021 construction season; and
- design, construct, and permit the project within the authorized project budget and at the lowest feasible cost.

2.3 Project Components

The project site shown in Figure 2-2 corresponds to the overall anticipated work area, including NTW reshaping and ecological enhancements. The total area within this project site, including potential stockpile areas, is approximately 50 acres.

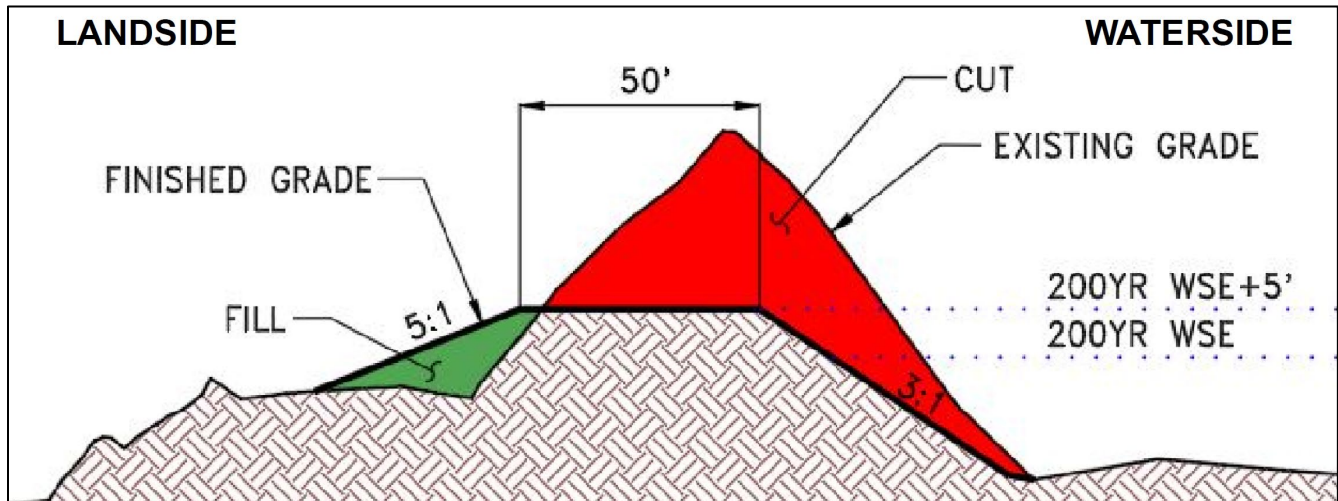
2.3.1 North Training Wall Reshaping

The existing NTW embankment would be graded to achieve a geotechnically stable geometry. The modified embankment crest would be 5 feet above the 200-year design water surface elevation. This crest elevation has been selected as a conservative approach to achieve 100-year FEMA certification and to account for future changes in hydraulics and hydrology that could result from climate change. The embankment would have a 30-foot-wide crest, 3H:1V (horizontal:vertical) waterside slope, and 5H:1V landside slope. A 20-foot-wide landside toe access road would be constructed to provide access during construction and operations and maintenance (O&M). **Figure 2-3** shows a typical cross section for the upstream portion of the NTW, where the greatest amount of material would be redistributed.

NTW reshaping activities would include:

- degrading the existing NTW embankment to near the design crest elevation,
- hauling and placing degraded material at lower portions of the NTW embankment to achieve the design cross section and construct the landside toe access road,
- finish-grading the embankment to the design crest elevation and waterside and landside slopes, and
- track-walking side slopes to interlock the cobble material and improve erosion resistance.

Figure 2-3. Typical North Training Wall Cross Section.



Source: Wood Rogers 2020

2.3.2 Ecological Enhancement

The ecological enhancement component would include introducing hydraulic roughness elements and associated velocity breaks and eddy fences to create flow velocity refugia and feeding areas for juvenile anadromous salmonids along approximately 3,900 linear feet of the south bank of the Yuba River. Riparian vegetation plantings also would be installed to improve instream cover and provide large woody material in areas where vegetation is currently lacking or sparse.

An approximately 0.8-acre enhancement area of native riparian plantings would be implemented adjacent to the thin band of existing riparian vegetation at the waterside toe of the NTW (see Figure 2-2). The extent of the planting area is constrained by the depth to groundwater, but it would expand the area of riparian vegetation along the NTW and the adjacent secondary channel being constructed as part of the Hallwood Side Channel and Floodplain Restoration Project (Hallwood Restoration Project). The enhancement area would be cleared and grubbed, if required, and excavated to approximately 1-2 feet deep. It would then be planted with live stakes of native species, and an excavator and hand shovels would be used to back-fill around the live stakes. Alternatively, the native plantings may be installed by drilling with auger, staking, and backfilling by hand.

Boulder clusters with native riparian plantings would be installed in three areas along the south bank of the river, ranging in length from approximately 50 feet to 1,200 feet, and totaling up to approximately 1.6 acres (see Figure 2-2). The width of the boulder clusters and associated plantings would vary; narrow clusters would be approximately 10 feet wide, and larger clusters extending into the channel would be up to approximately 40 feet wide. The varied width of these features would create pool habitat and high-flow refugia in eroded areas and areas with potential for erosion. The combination of boulder clusters and plantings is intended to resist scour and erosion forces and increase the sustainability of the native plantings.

Installing the boulder clusters and associated riparian plantings would require cofferdams to create a dry work area. Sand-filled bulk bags/super sacks would be placed from the south bank to provide a work zone isolated from the active river channel. For smaller areas (approximately 200 feet long or less), all boulder clusters would likely be installed with one cofferdam installation. For longer areas, cofferdams and boulder clusters would be installed in stages. After a cofferdam is installed, water within the enhancement area would be pumped back into the Yuba River or into nearby adjacent ponds in the Yuba Goldfields, depending on proximity. Measures would be implemented to ensure the discharged water does not exceed turbidity thresholds. The work area would be kept dry and equipment would be moved into the area via a constructed access ramp extending down the southern riverbank. These enhancement areas are currently bare. If vegetation is present when construction occurs, it would be cleared and grubbed, if necessary, to accommodate boulder cluster installation. The areas would then be slightly excavated (1-2 feet deep). The boulder clusters and live stakes of native species would be installed in layers. Courses of boulders would be laid, and stakes would be placed throughout the area of disturbance. Voids between the boulders would be back-filled with native fine material, and a successive course of boulders would be laid and the stakes back-filled. The cofferdam bags would be removed after boulder cluster and stake installation is complete.

2.4 Material Quantities, Sources, and Transport

2.4.1 North Training Wall Reshaping

No material import or export would be required to complete the NTW embankment reshaping. Portions of the embankment near the eastern limit contain excess material sufficient to meet design needs. Approximately 130,000 cubic yards (cy) of material is anticipated to be excavated from these areas and hauled to locations where material is lacking. An excess of approximately 300,000 cy of material would be generated by NTW reshaping. This material would be made available for aggregate processing at the adjacent Hallwood Facility. If the material cannot be processed as it is removed, it would be stored at an on-site stockpile (see Figure 2-2). The average round-trip haul distance for material redistribution and removal of excess material is anticipated to be approximately 1 mile.

Open-bowl scrapers are anticipated to be used to degrade, haul and initially place NTW material. Up to approximately 440 round trips would be completed each day, for approximately 15 days. After material is placed by the scrapers, dozers would be used to grade the material to establish the design geometry and track-walk the area. Additional equipment, including a motor grader and compactors, would be used to perform finish-grading activities. Finish-grading is anticipated to take approximately 10 days.

Excess material is anticipated to be removed from the NTW area via scraper. Up to approximately 440 round trips would be completed each day, for approximately 35 days. A dozer and grader would be used to grade the stockpile area, if needed.

2.4.2 Ecological Enhancement

Boulder and planting materials would be imported to the ecological enhancement areas via haul truck and tractor trailer. Approximately 10,000 cy of boulders would be imported to the south bank locations from within approximately 20 miles, by up to approximately 850 truck trips over approximately 40 days. Approximately 15 tractor trailer trips over 1 day are anticipated to be required to import plants and other material materials to the sites from within approximately 15 miles. Staging areas to stockpile rock and live stake materials would be located along access roads near each work area.

2.5 Construction Personnel and Equipment

The number of construction personnel would vary depending on project activities. Up to approximately 10 personnel are estimated to be onsite daily during project activities. Construction workers would most likely come from the local workforce in the Marysville, Yuba City, and Sacramento areas.

Table 2-1 lists the construction components and the types and number of equipment anticipated to be used for each project component. The construction contractors may use different equipment or more or less equipment, based on the construction schedule, the contractors' capabilities, and equipment availability. For example, it is possible a conveyor system would be used to transport some or all of the excess material to the Hallwood Facility processing area of the potential stockpile site.

2.6 Site Access, Haul Routes, and Staging Areas

Access to the Hallwood Facility for personnel, equipment, and material delivery would be via State Route (SR) 20, Hallwood Boulevard, and Walnut Avenue. Access within the facility would be along existing paved and unpaved roads. Temporary haul routes and staging areas are anticipated to be established along the northern edge of the NTW grading limits. Haul routes would likely extend in an east-west direction, with areas for temporary material stockpiling at various locations along these routes. Specific locations would be determined by the contractor to optimize efficiency and reduce haul times, lengths, and operational disturbance, but the NTW grading limits shown in Figure 2-2 incorporate likely landside haul routes and staging areas.

Access to the north bank ecological enhancement areas would be through the Hallwood Facility and an existing access road to the floodplain; a temporary haul route would be established through the floodplain to the individual enhancement area (see Figure 2-2). Access to the south bank ecological enhancement areas is anticipated to be through the Goldfields. These anticipated routes correspond to existing Goldfields access points and existing maintained and unmaintained routes through the Goldfields.

Table 2-1. Construction Components, Equipment, and Anticipated Work Durations

Construction Component	Anticipated Types of Equipment and Number of Pieces*	Anticipated Use Duration (days)
North Training Wall – Reshaping	Scraper (4)	25
	Grader (2)	15
	Grader	10
	Dozer	25
	Compactor	15
North Training Wall – Excess Material Removal	Scraper (4)	35
	Dozer	5
	Grader	5
Ecological Enhancement	Scraper	30
	Dozer	30
	Front-end Loader	30
	Grader	30
	Excavator	30
	Tractor Trailer	1
	Haul Truck	40

Notes: One piece of each equipment type is anticipated to be used, unless specified in parentheses; equipment may be used concurrently.

Sources: FlowWest 2020, MBK Engineers 2020

2.7 Construction Schedule

The earliest possible start date for project construction would be February 2021, and the latest possible end date is anticipated be in late Spring 2022. Construction is anticipated to be completed in approximately 6 months. Each of the three primary project components (NTW reshaping, excess material removal, and ecological enhancement) is anticipated to take approximately 1-2 months to complete, and none of the components are likely to be conducted concurrently. The overall construction timeline may or may not be contiguous, based on availability of construction resources and other factors. NTW work could occur in any season but would be subject to changing conditions associated with flow and water surface elevation of the Yuba River. For example, foundation conditions may at times limit construction traffic throughout the project site. Ecological enhancement that requires dewatering or in-water work would be conducted during an appropriate summer work window (e.g., July 15 to October 15), to minimize potential impacts on special-status fish.

NTW reshaping activities, including equipment operation, would typically occur 6 days a week (Monday through Saturday) but may also occur on Sunday. Activities would typically occur 12 hours per day (daylight hours) but could occur up to 24 hours per day. These hours are consistent with existing operations at the Teichert Hallwood facility, which occur up to 24 hours per day, 7 days a week depending on economic demand. If work occurs at nighttime, any

necessary lighting would be directed downward and would be consistent with existing nighttime operations at the Hallwood Facility. The specific number of hours that each piece of equipment would be used during the day is not known and would be up to the construction contractor. Equipment maintenance and other associated actions would typically occur between 7 am and 5 pm but also as needed.

Ecological enhancement activities, including equipment operation, would typically occur Monday through Saturday during normal working hours (7 am to 7 pm). Equipment maintenance could occur before and after working hours and on Sunday, as needed.

2.8 Utilities and Other Considerations

Pacific Gas and Electric Company (PG&E) steel towers and overhead utility lines are present between the two NTW reshaping areas (see gap at approximately Station 60+00 in Figure 2-2). These towers and lines would not be affected by project construction. American Telephone and Telegraph (AT&T) voice and data communication lines are present near the western end of the NTW reshaping area; these lines also would not be affected by project construction. Additionally, Teichert owns a number of high-voltage electricity lines throughout the Hallwood Facility. Approximately fifteen Teichert-owned wooden utility poles and associated line along the Hallwood Facility entrance road (at the downstream end of the NTW reshaping area) would likely require relocation. The exact locations for the new poles and line are not known at this time, but will likely be adjacent to Hallwood Facility entrance road.

2.9 Operations and Maintenance

After construction is complete, TRLIA (the local maintaining agency) will conduct approximately four maintenance inspections per year. This will include visual landside and waterside inspections of the NTW, constructed ecological features, and both landside and waterside toe locations. Additional patrols and monitoring may be conducted during high-water periods.

Routine NTW maintenance activities are anticipated to include repair of sloughing, or slope instabilities, as necessary following high-water events. Such maintenance is likely to include grading and fill placement, typically completed by large-scale construction equipment including front-end loaders and bull dozers.

Annual monitoring and maintenance of ecological enhancement areas would be conducted for 5 years. One monitoring visit per year is anticipated to be conducted to inspect riparian plantings and boulder clusters. Riparian plantings are anticipated to be watered via water truck, approximately monthly during the dry season (June–November), for the first 2 years after planting.

2.10 Regulatory Requirements, Permits, and Approvals

As the lead agency under CEQA, TRLIA has the principal responsibility for approving and carrying out the proposed project and for ensuring that CEQA requirements and other applicable regulations are met. The following permits are anticipated to be required for the project:

- **Central Valley Flood Protection Board Encroachment Permit.** For work or uses which encroach into rivers, waterways, and floodways, within and adjacent to Federal and State authorized flood control projects.
- **Central Valley Regional Water Quality Control Board (CVRWQCB) Clean Water Act (CWA) Section 401 Water Quality Certification.** For discharge of dredge and fill materials into waters of the State.
- **California Department of Fish and Wildlife (CDFW) Lake/Streambed Alteration Agreement.** For changing the bed, channel, or bank, of any river, stream, or lake.
- **U.S. Army Corps of Engineers (USACE) CWA Section 404 Permit.** For discharge of dredge and fill material into waters of the United States.
- **National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife (USFWS) Endangered Species Act (ESA) Section 7 Consultation.** Consultation for possible effects on Federally listed species.
- **State Historic Preservation Officer (SHPO) and National Historic Preservation Act Section 106 Consultation.** Consultation and Programmatic agreement or Memorandum of Agreement regarding effects on cultural resources pursuant to Section 106 of the National Historic Preservation Act.

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Chapter 3. Environmental Checklist

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 checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology / Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" 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 checked="" type="checkbox"/>	Tribal Cultural Resources	<input type="checkbox"/>	Utilities / Service Systems
<input checked="" type="checkbox"/>	Mandatory Findings of Significance	<input type="checkbox"/>	Energy	<input type="checkbox"/>	Wildfire

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as

described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- I find that 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.



Paul Brunner
Executive Director
Three Rivers Levee Improvement Authority



Date

Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for significant impacts to any resource category from project operations and maintenance of the existing and proposed facilities.
- 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) "Less-than-Significant Impact 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.
- 5) 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.
- 6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 7) 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.
- 8) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

3.1 Aesthetics

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
I. AESTHETICS – Except as provided in PRC Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.1.1 Environmental Setting

The landscape at the project site is dominated by the NTW, adjacent Hallwood Facility and Yuba River corridor on the north side of the river and the Goldfields on the south side of the river. The NTW and Goldfields are comprised of huge river cobble mounds from historic hydraulic mining.

A scenic vista is generally considered a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The Yuba County General Plan identifies local-scale scenic views of the Feather, Yuba, and Bear Rivers at bridge crossings and where roads parallel these rivers (Yuba County 2011a). The portion of the Yuba River adjacent to the project site is relatively isolated and is not visible from publicly accessible roadways; therefore, there are no scenic vistas in the project vicinity. There are also no designated State scenic highways in the project vicinity (Caltrans 2020a and 2020b).

Based on the project location and relative isolation, recreationists on the Yuba River are the only potential sensitive viewer group. The ecological enhancement areas would be clearly visible to

boaters, but much of the view of the NTW from the river is obscured by riparian vegetation. Project-related equipment may be visible from the river when operating at the top of the NTW, but much of the work would occur on the landside slope, which is not visible from the river. The closest residence is approximately 0.35 mile north of the east end of the NTW. The project site is unlikely to be visible from this residence because of intervening vegetation along the Cordua Canal and the Yuba River. Workers at Teichert Aggregates have views of the project area; however, project activities would be consistent with current operations at the Hallwood Facility.

3.1.2 Discussion

- a) **Have a substantial adverse effect on a scenic vista?**
- b) **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?**

There are no scenic vistas or scenic highways in the project vicinity. Therefore, there would be **no impact** related to these issues.

- c) **In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?**

The project would alter the site by reshaping the NTW and installing boulder clusters and riparian plantings along the Yuba River. A small amount of riparian vegetation (approximately 0.5 acre) at the waterside toe of the NTW would be removed to accommodate NTW reshaping. However, these relatively minor changes to the site would not degrade the existing visual character or quality of views of the project site and its surroundings, and the overall visual character of the area would remain the same. In addition, public views of the site are limited to a relatively small number of people on the Yuba River, to which public access is not available in the immediate vicinity. The visual character of the project site would be temporarily degraded by the presence of heavy equipment during temporary project construction activities and infrequent O&M activities. However, these impacts would be of short duration and only experienced by a relatively small number of recreationists along the river. For these reasons, the project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, and this impact would be **less than significant**.

- d) **Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

The project does not include new permanent sources of light. Construction would typically occur during daylight hours, but NTW work could occur at night. The adjacent Hallwood Facility sometimes operates 24 hours per day and produces nighttime light under current conditions. Lighting associated with potential NTW nighttime work would be directed downward and consistent with existing operations at the Hallwood Facility. Therefore, it would not create a new source of substantial light, and this impact would be **less than significant**.

3.2 Agriculture and Forestry Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
<p>II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) 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:</p>					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input 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"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.2.1 Environmental Setting

No agricultural land occurs on the project site. Riparian vegetation along the Yuba River is considered forestland and extends slightly into the NTW reshaping area and may extend into the ecological enhancement areas.

3.2.2 Discussion

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**
- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract**
- c) **Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))**

The project site is not located on or adjacent to land zoned as agriculture, forestland, timberland, or timberland zoned as Timberland Production. It also is not on land under a Williamson Act contract. Therefore, there would be **no impact** related to these issues.

- d) **Result in the loss of forest land or conversion of forest land to non-forest use**
- e) **Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

Approximately 2 acres of vegetation would be removed from the potential stockpile area, if it is required for storage of excess material removed from the NTW. This area was cleared of vegetation during previous mining-related activities and has become revegetated in recent years. Therefore, woody vegetation is limited to shrubs and immature trees. In addition, this vegetation is within an active aggregate mining facility and is zoned for mineral extraction. A very small amount of riparian vegetation outside the Hallwood Facility would be removed to accommodate NTW reshaping and boulder cluster placement. Reshaping the NTW would encroach slightly into the riparian corridor at the waterside toe, but no more than approximately 0.5 acre of vegetation is anticipated to be removed, most of which is shrubby vegetation and would not be considered forest land. Ecological enhancement activities would minimize removal of existing vegetation. It is possible up to approximately 0.5 acre of riparian vegetation would be removed for this project component, but removal would be limited to ground cover, shrubs, and immature trees to the maximum extent feasible. Therefore, this impact would be **less than significant**.

3.3 Air Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3.1 Environmental Setting

The project site is in the Sacramento Valley Air Basin. The Feather River Air Quality Management District (FRAQMD) administers local, State, and Federal air quality management programs in Yuba County. The Federal Clean Air Act and the California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) to establish health-based air quality standards at the Federal and State levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) were established for the following criteria pollutants: carbon monoxide ozone, sulfur dioxide, nitrogen dioxide, particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter, and lead.

EPA and CARB designate areas of the State as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the Federal and State Clean Air Acts, respectively. An “attainment” designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A “maintenance” designation indicates that the area previously had nonattainment status and currently has attainment status for the applicable pollutant; the area must demonstrate continued attainment for a specified number of years before it can be re-designated as an

attainment area. An “unclassified” designation signifies that data do not support either an attainment or a nonattainment status.

Under NAAQS, Yuba County does not have any criteria air pollutants designated as nonattainment; however, under CAAQS, PM₁₀ is designated as nonattainment (CARB 2020).

3.3.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

FRAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of Federal and State air quality laws. FRAQMD *Indirect Source Review Guidelines* (FRAQMD 2010) identify CEQA thresholds of significance for certain criteria air pollutants to assist lead agencies in determining air quality impacts for projects located in Yuba County, as presented in **Table 3-1**. Thresholds are the same for construction and operation emissions.

Table 3-1. Feather River Air Quality Management District Criteria Air Pollutant Emission Thresholds of Significance

Project Phase	Nitrogen Oxides	Reactive Organic Gases	PM ₁₀	PM _{2.5}
Operation	25 pounds/day	25 pounds/day	80 pounds/day	Not yet established
Construction	25 pounds/day multiplied by project length*	25 pounds/day multiplied by project length*	80 pounds/day	Not yet established

Notes: *Construction emissions as nitrogen oxides and reactive organic gases may be averaged over the life of the project, but may not exceed 4.5 tons/year

PM₁₀ = particulate matter less than 10 microns in diameter, PM_{2.5} = particulate matter less than 2.5 microns in diameter

Source: Feather River Air Quality Management District 2010

Project construction and O&M activities would temporarily generate criteria air pollutant emissions from exhaust associated with on-site equipment operation, material hauling, and worker vehicle trips, as well as fugitive dust from ground-disturbing activities. O&M activities would be minimal and result in negligible emissions. Construction-related emissions were modeled using the Roadway Construction Emissions Model; results are provided in Appendix A, “Air Quality Modeling Data.” **Table 3-2** shows estimated daily and annual construction-related pollutant emissions for each of the three project components. ROG and PM₁₀ emissions are below daily and annual FRAQMD significance thresholds. Nitrogen oxide (NO_x) emissions are below the annual FRAQMD significance threshold, but they would exceed the daily emissions threshold. This would be a **significant** impact. Mitigation Measure AQ-1 has been developed to reduce this impact.

Table 3-2. Estimated Construction-related Criteria Pollutant Emissions

Project Component	Daily Emissions (pounds/day)			Annual Emissions (tons/year)	
	NO _x	ROG	PM ₁₀	NO _x	ROG
North Training Wall – Reshaping	52.94	4.66	42.13	0.79	0.07
North Training Wall – Excess Material Removal	39.67	3.51	41.59	0.79	0.07
Ecological Enhancement	20.96	1.80	20.91	0.52	0.05
All Components	35.19¹	3.09 ¹	42.13 ²	2.11	0.09
Significance Threshold	25	25	80	4.5	4.5
<i>Exceeds Threshold?</i>	Yes	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Notes: ¹Average pounds per day over total construction period (120 days); ² maximum pounds per day
 NO_x = nitrogen oxide, PM₁₀ = particulate matter less than 10 microns in diameter, ROG = reactive organic gases.

Source: K.D. Anderson and Associates, Inc. 2020

Mitigation Measure AQ-1: Reduce Average Daily NO_x Emissions during Construction or Contribute to Off-site Mitigation Program.

TRLIA and its construction contractor(s) will implement one or more of the following measures to reduce average daily nitrogen oxide (NO_x) emissions during NTW reshaping and excess material removal to below Feather River Air Quality Management District thresholds and/or compensate for emissions that exceed thresholds:

- Increase the number of working days for NTW reshaping and excess material removal, combined, from 70 days to 120 days and reduce the number of scrapers working each day from four to two.
- Evaluate and implement other feasible emissions reduction measures. Effectiveness of potential alternative measures shall be estimated using the Roadway Construction Emissions Model to confirm emissions would be reduced to below FRAQMD thresholds. Alternative measures may include the following:
 - Use a conveyor system, rather than heavy equipment, to transport some or all of the excess material to the potential stockpile area or an existing stockpile at the Hallwood Facility.
 - Use heavy equipment with engines that meet California Air Resources Board Tier 4 emissions standards to complete NTW reshaping and excess material removal.
 - Use single-engine scrapers or other alternative equipment that may have lower emissions to complete NTW reshaping and excess material removal.

- Contribute to the FRAQMD Off-site Mitigation Program.

Timing: During project construction activities.

Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measure AQ-1 would reduce the potentially significant impact associated with average daily NO_x emissions to a less-than-significant level, because mitigated emissions would be below FRAQMD thresholds and/or off-site mitigation would be implemented to compensate for emissions that exceed thresholds. **Table 3-3** shows estimated daily and annual construction-related pollutant emissions for each of the three project components under the first mitigation scenario (increased working days and reduced equipment). This would be a **less-than-significant impact with mitigation incorporated**.

Table 3-3. Estimated Mitigated Construction-related Criteria Pollutant Emissions

Project Component	Daily Emissions (pounds/day)			Annual Emissions (tons/year)	
	NO _x	ROG	PM ₁₀	NO _x	ROG
North Training Wall – Reshaping	26.52	2.37	41.08	0.80	0.07
North Training Wall – Excess Material Removal	26.48	2.36	41.07	0.79	0.07
Ecological Enhancement	20.96	1.80	20.91	0.52	0.05
All Components	24.87 ¹	2.20 ¹	41.08 ²	2.10	0.19
Significance Threshold	25	25	80	4.5	4.5
<i>Exceeds Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Notes: ¹Average pounds per day over total construction period (170 days); ² Maximum pounds per day
 NO_x = nitrogen oxides, PM₁₀ = particulate matter less than 10 microns in diameter, ROG = reactive organic gases.

