PUBLIC DRAFT INITIAL STUDY
FOR THE
DAGUERRE POINT DAM NATURE-LIKE FISHWAY
SITE INVESTIGATIONS PROGRAM

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
dB	decibel
ESA	Federal Endangered Species Act
FRAQMD	Feather River Air Quality Management District
GHG	greenhouse gas
lb/day	pounds per day
$MTCO_2e$	metric tons of carbon dioxide-equivalent per year
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NLF	nature-like fishway
NOx	oxides of nitrogen
PAL	Project Area Limits
$PM_{2.5}$	fine particulate matter - less than 2.5 microns in diameter
PM_{10}	coarse particulate matter - from 2.5 to 10 microns in diameter
PRC	Public Resources Code
ROG	reactive organic gases
THRIS	Tribal Historic Information System
UAIC	United Auburn Indian Community
USACE	United States Army Corps of Engineers
VMT	vehicle miles traveled
YCWA	Yuba County Water Agency

1 INTRODUCTION

1.1 Project Overview

Yuba County Water Agency (Yuba Water) is investigating the feasibility of constructing a nature-like fishway (NLF) at Daguerre Point Dam to improve fish passage on the lower Yuba River while maintaining present water supply and hydraulic debris retention functions of the dam and impoundment. Fish passage would be improved by providing a new nature-based channel that restores the river's pre-dam flow path around the south end of Daguerre Point and allows fish to bypass the dam.

As part of this larger investigation, Yuba Water is proposing to complete a site investigation program to provide surface and subsurface geological information for planning and preliminary design of the proposed NLF at Daguerre Point Dam (Proposed Project). The Proposed Project includes four field components: aerial photogrammetry, geophysical investigations, drilling and testing, and excavation of test pits. The surface and sub-surface information gathered from this work would provide sufficient site-specific data to assist in determining the feasibility of the NLF.

1.2 Regulatory Guidance

This document evaluates the potential environmental impacts of the Proposed Project. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., and the State CEQA Guidelines, Title 14 California Code of Regulations section15000 et seq. This Initial Study was prepared by Yuba Water to determine if the Proposed Project could have significant impacts on the environment.

In accordance with State CEQA Guidelines section 15064(a), an Environmental Impact Report must be prepared if there is substantial evidence that a project may have significant impacts on the environment. If the lead agency for the CEQA process determines that there is no substantial evidence for such impacts, or if the potential impacts can be reduced through revisions to the project description or the addition of mitigation measures so that there would clearly be no significant effects, a Negative Declaration or Mitigated Negative Declaration can be prepared (State CEQA Guidelines section 15070). Yuba Water, as the CEQA lead agency for the Proposed Project, has determined that an Initial Study and Mitigated Negative Declaration are the appropriate documents for compliance with CEQA and the CEQA Guidelines.

1.3 Public Review

In accordance with State CEQA Guidelines section 15073, this document will be circulated to local, state, and federal agencies and to interested organizations and individuals who may wish to review and comment on it. In reviewing this Initial Study and proposed Mitigated Negative Declaration, affected public agencies and the interested public should focus on whether the document sufficiently identifies and analyzes the possible impacts of the Proposed Project on the environment.

Following the close of the public review period, the Yuba Water Board of Directors will review and evaluate the evidence contained in the Initial Study and proposed Mitigated Negative

Declaration and public comments received on these documents. At a scheduled and noticed Yuba Water Board of Directors public meeting, the Board will review a Statement of Findings prepared for the Proposed Project and consider adoption of the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, and approval of the Proposed Project.

1.4 Summary of Findings

Section 3 of this document contains the analysis and discussion of potential environmental impacts resulting from the Proposed Project. Based on the analysis presented in Section 3, the Proposed Project would have no impact on the following resources:

- Agriculture and Forestry Resources
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural Resources
- Utilities and Service Systems

Impacts of the Proposed Project were determined to be less than significant for the following resources:

- Aesthetics
- Air Quality
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Transportation

Impacts of the Proposed Project to the following resources would be less than significant with incorporation of the mitigation measures described in Section 3:

- Biological Resources
- Cultural Resources
- Wildfire

As required by CEQA, a Mitigation Monitoring and Reporting Program will be prepared and adopted at the time of project approval. It will include those mitigation measures that would reduce potentially significant environmental impacts to less than significant levels.