Source: K.D. Anderson and Associates, Inc. 2020

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

As discussed above, Yuba County does not have any criteria air pollutants designated as nonattainment under NAAQS; however, under CAAQS, PM₁₀ is designated at nonattainment (CARB 2020). As discussed under Question “a)” above, project construction would result in PM₁₀ emissions of approximately half the FRAQMD threshold. Therefore, the project would not result in a cumulatively considerable net increase of PM₁₀, the only criteria pollutant for which the region is in Federal or State non-attainment, and this impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during evaluation of a project's air quality impacts. These people include children, older adults, any person with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The project site is located in an Extractive District. The purpose of this zoning designation is to identify appropriate areas for mineral extraction, processing, and distribution. As a result, no sensitive receptors are located nearby; the nearest sensitive receptor is a residence approximately 0.35 mile north of the east end of the project site. Some workers at the immediately adjacent Hallwood Facility may be especially sensitive to air pollutants, but project-related emissions would be similar to those to which workers are exposed during typical facility operations.

CARB has identified diesel particulate matter from diesel-fueled engines as a toxic air contaminant. Use of heavy-duty diesel equipment for construction and operation activities would generate diesel particulate matter. However, construction activities are temporary and would occur over a relatively short duration. As discussed in Question "a)" above, O&M activities would be minor and use of heavy-duty diesel equipment during these activities would be minimal. Given the distance of sensitive receptors from the project site and temporary, short-term nature of project-related emissions, this impact would be **less than significant**.

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

Human response to odors is subjective, and sensitivity to odors varies greatly. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory and respiratory reactions, nausea, vomiting, headaches). The project would not create new objectionable odors. Sources that may emit odors during construction activities include exhaust from diesel construction equipment, which some individuals could consider offensive. However, odors from these sources would be localized and generally confined to the immediate area surrounding the project site. Haul trucks also would produce exhaust, but these would be limited to an average of approximately 20 trips per day for approximately 40 days, and they would travel along major routes that are currently used by similar large transport vehicles. Because of the diffusive properties of diesel exhaust, the remote nature of the project site, and existing conditions along haul routes, this impact would be **less than significant**.

3.4 Biological Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES – Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" 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 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"/>	<input type="checkbox"/>

3.4.1 Environmental Setting

Information presented in this environmental setting is based on review of biological resource databases, observations made during biological field surveys conducted by GEI Consultants, Inc. (GEI) in May 2020, and biological resources information from the Hallwood Restoration Project.

Habitat and Land Cover Types

The habitats and other land cover types described below occur on and/or immediately adjacent to the project site.

Barren

Barren portions of the project site are associated with the NTW and unpaved roads and access ramps. The staging areas for the ecological enhancement areas on the south side of the river also fall under this cover type. Vegetation is generally absent from barren areas, but occasional scattered ruderal grasses and forbs can occur at low density.

Non-native Annual Grassland

Non-native annual grassland vegetation occurs predominately in small patches at the landside toe of the NTW and along the waterside toe and side slopes of the NTW at the western end of the project site. These areas are colonized by non-native annual grasses, including ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), slender oat (*Avena barbata*), foxtail barley (*Hordeum murinum*), Italian ryegrass (*Festuca perennis*), Bermudagrass (*Cynodon dactylon*), and rattail sixweeks grass (*Festuca myuros*). Non-native forbs are also common in this habitat, including black mustard (*Brassica nigra*), turkey mullein (*Croton setiger*), horseweed (*Erigeron canadensis*), wild radish (*Raphanus sativus*), and prickly lettuce (*Lactuca serriola*).

Valley Oak Riparian Forest

Valley oak riparian forest occurs in a relatively narrow and discontinuous corridor waterside of the NTW; it also occurs in patches along mining pond margins landside of the NTW. This habitat type has a diverse assemblage of riparian trees, including valley oak (*Quercus lobata*), black walnut (*Juglans hindsii*), Fremont's cottonwood (*Populus fremontii*), box elder (*Acer negundo*) and Goodding's black willow (*Salix gooddingii*). White alder (*Alnus rhombifolia*) and buttonwillow (*Cephanthaus occidentalis*) are prevalent at lower elevations, closer to the water surface. Common understory shrubs include Himalayan blackberry (*Rubus armeniacus*) and poison oak (*Toxicodendron diversilobum*). Blue elderberry (*Sambucus nigra* ssp. *caerulea*) shrubs are scattered throughout this habitat along the waterside toe of the NTW but are more prevalent at the western end of the project site; three shrubs also occur on the landside slope of the NTW. This habitat type is located above the summer water surface elevation of the Yuba River, but accumulated woody debris and drift deposits indicate inundation during high flows.

Willow Scrub

Willow scrub habitat occurs predominately along the edge of mining ponds landside of the NTW, on point bars and along portions of the south bank in the Yuba River channel, and along the edge of tailing ponds in the Goldfields south of the river. This habitat is dominated by sandbar willow (*Salix exigua*); scattered California rose (*Rosa californica*) and coyote brush (*Baccharis pilularis*) also occur in some areas. An herbaceous layer is generally absent because of the dense canopy and competition for light and nutrients.

Open Water

Areas of open water occur in ponds landside of the NTW and are associated with on-going operations of the Hallwood Facility. These ponds exceed 6 feet deep. Narrow bands of vegetation, most commonly young trees and shrubby willows, border the ponds in some areas.

Riverine

This land cover includes the open-water channel of the Yuba River, as defined by the river's ordinary high-water mark (OHWM). During summer months and other low-flow periods, large areas of the unconsolidated gravel and cobble are exposed. All of the ecological enhancement areas and the staging area on the north side of the river are within this cover type area.

Sensitive Biological Resources

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under CEQA, the California Fish and Game Code (FGC), the California Endangered Species Act, Federal ESA, the CWA, and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-status Species

For purposes of this analysis, special-status species include plants and animals in one or more of the following categories:

- taxa (i.e., taxonomic categories or groups) officially listed by the State or Federal government as endangered, threatened, or rare;
- candidates for State or Federal listing as endangered or threatened;
- taxa that meet the criteria for listing, even if not currently included on any list, as described in State CEQA Guidelines California Code of Regulations Section 15380;
- species identified by CDFW as species of special concern;
- species listed as Fully Protected under the FGC; and
- plants considered by CDFW to be "rare, threatened, or endangered in California (i.e., List 1B and 2B plants)."

The California Natural Diversity Database (CNDDDB) (CDFW 2020a) and online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020) were reviewed for information on special-status plants and animals that occur in the project vicinity. These reviews included the

Browns Valley U.S. Geologic Survey 7.5-minute quadrangle on which the project site is located and the eight surrounding quadrangles. Lists of resources under NMFS or USFWS jurisdiction that could occur in the project vicinity were obtained from the Information for Planning and Conservation website (USFWS 2020) and online California Species List Tools (NMFS 2020), respectively. Database search results and USFWS and NMFS species lists are provided in Appendix B, “Biological Resources Information.”

Plants

Eleven special-status plants included in the CNDDDB and/or online Inventory of Rare and Endangered Vascular Plants of California search results were evaluated for their potential to occur on the project site (the USFWS species list did not include any plants). Most of these plants were determined to have no potential to occur on the project site, because they are restricted to habitats and microhabitats that do not occur onsite, such as vernal pools, meadows, and serpentine. Sanford’s arrowhead (*Sagittaria sanfordii*) and Brazilian watermeal (*Wolffia brasiliensis*) occur in ponds and ditches and were evaluated more closely for potential to occur in the mining ponds landside of the NTW. Conditions in these ponds, however, appear to be unsuitable for these species. Based on observations made during the May 2020 field surveys, the pond side slopes are relatively steep, the water is deep, and emergent vegetation is sparse. Sanford’s arrowhead favors shallow waters and areas where water recedes; Brazilian watermeal also occurs in shallow water, and the closest known occurrence is from a small, shallow pond in foothill woodland. Therefore, both of these species are unlikely to occur on or adjacent to the project site.

Fish

Five special-status fish taxa are included in the CNDDDB search results and/or on the USFWS or NMFS resource lists. Delta smelt (*Hypomesus transpacificus*) was eliminated from evaluation because the Yuba River is far upstream of its known range and distribution. The remaining taxa and several additional species are known or suspected of occurring in the lower Yuba River and are discussed below.

Central Valley Spring-run Chinook Salmon and Fall-run Chinook Salmon

Four runs of Chinook salmon (*Oncorhynchus tshawytscha*) occur in California: fall-, late-fall, winter-, and spring-run. The life histories of the runs differ primarily in the timing of their return to freshwater for spawning (Moyle 2002). The Central Valley spring-run Chinook salmon evolutionarily significant unit is State and Federally listed as threatened; fall-run Chinook salmon is a California Species of Special Concern.

Construction of Daguerre Point Dam in 1910, immediately upstream of the project site, created a partial barrier to salmon and other anadromous fish; fishways were constructed with the dam, but they were destroyed by floods in 1927-28 (Yoshiyama et al. 2000). Adequate fish ladders were subsequently constructed at the dam. Englebright Dam is a complete barrier and the current upstream limit for anadromous salmonids. Spring-run and fall-run Chinook salmon

populations persist in the lower Yuba River, spawning in moderately-sized cobble in riffles, riffle transitions, runs, and fast glides (Cram et al. 2017, Merz and Setka 2004).

The majority of spring-run Chinook salmon spawning occurs upstream of the SR 20 bridge, which is approximately 6 miles upstream of the project site. Fall-run Chinook salmon spawn throughout the Yuba River upstream of the Simpson Lane Bridge in Marysville, with the highest redd concentrations upstream of the SR 20 bridge. Spring-run Chinook salmon migrate into the lower Yuba River from April to June. A portion of the spring-run Chinook salmon run hold during the summer below Daguerre Point Dam before migrating upstream of the Highway 20 bridge to spawn by the end of September. The other portion of the spring-run Chinook salmon run hold over summer upstream of the Highway 20 Bridge. Spring-run Chinook salmon spawning generally occurs from the beginning of September to the middle of October. The annual fall-run Chinook salmon migration in the Yuba River begins in early September, peaks in November, and tapers off in December. Spawning generally occurs shortly after migration, primarily from early October through mid-December. (Yuba Accord RMT 2013.)

Spring-run Chinook salmon fry begin to emerge from the gravel starting in November and continuing until January; fall-run Chinook salmon emerge from January through March. After emerging, fry disperse downstream or to lateral margins of the river. Large numbers of fry have been captured at the mouth of the Yuba River in wet years. Spring-run Chinook salmon rear in the lower Yuba River from mid-November to mid-February and emigrate from mid-November through June. A small number of spring-run Chinook salmon in the lower Yuba River rear for a year before emigrating as smolts between October and March. Chinook salmon (both spring and fall-run) emigration generally peaks in late January, and 95 percent of emigration occurs by the end of April. (Yuba Accord RMT 2013.)

Central Valley Steelhead

The Central Valley steelhead (*Oncorhynchus mykiss*) distinct population segment is Federally listed as threatened. Only winter-run Central Valley steelhead currently occur in Central Valley streams (McEwan and Jackson 1996). Adult steelhead immigration and holding in the lower Yuba River occurs from August through March, and spawning occurs from January through April (Yuba Accord RMT 2013). Steelhead in the lower Yuba River use riffle transitions, riffles, fast glides, slow glides, and point bars for spawning, depending on discharge (Kammel and Pasternack 2014). Juvenile steelhead rearing and downstream migration occurs year-round and emigrating smolts have been observed from October through mid-April (Yuba Accord RMT 2013).

North American Green Sturgeon

The southern distinct population segment of North American green sturgeon (*Acipenser medirostris*) is Federally listed as threatened. Green sturgeon typically spawn every 3-4 years (Poytress et al. 2012). Adults on their spawning run enter San Francisco Bay during late winter to early spring, migrate to their spawning area, and spawn from April through early July (Heublein et al. 2009). After spawning, green sturgeon typically hold for several months in the river then

migrate downstream in fall or winter; some adults migrate downstream in spring and summer (Heublein et al. 2009). Spawning occurs in deep pools with medium-sized gravel, cobble, or boulder substrate (Poytress et al. 2012). Juveniles begin downstream migration between 6 months and 2 years of age (NMFS 2015). Spawning occurs primarily in the Sacramento River but has also been documented in the Feather River (Seesholtz et al. 2015). Adult green sturgeon has been observed in the pool below Daguerre Point Dam in May (Bergman et al. 2011), and an adult was observed below Daguerre Point Dam in 2006 (NMFS 2009). There also have been historical accounts by anglers of sturgeon (green or white) in the lower Yuba River (Beamesderfer et al. 2004). However, no green sturgeon eggs, larvae, or juveniles have been observed in the lower Yuba River (NMFS 2009).

Pacific Lamprey

Pacific lamprey (*Entosphenus tridentata*) is a California species of special concern. These lamprey have a diverse life history, with some rivers containing two runs; one run that returns in spring and spawns immediately after upstream migration and another run that migrates upstream in fall and spawns the following spring (Moyle et al. 2015). Most adult Pacific Lamprey spawning migrations occur between March and late June, with upstream movement typically occurring at night (Moyle et al. 2015). Spawning typically occurs from April to July in low-gradient stream reaches, with gravel in tailouts of pools and riffles (Goodman and Reid 2012). The deposited eggs hatch into ammocoetes that are transported downstream to a low-gradient silty area where they burrow and filter-feed (Goodman and Reid 2012, Moyle et al. 2015). After 4 to 7 years, ammocoetes metamorphose and migrate downstream to the ocean, typically during high-flow events in winter and spring (Goodman et al. 2015). Pacific lamprey has been extirpated from many California rivers, but they persist in the lower Yuba River (Yuba Accord RMT 2013).

River Lamprey

River lamprey (*Lampetra ayresi*) is a California species of special concern. This species has been studied little throughout its range, and detailed information on life history and distribution is lacking (USFWS 2004). There is little knowledge of river lamprey in California, particularly regarding habitat requirements and environmental tolerances (Moyle et al. 2015). Adults migrate to spawning areas in fall and spawn in small, gravel-bottomed tributary streams at the upstream end of riffles in winter or spring (USFWS 2004, Moyle et al. 2015). Ammocoetes filter feed in low velocity, depositional areas containing fine sediment for 3 to 5 years. Metamorphosis starts in summer and can take up to 10 months; entry into the ocean occurs in late spring (Moyle et al. 2015). The species occurs in the lower Yuba River but may be absent in some years; individuals were captured by rotary screw trap in 2 of the 6 years the trap was operated from 2003 to 2009 (Massa and McKibbin 2005, Massa and Campos 2006).

Riffle Sculpin

Riffle sculpin (*Cottus gulosus*) is a California species of special concern that is only found in permanent cold-water streams. These sculpin feed primarily at night and spawn under rocks in riffles or in the cavities of submerged logs in February through April (Moyle et al. 2015). Larvae and adults have poor dispersal ability; larvae are benthic and remain close to where they hatch

(Moyle et al. 2015). Riffle sculpin occur in the lower Yuba River; individuals were captured by rotary screw trap immediately downstream of the project site in all years that the trap was operated from 2003 to 2009. (Campos and Massa 2010).

Hardhead

Hardhead (*Mylopharodon conocephalus*) is a California species of special concern endemic to the Sacramento-San Joaquin and Russian River systems (Moyle 2002). This species is typically found in small to large streams in a low- to mid-elevation environment. Juvenile hardhead can occur at various depths, in shallow water and deeper lake habitats. Spawning occurs in May and June in the sand, gravel, and rocky areas of pools and side pools. Hardhead have been captured by rotary screw trap in the lower Yuba River (Campos and Massa 2010).

Wildlife

Twenty-five special-status wildlife taxa included in the CNDDDB search results and/or on the USFWS resource list were evaluated for potential to occur on or adjacent to the project site. As with the plant species, most of these species were determined to have no potential to occur on or adjacent to the project site because of restricted distribution and/or lack of suitable habitat. The few special-status wildlife taxa for which at least potentially suitable habitat occurs on or adjacent to the project site were evaluated in further detail and are discussed below.

Valley Elderberry Longhorn Beetle

Elderberry (*Sambucus* sp.) shrubs are the obligate host plant for the Federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Numerous elderberry shrubs occur in the lower Yuba River corridor, including on and adjacent to the project site. These shrubs are primarily restricted to riparian vegetation outside the NTW reshaping areas and ecological enhancement areas. However, three elderberry shrubs are growing on the landside slope of the NTW, within the reshaping area. Several occurrences of valley elderberry longhorn beetle are known from the project vicinity, and this subspecies has potential to occur on and adjacent to the project site.

Foothill Yellow-legged Frog

Foothill yellow-legged frog (*Rana boylei*) is State-listed as endangered. It occurs in and near rocky streams in valley and foothill areas. These frogs breed in streams, attaching egg masses to substrates in shallow water with low velocities, typically river bars, in spring to early summer as high flows recede (Wheeler and Welsh 2008). Foothill yellow-legged frog is typically found at higher elevation than the project site, and the nearest known occurrences are more than 10 miles upstream. Therefore, this species is unlikely to occur in this portion of the Yuba River. In addition, the ecological enhancement areas do not provide suitable aquatic habitat, because the site on the north side of the river is dry except during high flows, and the sites on the south side of the river are along the main channel, which has very fast-moving water.

Western Pond Turtle

Western pond turtle (*Emys marmorata*) is a California species of special concern that occurs in permanent or nearly permanent aquatic habitat and nests in uplands with suitable soils. Preferred aquatic habitat is deep, still, or slow-moving water with underwater refugia. Structures such as logs, rocks, bedrock outcrops, and exposed banks are required for basking (Ashton et al. 1997). The cobble substrate of the project site is unsuitable for nesting. The ecological enhancement areas do not provide suitable aquatic habitat, because the site on the north side of the river is dry except during high flows, and the sites on the south side of the river are along the main channel, which has very fast-moving water. Therefore, suitable on-site aquatic habitat is limited to the mining ponds landside of the NTW.

Special-status Birds

The Yuba River corridor and adjacent areas provide suitable nesting habitat for Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and yellow-breasted chat (*Icteria virens*). Swainson's hawk is State listed as threatened; white-tailed kite is fully protected under the FGC, and yellow-breasted chat is a California species of special concern. All of these species could nest in riparian habitat adjacent to the NTW and ecological enhancement areas. Yellow-breasted chat could also forage in this habitat, but suitable foraging habitat for the other two species is absent from the immediate vicinity.

Habitat adjacent to the project site could be used for foraging by several additional special-status birds that do not nest in the vicinity but may occur during migration and dispersal. These include bald eagle (*Haliaeetus leucocephalus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), bank swallow (*Riparia riparia*), and yellow warbler (*Setophaga petechia*).

Western Red Bat

Western red bat (*Lasiurus blossevillii*) is a California species of special concern that occurs primarily in riparian habitat. These bats typically roost in the foliage of mature trees associated with woodland borders, rivers, and agricultural areas. Roost trees are typically large cottonwoods, sycamores, walnuts, and willows. Activity levels in the Central Valley, as measured by acoustic surveys, have been shown to be highest in riparian habitat corridors more than 160 feet wide and dominated by mature trees (Pierson et al. 2006). Riparian woodland adjacent to the project site occurs in relatively narrow, discontinuous bands and is only marginally suitable for western red bat. Most of the riparian vegetation landside of the NTW was cleared within the past 20 years, and what occurs now is largely immature and also of marginal quality. Therefore, potential for western red bat to occur in riparian habitat adjacent to the project site is low.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, ESA, the Magnuson-Stevens Fishery Conservation and Management Act, Section 1602 of the FGC, Section 404 of the CWA, and the Porter-Cologne Act. Sensitive habitats may be of special concern for a variety of reasons, including their locally

or regionally declining status, or because they provide important habitat to special-status species.

Critical Habitat and Essential Fish Habitat

Section 3(5)A of the ESA defines “critical habitat” as the specific areas within the geographical area occupied by Federally listed species on which are found physical or biological features essential to the conservation of the species and that may require special management considerations or protection. The project site is within designated critical habitat for spring-run Chinook salmon, steelhead, and green sturgeon.

The project site also is within designated Essential Fish Habitat (EFH) for Pacific Coast salmon (Chinook salmon), as designated in the Pacific Coast Salmon Fishery Management Plan (PFMC 2016) and defined by the Magnuson-Stevens Fishery Conservation and Management Act. Chinook salmon freshwater EFH includes all habitat currently or historically occupied by Pacific Fishery Management Council-managed Chinook salmon in California, including the lower Yuba River.

Waters and Wetlands

Under Section 404 of the CWA, USACE regulates discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States, as codified in 33 United States Code 1251 et. seq. and defined in the Navigable Waters Protection Rule, include: the territorial seas and waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; tributaries; lakes, ponds, and impoundments of jurisdictional waters; and adjacent wetlands. Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Under Section 401 of the CWA, the CVRWQCB regulates discharge of dredged or fill material into waters of the United States that drain to the Central Valley, to ensure such activities do not violate State or Federal water quality standards; the CVRWQCB also regulates waters of the State, in compliance with the Porter-Cologne Act. In addition, diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to the regulatory approval of CDFW pursuant to Section 1602 of the FGC.

The lower Yuba River is a jurisdictional water of the United States subject to regulation under Sections 404 and 401 of the CWA. The extent of USACE jurisdiction is based on mapping completed for the Hallwood Restoration Project (Cramer Fish Sciences and cbec eco engineering 2017). During the May 2020 field surveys, GEI verified that the existing mapping is consistent with current conditions at the NTW project site. In addition to waters below the OHWM, adjacent riparian wetlands occur in some areas above the OHWM. All of the ecological

enhancement areas are below the OHWM. The NTW reshaping area is above the OHWM but encroaches very slightly into riparian wetlands in several locations. The Yuba River channel and associated riparian vegetation waterside of the NTW and along the south bank of the river also fall under CDFW jurisdiction pursuant to Section 1602 of the FGC.

The mining ponds and associated vegetation are not anticipated to fall under jurisdiction of any of the resource agencies. These features likely do not meet the definition of adjacent wetlands under the Navigable Waters Protection Rule, and they are exempt from regulation under Sections 404 and 401 of the CWA and the Porter-Cologne Act. The ponds also do not meet the definition of a “lake” under the FGC, and are therefore not subject to CDFW jurisdiction.

Natural Communities of Special Concern

CDFW maintains a list of sensitive natural communities (CDFW 2020b). Valley oak woodland and forest and sandbar willow thicket, which occur on and adjacent to the project site, are identified as sensitive natural communities.

3.4.2 Discussion

This impact discussion focuses on resources with reasonable potential to be affected by implementing the proposed project. Therefore, plant and wildlife species that are unlikely to occur on or adjacent to the project site (because of poor or unsuitable habitat conditions or known extant range of the species) are not addressed in this discussion.

- 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, U.S. Fish and Wildlife Service, or National Marine Fisheries Service?**

Special-status Fish

The ecological enhancement project component would improve habitat conditions for juvenile anadromous salmonids (steelhead, fall-run and spring-run Chinook salmon) in the lower Yuba River. Rearing habitat would be improved by installing boulder clusters to create flow velocity refugia and feeding areas. Although a very small amount of existing vegetation may require removal, riparian plantings would result in a long-term increase in cover and provide large woody material in areas where vegetation is currently lacking or sparse. The combination of boulder clusters and plantings also is intended to resist scour and erosion. These ecological enhancement features address several recommendations pertaining to the lower Yuba River in the Recovery Plan for Chinook salmon and steelhead (NMFS 2014), including:

- improve riparian habitat, instream cover, and large woody material availability,
- create and restore side-channel habitats to increase the quantity and quality of off-channel rearing (and spawning) areas, and

- use biotechnical techniques that integrate riparian restoration for riverbank stabilization instead of conventional rip rap in the Yuba River.

Therefore, the ecological enhancement component of the project would result in a **beneficial** impact on special-status fish.

Mercury contamination is a known concern in the lower Yuba River, particularly in areas such as the project site where extensive hydraulic mining has occurred. However, because ecological enhancements would be constructed in the active river channel, and associated excavation would be very shallow (1-2 feet), risk of exposing mercury contaminated sediments would be extremely low. These areas are part of an active channel and floodplain in which substrate is periodically displaced during flood flows. Therefore, it is unlikely that previously undisturbed contaminated sediments would be present close enough to the surface to become exposed by shallow project-related excavation, and this would be a **less-than-significant** impact.

Activities associated with reshaping the NTW and installing the boulder clusters could result in short-term increases in suspended sediment and turbidity levels and accidental exposure to hazardous materials (e.g., construction equipment leaking fluids). At high levels, suspended solids can adversely affect the physiology and behavior of aquatic organisms. Fish responses to increased turbidity and suspended sediment can range from behavioral changes to sublethal effects and, at high suspended sediment concentrations for prolonged periods, lethal effects (Newcombe and Jensen 1996). The amount of sediment that may be re-suspended by project activities is not anticipated to be substantial, and any re-suspension and re-deposition of instream sediments is expected to be localized and temporary. In addition, the area disturbed by project activities and associated turbidity at any given time would be a small proportion of the river channel (typically a maximum of approximately 20 percent of the channel width). Therefore, juvenile salmonids would have opportunities to move to other portions of the channel and avoid potential impacts from equipment and turbidity. Juvenile salmonids are also less likely to occur along the non-vegetated channel margins where work would occur. Nevertheless, an undetermined number of these and other special-status fishes may attempt to find shelter in the substrate and could be injured or killed during construction. Project-related increases in suspended sediment and turbidity and potential pollutant exposure have potential to cause adverse behavioral responses and sublethal and lethal effects. Therefore, impacts on special-status fish during project construction would be **potentially significant**. Mitigation Measure BIO-1 has been developed to address this impact.

Mitigation Measure BIO-1: Minimize Water Quality Impacts and Direct Injury and Mortality of Special-status Fish during Boulder Cluster Installation.

TRLIA and its construction contractor(s) will implement the following measures to avoid and minimize direct injury and mortality of special-status fish.

- Before project activities begin, worker awareness training shall be provided by a qualified biologist to inform on-site project personnel of the need to avoid and minimize

potential impacts on special-status fish and the possible penalties for not complying with these requirements. The training shall include, at a minimum, a discussion of the relevant species and measures to be implemented for their protection. An appointed representative shall be identified and available to project personnel to ensure that questions regarding avoidance and protection measures are addressed in a timely manner.

- A biological monitor approved by CDFW and NMFS shall be present onsite to monitor in-water construction activities and confirm proper implementation of water quality protection measures and other impact avoidance and minimization measures.
- During in-water work and dewatering, monitoring shall be conducted in compliance with all relevant permits, including the CWA Section 404 permit, CWA Section 401 Water Quality Certification, CDFW Streambed Alteration Agreement, and NMFS authorization. Such requirements are likely to include monitoring of turbidity levels. If appropriate, silt curtains shall be used to capture floating materials or sediments mobilized during construction activities and minimize water quality impacts.
- All dewatering pump intakes shall be screened and pumping rates shall be controlled according to CDFW and NMFS requirements.
- Cofferdam bulk bags/super sacks shall be installed in collaboration with an on-site qualified fisheries biologist and in a manner that facilitates movement of fish out of the dewatering area during installation. Before cofferdam installation is complete, the fisheries biologist shall determine if fish remain in the dewatering area and if relocation is necessary.
- If the fisheries biologist determines fish relocation is necessary, the biologist shall determine which fish relocation method is most appropriate for the conditions and will supervise relocation efforts. If feasible, relocation shall initially be attempted by herding the fish out of the work area to minimize impacts and avoid handling and transportation.
- If fish relocation using herding is not successful or the fisheries biologist decides it is not appropriate to attempt, fish capture and relocation shall be conducted. Before fish relocation begins, a qualified fisheries biologist shall identify the most appropriate release location(s).
- The method used to capture fish will depend on the nature of the work site and shall be selected and supervised by a qualified fisheries biologist with fish capture and handling experience. Electrofishing shall only be used if seining and/or dip netting is not feasible and shall only be conducted by properly trained personnel following NMFS guidelines.

- Fish shall not be anesthetized or measured. However, they shall be visually identified to species level, and year classes shall be estimated and recorded.
- Reports on fish relocation activities shall be submitted to CDFW and NMFS within 30 days after ecological enhancement activities are completed at each site.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measure BIO-1 would reduce impacts on special-status fish to a less-than-significant level because project personnel would be educated, turbidity and sedimentation would be minimized, monitoring and supervision would be conducted by a qualified fisheries biologist, only a small portion of the channel would be affected during construction activities, and the number of fish exposed to potential direct impacts would be minimized. Therefore, this impact would be **less-than-significant with mitigation incorporated**.

Valley Elderberry Longhorn Beetle

Blue elderberry shrubs, the host plant for valley elderberry longhorn beetle larvae, are widely distributed waterside of the NTW, and three elderberry shrubs are present in the reshaping area on the waterside slope of the NTW. Elderberry shrubs are unlikely to occur in the ecological enhancement areas, but they could occur adjacent to the areas. Several occurrences of valley elderberry longhorn beetle are known from the project vicinity, and there is potential for them to use shrubs on and adjacent to the project site. Reshaping the NTW would require removal of the landside elderberry shrubs; elderberry shrubs waterside of the NTW are not anticipated to require removal, but trimming of them may be necessary. Elderberry shrub removal would slightly reduce the amount of available habitat for the beetle but could result in loss of individuals, if larvae are present in the removed shrubs. Trimming also could result in loss of larvae, depending on the extent of trimming that is required. This would be a **potentially significant** impact. Mitigation Measure BIO-2 has been developed to address this impact.

Mitigation Measure BIO-2: Minimize Impacts on Valley Elderberry Longhorn Beetle.

TRLIA and its construction contractor(s) will implement the following measures to avoid and minimize impacts on elderberry shrubs and compensate for unavoidable impacts:

- Before project activities begin, worker awareness training shall be provided by a qualified biologist to inform on-site project personnel of the need to avoid and minimize potential impacts on elderberry shrubs and the possible penalties for not complying with these requirements. The training shall include, at a minimum, a discussion of valley elderberry longhorn beetle and its habitat and measures to be implemented for its protection. An appointed representative shall be identified and available to project personnel to ensure that questions regarding avoidance and protection measures are addressed in a timely manner.

- Before project activities near elderberry shrubs begin, stakes and/or flagging (substrate and slopes preclude use of fencing) shall be placed to clearly delineate the extent of NTW excavation and reshaping and ecological enhancement areas. A buffer shall be provided around each elderberry shrub to prevent accidental damage during construction activities. To the maximum extent feasible, buffers shall be a minimum of 20 feet from the dripline of elderberry shrubs.
- A qualified biological monitor shall supervise buffer establishment and conduct periodic inspections of the construction area to ensure that impact avoidance and minimization measures are properly implemented.
- To the maximum extent feasible, trimming of elderberry shrub branches and stems shall occur between November and February and shall avoid removal of branches and stems greater than 1 inch in diameter.
- The three elderberry shrubs that must be removed to accommodate NTW reshaping shall be transplanted, if feasible to safely do so, given potential access challenges related to their location on the relatively steep slope. The transplant location shall be suitable for elderberry growth and reproduction and as close as possible to the shrubs' original location. Transplanting shall be implemented as follows:
 - If feasible, elderberry shrubs shall be transplanted when they are dormant (November through the first 2 weeks in February) and after they have lost their leaves.
 - A qualified biologist shall conduct an exit hole survey immediately before transplanting and shall be onsite during transplanting activities. The biologist shall record the number of exit holes found on each shrub, the precise location of each shrub that is removed, and the precise transplant location for each shrub. This information shall be reported to USFWS and the CNDDDB.
 - Transplanting shall follow the most current version of the American National Standards Institute A300 (Part 6) guidelines. If possible, the entire root ball shall be removed.
 - The transplanted shrubs shall be protected to ensure they become reestablished.
- Compensatory mitigation shall be provided for elderberry shrub removal. An appropriate mitigation ratio shall be determined in consultation with USFWS. The ratio shall be a minimum of one credit at a USFWS-approved mitigation bank or one 1,800-square-foot area at an approved mitigation site for each removed shrub.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measure BIO-2 would reduce the potentially significant impact on valley elderberry longhorn beetle to a less-than-significant level because buffers would be implemented around elderberry shrubs; elderberry shrubs that require removal would be transplanted, if feasible; and compensatory mitigation would be provided. Therefore, this impact would be **less-than-significant with mitigation incorporated**.

Western Pond Turtle

No suitable nesting habitat for western pond turtle would be affected by the project. However, pond turtles could occur in ponds landside of the NTW. Fill would be placed in approximately 0.5 acre of open water of the approximately 7-acre pond at the eastern end of the project site. The edge of the affected portion of the pond supports dense shrubby vegetation and provides little opportunity for basking; higher-quality basking habitat occurs on the opposite, south-facing side of the pond and on the eastern side of the pond, where in-water basking habitat occurs. Placing fill in a small portion of the pond would slightly reduce habitat availability for western pond turtle, but this impact would be very minor. If individual pond turtles occur in the pond, they are likely to avoid fill areas after project activities begin, and an extensive area suitable habitat is available in the remaining portion of the pond. It is possible that pond turtles could be injured or killed during fill activities, but the number of individuals potentially affected would be low and is very unlikely to have a substantial impact on the local population. Therefore, this impact would be **less than significant**.

Special-status Birds

Three special-status bird species—Swainson's hawk, white-tailed kite, and yellow-breasted chat—have potential to nest in riparian habitat in the project area. Non-breeding bald eagle, western yellow-billed cuckoo, bank swallow, and yellow warbler could occur in the project area, but suitable nesting habitat for these species is absent or the area is outside their current nesting distribution. Project activities would not directly remove nesting habitat or destroy active nests of Swainson's hawk or white-tailed kite. A total of up to approximately 3 acres of shrubby riparian vegetation suitable for yellow-breasted chat nesting could be removed, but many more acres of higher-quality nesting habitat for this species occur in the immediate vicinity. Therefore, loss of this habitat would be a **less-than-significant** impact.

Swainson's hawks and white-tailed kites could nest in trees near the NTW reshaping area and the ecological enhancement areas, and yellow-breasted chat could nest in riparian habitat in or adjacent to these areas and at the potential stockpile site. Project activities could destroy active chat nests and disturb nesting behavior of all three species, potentially resulting in nest abandonment, reduced care of eggs or young, or premature fledging. Because Swainson's hawk is a threatened species and white-tailed kite is a fully protected species, project-related failure of a nest of either species would be a **potentially significant** impact. Mitigation Measure BIO-3, presented below, has been developed to address this impact.

The relatively small amount of vegetation removal on the project site could remove a small number of active nests of yellow-breasted chat and common bird species. FGC Section 3503

prohibits take, possession, and needless destruction of nest or eggs of any bird. Although removing an active bird nest during project activities could violate FGC Section 3503, this would not in itself be a significant impact under CEQA. Potential loss of a very small number of active yellow-breasted chat nests would not have a substantial adverse effect on the local population. In addition, the potential extent of loss of active nests of common bird species would not substantially reduce their abundance or cause any species to drop below self-sustaining levels. Therefore, this would be a **less-than-significant impact**. Furthermore, implementing Mitigation Measure BIO-3 would avoid and minimize potential to destroy bird nests protected by FGC Section 3503.

Mitigation Measure BIO-3: Avoid and Minimize Potential to Destroy or Result in Failure of Active Bird Nests.

TRLIA and its construction contractor(s) will implement the following measures to minimize potential to destroy an active bird nest or result in failure of a special-status bird nest during project implementation:

- A qualified biologist shall conduct a survey of suitable nesting habitat that would be removed by project activities during the nesting season (February-August). A minimum of one survey shall be conducted no more than 7 days before project activities begin.
- If an active bird nest is found, removal or direct disturbance of habitat in which the nest is located shall be delayed until the biologist confirms the nest is no longer active.
- A qualified biologist also shall conduct a survey of suitable nesting habitat for Swainson's hawk, white-tailed kite, and common raptors adjacent to project activities that would occur during the nesting season (February-August). Surveys shall be conducted within 14 days before project activities begin near suitable raptor nesting habitat.
- If an active raptor nest is found, a protective buffer shall be established and implemented until a qualified biologist confirms the nest is no longer active. A qualified biologist shall monitor the nest during project activities to confirm effectiveness of the buffer. The size of the buffer will depend on the type and intensity of project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the nest to failure.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measure BIO-3 would reduce the potentially significant impact associated with failure of active bird nests to a less-than-significant level, because habitat with active nests would not be removed, and buffers would be implemented around active raptor nests. Therefore, this impact would be **less-than-significant with mitigation incorporated**.

Western Red Bat

Riparian woodland and forest adjacent to the project site provides marginal-quality roosting habitat for western red bat, which favors areas that support riparian corridors wider than 160 feet and dominated by mature trees. Riparian vegetation that would be removed is primarily shrubby and supports very few mature trees; this habitat is unlikely to be used by western red bat for roosting and especially unlikely to support maternity roosts. Because only a small amount of poor-quality roosting habitat for western red bat would be removed and few, if any, individuals would be affected, this impact would be **less than significant**.

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

Valley oak woodland and forest and sandbar willow scrub are riparian habitats and sensitive natural communities. A small amount (approximately 1.25 acres) of these habitats would be removed to accommodate NTW reshaping, and very minimal additional scrub removal may occur in the ecological enhancement areas. Vegetation to be removed would primarily be shrubby species such as sandbar willow, Himalayan blackberry, and California rose that would likely become reestablished after NTW reshaping is complete. Very few trees are anticipated to require removal. This likely temporary habitat loss represents a very small proportion of riparian habitat in the project vicinity. In addition, riparian habitat loss would be offset by riparian plantings associated with the ecological enhancement components. Up to 2 acres of riparian vegetation would be removed from the potential stockpile area, if it is required for storage of excess material removed from the NTW. However, this area was cleared of vegetation during previous mining-related activities and has become revegetated in recent years. It is not subject to regulation under Section 1602 of the FGC but may require replacement if it was established as a requirement of the Hallwood Facility Reclamation Plan. For these reasons, impacts on riparian habitat would be **less than significant**.

As discussed under Question “(a)” above, the project would improve conditions for anadromous salmonids in the lower Yuba River. Therefore, although project activities would temporarily disturb designated critical habitat for steelhead, spring-run Chinook salmon, and green sturgeon and EFH for Chinook salmon, the overall result would be **beneficial**.

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?

The Yuba River is a water of the United States subject to regulation under Sections 404 and 401 of the CWA. NTW reshaping would extend very slightly into jurisdictional riparian wetlands, and the ecological enhancements would include boulder placement below the OHWM. Project activities also could temporarily degrade water quality in the river. These impacts would not, however, result in permanent loss of riparian wetland or permanent adverse impacts on the river. Therefore, impacts on waters of the United States and waters of the State would be **less than**

significant. In addition, appropriate permits and water quality certification would be obtained from USACE and CVRWQCB, as needed, and all conditions of these permits would be met.

- 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?**

The project site is part of a much larger extent of riverine, woodland/forest, and scrub habitats along the lower Yuba River. The river system serves as a corridor and/or primary route for fish and wildlife migration and movement. Project activities would not substantially interfere with the movement of native wildlife because activities would be limited to a very small proportion of the river corridor, would occur over a relatively brief period of time, and would not completely impede upstream or downstream wildlife movement. The in-water construction work window is timed specifically to minimize impacts on anadromous salmonids. As described under Question “a)” above, the project would improve conditions for juvenile salmonids in the lower Yuba River. Therefore, the long-term impact on rearing habitat would be **beneficial**. However, short-term impacts on rearing juvenile salmonids and other native fish could occur during construction; this would be a **potentially significant** impact. Mitigation Measure BIO-1 has been developed to address this temporary impact.

Mitigation Measure BIO-1: Minimize Water Quality Impacts and Direct Injury and Mortality of Special-status Fish during Boulder Cluster Installation.

Please *refer to* Mitigation Measure BIO-1, above, for the full text of this mitigation measure.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

Yuba County does not have any ordinances prescribing specific requirements for tree preservation or protection of other biological resources. Most of the policies identified in the Natural Resources Element of the Yuba County 2030 General Plan (Yuba County 2011a) apply to development projects. However, Policy NR5.7 addresses public investments and overall resource protection and could therefore apply to the proposed project. This policy states: “New developments and public investments near Yuba County’s streams and rivers shall be designed to avoid tree removal, erosion, or other modifications that would adversely affect salmonid habitat.” As discussed under Question “(a)” above, the project would improve conditions for anadromous salmonids in the lower Yuba River. Therefore, although project activities would result in temporary disturbance of salmonid habitat and could require a small amount of vegetation removal in the ecological enhancement areas, the overall result would be **beneficial**.

- 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?**

Yuba and Sutter Counties, in collaboration with CDFW, USFWS, and NMFS, are developing a regional conservation plan that will be a joint Federal Habitat Conservation Plan and State Natural Community Conservation Plan; however, the plan has not yet been approved and it is speculative to assume approval. Therefore, the project would not conflict with an adopted conservation plan, and **no impact** related to conflict with such a plan would occur.

3.5 Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
V. CULTURAL RESOURCES – Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

Cultural resources are defined as buildings, sites, structures, or objects that may have historic, architectural, archaeological, cultural, or scientific importance. CEQA defines a “historical resource” as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR).

Prehistoric Setting

This brief overview of the prehistory of the region is adapted from synthesis and analysis of the archaeology of central California (Rosenthal et al. 2007), which expands and refines earlier chronological schemes developed for central California.

The Paleo-Indian period (11,500 to 8,550 calibrated radiocarbon date [cal] Before Common Era [B.C.E.]¹) is the earliest accepted period for human occupation in California. Archaeological evidence dating to this period, however, is extremely rare or of dubious association.

The Lower Archaic period (8,550 to 5,550 cal B.C.E.) is nearly as bereft of evidence as the Paleo-Indian primarily because of two large depositional events in 9,050 cal B.C.E. and 5,550 cal B.C.E. Artifacts dating to this period are usually isolated finds that include stemmed points, crescent-shaped flaked stone tools, and early concave base points. Despite this limited data set,

¹ Before Common Era and Common Era are alternatives to the Dionysian system terminology of Before Christ and Anno Domini, respectively, and correspond to the same years in the Dionysian system.

however, marine shell from California found in the Great Basin and obsidian from sources in the Great Basin indicate that regional interaction was well established by this archaeological period. Middle Archaic period (5,550 to 550 cal B.C.E.) sites are rare in most of central California but are relatively common in buried contexts in the foothills. Archeological assemblages from this period are characterized by expedient, cobble-based tools used for chopping, pounding, scraping, and mulling. Archaeobotanical studies have shown a heavy reliance on acorns and pine nuts during this period. Few bone or shell artifacts have been identified to this period, but tabular pendants, incised slate, and perforated stone plummets have been found in low numbers and over wide areas. Material sources tend to be local, with few imported obsidian artifacts.

The Upper Archaic period (550 cal B.C.E. to cal Common Era [C.E.] 1,100) corresponds roughly to the beginning of the Late Holocene, a time characterized by a shift from a relatively warm, dry climate to a wetter, cooler, and more stable climate. This archaeological period is better represented and understood than previous periods, with evidence indicating that while economies varied by region, the overall emphasis was on resources that could be harvested and processed in bulk. Such resources included acorn, rabbit, salmon, shellfish, and deer. Specialized technologies, including new types of bone tools, various bead types, ceremonial blades, and polished and ground stone plummets, appear in the archaeological record during this period. The lower Sierra foothills may have been occasionally occupied by groups from the valley floor, based on similar burial patterns.

The Emergent period (cal C.E. 1,100 to Historic²) archaeological record is the most substantial and comprehensive of any period, and its assemblages and adaptations are also the most diverse. Many earlier archaic technologies and traditions are no longer represented during this period, and bow and arrow technology appears, arguably the most distinctive technological aspect of the Emergent period. More complex social forms also emerged, as evidenced by increased variation in burial types and furnishings. Other changes included shifts in obsidian use/production, decentralization of bead manufacture, a unique arrow type form in some areas, changes in burial practices, and possibly a monetized system of exchange. The Emergent period is usually split into two broad phases, the Lower and Upper Emergent, that are defined based on the appearance or increase in frequency of specific artifact types.

Ethnographic Setting

The project site is in the ancestral territory of the Nisenan, or Southern Maidu. The Nisenan ancestral territory include the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River, and extends from the crest of the Sierra Nevada to the banks of the Sacramento River. The northern boundary was in the vicinity of Honcut Creek, while the southern limits of the territory was just south of the American River. The project area is on the territory occupied by the northernmost Hill Nisenan group who spoke the Bear River dialect of the Nisenan language (Kroeber 1925, Beals 1933).

² Historic refers to the time from European-American settlement (early 1800s) to present day.

The Nisenan lived in small villages throughout the foothills, mostly situated on ridges or terraces above streams for a nearby water supply, though smaller specialized camp locations were established farther from water sources. Like in much of central California, the political organization of the Hill Nisenan revolved around the tribelet. In general, the tribelet system was typified by a single, relatively large village, usually containing one or more ceremonial structures and the home base for a chief and possibly several assistants. This central, large village had one or more satellite villages associated with it. Together, the central village and its satellites were the largest political unit (the tribelet) that was recognized by Miwok speakers. Associated villages within an individual tribelet cooperated with each other for ceremonial purposes and group activities such as game drives (Kroeber 1925; Wilson and Towne 1978; Merriam 1967).

The Nisenan followed a seasonal round of food gathering, as did most California Indians. Throughout California, various species of oak provided the most important staple food, although the black oak was apparently the most preferred. Acorn harvests in the early fall provided the region's native inhabitants with a reliable, large-scale food source that could sustain populations through the winter months. Acorn was supplemented with other seeds, berries, nuts, and edible roots. Animals food resources included small game, such as rabbit and quail. Larger game, such as mule deer, tule elk, black bear, and grizzly bear, were also hunted. Fishing was also important in the valley and in the foothills along major water ways (Wilson and Towne 1978).

The Nisenan tool kit was varied and efficient. Ground stone tools included cobble pestles used with several different types of bedrock mortars, acorn anvils, and hammer stones. Several types of flaked stone hunting and butchering tools, made of chert and imported obsidian, were used, including knives, scrapers, and arrow and spear points. Fish could be caught with nets, gorges, hooks, and harpoons within the larger perennial drainages of the foothill regions. Freshwater clams and mussels were also gathered in the larger waterways, such as the Sacramento River. Other aquatic food resources available to native populations near the project area would have included salmon and sturgeon, which would have been netted or caught with the aid of weirs (Wilson and Towne 1978).

Hill Nisenan villages were located on ridges and large flats along major streams. They were smaller than in the valley, and it was common for family groups to live away from the main village. Houses were conical-shaped and covered with slabs of bark, skins, and brush. Brush shelters were used in the summer. Most villages had bedrock mortar sites (Wilson and Towne 1978).

Euro-American contact with the Nisenan indigenous culture began with infrequent Spanish excursions along the southern edge of the Nisenan territory. In the early 1800s, American and Hudson's Bay Company trappers travelling through the Sacramento and San Joaquin Valleys. In 1833, the Nisenan were believed to be wiped out by malaria sweeping through the Sacramento Valley (Cook 1955, Wilson and Towne 1978). It is estimated that 75 percent of the native population died in this epidemic and the rest dealt with the settlers and gold miners that soon followed (Cook 1955). In the 1870s, there was a resurgence of their traditional culture. Through newfound political, economic, and social influence, they now constitute a growing and thriving Native American community in California.

Historic Setting

Yuba County

European influence began in the project vicinity in 1808, when Spanish explorer Gabriel Moraga led an expedition from Mission San Jose up to the Cosumnes and Feather Rivers. Other explorers, fur trappers, and traders visited the area over the following decades. Captain John Augustus Sutter settled in the Sacramento Valley in 1841, when his grant was approved by the Mexican authorities. He built Sutter's Fort in Sacramento, and his considerable claim covered most of what would become Sacramento and Placer Counties, all of Sutter County, the valley portion of Yuba County, and a small part of Colusa County. The region offered fertile land for settlers encouraged by the proximity of Sutter's settlements, but it was not until the discovery of gold on the American River in 1848 that immigrants flooded into Yuba County. The initial discovery of gold in what is now Yuba County was made just east of Marysville. In 1850, the township of Marysville was established. Marysville witnessed tremendous growth, because of its proximity to the gold-bearing placers. Apart from this community, there was little other development in the area. With the introduction of the gold dredging process in the late 1800s, mining boomed along the Yuba River for a few decades (Beck and Haase 1974, Hoover et al. 1990).

Gold Mining and Dredging

Following the discovery of gold in the foothills, miners moved to the Yuba River and other waterways to seek their fortune in mining in the region. Various mining methods were implemented such as gold panning and the related rocker as well as sluice boxes. Miners also dug ditches along streams to control the flow of water and potential gold-bearing deposits. The development of hydraulic mining in 1852 would alter the mining industry as it quickly became the favored mining method. Hydraulic mining directed water under high pressure against the gold-bearing deposits. It remained popular until the late 19th century when the courts prohibited it because of damage caused by the massive amount of debris carried downstream into the Sacramento River and its tributaries. Hydraulic tailings were also deposited into the Yuba River valley during this period and dredging was necessary to access the deep deposits (Horizon 2016).

Dredging began in earnest along the Yuba River in the early 20th century when Wendell P. Hammon (the "Dredge King") popularized the use of bucket-line dredges at his Oroville mining operation and later in the Yuba fields. The bucket-line dredging was used in the Yuba Goldfields throughout most of the 20th century with over 10,000 acres of land and tailings reworked to access gold deposits. Currently, the Goldfields are mostly quarried for cobble and gravel construction materials (Horizon 2016).

Yuba River Training Walls

In the 1890s, the CDC envisioned constructing walls along the portion of the Yuba River traveling through the Yuba Goldfields to impound the mining debris deposited in the Goldfields and to prevent further damage to the waterways and surrounding land. The CDC drew up plans and

with approval from the U.S. Corps of Engineers, construction of the walls was underway by the early 1900s. Contractors built gravel embankments designed to confine and control the flow of the river in the area of the Yuba Goldfields. The NTW was completed in 1907, and the South Training Wall was completed in 1920. The Middle Training Wall was added in 1929 and helped create an overflow channel between the two outer walls. Over time, the three walls were strengthened and raised. Regular maintenance ceased by the mid-20th century, resulting in gradual deterioration of the three features and related periodic localized flooding (Horizon 2016).

3.5.2 Discussion

The cultural resources investigations completed to support this analysis included a records search conducted at the North Central California Information Center of the California Historical Resources Information System, review of cultural resources documents prepared for the adjacent Hallwood Restoration Project, review of historic maps and ethnographic documents, archival research, and a project site visit.

A reconnaissance-level pedestrian survey of most of the project site was previously conducted by qualified archaeologists on June 7, 2016 for the Hallwood Restoration Project (Horizon 2016). At that time, it was noted that no original ground surface occurs on the project site, which is comprised of cobble mine tailings. Two historic-era (more than 45 years old) cultural resources are occur on the project site, the NTW and the Yuba Goldfields Historic Mining District.

On November 19, 2020, GEI archaeologist Jesse Martinez (M.A. and Registered Professional Archaeologist), conducted a reconnaissance-level site visit to observe the current site conditions and determine if any notable changes have occurred since the 2016 survey. No additional cultural resources were identified during the 2020 site visit. However, modifications to the historic landscape were noted, such as cobble-lined canals to help water drain more effectively.

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California Historical Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA, unless a preponderance of evidence indicates otherwise (PRC Section 5024.1, 14 CCR Section 4850). The eligibility criteria for listing in the CRHR are similar to those for NRHP listing but focus on importance of the resources to California history and heritage.

A cultural resource may be eligible for listing in the CRHR if it:

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 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.