1.5 Document Organization

This document is organized in the following manner:

- **Section 1 - Introduction.** This section provides a project overview and regulatory guidance and describes the public review process and organization of this document.

- **Section 2 - Project Description.** This section describes project location, history and background, purpose, and components.

- **Section 3 - Environmental Checklist.** This section provides an environmental setting for the Proposed Project and analyzes the potential environmental impacts of the Proposed Project. Resource topics appear in the order that they appear in Appendix G (Environmental Checklist) of the State CEQA Guidelines. Mitigation measures are incorporated and discussed, where appropriate, to reduce potentially significant impacts to a less-than-significant level. Mandatory Findings of Significance are also presented in this section.

- **Section 4 - List of Preparers.** This section contains a list of people that assisted in the preparation of this document.

- **Section 5 - References.** This section identifies the references used in the preparation of this document.

2 PROJECT DESCRIPTION

This section describes the Proposed Project location, provides history and background of the project site, describes the project purpose, and provides a detailed description of the project components.

2.1 Project Location

The Proposed Project location is located at Daguerre Point, latitude 39.206409, longitude 121.442861 on the south bank of the lower Yuba River; adjacent to Daguerre Point Dam, and approximately 12 miles northeast of Marysville, in Yuba County, California (**Figure 1** and **Figure 2**). The parcels of land where the Proposed Project will occur are owned by the United States Army Corps of Engineers (USACE), for which a special use permit has been executed to allow for the implementation of the Proposed Project, and Western Aggregate, Inc. for which a right of entry is currently being executed.