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

The 2016 cultural resources report for the Hallwood Restoration Project (Horizon 2016) recommended the NTW as eligible for the NRHP/CRHR under Criterion A/1 for its association with hydraulic mining and under Criterion C/3 for its unique engineering and construction method as an individual resource. The NTW has suffered some deterioration over time; however, it retains sufficient integrity to convey its historical significance. In 2017, the SHPO concurred with the finding of significance of the NTW eligibility as an individual resource at the State level (Polanco 2017). The NTW was also recommended as a contributor to the “potential Yuba Goldfields Historic Mining District” identified in the 2016 report (Horizon 2016). The report recommended the district as eligible under NRHP Criteria A and C for its association with area dredging and bucket-line dredge technology. The SHPO concurred with the eligibility finding for the district for the purposes of the Hallwood Restoration Project (Polanco 2017). The boundaries of the loosely identified historic district are not clearly defined in the report. However, it was subsequently described as encompassing 10,000 acres of the Yuba Goldfields, the three training walls, and other mining-related features (Horizon 2017). Because the NTW meets CRHR eligibility criteria, and the SHPO has concurred that it meets criteria for listing in the NRHP, it has been added to the CRHR. Therefore, the NTW and Yuba Goldfields Historic Mining District are considered historical resources for the purposes of CEQA.

The project would reshape the NTW to enhance flood protection and build a landside toe access road for O&M. Higher areas of the NTW embankment, primarily in the upstream portion and smaller areas in the downstream portion, would be partially degraded. Cobble material excavated from these areas would be placed along the lower portions of the NTW embankment to create a uniform and more stable embankment. Despite these proposed modifications, the NTW would continue to function in the way it has for over 100 years – to store dredge material and “channelize” the Yuba River. For several decades since its construction, the NTW, as well as the other two training walls, underwent maintenance that affected their original shape and appearance as conditions changed. The configuration of the three training walls evolved over the years to address ongoing flood control and mining-related issues in the Yuba Basin (Horizon 2017). When originally built, the NTW was as low as 10 feet high. Through periodic maintenance, the wall was widened, expanded, and strengthened in sections and its height was gradually increased to up to 70 feet (Horizon 2017). Regular upkeep continued for several decades, until maintenance gradually ceased in the mid-20th century and the walls were left to deteriorate. The installation of PG&E towers and nearby mining activities have also contributed to changes to the

NTW. Currently, approximately 60-70 percent of the original wall remains (Horizon 2016). The proposed reshaping would alter the appearance of portions of the NTW, most notably in the upstream portion. Overall, however, the 2.25-mile-long resource would retain its look and feel as a dredge tailing wall on the landscape. It also would retain sufficient form and materials to convey its historical significance related to dredge mining and the Yuba Goldfields. Therefore, the project's impact on the NTW would be **less than significant**.

Similarly, NTW modifications would not alter the overall feeling and association of the approximately 10,000-acre Yuba Goldfields Historic Mining District. The wall, a character-defining feature of the district, is just one component of the large mining district that includes many thousands of acres of similarly configured dredge features across a visible landscape. The historic district would continue to retain sufficient integrity to physically convey its significance as a dredge mining-related property. Therefore, the project's impact on the Yuba Goldfields Historic Mining District would be **less than significant**.

No archaeological resources have been identified on the project site during the November 2020 site visit or previous investigations. During project activities and continuing consultation with Native American Tribes, however, it is possible that archaeological resources meeting criteria for inclusion of the CRHR could be identified. Therefore, this would be a **potentially significant** impact. Mitigation Measure CR-1 has been developed to address this impact.

Mitigation Measure CR-1: Conduct Cultural Resources Awareness Training.

TRLIA shall provide a cultural resources sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training shall be developed in coordination with an archaeologist meeting Secretary of the Interior Professional Qualifications Standards for Archaeology. TRLIA 10 shall invite Native American representatives from interested culturally affiliated Native American Tribes to participate. The training shall be conducted before any project-related construction activities begin on the project site and shall include relevant information regarding sensitive cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating Federal and State laws and regulations.

The training shall also describe what to do and who to contact if any potential cultural resources are encountered. The training shall emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and shall discuss appropriate behaviors and responsive actions, consistent with Native American Tribal values.

Timing: Before project construction activities begin.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure CR-2: Implement Procedures for Inadvertent Discovery of Cultural Material.

If an inadvertent discovery of buried or otherwise previously unidentified historical resources, including archaeological resources (e.g., unusual amounts of shell, animal bone, any human remains, bottle glass, ceramics, building remains), is made at any time during project-related construction activities or project planning, TRLIA, with input from other interested parties, will develop and implement appropriate protection and avoidance measures, where feasible. If such resources are discovered during project construction, all work within a 100-foot radius of the find shall cease. TRLIA shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Culturally affiliated Native American Tribes will also be contacted concerning resources of Native American origin. Avoidance is the preferred CEQA mitigation measure for cultural resources. If avoidance is not possible, any necessary treatment/investigation shall be developed in coordination with interested Native American Tribes providing recommendations to TRLIA and shall be completed before project activities continue in the vicinity of the find. An inadvertent discovery plan shall be developed before construction begins and shall be implemented in the event of a discovery during project construction.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measures CR-1 and CR-2 would reduce the potential impact related to discovery of unknown historical resources to a less-than-significant level because cultural awareness training would be provided to on-site project personnel, all finds would be assessed by a qualified archaeologist, and the treatment or investigation would be conducted in accordance with CCR Section 15064.5. Therefore, this would be a **less-than-significant impact with mitigation incorporated**.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

As used in PRC Section 21083.2, the term "unique archaeological resource" refers to an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- has a special and particular quality such as being the oldest of its type or the best available example of its type, or

- is directly associated with a scientifically recognized important prehistoric or historic event or person.

No archaeological resources were found on the project site during the 2016 pedestrian survey (Horizon 2016) or the November 2020 site visit, and none were identified in the records search. Ground disturbance would occur in a portion of the existing NTW embankment to reshape it to a more stable profile. The project site was extensively modified during the original construction of the NTW and subsequent maintenance. Excavation would extend 10 feet or less along most of the embankment, but in the upstream portion excavation would extend up to 70 feet deep. However, the excavated material would be entirely limited to cobble mine tailings. This material would be hauled and placed at lower portions of the NTW embankment to achieve a uniform crown elevation and construct the landside toe access road. Other limited excavations would include areas for the placement of boulder clusters and riparian plantings in the ecological enhancement areas. The likelihood of encountering cultural resources during construction is very low, because the project area underwent aggregate mining in the past, and it is unlikely that any historical or archaeological resources that may have once existed on the project site have not been destroyed. Nevertheless, the remote possibility remains that previously unidentified, buried historical or archaeological resources may exist on the project site. If such resources are present in areas subject to project-related ground disturbance, they could be destroyed or otherwise substantially altered by project implementation. This would be a **potentially significant** impact.

Implementing Mitigation Measure CR-1, presented under Question “a)” above, would reduce the potential impact related to discovery of unknown archaeological resources because the find would be assessed by a qualified archaeologist and the treatment or investigation would be conducted in accordance with CCR Section 15064.5. Therefore, this impact would be a **less-than-significant impact with mitigation incorporated**.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

No human remains were found on the project site during the 2016 pedestrian survey (Horizon 2016) and none were identified in the records search. Given the project site was used for aggregate mining in the past, any human remains that may have existed on the site have likely been destroyed. However, it is possible, though unlikely, that undiscovered, buried human remains may exist on the project site. If human remains are present in areas subject to project-related ground disturbance, they could be encountered during project planning or project-related construction activities. This would be a **potentially significant** impact. Mitigation Measure CR-2 has been developed to address this impact.

Mitigation Measure CR-3: Avoid Potential Effects to Previously Unknown Human Remains.

If an inadvertent discovery of human remains is made at any time during project planning or project-related construction activities, TRLIA will implement the procedures listed

below. If human remains are identified on the project site, the following performance standards shall be met prior to implementing or continuing actions, such as construction, that may result in damage to or destruction of human remains:

- In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, TRLIA will immediately halt potentially damaging excavation in the area of the burial and notify the Yuba County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of TRLIA for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.9 et seq.
- Upon the discovery of Native American human remains, TRLIA will require that all construction work within 100 feet of the discovery stop, until consultation with the MLD has taken place. The MLD will have 48 hours to complete a site inspection and make recommendations to the landowner after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. PRC Section 5097.98(b)(2) suggests that the concerned parties may mutually agree to extend discussions beyond the initial 48 hours to allow for the discovery of additional remains.
- If agreed to by the MLD and the landowner, TRLIA or its authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. If the NAHC is unable to identify an MLD, or if the MLD fails to make a recommendation within 48 hours after being granted access to the site, TRLIA or its authorized representative may also reinter the remains at a location not subject to further disturbance if recommendation of the MLD is rejected and mediation by the NAHC fails to provide measures acceptable to TRLIA.
- If the human remains are of historic age and are determined not to be of Native American origin, TRLIA will follow the provisions of the California Health and Safety Code Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

Timing: During project construction activities.
Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measure CR-3 would reduce the potentially significant impact associated with human remains, because any inadvertent discovery of human remains would be addressed as proscribed by State law and the MLD would be consulted. Therefore, this impact would be **less-than-significant impact with mitigation incorporated.**

3.6 Energy

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VI. ENERGY – Would the project:					
a) Result in 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"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.6.1 Environmental Setting

PG&E supplies electric power and natural gas to Yuba County. In 2019, Yuba County consumed approximately 512 million kilowatts per hour (CEC 2020). Current energy usage at the project site is negligible, because the site does not include energy-consuming structures or facilities.

3.6.2 Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Project-related energy consumption would include electricity, gasoline, diesel fuel, and oil for construction equipment and other items required for project implementation. The project would not include permanent sources of energy use. Project implementation would not include wasteful or unnecessary consumption of energy resources, because it would be required to meet air quality and greenhouse gas (GHG) emissions criteria that require the use of efficient equipment. In addition, project construction would be completed within the shortest period feasible, expected to be approximately 6 months. O&M activities would require minimal use of vehicles for infrequent monitoring and maintenance of the NTW and ecological enhancement features. Therefore, project-related energy use would result in a **less-than-significant impact**.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

The project would not result in developed land uses or construct temporary or permanent structures or facilities that could conflict with State or local plans for renewable energy or efficiency, and there would be **no impact** associated with this issue.

3.7 Geology and Soils

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VII. GEOLOGY AND SOILS – Would the project:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (<i>Refer to California Geological Survey Special Publication 42.</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<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"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<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 where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

The project site is classified as dumps and mine tailing and riverwash (NRCS 2020) and is underlain by Pliocene-age sediment (Saucedo and Wagner 1992). The Foothills Fault System, comprised of Quaternary and Pre-Quaternary faults, is located approximately 6 miles east of the project site and is the nearest fault system (CGS 2020a). There are no Alquist-Priolo Earthquake Fault Zones of required investigation near the project site (CGS 2020b). Additionally, the project site is not within an area at risk for landslides or within a known liquefaction zone (CGS 2020b).

3.7.2 Discussion

- 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 California Geological Survey Special Publication 42.)**

The project site is not within an Alquist-Priolo Earthquake Fault Zone. Additionally, there are no active faults in the project vicinity (i.e., faults showing evidence of displacement within the last 11,700 years). Therefore, there would be **no impact** related to a known earthquake fault.

ii) **Strong seismic ground shaking?**

iii) **Seismic-related ground failure, including liquefaction?**

iv) **Landslides?**

Strong earthquakes generally create ground shaking, including liquefaction and landslides, with reduced effects as distance increases from the earthquake's epicenter. The area affected by ground shaking in any given earthquake would vary depending on the earthquake's intensity, duration, distance from the project site, and the underlying material. There are no active faults in the project vicinity, and the project site is not located within a known liquefaction or landslide zone, though on-site ground shaking could result from distant earthquakes. However, the project does not include components, such as buildings or other facilities, that could increase the number of people in the project area. In addition, NTW reshaping would redistribute existing on-site materials in a manner designed to improve embankment stability and would likely reduce risk of ground failure and landslide. Boulder placement and planting associated with ecosystem enhancement would not increase these risks and would not be implemented near areas occupied by people that could be susceptible to loss, injury, or death. Therefore, project implementation would not increase risk of landslide, liquefaction, or other seismic-related ground failure, and this would be a **less-than-significant** impact.

b) Result in substantial soil erosion or the loss of topsoil?

The project would include excavation, fill, and grading to achieve a geotechnically stable geometry for the NTW and to install the ecological enhancements. Although material that would be disturbed is primarily cobble, some soil would be disturbed and could be exposed to erosion if a storm event occurs during construction. Rainfall of sufficient intensity could dislodge soil particles from the soil surface. If particles are dislodged and the storm is large enough to generate runoff, substantial localized erosion could occur. Therefore, this impact would be **potentially significant**. Mitigation Measure GEO-1 has been developed to address this impact.

Mitigation Measure GEO-1: Implement a Stormwater Pollution Prevention Plan and Associated Best Management Practices.

TRLIA shall prepare and implement the appropriate Stormwater Pollution Prevention Plan (SWPPP), or Stormwater Management Plan (SWMP), as needed, to prevent and control pollution and to minimize and control runoff and erosion in compliance with State and local laws. The SWPPP or SWMP shall identify the activities that may cause pollutant discharge (including sediment) during storms, techniques to control pollutant discharge, and an erosion control plan. Regardless of the need for a SWPPP or SWMP, construction techniques and Best Management Practices (BMPs) shall be identified and implemented, as appropriate, to reduce the potential for erosion and sedimentation. These may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, water bars, or other methods appropriate to the site conditions.

The SWPPP or SWMP shall also include a spill prevention, control, and countermeasure plan, and applicable hazardous materials business plans. The SWPPP or SWMP shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), measures to prevent hazardous material and waste spills, and materials available to clean up hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to spills.

The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions.

TRLIA and all contractors will abide by regulations governing hazardous materials transport included in CCR Title 22, the California Vehicle Code (CCR Title 13), and the State Fire Marshal Regulations (CCR Title 19). Transport of hazardous materials can only be conducted under a registration issued by the California Department of Toxic Substances Control (DTSC). Construction contractors shall be required to use, store, and transport hazardous materials in compliance with all Federal, State, and local regulations.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measure GEO-1 would reduce the potentially significant impact from construction-related erosion to a less-than-significant level, because a SWPPP or SWMP and associated BMPs would be implemented to minimize and control runoff and erosion. Therefore, the project would have a **less-than-significant impact with mitigation incorporated**.

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?

See response to Question “a)” above. This impact would be **less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Soils on the project site consist of dumps and mine tailing and riverwash that are not considered expansive soils (NRCS 2020). Therefore, there would be **no impact** to life or property related to this issue.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project does not include septic tanks or connection to a sewage system, and there would be **no impact** related to this issue.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project site is comprised of mine tailings and riverwash underlain by Pliocene deposits of the Laguna Formation. This formation is not considered sensitive for paleontological resources. In addition, the depth and mechanical nature of the dredging process would likely have destroyed any fossils that may have been present before mining activities began. Therefore, potential for a unique paleontological resource or geological feature on the project site is extremely low, and there would be **no impact** related to this issue.

3.8 Greenhouse Gas Emissions

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VIII. GREENHOUSE GAS EMISSIONS – Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.8.1 Environmental Setting

GHGs are present in the atmosphere naturally, released by natural and human-caused sources, and formed from secondary reactions taking place in the atmosphere. Human sources include emissions associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors (Yuba County 2001a). Evidence has shown that GHG emissions from locations around the world likely will contribute to global climate change, which could have drastic impacts related to flooding and other natural disasters, agriculture, habitats, water supply, and the economy. The Yuba County 2030 General Plan approach to climate change addresses transportation-related emissions, as well as electricity, agriculture, solid waste, and other sectors (Yuba County 2011b). Although the plan includes an action to prepare and adopt a GHG Reduction Plan, such a plan has not yet been completed.

3.8.2 Discussion

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

FRAQMD has not established CEQA thresholds of significance for GHG emissions. However, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted a CEQA threshold of 1,100 metric tons of carbon dioxide equivalent per year for construction-related GHG emissions (SMAQMD 2015). In the absence of a local threshold in Yuba County, the SMAQMD threshold in adjacent Sacramento County was used to evaluate the significance of GHG emissions.

Project construction would generate GHG emissions from exhaust associated with on-site equipment operation, transport of materials to the ecological enhancement areas, and worker vehicle trips. GHG emissions from project construction were modeled using the Road

Construction Emissions Model; results are presented in Appendix A, "Air Quality Modeling Results." Project construction is estimated to generate approximately 278 metric tons of carbon dioxide equivalent, an amount substantially below the SMAQMD significance threshold of 1,100 metric tons. O&M activities would be minimal and result in negligible emissions. The project also would not increase population or employment growth. Therefore, the project would not directly or indirectly generate GHG emissions that may have a significant impact on the environment. This impact would be **less than significant**.

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

The project would not conflict with plans, policies, or regulations adopted to reduce GHG emissions. The project's small incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs would be less than cumulatively considerable and would not make a direct, indirect, or cumulatively considerable incremental contribution to a significant cumulative impact on GHG emissions. This impact would be **less than significant**.

3.9 Hazards and Hazardous Materials

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<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"/>	<input type="checkbox"/>

3.9.1 Environmental Setting

A search of all data sources included in the Cortese List (enumerated in PRC Section 65962.5) was conducted for the project site and vicinity, including: the GeoTracker database, a groundwater information management system maintained by the State Water Resources Control Board; the Hazardous Waste and Substances Site List (i.e., the EnviroStor database) maintained by DTSC; and EPA's Superfund Site database (DTSC 2020, SWRCB 2020a and 2020b, CalEPA 2016, EPA 2020). No hazardous material sites were identified within 0.25 mile of the project site. There are also no known naturally occurring asbestos hazards in the project vicinity (DOC 2000).

No schools are present within 0.25 mile of the project site. The nearest school is the Cordua Elementary School, approximately 2 miles northwest of the project site. The nearest park, Hammon Grove Park, is approximately 3 miles northeast of the project site.

The nearest airstrip is the Hammonton Air Strip, approximately 2 miles southeast of the site; the nearest airport is at Beale Air Force Base (AFB), approximately 3.5 miles south of the project site. The Hammonton Air Strip does not have a Land Use Compatibility Plan, but the project site is located within Safety Zone 4 outlined in the Beale AFB Land Use Compatibility Plan (SACOG 2010). This plan states that Safety Zone 4, the Outer Approach/Departure Zone, lies along the extended runway centerline beyond Zone 2 and is especially significant at airports that have straight-in instrument approach procedures (such as Beale AFB) or a high volume of operations that result in an extended traffic pattern.

The project site is not located on an emergency evacuation route or within an emergency response planning area. The nearest evacuation route is SR 20, approximately 1.5 miles north of the project site (Yuba County 2011b and 2015).

3.9.2 Discussion

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**
- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

The project site does not contain known hazardous materials, but construction activities would include use and storage of small amounts of hazardous substances such as fuels, lubricants, and oils that are necessary for construction equipment operation. Project activities would not involve use of acutely hazardous materials, and construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations. However, accidental spills could occur during construction activities. Therefore, this impact would be **potentially significant**. Mitigation Measure GEO-1 has been developed to address this impact.

Mitigation Measure GEO-1: Implement a Stormwater Pollution Prevention Plan and Associated Best Management Practices.

Please *refer to* Mitigation Measure GEO-1 in Section 3.7 “Geology and Soils,” for the full text of this mitigation measure.

Implementing Mitigation Measure GEO-1 would reduce the potentially significant impact from accidental spill of or exposure to hazardous materials during routine use, transport, or disposal to a less-than-significant level because a SWPPP or SWMP would be implemented. The SWPPP or SWMP would include a spill prevention, control, and countermeasure plan, and would identify the types of materials used for equipment operation, along with measures to prevent and materials available to clean up any hazardous material and waste spills. The SWPPP would also identify emergency procedures for responding to spills. Therefore, the project would have a **less-than-significant impact with mitigation incorporated**.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

There are no schools within 0.25 mile of the project site, and there would be **no impact** related to this issue.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

The project site is not identified on any list compiled pursuant to Government Code Section 65962.5, and there would be **no impact** related to this issue.

- 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?**

The project site is located in Beale AFB Safety Zone 4 (SACOG 2010). The project includes reshaping of an existing structure and minor changes to small areas along the banks of the Yuba River. These activities would not create or worsen a safety hazard related to AFB operations. If NTW work is conducted at night, any necessary lighting would be directed downward and consistent with existing nighttime operations at the Hallwood Facility. The project site is located far enough from Beale AFB that project personnel would not be exposed to excessive airport noise. The project also would not expose people residing in the area to excessive noise. Therefore, the project would not result in a safety hazard or excessive noise for people residing working in the project area. This impact would be **less than significant**.

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

Access to the primary project site would be via SR 20, Hallwood Boulevard, and Walnut Avenue; access to ecological enhancement areas on the south side of the river would be via Hammonton-Smartville Road and through the Goldfields. Import of boulder material for the ecological enhancements would require an average of approximately 20 truck trips per day for approximately 40 days, and approximately 15 tractor trailer trips over 1 day are anticipated to be required to import plants and other material materials. Additional vehicle trips would result from project personnel transport to and from the site. O&M activities would generate a negligible amount of additional traffic. The project also would not require any road closures. The short-term, temporary increase in construction-related traffic would be minor and intermittent and would not impair emergency response or evacuation. Therefore, this impact would be **less than significant**.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Wildland fire risk associated with the proposed project is discussed in Section 3.20, "Wildfire." This impact would be **less than significant**.

3.10 Hydrology and Water Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input 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:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) result in substantial erosion or siltation on- or offsite;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.10.1 Environmental Setting

Surface Water

The Yuba River drains the western slope of the Sierra Nevada and flows generally southwesterly to its confluence with the Feather River at Marysville. The Yuba River in the Marysville vicinity drains approximately 1,340 square miles. Mean monthly flows for the Yuba River are greatest in winter and early spring (January–March) and are at their lowest in late summer and early fall (July–October). The effects of reservoir storage capacity on flows are noticeable in extreme water years. Yuba River flows are greatly reduced in very dry years because of the limited carryover storage capacity of New Bullards Bar Reservoir. (Yuba County 2011a.)

The project slopes slightly from east to west. Existing site drainage is by overland flow, within the Yuba River channel waterside of the NTW and at the ecological enhancement sites. Landside of the NTW, runoff is contained within the Hallwood Facility drainage system. The project site is currently mapped in the dam breach inundation zone for several upstream reservoirs, including Virginia Ranch Dam, New Bullards Bar Dam, Bowman Dam, French Lake Dam, and Jackson Meadows Dam (DWR 2020a). The project site is not in a coastal area and is outside the tsunami hazard zone. Additionally, there are no water bodies on or near the project site large enough to be subjected to a seiche, as a result of an earthquake.

The project site is in the Sacramento Hydrologic Basin Planning Area, the Marysville Hydrologic Unit, and the Lower Yuba River Hydrologic Area (515.30) (CVRWQCB 1986). In accordance with CWA Section 303, water quality standards for this basin are contained in the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin. The lower Yuba River is on the 303(d) list as an impaired water for copper and mercury (SWRCB 2016).

Groundwater

The project site is in the Sacramento Valley – South Yuba Groundwater Subbasin (#5-021.61), as designated by California Department of Water Resources Bulletin 118 (DWR 2016). The general groundwater flow in Yuba County is from east to west, from the mountain front recharge regions to the Central Valley discharge region (YCWA 2010). The project site is not located within a groundwater basin designated as “High Priority” or “Critically Overdrafted” (DWR 2019). The project site is also within the planning areas of Yuba County Water Agency³ Groundwater Management Plan and Yuba Subbasins Water Management Plan, which was the Groundwater Sustainability Plan developed for the project area, in compliance with the Sustainable Groundwater Management Act (YCWA 2010, YWA 2019). The project site is also located within the Yuba County Integrated Regional Water Management Plan area (YCRWGM 2018).

³ As of July 2018, Yuba County Water Agency rebranded to Yuba Water Agency; however, the legal name of the agency remains Yuba County Water Agency.

No municipal, domestic, or industrial groundwater supply wells are known from near the project site. The nearest documented groundwater monitoring well is approximately 1 mile west of the project site, on the north side of Walnut Avenue; documented depth to groundwater at this location has varied from approximately 14 to 22 feet over the past 5 years (DWR 2020b).

3.10.2 Discussion

a) **Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?**

Direct and indirect discharges resulting from project-related ground disturbance could cause surface water to become contaminated by soil or construction-related substances. Construction activities could temporarily impair water quality if disturbed material, petroleum products, or construction-related wastes are discharged into surface drainages or onto the ground, where they could be carried into receiving waters. Accidental spills of construction-related substances, such as oils and fuels, could contaminate both surface water and groundwater. The extent of potential impacts on water quality would depend on several factors, including the tendency toward erosion of soil types encountered, soil chemistry, construction practices, extent of disturbed area, duration of construction activities, proximity to receiving water bodies, and sensitivity of those water bodies to construction-related contaminants.

Implementing the ecological enhancement component would require coffer dams and dewatering to provide a work zone isolated from the active river channel for installing boulder clusters and associated plantings. Water within the work areas would be pumped back into the Yuba River or into nearby ponds in the Goldfields. Shallow excavation (1-2 feet) and backfill also would occur in the ecological enhancement areas. Ground disturbance also would occur in the NTW reshaping area. Surface soils could be exposed to wind and water erosion during these ground-disturbing activities. Construction activities could increase turbidity and sedimentation when Yuba River work areas are dewatered and when coffer dams are removed from the ecological enhancement areas. In addition, sediment-laden runoff from the NTW reshaping areas during storm events could degrade water quality. These impacts would be **potentially significant**. Mitigation Measures BIO-1 and GEO-1 have been developed to address this impact.

Mitigation Measure BIO-1: Minimize Water Quality Impacts and Direct Injury and Mortality of Special-status Fish during Boulder Cluster Installation.

Please *refer to* Mitigation Measure BIO-1 in Section 3.4, “Biological Resources,” for the full text of this mitigation measure.

Measure GEO-1: Implement a Stormwater Pollution Prevention Plan and Associated Best Management Practices.

Please *refer to* Mitigation Measure GEO-1 in Section 3.7, “Geology and Soils,” for the full text of this mitigation measure.

Implementing Mitigation Measures BIO-1 and GEO-1 would include measures to minimize turbidity and sedimentation in the Yuba River and prevent and manage soil erosion and sediment-laden stormwater runoff that could degrade water quality during construction. Therefore, potential impacts to surface water quality from the project would be a **less-than-significant impact with mitigation incorporated**.

- b) **Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

The project would not rely on consumptive groundwater use for construction or O&M activities. None of the project components would require placement of impervious surfaces on the project site. Any surface runoff from the site would continue to flow overland and infiltrate or drain in the same manner as pre-project conditions and would not interfere with groundwater recharge. The project would not impede sustainable management of the groundwater basin in the region. Therefore, there would be **no impact** related to this issue.

- 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?**

The project would not alter existing drainage patterns or add impervious surfaces. However, as discussed under Question “a)” above, project-related dewatering and ground disturbance could result in turbidity and sedimentation during and after dewatering or as a result of storm events; this could result in on- or off-site siltation and would be a **potentially significant** impact. Mitigation Measures BIO-1 and GEO-1 have been developed to address this impact.

Mitigation Measure BIO-1: Minimize Water Quality Impacts of Dewatering and Injury and Mortality of Special-status Fish Species

Please *refer to* Mitigation Measure BIO-1 in Section 3.4, “Biological Resources,” for the full text of this mitigation measure.

Mitigation Measure GEO-1: Implement a Stormwater Pollution Prevention Plan and Associated Best Management Practices.

Please *refer to* Mitigation Measure GEO-1 in Section 3.7, “Geology and Soils,” for the full text of this mitigation measure.

Implementing Mitigation Measures BIO-1 and GEO-1 would include measures to minimize turbidity and sedimentation in the Yuba River and BMPs to manage erosion during construction. Therefore, the project would have a **less-than-significant impact with mitigation incorporated**.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

The project would not alter surface runoff and therefore would not result in on- or off-site flooding. On the contrary, the project would increase the level of flood protection and reduce the flood risk to the Hallwood community, the City of Marysville, and portions of D-10. This would be a **beneficial impact**.

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?

iv) Impede or redirect flood flows?

The project would not create or contribute runoff water, including polluted runoff, or impede or redirect flood flows. The ecosystem enhancement component of the project would add boulder clusters and plantings in the floodplain; these would have a negligible increase in channel roughness and would affect an extremely minor portion of the floodplain during flood flows. A comparison of the cross-sectional channel area with and without the boulder cluster and plantings was completed, and the resulting reduction in cross-sectional area was negligible. The area of the Yuba River channel along the project reach averages approximately 20,000 square feet; the area of flow that would be impacted by the ecosystem elements is approximately 160 square feet. Therefore, a negligible impact on conveyance capacity of the Yuba River would occur, and this would be a **less-than-significant impact**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project site is not within a tsunami or seiche hazard area. The site is located in a designated 100-year flood hazard area (FEMA 2020), but project implementation would increase the level of flood protection and reduce the flood risk to the Hallwood community, the City of Marysville, and portions of D-10. Therefore, it would reduce risk of pollutant release during a flood. This would be a **beneficial impact**.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project could result in minor, localized water quality impacts, as discussed under Question “a)” above, but it would not conflict with or obstruct implementation of a water quality control plan. As discussed under Question “b)” above, the project would not impede sustainable groundwater management. Therefore, there would be **no impact** related to these issues.

3.11 Land Use and Planning

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XI. 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"/>	<input 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"/>	<input type="checkbox"/>

3.11.1 Environmental Setting

The project site is located along the Yuba River, on land designated as Natural Resources by the Yuba County General Plan, and is zoned as EX (Extractive District) (Yuba County 2016). The purpose of this zoning designation is to establish appropriate locations for mineral extraction, processing, and distribution. Existing land use immediately north of the NTW is industrial. The Yuba River corridor, including the ecological enhancement areas, is south of the NTW, and the Goldfields are south of the river.

3.11.2 Discussion

a) Physically divide an established community?

The project site is relatively remote and is not located in an existing community. The site also is not accessible to the public, except for river recreationists that can access the ecological enhancement areas. Therefore, the project would not physically divide an established community, and there would be **no impact** related to this issue.

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?

There would be no change in land use at the project site. Therefore, no conflict with an adopted land use plan, policy, or regulation, would occur, and there would be **no impact** related to this issue.

3.12 Mineral Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XII. MINERAL RESOURCES – Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>

3.12.1 Environmental Setting

In compliance with the Surface and Mining Reclamation Act, the California Geologic Survey established a Mineral Resource Zones classification system to denote location and significance of key extractive resources. The project site is in the Yuba City–Marysville Production–Consumption Region and is designated as MRZ-2, meaning adequate information indicates that significant mineral deposits are present (CGS 1988).

3.12.2 Discussion

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**
- b) **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

The project site is known as an important resource recovery site in Yuba County and is immediately adjacent to an existing aggregate mining and processing facility. The NTW is comprised of cobble material suitable for aggregate processing. Under existing conditions, however, material is unlikely to be removed from the NTW for this purpose, because the NTW provides protection from Yuba River flood flows to the Hallwood Facility and adjacent Hallwood community. Reshaping the NTW would require redistribution of some material to improve NTW stability and increase flood protection. However, an excess of approximately 300,000 cy of material would be generated by NTW modifications, and this material would be made available for aggregate processing. Therefore, project implementation would not result in the loss of availability of valuable or important mineral resources but would rather indirectly make available approximately 300,000 cy of aggregate material that would otherwise likely not be available. This is considered to be a **beneficial impact**.

3.13 Noise

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIII. NOISE – Would the project:					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or Federal standards?	<input type="checkbox"/>	<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"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.13.1 Environmental Setting

The project site is located along the Yuba River, in an unincorporated and relatively remote area of Yuba County. The Hallwood Facility is immediately north of the site, and the Yuba River and Goldfields are south of the site. The rural residential and agricultural community of Hallwood is approximately 0.5 mile west of the project site, and an isolated residence is approximately 0.35 mile north of the east end of the site.

Chapter 8.20 – Noise Regulations of the Yuba County Code of Ordinances (Yuba County 2018) establishes maximum noise levels in single-family residential zones of: 55 decibels (dB) between 10 pm and 7 am, 60 dB between 7 pm and 10 pm, and 65 dB between 7 am and 7 pm. The maximum permitted noise level in Extractive Industrial Zones (M-2), such as the Hallwood Facility is 80 dB.

3.13.2 Discussion

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?**

Construction noise impacts typically result from construction activities that generate very high noise levels, occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), occur immediately adjacent to noise sensitive land uses, or last over extended periods of time. The project would temporarily generate construction noise from equipment operation at the project site and transport of materials and equipment to and from the ecological enhancement areas. **Table 3-4** presents typical noise levels generated at 50 feet from types of equipment that may be used for the project.

Table 3-4. Construction Equipment and Typical Equipment Noise Levels.

Type of Equipment	Typical Noise Levels (dB L _{max}) at 50 Feet
Dozer	82
Dump Truck	76
Front-end Loader	79
Grader	85
Pick-up Truck	75
Scraper	84

Notes: dB = decibels; L_{max} = maximum instantaneous sound level;

Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI Consultants, Inc. in 2020

No permanent noise sources would be generated by the project; O&M activities would be infrequent and result in brief and negligible increases in noise levels. Project construction would generate temporary noise on the project site and along haul routes. Approximately half of the portion of the NTW that would be reshaped is immediately adjacent to the Hallwood Facility aggregate processing area or associated haul routes. Project-related noise levels are likely to be similar to existing noise levels in these areas.

The nearest noise-sensitive land uses are the rural residential community of Hallwood northwest of the project site and a single rural residence north of the east end of the project site (0.5 and 0.35 mile from the project site, respectively). Because of the distance of these receptors from the project site, they would not experience noise levels that exceed County limits for single-family residential, even if project activity occurs at night.

Import of boulder material for the ecological enhancements, would require an average of approximately 20 truck trips per day for approximately 40 days. These trucks would increase noise levels along roads they travel. However, likely transport routes would be major roads, such as Hammonton-Smartville Road, that currently experience frequent heavy truck use. Therefore, the short-term and temporary addition of approximately 20 truck trips per day would have a minor impact.

For these reasons, the project would not result in a substantial temporary or permanent increase in ambient noise levels in excess of established standards, and this impact would be **less than significant**.

b) Generation of excessive groundborne vibration or groundborne noise levels?

No permanent vibration sources would be generated by the project; O&M activities would be infrequent and result in brief and negligible vibrations. The project would generate temporary groundborne vibrations from heavy equipment operation at the project site and material transport. Such vibrations would not be discernible at residential sensitive receptors closest to the project site, and vibrations from material transport would represent a short-term minor increase compared to existing conditions. In addition, Section 11.26.060 of the Yuba County Code of Ordinances (Yuba County 2018) exempts temporary construction and construction vehicles that enter and leave affected parcels from County restrictions. Therefore, the project would have a **less-than-significant impact** related to vibration.

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 2 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?

Excessive airport-related noise levels associated with the proposed project are discussed under Question “e)” in Section 3.9, “Hazards and Hazardous Materials.” This impact would be **less than significant**.

3.14 Population and Housing

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIV. 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"/>	<input 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"/>	<input type="checkbox"/>

3.14.1 Environmental Setting

The project site is located approximately 0.5 mile east of the Hallwood community, in an unincorporated area of Yuba County. The population of Yuba County was estimated in January 2020 to be 78,887 (DOF 2020).

3.14.2 Discussion

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

The project does not involve and would not require construction of temporary or permanent housing. It also would not develop or extend any new roads or other infrastructure that would support population growth. The primary overall project purpose is to provide 100-year flood protection to the Hallwood community and reduce flood risk for the City of Marysville and portions of D-10. Local land use decisions are within the jurisdiction of Yuba County, which has adopted a general plan consistent with State law. The Yuba County 2030 General Plan (Yuba County 2011b) provides an overall framework for growth and development in the County, including the project vicinity. Flood protection provided by the proposed project would not affect population goals outlined in the General Plan. In addition, despite the flood risk identified by TRLIA, the Hallwood community and much of the area that would be provided additional flood risk reduction is mapped by FEMA as Zone X (Area of Minimal Flood Hazard) (FEMA 2020). Therefore, the project would not directly or indirectly induce substantial population growth, and there would be **no impact** related to this issue.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project would not displace any houses or people, and there would be **no impact** related to this issue.

3.15 Public Services

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XV. PUBLIC SERVICES – Would the project:					
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.15.1 Environmental Setting

The Yuba County Sherriff’s Department provides law enforcement and emergency response services to the unincorporated areas of Yuba County, including the project site. In the event of a fire at the project site, the Hallwood Community Service District (CSD) would respond (Yuba County 2011a). The Marysville Fire Department occasionally responds to calls for service outside of City limits.

3.15.2 Discussion

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

The project does not include development or other components that would increase the number of public service users in the project area or increase response times for fire protection, police protection, or other public services. Additionally, because the project does not involve new residential construction, no new schools, parks, or public facilities would be needed. Therefore, the project would not directly or indirectly affect the need for public facilities or required level of service, response times, or other objectives, compared to existing conditions, and there would be **no impact** related to this issue.

3.16 Recreation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVI. 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"/>	<input 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"/>	<input type="checkbox"/>

3.16.1 Environmental Setting

Yuba County operates nine local parks and one regional park, which offer a variety of recreational opportunities, including fishing, hiking, camping, playgrounds, and basketball courts (Yuba County 2011a). The nearest public park, Hammon Grove Park, is approximately 3 miles northeast of the project site. The project site is located adjacent to the Yuba River, but no river recreation facilities are present in the vicinity, and the area is not easily accessible to the public.

3.16.2 Discussion

- a) **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**
- b) **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

The project does not include construction of recreational facilities or components that would increase the number of park or other recreational facility users in the project area. Construction of new facilities or expansion of existing facilities would not be required, and the condition and potential deterioration of existing facilities would not be impacted. Therefore, there would be **no impact** related to these issues.

3.17 Transportation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVII. TRANSPORTATION – Would the project:					
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.17.1 Environmental Setting

Vehicle miles traveled (VMT) in Yuba County was estimated to be 765,263 in 2011, when the Yuba County General Plan was prepared (Yuba County 2011b). The project site is in a relatively remote portion of Yuba County. The nearest major transportation routes are SR 20, approximately 1.5 miles north of the NTW, and Hammonton-Smartville Road, approximately 2 miles south of the ecological enhancement areas on the south side of the Yuba River. Local access to the project site would be via Hallwood Boulevard and Walnut Avenue on the north side of the river and via the Goldfields on the south side of the river.

3.17.2 Discussion

a) Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Project-related transportation would be limited to travel by project personnel to and from the site and equipment and material delivery, primarily for the ecological enhancements. No road closures would be required. Project personnel are anticipated to come from the local Marysville and Yuba City area, but some could come from the Sacramento area. Workers would generate an average of approximately 10 vehicle trips to and from the site daily for the approximately 6-month construction period; this would result in a total of fewer than 2,000 round-trip commute trips. Import of boulder material for the ecological enhancements would require approximately

850 haul truck trips, an average of just over 20 trips per day for approximately 40 days, and approximately 15 tractor trailer trips over 1 day to import plants and other material materials. These materials would come from within up to approximately 20 miles of the project site. O&M activities would generate a negligible amount of additional long-term traffic.

The level of vehicle trips that would be generated by the project and the temporary, short-term nature of the minor traffic increase would not result in any changes to transportation circulation patterns or facilities that would conflict with any transportation-related plans, ordinances, or policies. Therefore, this impact would be **less than significant**.

b) Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?

The project does not include development of any new residential uses or other development that would directly or indirectly contribute to population growth or substantially increase existing VMT by residents and visitors of the area. Flood risk reduction provided by the proposed project would not affect population goals outlined in the Yuba County General Plan. In addition, despite the flood risk identified by TRLIA, the Hallwood community and much of the area that would be provided additional flood risk reduction is mapped by FEMA as Zone X (Area of Minimal Flood Hazard) (FEMA 2020).

See response to Question “a)” above for a more detailed discussion of project-related VMT. Project implementation would result in a minor temporary, short-term increase in VMT and, therefore, would result in a less-than-significant impact consistent with State CEQA Guidelines 15054.3(b)(2). This impact would be a **less than significant**.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project does not include any publicly accessible roads, and the toe access road landside of the NTW would be straight and designed to avoid hazards and conform to applicable design standards. Therefore, this impact would be **less than significant**.

d) Result in inadequate emergency access?

The project would not require road closures or other changes that could result in inadequate emergency access. The temporary, short-term increase in vehicle trips to and from the project site during construction activities would be minimal and would not affect emergency access. Therefore, this impact would be **less than significant**.

3.18 Tribal Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVIII. TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource 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) 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"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.18.1 Environmental Setting

Please refer to the “Ethnographic Setting” in Section 3.5, “Cultural Resources.”

TRLIA was previously contacted by United Auburn Indian Community (UAIC) to request consultation on projects under Assembly Bill 52 (PRC Section 21080.3.1). On behalf of TRLIA, GEI sent a letter to the UAIC Chairperson on November 20, 2020 with a project description and maps of the project location and project site. GEI also sent a letter request to the Native American Heritage Commission (NAHC) asking for a search of its Sacred Lands File (SLF) for the project vicinity. The NAHC responded on November 18, 2020 stating that the search of the SLF was negative. The response also indicated that UAIC and Tsi Akim Maidu should be contacted for any additional information regarding Tribal Cultural Resources (TCRs) in the project area. On behalf of TRLIA, GEI sent a letter to the Tsi Akim Maidu Director and the Enterprise Rancheria of the Estom Yumeka Maidu Tribe Chairperson with a project description and maps of the project location and project site. These letters were sent on November 20, 2020. No responses have been received to date, but UAIC and Enterprise Rancheria acknowledged

receipt of the letter. The letter received from the NAHC and letters sent to the local Tribes are provided in Appendix C, "Tribal Consultation."

3.18.2 Discussion

- a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource 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)?**

- b) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource 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.**

TCRs are (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that is either in or eligible for inclusion in the CRHR or a local historic register; or (2) a resource that the lead agency, at its discretion and supported by substantial evidence, chooses to treat as a TCR. A cultural landscape may qualify as a TCR if it meets the criteria to be eligible for inclusion in the CRHR and is geographically defined in terms of the size and scope of the landscape. Other historical resources (as described in PRC Section 21084.1), unique archaeological resources (as defined in PRC Section 21083.2[g]), and non-unique archaeological resources (as described in PRC Section 21083.2[h]) may also be TCRs, if they meet CRHR eligibility criteria.

No Native American Tribes have provided information regarding TCRs on or near the project site, and none are known to occur. The likelihood of encountering physical TCRs during project construction is very low, because the project area underwent aggregate mining in the past, and it is unlikely that any physical resources that may have once existed on the project site have not been destroyed. Nevertheless, the possibility remains that TCRs could be identified on the project site during project activities and continuing consultation with Native American Tribes. If such resources are present in areas subject to project-related ground disturbance, they could be destroyed or otherwise substantially altered by project implementation. This would be a **potentially significant impact**. Implementing Mitigation Measures TCR-1 and TCR-2 would address this impact.

Mitigation Measure TCR-1: In the Event that Tribal Cultural Resources are Discovered Before or During Construction, Implement Procedures to Evaluate Tribal Cultural Resources and Implement Avoidance and Minimization Measures to Avoid Significant Impacts.

California Native American Tribes that are traditionally and culturally affiliated with the geographic area in which the project is located may have expertise concerning their TCRs. Consistent with PRC Section 21080.3.1, culturally affiliated Tribes shall be consulted concerning TCRs that may be impacted, if these types of resources are discovered before or during construction. Consultation with culturally affiliated Tribes shall focus on identifying measures to avoid or minimize impacts on any such resources discovered during construction. If TCRs are identified on the project site, before or during construction, the following performance standards will be met before proceeding with project activities that may result in damage to or destruction of TCRs:

- Each identified TCR shall be evaluated for CRHR eligibility through application of established eligibility criteria (CCR 15064.636), in consultation with interested Native American Tribes.
- If a TCR is determined to be eligible for listing in the CRHR, TRLIA shall avoid damaging the TCR in accordance with PRC Section 21084.3, if feasible. If TRLIA determines that the project may cause a substantial adverse change to a TCR, and measures are not otherwise identified in the consultation process, the following are examples of mitigation steps capable of avoiding or substantially lessening potential significant impacts to a TCR or alternatives that would avoid significant impacts to a TCR. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which mitigation specifically addresses inadvertent discovery of TCRs:
 - iii. Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - iv. Treat the resource with culturally appropriate dignity, taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - a. Protect the cultural character and integrity of the resource.
 - b. Protect the traditional use of the resource.
 - c. Protect the confidentiality of the resource.

- d. Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
- e. Protect the resource.

Timing: Before and during project construction activities.

Responsibility: TRLIA and construction contractor(s).

Mitigation Measure TCR-2: Conduct Tribal Cultural Resources Awareness Training.

TRLIA shall provide TCR sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training shall be developed in coordination with an archaeologist meeting Secretary of the Interior Professional Qualifications Standards for Archaeology, as well as culturally affiliated Native American Tribes. TRLIA shall invite Native American representatives from interested culturally affiliated Native American Tribes to participate. The training shall be conducted before any project-related construction activities begin on the project site and shall include relevant information regarding TCRs, including applicable regulations, protocols for avoidance, and consequences of violating Federal and State laws and regulations.

The training shall also describe what to do and who to contact if any potential TCRs are encountered. The training shall emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and shall discuss appropriate behaviors and responsive actions, consistent with Native American Tribal values.

Timing: Before project construction activities begin.

Responsibility: TRLIA and construction contractor(s).

Implementing Mitigation Measures TCR-1 and TRC-2 would reduce the potential impact related to discovery of TCRs to a less-than-significant level because TCR awareness training would be provided to on-site project personnel the find would be assessed by culturally affiliated Tribes and the identification and implementation of avoidance or minimization measures would be conducted in consultation with the Tribes. Therefore, this impact would be **less-than-significant impact with mitigation incorporated**.

3.19 Utilities and Service Systems

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:					
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<input 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"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.19.1 Environmental Setting

PG&E provides electric and gas service to the project site and vicinity. PG&E steel towers and overhead utility lines are present between the two NTW grading areas. Additionally, several high voltage electricity lines occur at the Hallwood Facility, adjacent to the project site, and in the Hallwood community. AT&T voice and data communication lines also occur in the Hallwood community. Solid waste collection services are provided by Recology Yuba-Sutter; after solid waste is collected and sorted, it is disposed of at the Ostrom Road Landfill, approximately 4 miles north of Wheatland (Yuba County 2011a).

3.19.2 Discussion

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

The project would not require construction of new or expanded utility facilities. The PG&E steel towers and overhead utility lines and the AT&T voice and data communication lines would not be affected by project construction. The portion of the high-voltage electrical line owned by Teichert Aggregates and adjacent to the west end of the NTW reshaping area is anticipated to require relocation. The exact locations for the new poles and line are not known at this time, but will likely be adjacent to Hallwood Facility entrance road. This power is used solely by Teichert Aggregates, and no communities would be affected. Relocation would occur in existing disturbed areas and would not result in additional environmental impacts. TRLIA would coordinate with Teichert Aggregates regarding relocation to minimize potential disruption of Hallwood Facility activities. This impact would be **less than significant**.

- b) **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?**
- c) **Result in a determination by the wastewater treatment provider 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?**
- 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?**

The project does not include development of any new residential uses or other development that would require water, wastewater treatment, or solid waste disposal. The project also would not directly or indirectly contribute to population growth that could lead to additional utility or service system needs. Project construction and O&M would not require wastewater treatment and are unlikely to require solid waste disposal. If solid waste disposal is required, it would be a relatively small amount that would not exceed State or local standards or local landfill capacity. A relatively small amount of water would be required to irrigate the ecological enhancement plantings during the dry season in the first 2 years following installation; sufficient water supplies are available to meet this short-term need. Therefore, impacts related to sufficiency of existing supplies and infrastructure would be **less than significant**.

- e) **Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?**

The project is unlikely to generate any solid waste requiring off-site disposal. However, if such disposal becomes necessary, it would be conducted in compliance with Federal, State, and local regulations related to solid waste. Therefore, there would be **no impact** related to this issue.

3.20 Wildfire

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XX. WILDFIRE. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.20.1 Environmental Setting

The project site is within an unincorporated Local Responsibility Area with fire hazard severity classifications of unzoned and moderate (Cal Fire 2007a and 2007b). In the event of a fire, the Hallwood CSD would respond. The Hallwood CSD contracts with Marysville Fire Department for fire protection services but owns and provides its own equipment and has two on-call firefighters, in addition to the Marysville Fire Department firefighters (Yuba County 2011a).

3.20.2 Discussion

- a) **Substantially impair an adopted emergency response plan or emergency evacuation plan?**

Impairment of an emergency response or evacuation plan associated with the proposed project is discussed under Question “f)” in Section 3.9, “Hazards and Hazardous Materials.” This impact would be **less than significant**.

- b) **Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

Project activities would occur within relatively remote areas that are primarily barren and support minimal fuel for a wildfire. In addition, activities adjacent to the Hallwood Facility would be implemented in compliance with any existing Teichert Aggregates requirements regarding wildfire risk. Therefore, the project would not exacerbate fire risk, and this impact would be **less than significant**.

- 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?**

The landside access road that would be constructed along the NTW would not be publicly accessible, and, therefore, would not exacerbate fire risk. No other new infrastructure would be constructed or required as a result of project implementation. This impact would be **less than significant**.

- 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?**

The project would not change drainage patterns and would improve stability of the NTW. Therefore, it would not expose people or structures to significant risks, including flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. There would be no impact related to these issues although the project would reduce local flood risks which, in turn, reduces the exposure of people and structures to significant flood risks. For this reason, this is considered to a **beneficial impact**.

3.21 Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE – Would the project:					
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 considerable 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"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.21.1 Discussion

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?**

The analysis conducted in this IS concludes that implementing the project would not have a significant impact on the environment. As evaluated in Section 3.4, "Biological Resources,"

impacts on biological resources would be less than significant or less than significant with mitigation incorporated, but ecological enhancements would improve approximately 2.4 acres (5,200 linear feet) of aquatic and riparian habitats along the north and south banks of the Yuba River. The project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Section 3.5, "Cultural Resources," the project would not eliminate important examples of the major periods of California history or prehistory. Overall, this impact would be **less than significant with mitigation incorporated**.

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

The temporary, short-term nature of the project's construction impacts and the long-term improvement to flood protection, habitat values, and O&M access would result in no impacts, less-than-significant impacts, less-than-significant impacts with mitigation incorporated, or beneficial impacts on the physical environment. The Hallwood Restoration Project is ongoing near the project site, but temporal overlap with project activities would likely be limited to the ecological enhancement components, which would primarily occur on the opposite side of the river. The Hallwood Facility is adjacent to the project site, and aggregate mining and processing activities at the facility may overlap portions of the project construction period. However, the proposed project would not cause any cumulatively considerable incremental contributions to significant cumulative impacts associated with the Hallwood Restoration Project or the Hallwood Facility, primarily due to the proposed project's temporary, short-term, and relatively minor construction impacts.

The proposed project would reduce flood risks for the Hallwood community, the City of Marysville, and portions of D-10, thereby reducing the potential for flooding that could potentially result in numerous significant impacts to environmental resources. Potential impacts to these resources would depend on the specific location, magnitude, and duration of any flooding, and the high potential for significant environmental impacts resulting from any necessary post-flood reconstruction efforts.

The project's relatively minor impacts would result from the relatively short construction schedule and the project's remote location in an area previously disturbed by hydraulic mining and adjacent to an active aggregate mining and processing facility. With implementation of mitigation presented in this IS, none of the project's impacts would make a cumulatively considerable, incremental contribution to significant cumulative impacts. This impact would be **less than significant with mitigation incorporated**.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

The project would result in less-than-significant impacts with mitigation incorporated for several topics that could cause substantial adverse effects on human beings, including air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, and TCRs. Overall, the project's impacts on human beings, either directly or indirectly, would not be substantial, would be **less than significant with mitigation incorporated**, and would reduce flood risks to the Hallwood Community, the City of Marysville, and portions of D-10.