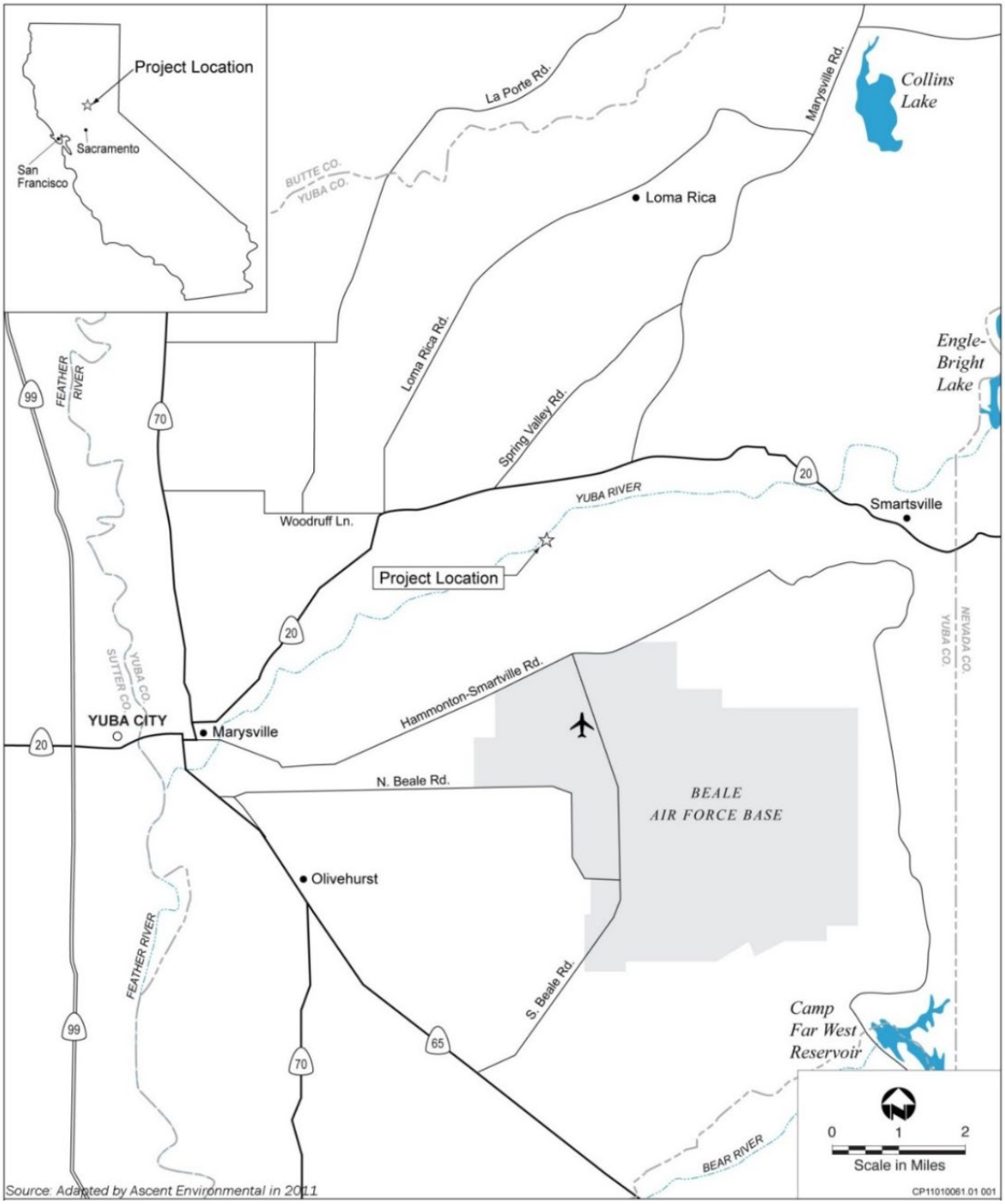

Figure 1. Regional location of project site.

Figure 2. Proposed Project site, including the locations of the geophysical investigations, boring, and test pit excavations

2.2 Background

Yuba Water is investigating the feasibility of constructing a NLF at Daguerre Point Dam to improve fish habitat on the lower Yuba River. The new NLF channel would be designed to improve the passage past Daguerre Point Dam for salmon and steelhead and to enable new fish passage for green sturgeon and Pacific lamprey. The NLF would also include a new fish screen and diversion facility that would improve fish protection, water supply reliability, and flood protection at Yuba Water's water supply diversion facilities at Daguerre Point Dam.

Daguerre Point Dam and the area of the proposed NLF are located on the western edge of the Sierra Nevada foothills, where the lower Yuba River flows out into the Sacramento Valley. Daguerre Point is the remains of an elevated bedrock ridge underlain by Jurassic-age metavolcanic rocks of the Smartville Complex metamorphic belt and in the area of the Yuba River forms the westernmost extent of exposed basement rock in the lowermost foothills at the east margin of the Sacramento Valley.

Previous modeling of the dredge tailings and concealed top of bedrock in the area of Daguerre Point Dam shows that an ancestral channel of the lower Yuba River flowed southward upstream of the dam (possibly deflected southward along the east side of the bedrock ridge) and then back westward around the south side of Daguerre Point. In 1910, following completion of Daguerre Point Dam in 1906, the Yuba River was diverted over the dam and through the Daguerre Point Cut by constructing a large training embankment from dredge tailings that spanned the Yuba Goldfields south of the river.

The proposed alignment of the NLF around the south-east end of Daguerre Point lies above the west-side flank of the former southward-draining LYR channel, and therefore the bedrock surface slopes down southeastward towards the thalweg of the now-buried channel. Varying amounts of surficial deposits including recent alluvium, spoil fill from the 1965 Daguerre Point Dam reconstruction, dredge tailings, colluvium, and older alluvium that overlie the bedrock are likely concentrated along the upstream to central reach of the NLF, extending around the southeast to southwest sides of Daguerre Point.

Characterization of various bedrock properties (vertical and lateral extent of weathering, fracture spacing, hardness, strength, permeability, groutability, excavatability, etc.) is the primary objective of the Proposed Project.

2.3 Project Purpose

The purpose of the Proposed Project is to complete a site investigation program to provide surface and subsurface geological information to assist with determining the feasibility of the proposed NLF.

2.4 Project Description

The Proposed Project includes four components.

1. Aerial Photogrammetry.

2. Geophysical Investigations.

3. Drilling and Testing.

4. Test Pit Excavations.

The following sections describe in detail the scope of the Proposed Project.

2.4.1 Aerial Photogrammetry

To assist in geological mapping of surficial deposits the site would be flown by a mapping drone and an updated georeferenced high resolution orthophoto of the site would be developed.