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3.21 Mandatory Findings of Significance

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Chapter 5. Report Preparers

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Chrissy Russo Aesthetics, Agriculture and Forestry Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems

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Paul Frank, P.E. Project Description Input

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Appendix A. Air Pollutant Emissions Analysis

November 25, 2020

Ms. Anne King
Senior Biologist
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2868 Prospect Park Drive, Suite 400
Rancho Cordova, CA 95670

Subject: *Three Rivers Levee Improvement Authority – North Training Wall Project – Emissions Modeling Analysis*

Dear Ms. King:

On behalf of KD Anderson & Associates (KDA), I am pleased to submit this report on air pollutant emissions analysis of the Three Rivers Levee Improvement Authority (TRLIA) North Training Wall (NTW) Project.

PROJECT UNDERSTANDING

The following is our understanding of the NTW Project.

Location and Background

As shown in the enclosed **Figure 1**, the approximately 2.25-mile-long NTW is located on the north bank of the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County. The NTW is a cobble embankment that was constructed by the California Debris Commission in 1899 to confine the Yuba River and facilitate migration of mining debris within the floodway. Flood control was not an authorized purpose, but the NTW has historically provided and continues to provide flood protection to the surrounding area. The height and width of the NTW have decreased over time, creating a flood risk in the area.

The primary purpose of the NTW Project is to meet Federal Emergency Management Agency (FEMA) 100-year flood protection certification requirements. A secondary purpose is to improve availability of rearing, high-flow refugia, and other habitats for salmonids in this reach of the Yuba River.

Components

The components of the NTW project site, shown in the enclosed **Figure 2**, include areas for:

- NTW modifications, and
- ecological enhancements.

These components are described below.

North Training Wall Modifications

The existing NTW embankment would be graded to achieve a geotechnically stable geometry. The modified embankment crest would be 5 feet above the 200-year design water surface elevation. The enclosed **Figure 3** shows a typical cross section of the modified embankment. A 20-foot-wide landside toe access road would be constructed to provide access during construction, and operations and maintenance. NTW modification activities would include:

- degrading the existing NTW embankment to near the design crest elevation,
- hauling and placing degraded material at lower portions of the NTW embankment to achieve the design cross section and construct the landside toe access road,
- finish grading the embankment to the design crest elevation and waterside and landside slopes, and
- trackwalking side slopes to ensure interlocking the cobble material and improve erosion resistance.

The NTW modifications would involve reshaping of the NTW and subsequent removal of excess material.

Ecological Enhancements

The ecological enhancement component of the NTW Project would include hydraulic roughness elements and associated velocity breaks and eddy fences to create flow velocity refugia and feeding stations for juvenile anadromous salmonids. Riparian vegetation plantings also would be installed to improve instream cover and large woody material availability in areas where vegetation is currently lacking or sparse.

One area of native riparian plantings would be implemented in gaps in the thin band of existing riparian vegetation near the waterside toe of the NTW. Four areas of boulder clusters with native riparian plantings also would be installed along the river edge.

KDA

Material Quantities, Sources, and Transport

North Training Wall Modification. No material import or export from the project area would be required to complete the grading and reshaping of the NTW embankment. Portions of the embankment near the eastern limit contain excess material sufficient to meet design needs. Approximately 130,000 cubic yards (cy) of material is anticipated to be excavated from these areas and hauled to locations where material is lacking. An excess of approximately 300,000 cy of material would be generated by NTW modification. This material would be removed to an on-site stockpile and is anticipated to be made available for aggregate processing. The average round-trip haul distance for material redistribution and removal of excess material is anticipated to be approximately 1 mile.

Open-bowl scrapers are anticipated to be used to degrade, haul and initially place NTW material. After material is placed by the scrapers, dozers would be used to grade the material to establish the design geometry and trackwalk the area. Additional equipment, including a motor grader and compactor would be used to perform finish grading activities. The overall duration of the NTW reshaping period would be approximately 30 days.

Excess material is anticipated to be transported to the stockpile area via scraper. Up to approximately 440 round trips would be completed each day. A dozer and grader would then be used to grade the stockpile area. The overall duration of the excess material removal period would be approximately 40 days.

Ecological Enhancement. Boulder and planting materials would be imported to the ecological enhancement areas via haul truck and tractor trailer. Approximately 10,000 cy of boulders would be imported over 40 days. Approximately 15 tractor trailer trips over 1 day are anticipated to be required to import plants and other material materials to the sites from within approximately 15 miles of the ecological enhancement sites. The overall duration of the ecological enhancement period would be approximately 50 days.

Construction Personnel and Equipment

The number of construction personnel would vary depending on project activities. Up to approximately 8 to 10 personnel are estimated to be onsite daily during project activities. Construction workers would most likely come from the local workforce in the Marysville, Yuba City, and Sacramento areas.

The enclosed **Table 1** lists the construction components, and the types and number of equipment anticipated to be used for each component. The values shown in **Table 1** were used in the analysis presented in this air quality report. The construction contractors may use different equipment or more or less equipment, based on the construction schedule, the contractors' capabilities, and equipment availability.

KDA

Construction Schedule

The earliest possible start date for project construction would be March 2021 and the latest possible end date is anticipated be late Spring 2022. Construction is anticipated to completed in approximately 3 to 4 months. The timeline may or may not be contiguous, based on availability of construction resources and other factors.

Degrade and hauling activities to reshape the NTW, and finish grading and trackwalking would be completed concurrently in approximately in approximately 1 to 2 months. Removal of excess material from the NTW would take 1 to 2 months. Ecological enhancements are anticipated to be completed in 1 to 2 months.

NTW modification activities would typically occur 6 days a week (Monday through Saturday) but may also occur on Sunday. The specific number of hours that each piece of equipment would be used during the day is not known and would be up to the construction contractor.

Our understanding is the NTW Project would have little or no effect on long-term operational emissions.

METHODOLOGY

In the *Indirect Source Review Guidelines*, the Feather River Air Quality Management District (FRAQMD) notes,

“The District recommends the Roadway Construction Emissions Model to calculate emissions from linear construction projects, such as new roadways, road widening, and levee projects. This model is available to download at: <http://www.airquality.org/ceqa/index.shtml>.”

KDA applied the Road Construction Emissions Model to analyze the effects of the NTW Project on criteria pollutant air quality emissions and greenhouse gas (GHG) emissions. A detailed description of the model may be found at the Sacramento Metropolitan Air Quality Management District internet website (<http://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools>).

The Road Construction Emissions Model analysis was based on project description information provided by you in a November 13, 2020 E-mail messages to me, and subsequent E-mail correspondence. The Road Construction Emissions Model output reports are enclosed.

KDA

Phase Names

The Road Construction Emissions Model software is limited in the number of construction phases that can be analyzed in an individual model run and is limited in the names that can be applied to phases. In particular, the names of phases in the model cannot be modified.

Two runs of the Road Construction Emissions Model were used to analyze the NTW Project. One run of the model was used to analyze reshaping of the NTW and removal of excess material. A second run of the model was used to analyze ecological enhancements.

Because the names of construction phases in the Road Construction Emissions Model cannot be modified, the names of NTW Project construction phases do not appear in the enclosed model output reports. To facilitate review of the model output reports, the following describes how NTW Project construction phases are listed in the output reports.

In the first run of the Road Construction Emissions Model, the following describes the correspondence between model phase names and NTW Project phase names:

- The Road Construction Emissions Model phase “Grubbing/Land Clearing” is used for NTW reshaping.
- The Road Construction Emissions Model phase “Grading/Excavation” is used for removal of excess material.

In the second run of the model, the following describes the correspondence between Road Construction Emissions Model phase names and NTW Project phase names:

- The Road Construction Emissions Model phase “Grubbing/Land Clearing” is used for ecological enhancement.

SIGNIFICANCE THRESHOLDS

The following is a description of thresholds applied in this letter report to determine the significance of air quality impacts.

Criteria Pollutant Emissions

In the *Indirect Source Review Guidelines*, the FRAQMD recommends significance thresholds for construction-related emissions of nitrogen oxides (NO_x), reactive organic gases (ROG), and particulate matter less than 10 microns in diameter (PM₁₀). These types of emissions are referred to as criteria pollutant emissions.

KDA

For both NO_x and ROG, the FRAQMD recommends a significance threshold of “25 lbs/day multiplied by the project length, not to exceed 4.5 tons/year”. The FRAQMD further notes, “NO_x and ROG Construction emissions may be averaged over the life of the project, but may not exceed 4.5 tons/year”. In this report,

- NO_x and ROG emissions were calculated in pounds per day (ppd), averaged over the duration of the construction period. The project is considered to have a significant impact if the average daily value for either NO_x or ROG exceeds 25 ppd.
- The sum of NO_x and ROG emissions over the entire construction period were also calculated. The project is considered to have a significant impact if the total for the construction period exceeds 4.5 tons.

For PM₁₀, the FRAQMD recommends a significance threshold of 80 ppd. The project is considered to have a significant impact if emissions exceed 80 ppd during the construction period.

Greenhouse Gas Emissions

In the *Indirect Source Review Guidelines*, the FRAQMD notes,

“Air districts have traditionally provided guidance to local lead agencies on evaluating and addressing air pollution impacts from projects subject to CEQA. Recognizing the need for a common platform of information and tools to support decision makers as they establish policies and programs for GHG and CEQA, the California Air Pollution Control Officers Association has prepared a white paper reviewing policy choices, analytical tools, and mitigation strategies. This white paper, entitled ‘CEQA and Climate Change’ is available at <http://www.capcoa.org/>. The District recommends the use of this white paper by local lead agencies.”

The California Air Pollution Control Officers Association (CAPCOA) document *CEQA and Climate Change* notes,

“Although construction activity has been addressed in the analytical methodologies and mitigation chapters, this paper does not discuss whether any of the threshold approaches adequately addresses impacts from construction activity. More study is needed to make this assessment or to develop separate thresholds for construction activity. The focus of this paper is the long-term adverse operational impacts of land use development.”

KDA

In *CEQA and Climate Change* CAPCOA identifies a guideline of 900 metric tons per year of carbon dioxide equivalent (MT/yr CO₂e) emissions as a conservative threshold for requiring further analysis and mitigation. While CAPCOA does not directly recommend use of this guideline to construction activity, because the FRAQMD recommends use of *CEQA and Climate Change*, and because the 900 MT CO₂e is a conservative threshold, this threshold is applied in this letter report. Therefore, the NTW Project is considered to have a significant impact if GHG emissions exceed 900 MT/yr of CO₂e.

RESULTS

The results of the Road Construction Emissions Model emissions analysis are shown in the enclosed **Table 2**, **Table 3**, and **Table 4**.

Criteria Pollutant Emissions

The following is a description of the impacts of the NTW Project on criteria pollutant emissions.

Reactive Organic Gas and Inhalable Particulate Matter. Estimated criteria pollutant emissions for the NTW Project are presented in **Table 2**. As shown in **Table 2**, project-related emissions of ROG and PM₁₀ would be below the daily significance thresholds presented in the *Significance Threshold* section of this report. In addition, emissions of ROG for the entire construction period would be below the 4.5 tons per year threshold. As a result, the project's impact on ROG and PM₁₀ emissions is considered to be less than significant. No mitigation measures are required.

Nitrogen Oxides. As shown in **Table 2**, project-related daily emissions of NO_x averaged over the construction period would be 35.19 ppd, which is greater than the 25 ppd significance threshold presented in the *Significance Threshold* section of this report. Emissions of NO_x for the entire construction period would be below the 4.5 tons per year threshold. Because daily NO_x emissions would exceed the 25 ppd threshold, this impact is considered significant. This impact would be reduced to a less than significant level by implementing the following mitigation measure.

Mitigation Measure: Extend Construction Schedule for North Training Wall Modifications. Project-related NO_x exceeding the significance threshold would be due to construction equipment exhaust emissions. Daily emissions averaged over the construction period exceeding the threshold would be due to emissions being generated during a finite period of time. That is, exceeding the threshold would be in part due to emissions occurring during a limited number of days. As noted in the *Material Quantities, Sources, and Transport* section of this report, the duration of the NTW reshaping period would be approximately 30 days, and

KDA

the duration of the excess material removal period would be approximately 40 days.

To reduce project-related NO_x emissions to less than the 25 ppd significance threshold, the duration of the NTW reshaping period will be increased to 60 days, and the duration of the excess material removal period will be increased to 60 days.

During NTW modification, the use of scrapers would be a substantial source of NO_x emissions. The overall use of scrapers can be quantified in “scraper-days” – the number of days a certain number of scrapers are used. One scraper used for one day would be one scraper-day. As shown in **Table 1**, during NTW reshaping, four scrapers would be used for 25 days, resulting in 100 scraper-days (4 x 25 = 100). During excess material removal, four scrapers would be used for 35 days, resulting in 140 scraper-days (4 x 35 = 140).

With implementation of this mitigation measure, during NTW modification under the extended construction schedule, two scrapers will be used for 50 days, resulting in 100 scraper-days (2 x 50 = 100). With implementation of this mitigation measure, during excess material removal under the extended construction schedule, two scrapers will be used for 60 days, and one scraper will be used for 20 days, resulting in 140 scraper-days ([2 x 60] + [1 x 20] = 140). As a result, the overall amount of use of scrapers would not be affected by this mitigation measure. The effect of this mitigation measure will be to distribute the associated emissions over a longer period of time.

Table 3 shows criteria pollutant emissions with implementation of the mitigation measure described above. With implementation of this mitigation measure, project-related daily emissions of NO_x averaged over the construction period would be 24.87 ppd, which is less than the 25 ppd significance threshold presented in the *Significance Thresholds* section of this report. As a result, with implementation of this mitigation measure, the project’s impact on NO_x emissions is considered to be less than significant.

Greenhouse Gas Emissions

Estimated GHG emissions for the NTW Project are presented in **Table 4**. As shown in **Table 4**, project-related GHG emissions are forecasted to be 277.63 MT of CO₂e for the construction period, which is below the 900 MT/yr CO₂e significance threshold. As a result, the project’s impact on GHG emissions is considered to be less than significant. No mitigation measures are required.

KDA

Ms. Anne King
November 25, 2020
Page 9 of 9

CLOSING

Thank you for providing KDA with the opportunity to provide GEI Consultants with air pollutant emissions analysis services on the NTW Project. Please let me know if you have any questions about this report.

Sincerely,

KD Anderson & Associates, Inc.

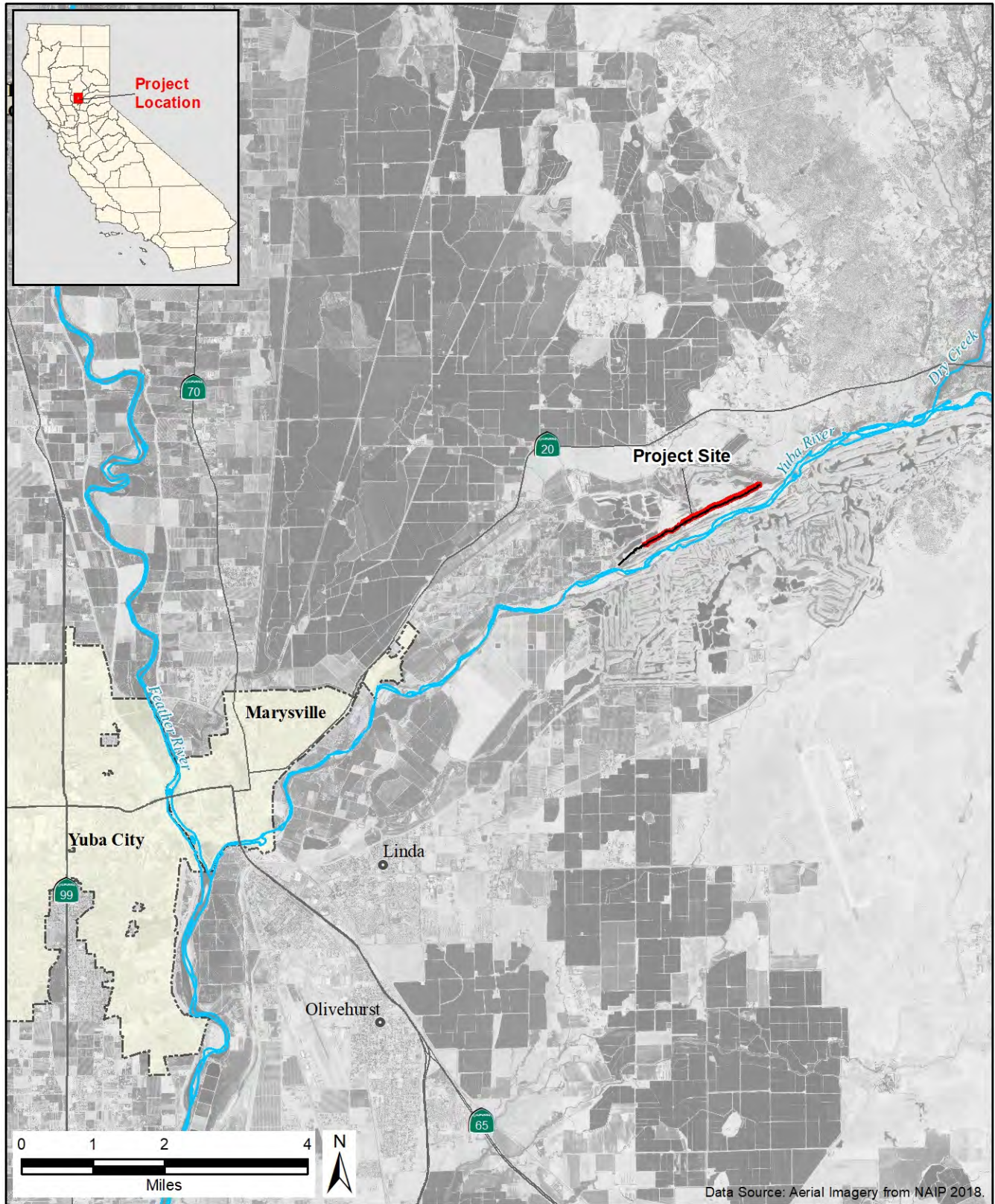
A handwritten signature in blue ink, appearing to read "Wayne Shijo". The signature is fluid and cursive, with the first name "Wayne" written in a larger, more prominent script than the last name "Shijo".

Wayne Shijo
Project Manager

enclosures

KDA

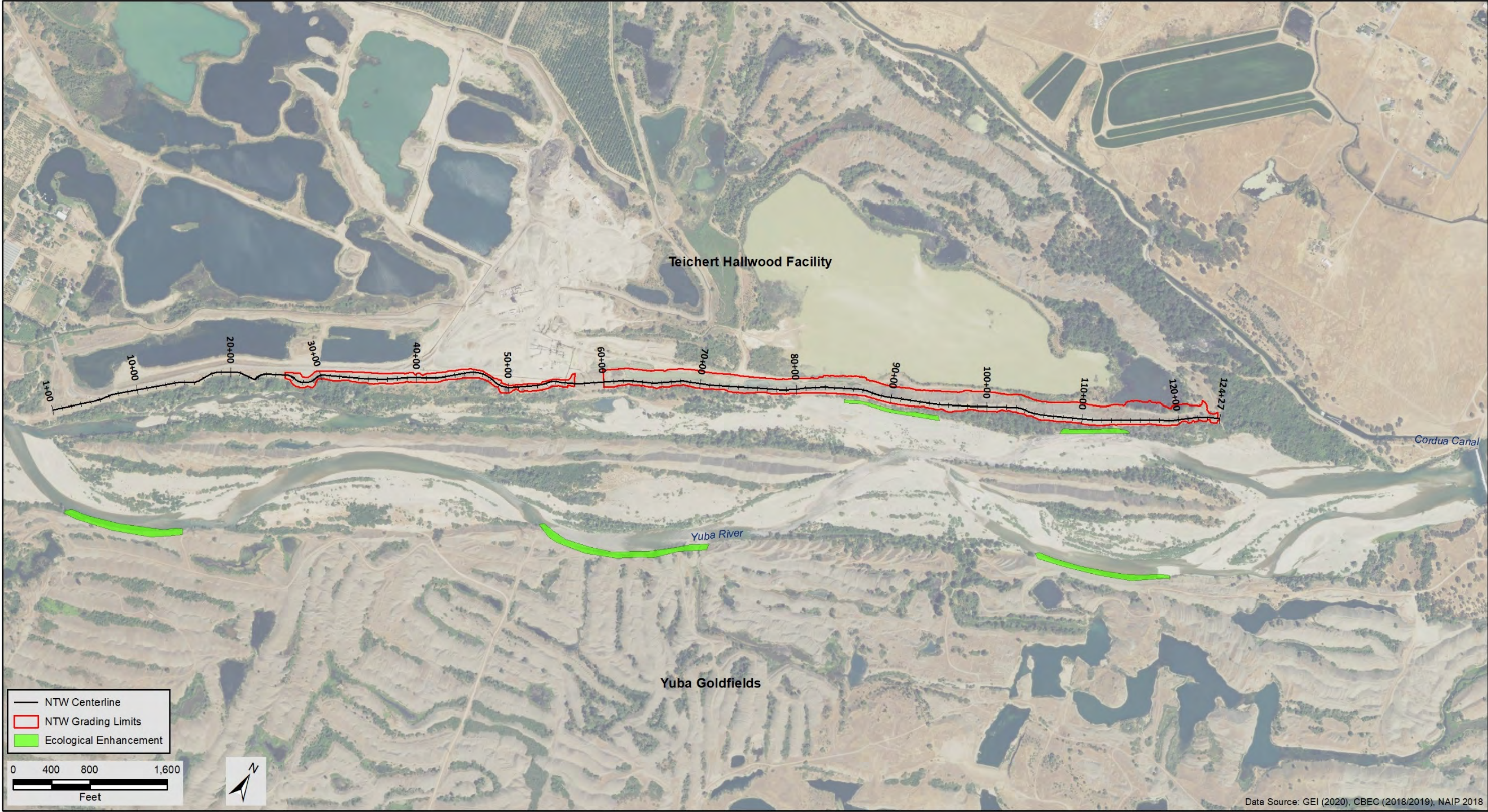
Figure 1. North Training Wall Location.



Z:\Projects\050115_TRLIA\050115_NorthTrainingWall\G006_050115_NTW_ProjectLocation.mxd
28Oct2020 RS

Source: GEI Consultants, Inc. 2020

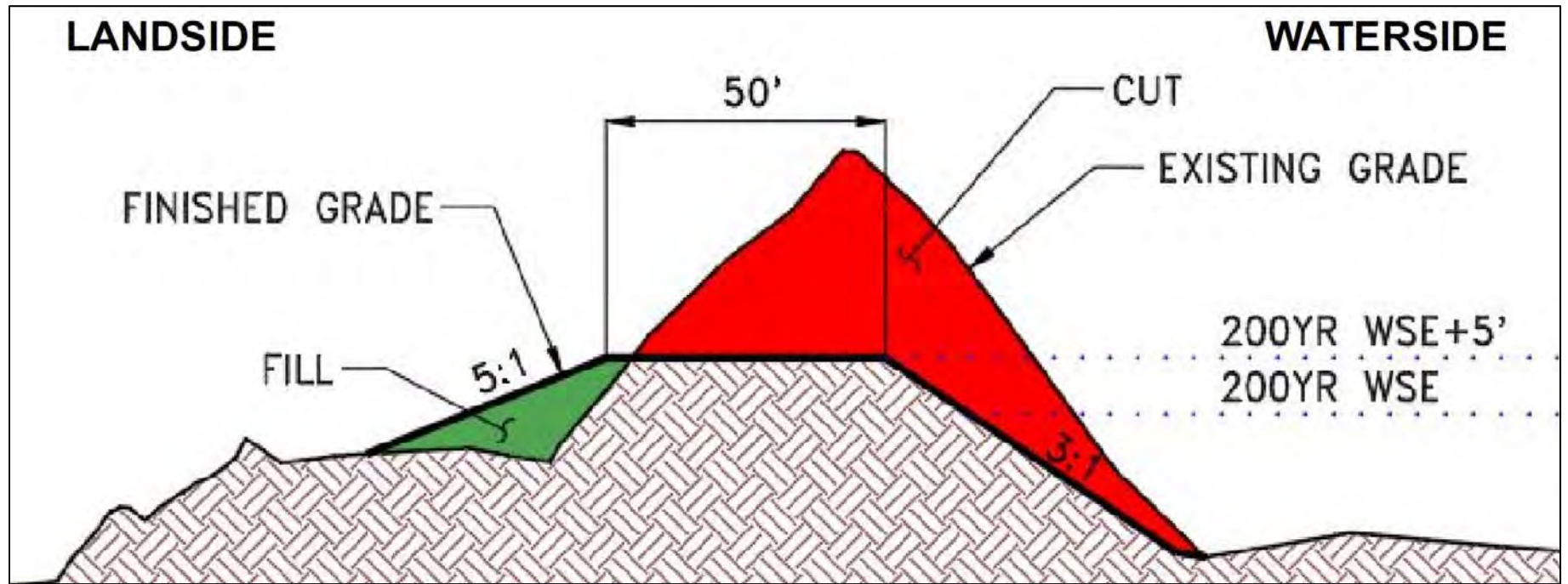
Figure 2. North Training Wall Project Footprint.



Source: Wood Rogers 2020

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Data Source: GEI (2020), CBEC (2018/2019), NAIP 2018

Figure 3. Typical North Training Wall Cross Section.