Areas of interest are shown in **Figure 3**. The yellow line shows the areas of interest for high resolution orthophoto. The red line shows the areas of interest for photogrammetric ground surface.

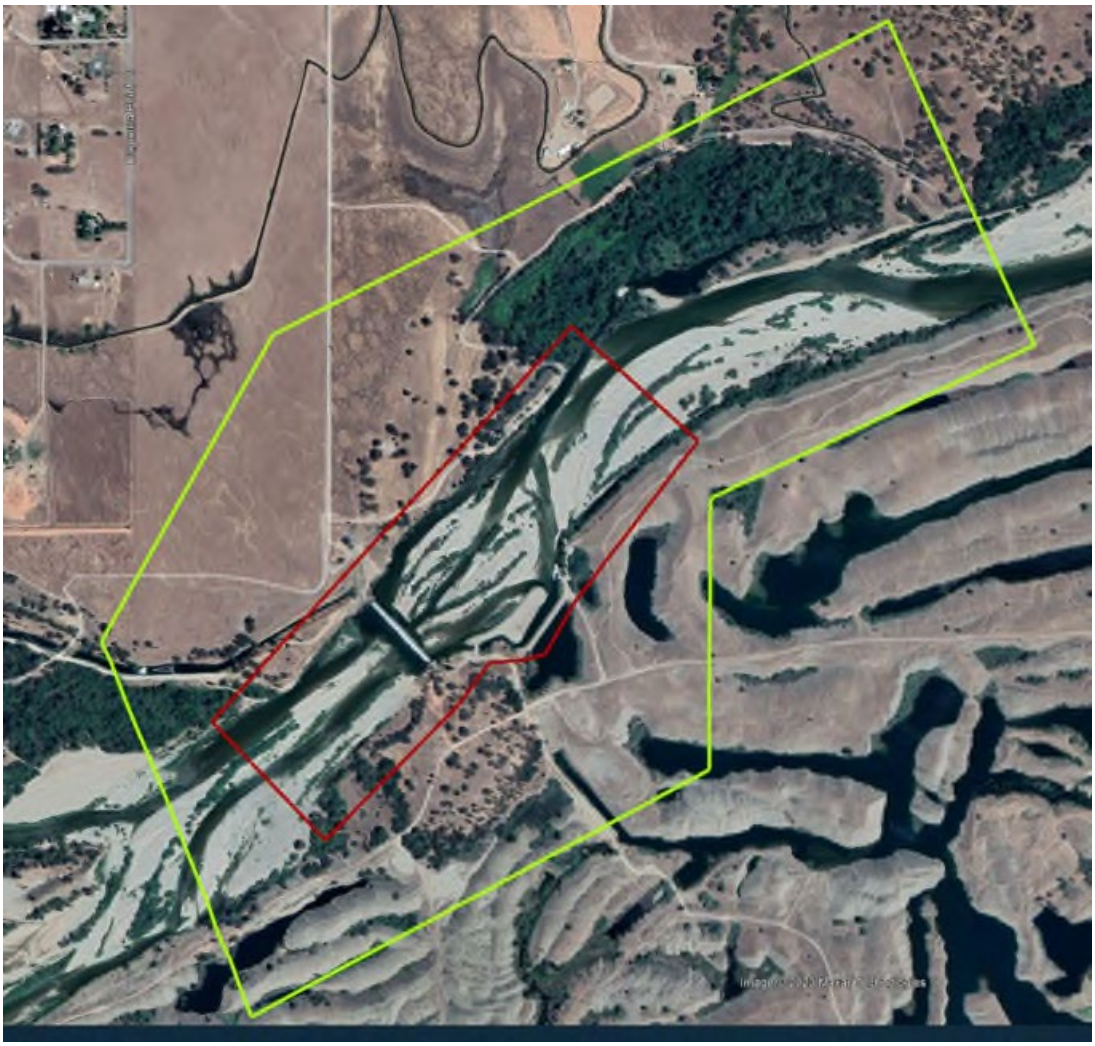

Figure 3. Area of interest for aerial photogrammetry.

Aerial photogrammetry would be completed in one day by two operators accessing the site by truck.