Source: Wood Rogers 2020

Table 1. Construction Components, Equipment, and Anticipated Work Durations

Construction Component	Anticipated Types of Equipment and Number of Pieces*	Anticipated Use Duration (days)
North Training Wall Modification – Reshaping	Scraper (4)	25
	Grader (2)	15
	Grader	10
	Dozer	25
	Compactor	15
North Training Wall Modification – Excess Material Removal	Scraper (4)	35
	Dozer	5
	Grader	5
Ecological Enhancement	Scraper	30
	Dozer	30
	Front-end loader	30
	Grader	30
	Excavator	30
	Tractor trailer	1
	Haul truck	40
<hr/> <p>Notes: * One piece of each equipment type is anticipated to be used, unless specified in parentheses; equipment may be utilized concurrently.</p>		

Table 2. North Training Wall Project Criteria Pollutant Emissions

Emissions and Time Period	North Training Wall Reshaping	Excess Material Removal	Concurrent Ecological Enhancements	Total Construction Period
NO _x in ppd	52.94	39.67	20.96	
ROG in ppd	4.66	3.51	1.80	
PM ₁₀ in ppd	42.13	41.59	20.91	
Length of Phase in Days	30	40	50	120
NO _x in Pounds for Phase Period	1,588.20	1,586.80	1,048.00	4,223
NO _x in Tons for Phase Period	0.79	0.79	0.52	2.11
ROG in Pounds for Phase Period	139.80	140.40	90.00	370
ROG in Tons for Phase Period	0.07	0.07	0.05	0.19
NO _x in ppd Averaged Over the Construction Period				35.19
NO _x Significance Threshold in ppd Averaged Over the Construction Period				25
Significant Impact? (Average Daily NO _x Exceeds 25 ppd?)				Yes
Significant Impact? (Total Construction Period NO _x Exceeds 4.5 tons per year?)				No
ROG in ppd Averaged Over the Construction Period				3.09
ROG Significance Threshold in ppd Averaged Over the Construction Period				25
Significant Impact? (Average Daily ROG Exceeds 25 ppd?)				No
Significant Impact? (Total Construction Period ROG Exceeds 4.5 tons per year?)				No
Maximum PM ₁₀ in ppd for the Construction Period				42.13
PM ₁₀ Significance Threshold in ppd				80
Significant Impact?				No
<hr/> Notes: "NO _x " = nitrogen oxides. "ROG" = reactive organic gases. "PM10" = inhalable particulate matter less than 10 microns diameter. "ppd" = pounds per day.				

Table 3. North Training Wall Project Criteria Pollutant Emissions - Mitigated

Emissions and Time Period	North Training Wall Reshaping	Excess Material Removal	Concurrent Ecological Enhancements	Total Construction Period
NO _x in ppd	26.52	26.48	20.96	
ROG in ppd	2.37	2.36	1.80	
PM ₁₀ in ppd	41.08	41.07	20.91	
Length of Phase in Days	60	60	50	170
NO _x in Pounds for Phase Period	1,591.20	1,588.80	1,048.00	4,228
NO _x in Tons for Phase Period	0.80	0.79	0.52	2.11
ROG in Pounds for Phase Period	142.20	141.60	90.00	374
ROG in Tons for Phase Period	0.07	0.07	0.05	0.19
NO _x in ppd Averaged Over the Construction Period				24.87
NO _x Significance Threshold in ppd Averaged Over the Construction Period				25
Significant Impact? (Average Daily NO _x Exceeds 25 ppd?)				No
Significant Impact? (Total Construction Period NO _x Exceeds 4.5 tons per year?)				No
ROG in ppd Averaged Over the Construction Period				2.20
ROG Significance Threshold in ppd Averaged Over the Construction Period				25
Significant Impact? (Average Daily ROG Exceeds 25 ppd?)				No
Significant Impact? (Total Construction Period ROG Exceeds 4.5 tons per year?)				No
Maximum PM ₁₀ in ppd for the Construction Period				41.08
PM ₁₀ Significance Threshold in ppd				80
Significant Impact?				No
<hr/> Notes: "NO _x " = nitrogen oxides. "ROG" = reactive organic gases. "PM10" = inhalable particulate matter less than 10 microns diameter. "ppd" = pounds per day.				

Table 4. North Training Wall Project Greenhouse Gas Emissions

Project Phase	Metric Tons of Carbon Dioxide Equivalent Emissions During Project Phase
North Training Wall Modification – Reshaping	92.95
North Training Wall Modification – Excess Material Removal	103.14
Ecological Enhancement	81.54
Total	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/> 277.63
Significance Threshold	900
Significant Impact?	No

**Road Construction Emissions Model
Output Report for
North Training Wall Reshaping and
Removal of Excess Material**

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> TRLIA No. Trng Wall Reshap & Exc Mater Removal - Pre-Mitig														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	4.66	30.28	52.94	42.13	2.13	40.00	10.26	1.94	8.32	0.07	6,758.18	2.09	0.07	6,830.41
Grading/Excavation	3.51	26.34	39.67	41.59	1.59	40.00	9.76	1.44	8.32	0.06	5,624.18	1.73	0.06	5,684.30
Drainage/Utilities/Sub-Grade	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
Paving	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
Maximum (pounds/day)	4.66	30.28	52.94	42.13	2.13	40.00	10.26	1.94	8.32	0.07	6,758.18	2.09	0.07	6,830.41
Total (tons/construction project)	0.14	0.98	1.59	1.46	0.06	1.40	0.35	0.06	0.29	0.00	213.86	0.07	0.00	216.14

Notes: Project Start Year -> 2021
 Project Length (months) -> 3
 Total Project Area (acres) -> 35
 Maximum Area Disturbed/Day (acres) -> 2
 Water Truck Used? -> No

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	400	0
Grading/Excavation	0	0	0	0	400	0
Drainage/Utilities/Sub-Grade	0	0	0	0	0	0
Paving	0	0	0	0	0	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> TRLIA No. Trng Wall Reshap & Exc Mater Removal - Pre-Mitig														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.07	0.45	0.79	0.63	0.03	0.60	0.15	0.03	0.12	0.00	101.37	0.03	0.00	92.95
Grading/Excavation	0.07	0.53	0.79	0.83	0.03	0.80	0.20	0.03	0.17	0.00	112.48	0.03	0.00	103.14
Drainage/Utilities/Sub-Grade	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
Paving	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
Maximum (tons/phase)	0.07	0.53	0.79	0.83	0.03	0.80	0.20	0.03	0.17	0.00	112.48	0.03	0.00	103.14
Total (tons/construction project)	0.14	0.98	1.59	1.46	0.06	1.40	0.35	0.06	0.29	0.00	213.86	0.07	0.00	196.08

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

**Road Construction Emissions Model
Output Report for
Ecological Enhancement**

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> TRLIA Yuba River Ecological Enhancement														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.80	12.34	20.96	20.91	0.91	20.00	4.95	0.79	4.16	0.04	3,522.43	0.73	0.18	3,595.12
Grading/Excavation	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
Drainage/Utilities/Sub-Grade	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
Paving	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
Maximum (pounds/day)	1.80	12.34	20.96	20.91	0.91	20.00	4.95	0.79	4.16	0.04	3,522.43	0.73	0.18	3,595.12
Total (tons/construction project)	0.05	0.31	0.52	0.52	0.02	0.50	0.12	0.02	0.10	0.00	88.06	0.02	0.00	89.88

Notes: Project Start Year -> 2021
 Project Length (months) -> 2
 Total Project Area (acres) -> 8
 Maximum Area Disturbed/Day (acres) -> 1
 Water Truck Used? -> No

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	200	0	240	9	400	0
Grading/Excavation	0	0	0	0	0	0
Drainage/Utilities/Sub-Grade	0	0	0	0	0	0
Paving	0	0	0	0	0	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> TRLIA Yuba River Ecological Enhancement														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.05	0.31	0.52	0.52	0.02	0.50	0.12	0.02	0.10	0.00	88.06	0.02	0.00	81.54
Grading/Excavation	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
Drainage/Utilities/Sub-Grade	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
Paving	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
Maximum (tons/phase)	0.05	0.31	0.52	0.52	0.02	0.50	0.12	0.02	0.10	0.00	88.06	0.02	0.00	81.54
Total (tons/construction project)	0.05	0.31	0.52	0.52	0.02	0.50	0.12	0.02	0.10	0.00	88.06	0.02	0.00	81.54

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

**Road Construction Emissions Model
Output Report for
North Training Wall Reshaping and
Removal of Excess Material –
With Mitigation Measure**

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> TRLIA N Trng Wall Reshap & Exc Mater Remov - Mitig Ext Sched &														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	2.37	15.69	26.52	41.08	1.08	40.00	9.30	0.98	8.32	0.04	3,530.52	1.05	0.04	3,568.01
Grading/Excavation	2.36	17.93	26.48	41.07	1.07	40.00	9.29	0.97	8.32	0.04	3,850.41	1.16	0.04	3,891.40
Drainage/Utilities/Sub-Grade	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
Paving	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
Maximum (pounds/day)	2.37	17.93	26.52	41.08	1.08	40.00	9.30	0.98	8.32	0.04	3,850.41	1.16	0.04	3,891.40
Total (tons/construction project)	0.14	1.01	1.59	2.46	0.06	2.40	0.56	0.06	0.50	0.00	221.43	0.07	0.00	223.78

Notes: Project Start Year -> 2021
 Project Length (months) -> 5
 Total Project Area (acres) -> 35
 Maximum Area Disturbed/Day (acres) -> 2
 Water Truck Used? -> No

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	400	0
Grading/Excavation	0	0	0	0	400	0
Drainage/Utilities/Sub-Grade	0	0	0	0	0	0
Paving	0	0	0	0	0	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> TRLIA N Trng Wall Reshap & Exc Mater Remov - Mitig Ext Sched &														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.07	0.47	0.80	1.23	0.03	1.20	0.28	0.03	0.25	0.00	105.92	0.03	0.00	97.11
Grading/Excavation	0.07	0.54	0.79	1.23	0.03	1.20	0.28	0.03	0.25	0.00	115.51	0.03	0.00	105.91
Drainage/Utilities/Sub-Grade	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
Paving	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
Maximum (tons/phase)	0.07	0.54	0.80	1.23	0.03	1.20	0.28	0.03	0.25	0.00	115.51	0.03	0.00	105.91
Total (tons/construction project)	0.14	1.01	1.59	2.46	0.06	2.40	0.56	0.06	0.50	0.00	221.43	0.07	0.00	203.01

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Appendix B. Biological Resources Information

California Native Plant Society Species List

California Natural Diversity Database Plant and Animal Species Lists

National Marine Fisheries Service Species List

U.S. Fish and Wildlife Service Species List

California Native Plant Society Species List

*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

Plant List

19 matches found. [Click on scientific name for details](#)

Search Criteria

Found in Quads 3912135, 3912134, 3912133, 3912125, 3912124, 3912123, 3912115 3912114 and 3912113;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Astragalus pauperculus	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	4.3	S4	G4
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	1B.1	S1	G2T1
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual / perennial herb	Aug	4.2	S4	G5
Brodiaea rosea ssp. vallicola	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	4.2	S3	G5T3
Brodiaea sierrae	Sierra foothills brodiaea	Themidaceae	perennial bulbiferous herb	May-Aug	4.3	S3	G3
Clarkia biloba ssp. brandegeae	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	4.2	S4	G4G5T4
Cryptantha rostellata	red-stemmed cryptantha	Boraginaceae	annual herb	Apr-Jun	4.2	S3	G4
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Erythranthe glaucescens	shield-bracted monkeyflower	Phrymaceae	annual herb	Feb-Aug(Sep)	4.3	S3S4	G3G4
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	4.2	S3	G3
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	1B.2	S1	G2T1
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	1B.1	S2	G2T2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Monardella venosa	veiny monardella	Lamiaceae	annual herb	May,Jul	1B.1	S1	G1
Paronychia ahartii	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	1B.1	S3	G3
Plagiobothrys glyptocarpus var. modestus	Cedar Crest popcornflower	Boraginaceae	annual herb	Apr-Jun	3	SH	G3THQ
Pseudobahia bahiifolia	Hartweg's golden	Asteraceae	annual herb	Mar-Apr	1B.1	S2	G2

sunburst

[Wolffia brasiliensis](#)

Brazilian watermeal Araceae

perennial herb
(aquatic)

Apr,Dec

2B.3

S2

G5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 26 November 2020].

Search the Inventory[Simple Search](#)[Advanced Search](#)[Glossary](#)**Information**[About the Inventory](#)[About the Rare Plant Program](#)[CNPS Home Page](#)[About CNPS](#)[Join CNPS](#)**Contributors**[The Calflora Database](#)[The California Lichen Society](#)[California Natural Diversity Database](#)[The Jepson Flora Project](#)[The Consortium of California Herbaria](#)[CalPhotos](#)**Questions and Comments**rareplants@cnps.org

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California Natural Diversity Database Plant and Animal Species Lists



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Browns Valley (3912124) OR Honcut (3912135) OR Loma Rica (3912134) OR Oregon House (3912133) OR Yuba City (3912125) OR Smartville (3912123) OR Olivehurst (3912115) OR Wheatland (3912114) OR Camp Far West (3912113)) AND Taxonomic Group (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Astragalus tener</i> var. <i>ferrisiae</i> Ferris' milk-vetch	PDFAB0F8R3	None	None	G2T1	S1	1B.1
<i>Clarkia biloba</i> ssp. <i>brandegeae</i> Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
<i>Delphinium recurvatum</i> recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<i>Downingia pusilla</i> dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
<i>Juncus leiospermus</i> var. <i>ahartii</i> Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2
<i>Legenere limosa</i> legenere	PDCAM0C010	None	None	G2	S2	1B.1
<i>Monardella venosa</i> veiny monardella	PDLAM18082	None	None	G1	S1	1B.1
<i>Paronychia ahartii</i> Ahart's paronychia	PDCAR0L0V0	None	None	G3	S3	1B.1
<i>Pseudobahia bahiifolia</i> Hartweg's golden sunburst	PDAST7P010	Endangered	Endangered	G1	S1	1B.1
<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<i>Wolffia brasiliensis</i> Brazilian watermeal	PMLEM03020	None	None	G5	S2	2B.3

Record Count: 11



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Browns Valley (3912124) OR Honcut (3912135) OR Loma Rica (3912134) OR Oregon House (3912133) OR Yuba City (3912125) OR Smartville (3912123) OR Olivehurst (3912115) OR Wheatland (3912114) OR Camp Far West (3912113)) AND Taxonomic Group (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Asio otus</i> long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Circus hudsonius</i> northern harrier	ABNKC11011	None	None	G5	S3	SSC
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S3	
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Haliaeetus leucocephalus</i> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<i>Icteria virens</i> yellow-breasted chat	ABPBX24010	None	None	G5	S3	SSC
<i>Lasiurus blossevillii</i> western red bat	AMACC05060	None	None	G5	S3	SSC
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4	
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Linderiella occidentalis</i> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<i>Melospiza melodia</i> song sparrow ("Modesto" population)	ABPBXA3010	None	None	G5	S3?	SSC
<i>Myotis yumanensis</i> Yuma myotis	AMACC01020	None	None	G5	S4	
<i>Oncorhynchus mykiss irideus pop. 11</i> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
<i>Oncorhynchus tshawytscha pop. 6</i> chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	G5	S2	
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Setophaga petechia</i> yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
<i>Spea hammondi</i> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<i>Thamnophis gigas</i> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
<i>Vireo bellii pusillus</i> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 29

National Marine Fisheries Service Species List

National Marine Fisheries Service – Species List

Quad Name **Browns Valley**

Quad Number **39121-B4**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - **X**

SRWR Chinook Salmon ESU (E) - **X**

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - **X**

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat - **X**

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat - **X**

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

U.S. Fish and Wildlife Service Species List



United States Department of the Interior



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

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-0416
Event Code: 08ESMF00-2021-E-01126
Project Name: Yuba River North Training Wall Project

November 26, 2020

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-0416

Event Code: 08ESMF00-2021-E-01126

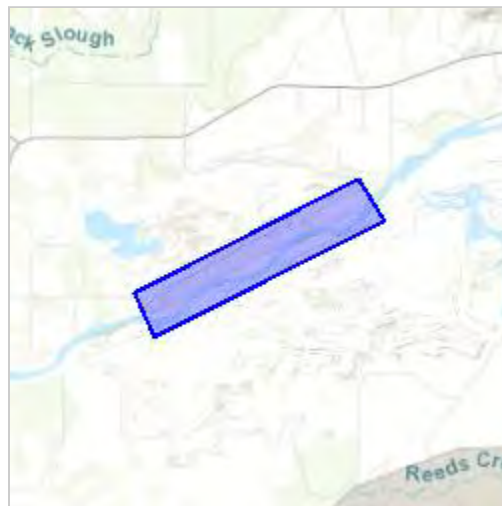
Project Name: Yuba River North Training Wall Project

Project Type: ** OTHER **

Project Description: The project is located along the Yuba River and would include reshaping the existing North Training Wall and ecological enhancements to improve habitat for juvenile salmonids.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.19714021645308N121.46971412020228W>



Counties: Yuba, CA

Endangered Species Act Species

There is a total of 7 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.

Reptiles

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

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	Threatened

Fishes

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

Insects

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

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

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

Appendix C. Tribal Consultation

Native American Heritage Commission Correspondence

NATIVE AMERICAN HERITAGE COMMISSION

November 18, 2020

Barry Scott

GEI Consultants

Via Email to: bscott@geiconsultants.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Yuba River North Training Wall Project, Yuba County

Dear Mr. Scott:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:



CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
Marshall McKay
Wintun

COMMISSIONER
William Mungary
Paiute/White Mountain
Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,



Nancy Gonzalez-Lopez

Cultural Resources Analyst

Attachment

**Native American Heritage Commission
Native American Contact List
Yuba County
11/18/2020**

Tsi Akim Maidu

Grayson Coney, Cultural Director
P.O. Box 510 Maidu
Browns Valley, CA, 95918
Phone: (530) 383 - 7234
tsi-akim-maidu@att.net

***United Auburn Indian
Community of the Auburn
Rancheria***

Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn, CA, 95603 Miwok
Phone: (530) 883 - 2390
Fax: (530) 883-2380
bguth@auburnrancheria.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Yuba River North Training Wall Project, Yuba County.

Native American Tribal Correspondence



Consulting
Engineers and
Scientists

November 20, 2020

Mr. Gene Whitehouse, Chairman
United Auburn Indian Community
10720 Indian Hill Road
Auburn, California 95603

Subject: Three Rivers Levee Improvement Authority, Yuba River North Training Wall Project

Dear Chairman Whitehouse,

On behalf of Three Rivers Levee Improvement Authority (TRLIA), GEI Consultants (GEI) is sending you this letter to serve as a formal invitation to your Tribe to consult with TRLIA regarding the proposed Yuba River North Training Wall (NTW) project under Assembly Bill 52 (AB 52), pursuant to Public Resources Code (PRC) Section 21080.3.1. The proposed project is located on the north bank of the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County (Attachment 1, Figure 1). The NTW forms the southern boundary of the Teichert Aggregates Hallwood Facility and is north of the Yuba Goldfields.

The approximately 2.25-mile-long NTW is an existing cobble embankment that was constructed by the California Debris Commission in 1899 to confine the Yuba River and facilitate migration of mining debris within the floodway. Flood control was not an authorized purpose, but the NTW has historically provided and continues to provide flood protection to the surrounding area. However, the height and width of the NTW have decreased over time. This reduction and ongoing, persistent erosion from storm events have combined to create a flood risk to the Hallwood community, the City of Marysville, and portions of Reclamation District 10 (D-10).

The overall project is anticipated to include two phases (Attachment 1, Figure 2). Phase 1 would reshape the NTW embankment to a more stable geometry to improve flood protection for the City of Marysville and portions of D-10 and substantially reduce flood risk to the Hallwood community. An additional component of Phase 1 is ecological enhancement of juvenile anadromous salmonid rearing habitat in adjacent and nearby areas of the Yuba River. Phase 2 would include a tie-in to high ground and ecological enhancements immediately upstream of the NTW.

The existing NTW embankment would be graded to achieve a geotechnically stable geometry. The modified embankment crest would be 5 feet above the 200-year design water surface elevation and would have a 30-foot-wide crest. A 20-foot-wide landside toe access road would be constructed to provide access during construction and operations and maintenance.

NTW modification activities would include:

- Degrading the existing NTW embankment to near the design crest elevation.
- Hauling and placing degraded material at lower portions of the NTW embankment to achieve the design cross section and construct the landside toe access road.
- Finish grading the embankment to the design crest elevation and waterside and landside slopes.
- Trackwalking side slopes to ensure interlocking the cobble material and improve erosion resistance.

The ecological enhancement component of Phase 1 would include features to create flow velocity refugia and feeding stations for juvenile anadromous salmonids. Riparian vegetation plantings also would be installed to improve instream cover and large woody material availability in areas where vegetation is currently lacking or sparse. Four areas of boulder clusters with native species riparian plantings are proposed. One area would be at the waterside toe of the NTW to create high-flow refugia in currently unvegetated areas with particular potential for erosion. Three boulder cluster and plantings areas would be along the south bank of the Yuba River to create pool habitat and high-flow refugia in eroded areas and areas with potential for erosion. The combination of boulder clusters and plantings is intended to resist scour and erosion forces and increase the sustainability of the native plantings. Boulder cluster/riparian planting activities would include:

- Clearing and grubbing existing vegetation within the enhancement areas
- Over-excavating the enhancement areas
- Installing boulder clusters and live stakes of native species in layers by laying a course of boulders, placing stakes throughout the area of disturbance, back-filling voids between the boulders with native fine material, laying a successive course of boulders

TRLIA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare an Initial Study (IS) to analyze potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources.

As part of the cultural resources review of the proposed project under CEQA, TRLIA is providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in PRC Section 21074, that may be close to the proposed project site shown in Attachment 1, Figure 3. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential, in accordance with California Government Code Section 6254.10.

If your Tribe would like to participate in formal consultation with TRLIA, please notify Mr. Paul Brunner, Executive Director, in writing, within 30 calendar days of receipt of this notice. If a written request is not received by TRLIA within 30 calendar days, the consultation process under PRC Section 21080.3.1 may not take place. TRLIA is committed, however, to continuing to work with your Tribe on the proposed project.

Please send written notification to:

Mr. Paul Brunner, Executive Director
Three Rivers Levee Improvement Authority
1114 Yuba Street, Suite 218
Marysville, California 95901
PBrunner@co.yuba.ca.us

Sincerely,

A handwritten signature in blue ink that reads "Barry G. Scott". The signature is written in a cursive style with a large, prominent 'B' and 'S'.

Barry G. Scott, RPA
Senior Archaeologist
GEI Consultants, Inc.

Attachment 1: NTW Figures 1–3

cc: Mr. Paul Brunner, Executive Director
Three Rivers Levee Improvement Authority

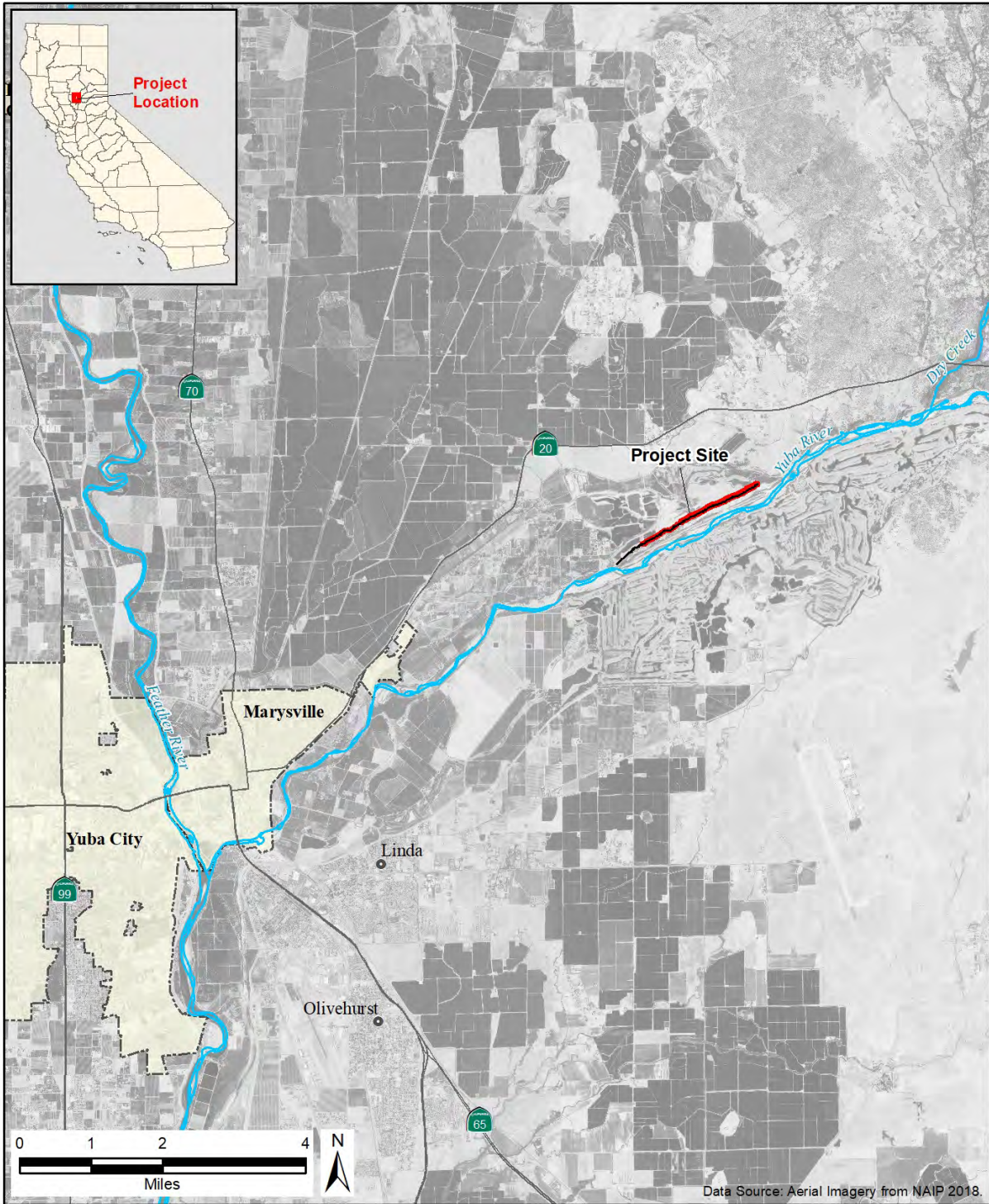
Electronic copies email to:

Rebecca Allen, Tribal Historic Preservation Director
United Auburn Indian Community
rallen@auburnrancheria.com

Melodi McAdams, Research and Repatriation Specialist
United Auburn Indian Community
Mmcadams@auburnrancheria.com