2.4.2 Geophysical Investigations

The proposed geophysical investigation is comprised of seismic refraction lines along 12 transects ranging in length from 380 to 1,500 feet. The planned total length of the seismic lines is 11,214 feet, which is about 2.1 miles. The planned locations of seismic lines are shown in Figure 2. The final locations of the lines may be refined in the field to account for obstructions, and to avoid potential cultural and biological resources and poison oak.

The geophysical work would be performed by two workers using a 250' Geometrics GeoCode 24 channel seismic system with a seismic source that would consist of a hammer and steel plate in contact with the ground. Geophysical investigations are expected to take two weeks to complete. The investigation would acquire seismic P-wave velocity data to determine the thickness of overburden and the depth and hardness of underlying bedrock. The resulting data would be processed to generate color-coded seismic refraction velocity profiles. The data would then be interpreted to derive the thickness of overburden and the depth and character of the underlying bedrock.

2.4.3 Drilling and Testing

The scope of the proposed drilling program consists of nine borings, ranging in depth from 21 to 60 feet with an estimated total depth of 368 feet. The actual length of boreholes would depend on the types and uniformity of the strata encountered.

Planned locations of the boreholes are shown in Figure 2. Five of the boreholes would be located on existing roads on Daguerre Point. Three of the boreholes would be located on gently sloping terrain accessible from existing roads on the top of Daguerre Point. One borehole would be located on an alluvial terrace downstream of Daguerre Point Dam. The locations and depths of boreholes may be revised based on the findings of the geophysical investigation.

The drilling would be carried out by a track-mounted drill rig that can access offroad drill sites. In-situ testing would include penetrometer with water pressure and falling head permeability testing. The boreholes would be drilled via mud rotary and HQ-3 coring. The uppermost section of the boreholes, where drilling through soils (e.g., dredge tailings, other fill, alluvium and colluvium) would be sampled mostly via standard penetration test drive sampling using a split-spoon sampler. Borings would be sampled at 2.5' intervals with a one-foot interval between samples. After photographing and logging all samples would be placed in plastic bags and examined later, if necessary.

Most of the drilling is expected to occur through meta-volcanic rock and drilled by HQ-3 coring. This method would provide near full recovery of the core, for inspection either on site or afterward (the core would be logged, photographed and boxed). Rock coring is expected to comprise around 90% of everything drilled. Borings would be standard penetration test-sampled every 2.5 feet to rock after which they would be HQ-3-cored to the bottom of the hole.

The borings would be backfilled with cement grout via the Tremie method per State of California and Yuba County regulations as outlined in the State of California water well standards Bulletin 74-81. A steel surface casing used to maintain drill fluid circulation and contain cuttings would not be removed until completion of the grouting process, so would be in place until the boring is terminated.

The drilling and testing work would be completed in three weeks using four workers, two tracked vehicles (a drill rig and support vehicle), and two pickup trucks.

2.4.4 Test Pit Excavations

Ten shallow test pits would be excavated to determine excavation conditions, assess the depth and types of overburden, and gather overburden samples for laboratory analysis. Test pits would be shallow pits with a width of about 6 to 12 feet and a typical depth of 6 to 8 feet depending on soil type. The test pits would be logged and photographed by CAI's engineering geologist to identify overburden stratigraphy. Bag samples would be taken, as appropriate, for laboratory analyses. Test pits would then be backfilled and compacted using the material excavated from each pit.

Test pit excavations would be completed in one week by two workers using an excavator.

2.4.5 Construction Schedule

The Proposed Project would be sequenced with the aerial photogrammetry completed first, followed by the geophysical investigation, drilling and testing, and test pit excavations. The Proposed Project would take approximately six weeks to complete with initiation of work expected to occur in the late summer or fall of 2023, when all approvals are in hand.

3 ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected

The environmental factors, if checked below, would be potentially affected by this project and would involve at least one impact that is a significant or potentially significant impact that cannot be reduced to a less-than-significant level as indicated by the checklist on the following pages.

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

Evaluation of Environmental Impacts

The following Environmental Checklist form is based on the checklist suggested in Appendix G of the State CEQA Guidelines. The Environmental Checklist identifies potential project effects as corresponding to the following categories of impacts:

- **Potentially Significant Impact**: An effect that may be significant based on substantial evidence and the significance criteria. If the project may result in one or more potentially significant impacts, an Environmental Impact Report is required.
- **Less than Significant with Mitigation Incorporated**: An effect that, with the implementation of project-specific mitigation measures, is reduced from potentially significant to less than significant.
- **Less-than-significant impact**: An effect for which no significant impacts, only less-than-significant impacts, result.
- **No Impact**: An effect for which the Proposed Project does not create an impact.

3.1 Aesthetics

Except as provided in Public Resource Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☑	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☑

3.1.1 Setting

The Proposed Project site is located in a rural setting on the south bank of the lower Yuba River. Several unpaved access roads lead to the site, which contains grasslands and oak woodland vegetation. Views to the south and east of the project site include the Yuba Goldfields. This area includes irregular gravel and cobble mounds interspersed with ponds. The cobble mounds are covered with sparse ruderal vegetation; trees occur in varying numbers in the Goldfields and scattered woody vegetation is present in upland areas. Views to the north and west of the Project

site are of the lower Yuba River, Daguerre Point Dam, and grazing lands located across the river. No changes to the visual character would occur due to the presence of site investigation equipment. These changes would not be visible from off-site and would be temporary. Rural residences in the vicinity do not have direct views of the project site.

Because of the rural setting of the project site, most off-site views are obscured by distance, topography, and vegetation. In addition, there are no scenic resources (i.e., scenic roadways, historic features) in the project vicinity, and the nearest eligible state scenic highway is State Route 49, which is more than 15 miles east of the project site. Yuba County has designated a number of roadways within the county as scenic; however, the project site is not visible from any of these roadways because of distance, topography, and intervening vegetation.

3.1.2 Discussion

a) A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The Proposed Project would be consistent with existing characteristics of the site and would not substantially alter the visual character of the site. Therefore, the Proposed Project would have **no impact** on a scenic vista.

b) The Proposed Project is not located on, adjacent to, or visible from any scenic state highway and there are no known designated scenic resources in the project area. Therefore, the Proposed Project would have **no impact** on scenic resources.

c) The Proposed Project is located in a non-urbanized area, with all access via private property and, as such, there would be minimal if any opportunity for the public to see the Proposed Project site. The following analysis considers the potential for the Proposed Project to degrade the existing visual character or quality of public views of the site in the event public were to encounter this view.

   Following the site investigation work, the visual characteristics of the site would not differ appreciably, if at all, from existing conditions, due to the investigative nature of the Proposed Project. Aerial photogrammetry and geophysical investigations would have no effect on the visual characteristics of the Proposed Project site. The boring and test pit components of the Proposed Project are groundbreaking and would include the temporary placement of excavated soils on land adjacent to each test location. However, at the completion of each boring and test pit excavation, all soil not kept for analysis would be placed back into the boring hole or test pit and capped at the surface. Grassland vegetation would be expected to repopulate the test locations within a few months, leaving no difference in the visual characteristics of the site. As such, the Proposed Project would have a **less-than-significant impact** on the existing visual character of the Proposed Project site and its surroundings and would not conflict with applicable zoning and other regulations governing scenic quality.

d) The Proposed Project does not include nighttime lighting or nighttime work. Furthermore, the Proposed Project does not include any features that would create substantial light or glare during the day. Therefore, the Proposed Project would have **no impact** on day or nighttime views in the area.

3.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 511049g)?	☐	☐	☐	☑
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?	☐	☐	☐	☑

3.2.1 Setting

The Project site is in a rural setting adjacent to the lower Yuba River on property owned by USACE and Western Aggregates, Inc. None of the Proposed Project site that would be disturbed by investigation activities is zoned or used for agriculture or forestry resources.

3.2.2 Discussion

a) No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is located within the Proposed Project site and the Proposed Project would not result in the conversion of agricultural land to non-agricultural uses. Therefore, there would be **no impact** on farmland conversion to a non-agricultural use.

b) None of the Proposed Project site is in an area zoned for agriculture. As such, the Proposed Project would not disturb any land used for agriculture or that is subject to Williamson Act contract and would not result in any changes that would conflict with the zoning. Therefore, the Proposed Project would have **no impact** on existing agricultural use zoning or a Williamson Act contract.

c-d) The Proposed Project would not involve the conversion of forest land or timberlands to another use, nor would the Proposed Project directly affect forest land or timberlands.