Attachment 1. North Training Wall Project Figures

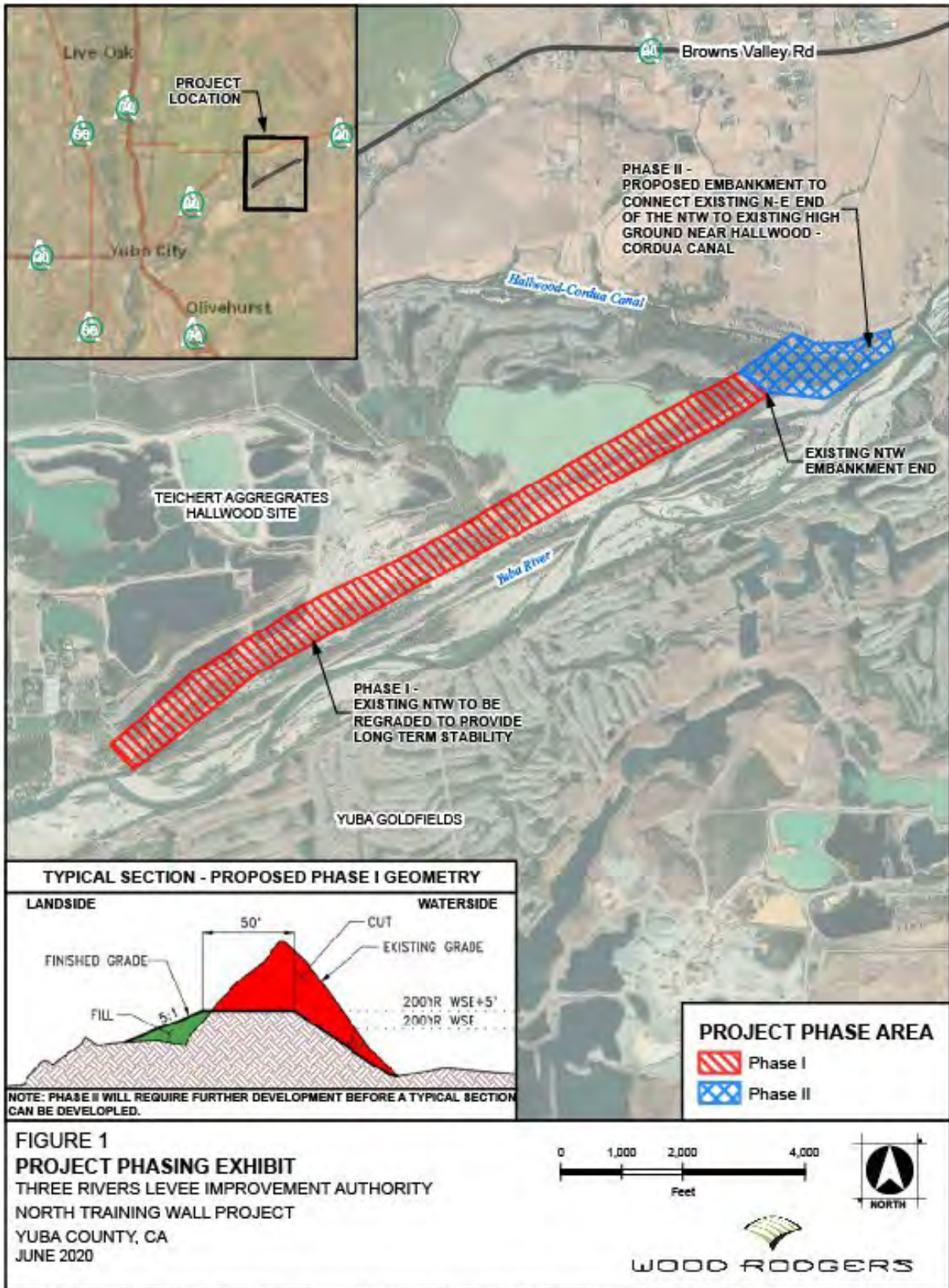
Figure 1. Project Location



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28Oct2020 RS

Source: GEI Consultants, Inc.

Figure 2. Project Phases



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Figure 3. Project Site



Source: Wood Rogers 2020, FloWest 2020

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Consulting
Engineers and
Scientists

November 20, 2020

Glenda Nelson, Chairperson
Enterprise Rancheria of the Estom Yumeka Maidu Tribe
2133 Monte Vista Avenue
Oroville, California 95966

Subject: Three Rivers Levee Improvement Authority, Yuba River North Training Wall Project

Dear Chairperson Nelson,

On behalf of Three Rivers Levee Improvement Authority (TRLIA), GEI Consultants (GEI) is sending you this letter to serve as a formal invitation to your Tribe to consult with TRLIA regarding the proposed Yuba River North Training Wall (NTW) project. The proposed project is located on the north bank of the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County (Attachment 1, Figure 1). The NTW forms the southern boundary of the Teichert Aggregates Hallwood Facility and is north of the Yuba Goldfields.

The approximately 2.25-mile-long NTW is an existing cobble embankment that was constructed by the California Debris Commission in 1899 to confine the Yuba River and facilitate migration of mining debris within the floodway. Flood control was not an authorized purpose, but the NTW has historically provided and continues to provide flood protection to the surrounding area. However, the height and width of the NTW have decreased over time. This reduction and ongoing, persistent erosion from storm events have combined to create a flood risk to the Hallwood community, the City of Marysville, and portions of Reclamation District 10 (D-10).

The overall project is anticipated to include two phases (Attachment 1, Figure 2). Phase 1 would reshape the NTW embankment to a more stable geometry to improve flood protection for the City of Marysville and portions of D-10 and substantially reduce flood risk to the Hallwood community. An additional component of Phase 1 is ecological enhancement of juvenile anadromous salmonid rearing habitat in adjacent and nearby areas of the Yuba River. Phase 2 would include a tie-in to high ground and ecological enhancements immediately upstream of the NTW.

The existing NTW embankment would be graded to achieve a geotechnically stable geometry. The modified embankment crest would be 5 feet above the 200-year design water surface elevation and would have a 30-foot-wide crest. A 20-foot-wide landside toe access road would be constructed to provide access during construction and operations and maintenance.

NTW modification activities would include:

- Degrading the existing NTW embankment to near the design crest elevation.
- Hauling and placing degraded material at lower portions of the NTW embankment to achieve the design cross section and construct the landside toe access road.
- Finish grading the embankment to the design crest elevation and waterside and landside slopes.
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- Installing boulder clusters and live stakes of native species in layers by laying a course of boulders, placing stakes throughout the area of disturbance, back-filling voids between the boulders with native fine material, laying a successive course of boulders

TRLIA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare an Initial Study (IS) to analyze potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources.

As part of the cultural resources review of the proposed project under CEQA, TRLIA is providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in PRC Section 21074, that may be close to the proposed project site shown in Attachment 1, Figure 3. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential, in accordance with California Government Code Section 6254.10.

If your Tribe would like to participate in formal consultation with TRLIA, please notify Mr. Paul Brunner, Executive Director, in writing, within 30 calendar days of receipt of this notice. Please send written notification to:

Mr. Paul Brunner, Executive Director
Three Rivers Levee Improvement Authority
1114 Yuba Street, Suite 218
Marysville, California 95901
PBrunner@co.yuba.ca.us
Sincerely,

A handwritten signature in blue ink that reads "Barry G. Scott". The signature is written in a cursive, flowing style.

Barry G. Scott, RPA
Senior Archaeologist
GEI Consultants, Inc.

Attachment 1: NTW Figures 1–3

cc: Mr. Paul Brunner, Executive Director
Three Rivers Levee Improvement Authority

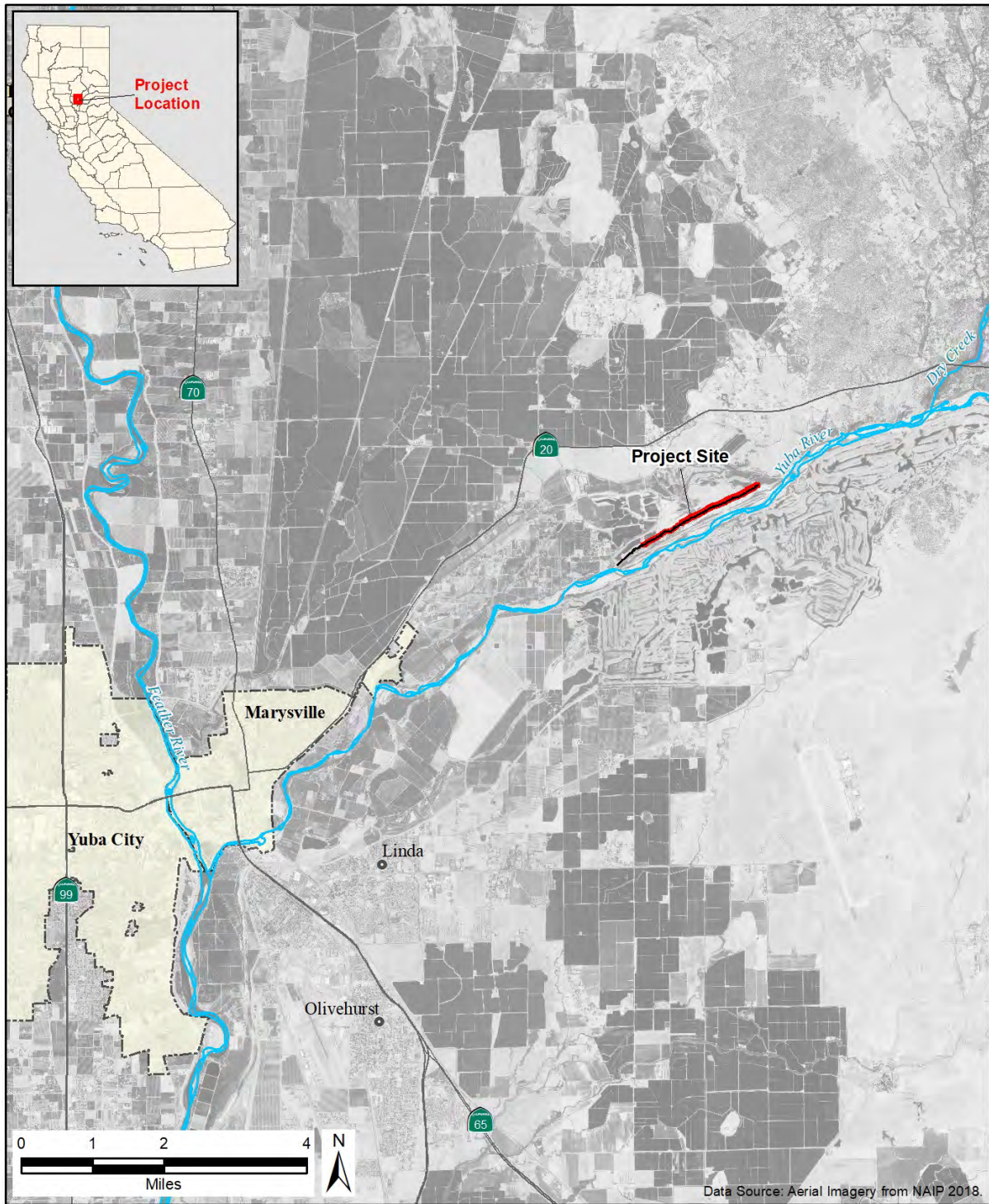
Electronic copies email to:

Creig Marcus, Tribal Administrator
Enterprise Rancheria of the Estom Yumeka Maidu Tribe
creigm@enterpriserancheria.org

Reno Franklin, Tribal Historic Preservation Officer
Enterprise Rancheria of the Estom Yumeka Maidu Tribe
renokeoni@me.com

Attachment 1. North Training Wall Project Figures

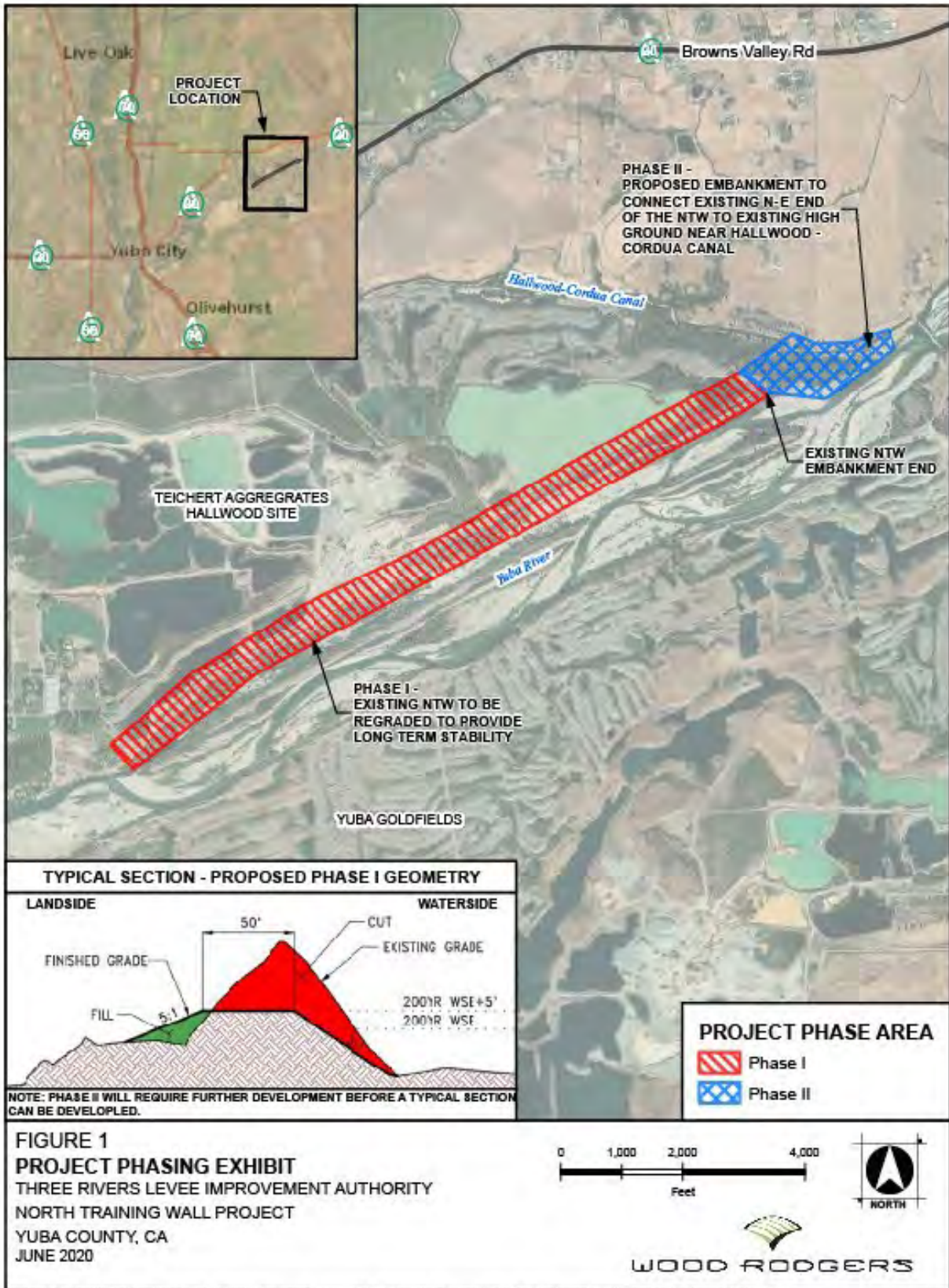
Figure 1. Project Location



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28Oct2020 RS

Source: GEI Consultants, Inc.

Figure 2. Project Phases



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Figure 3. Project Site



Data Source: GEI (2020), CBEC (2018/2019), NAIP 2018

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Source: Wood Rogers 2020, FloWest 2020



Consulting
Engineers and
Scientists

November 20, 2020

Grayson Coney, Cultural Director
Tsi Akim Maidu
P. O. Box 510
Browns Valley, California 95918

Subject: Three Rivers Levee Improvement Authority, Yuba River North Training Wall Project

Dear Director Coney,

On behalf of Three Rivers Levee Improvement Authority (TRLIA), GEI Consultants (GEI) is sending you this letter to serve as a formal invitation to your Tribe to consult with TRLIA regarding the proposed Yuba River North Training Wall (NTW) project. The proposed project is located on the north bank of the Yuba River, approximately 6 miles northeast of the City of Marysville, in Yuba County (Attachment 1, Figure 1). The NTW forms the southern boundary of the Teichert Aggregates Hallwood Facility and is north of the Yuba Goldfields.

The approximately 2.25-mile-long NTW is an existing cobble embankment that was constructed by the California Debris Commission in 1899 to confine the Yuba River and facilitate migration of mining debris within the floodway. Flood control was not an authorized purpose, but the NTW has historically provided and continues to provide flood protection to the surrounding area. However, the height and width of the NTW have decreased over time. This reduction and ongoing, persistent erosion from storm events have combined to create a flood risk to the Hallwood community, the City of Marysville, and portions of Reclamation District 10 (D-10).

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As part of the cultural resources review of the proposed project under CEQA, TRLIA is providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in PRC Section 21074, that may be close to the proposed project site shown in Attachment 1, Figure 3. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential, in accordance with California Government Code Section 6254.10.

If your Tribe would like to participate in formal consultation with TRLIA, please notify Mr. Paul Brunner, Executive Director, in writing, within 30 calendar days of receipt of this notice. Please send written notification to:

Mr. Paul Brunner, Executive Director
Three Rivers Levee Improvement Authority
1114 Yuba Street, Suite 218
Marysville, California 95901
PBrunner@co.yuba.ca.us

Sincerely,



Barry G. Scott, RPA
Senior Archaeologist
GEI Consultants, Inc.

Attachment 1: NTW Figures 1–3

cc: Mr. Paul Brunner, Executive Director
Three Rivers Levee Improvement Authority

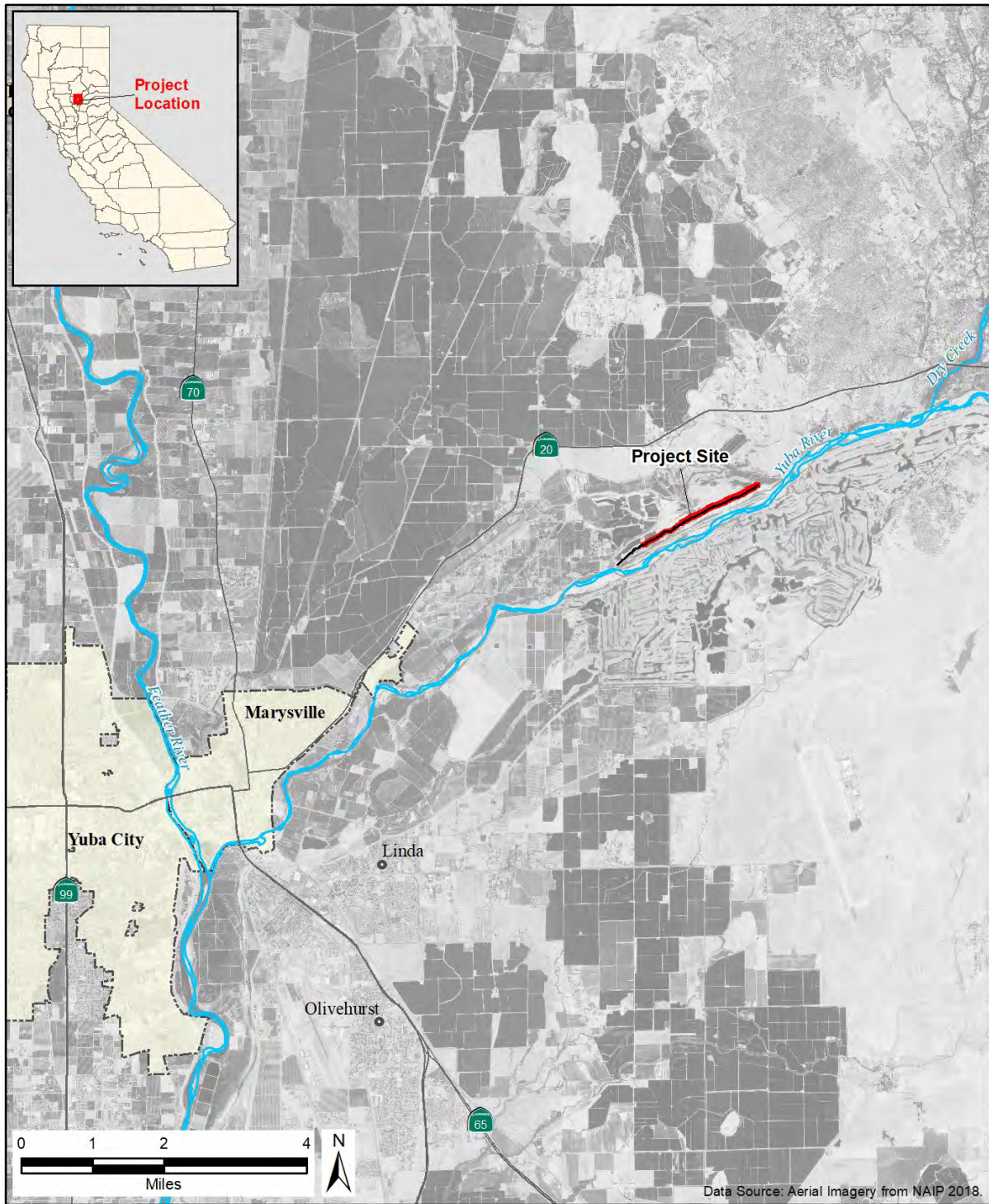
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Creig Marcus, Tribal Administrator
Enterprise Rancheria of the Estom Yumeka Maidu Tribe
creigm@enterpriserancheria.org

Reno Franklin, Tribal Historic Preservation Officer
Enterprise Rancheria of the Estom Yumeka Maidu Tribe
renokeoni@me.com

Attachment 1. North Training Wall Project Figures

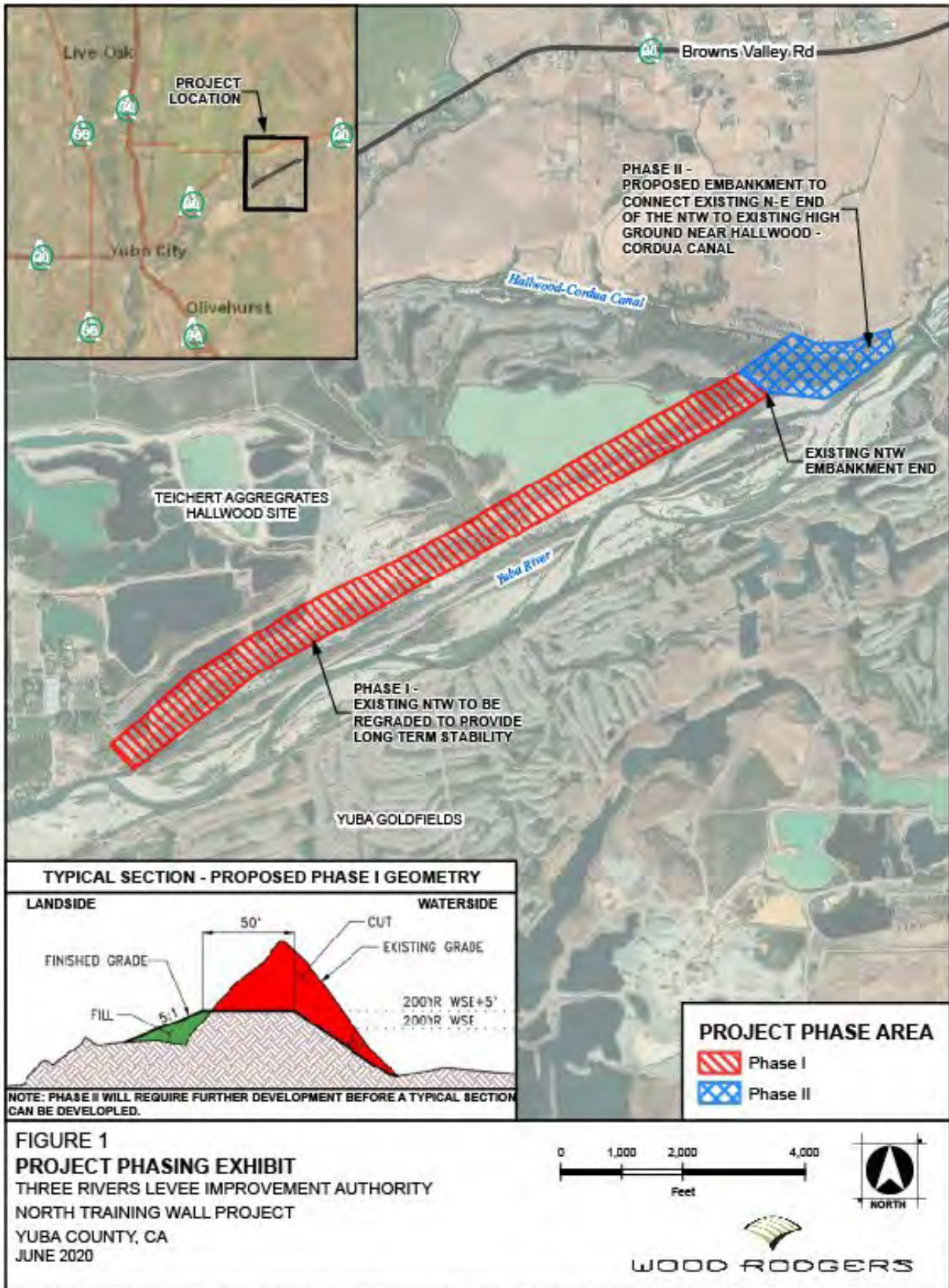
Figure 1. Project Location



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28Oct2020 RS

Source: GEI Consultants, Inc.

Figure 2. Project Phases



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Figure 3. Project Site



Source: Wood Rogers 2020, FloWest 2020

04Nov2020 SI Z:\Projects\050115_TRLIA\050115_NorthTrainingWall\G005_050115_NTW_ProjectSite.mxd