Therefore, the Proposed Project would have **no impact** on existing zoning or loss of forest land or timberlands.

e) As identified in response "b" above, the Proposed Project would not occur on land zoned for agriculture. As such, the Proposed Project would not result in any conversion of Farmland to a different use. Therefore, the Proposed Project would have **no impact** on the conversion farmland to non-agricultural use or of forest land to a non-forest use.

3.3 Air Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☑	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☑

3.3.1 Setting

The Proposed Project site is in Yuba County, which is within the Northern Sacramento Valley Area Air Basin. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The climate throughout the Northern Sacramento Valley Area Air Basin is similar, especially the valley floor where the majority of the population resides. Summers are typically dry and warm.

Of the many potential air pollutants, ozone, and particulate matter (i.e., respirable [PM_{10}] and fine [$PM_{2.5}$]) are of primary concern within Yuba County. Yuba County is a "non-attainment" for ozone, $PM_{2.5}$ and PM_{10}, and either "attainment" or unclassified for nitrogen dioxide, sulfur dioxide, sulfate, lead, carbon monoxide, hydrogen sulfide, and visibility reducing particles under the terms of the California Clean Air Act (California Air Resources Board 2022). Under the terms of the National Ambient Air Quality Standards, Yuba County is categorized as in "attainment" or unclassified for all pollutants (U.S. Environmental Protection Agency 2018).

Air quality within the Proposed Project area is regulated by the U.S. Environmental Protection Agency and California Air Resources Board (CARB) at the federal and state levels, respectively, and locally by the Feather River Air Quality Management District (FRAQMD). The FRAQMD is a bi-county district that was formed to administer local, state, and federal air quality management

programs for Yuba and Sutter counties. The mission of the FRAQMD is to promote and improve the air quality of Sutter and Yuba counties. This is accomplished through monitoring, evaluation, education, by implementing control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles. The FRAQMD also responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the federal Clean Air Act (including amendments) and California Clean Air Act. The FRAQMD has established thresholds for reactive organic gases (25 pounds per day [lb/day]), oxides of nitrogen (25 lb/day), and PM_{10} (80 lb/day).

The General Conformity regulation of the Clean Air Act was established in 1993 to help states and tribes improve air quality in those areas that do not meet national ambient air quality standards. The regulation contains *de minimis* thresholds, below which, a project would not be considered to substantially interfere with attainment of national standards associated with air quality planning efforts. The Proposed Project area is in attainment for all federal standards, thus *de minimis* thresholds do not apply.

Sensitive land uses are generally considered to include those uses where exposure to pollutants could result in health-related risks to individuals. Residential dwellings and places where people recreate or congregate for extended periods of time such as parks or schools are of primary concern because of the potential for increased and prolonged exposure of individuals to pollutants. Sensitive receptors closest to potential construction activities include single-family residences located approximately 3,000 feet north of the project site.

3.3.2 Discussion

a) The Proposed Project consists of temporary site investigations and would not result in increases in population or employment. Thus, the Proposed Project would have **no impact** in regard to conflicting with or obstructing implementation of an air quality plan.

b) Proposed Project-related emissions of criteria air pollutants were calculated using the California Emissions Estimator Model or CalEEMod, Version 2020.4.0, which is a statewide land use emissions computer model. CalEEMod is approved by the FRAQMD for construction projects for use in CEQA and NEPA environmental review (Feather River Air Quality Management District 2010). While the Proposed Project is a site investigation, not a construction project, it involves construction-type equipment and CalEEMod is the best available tool to estimate emissions from the project. Modeling was completed to determine the daily amount of oxides of nitrogen (NOx), reactive organic gases (ROG), PM_{10} and $PM_{2.5}$ emissions that would be generated by Proposed Project, based on project-specific information (e.g., schedule, types of equipment, daily equipment run time). Modeling assumed CalEEMod's default values for trip lengths, and equipment was assumed to run 8 hours per day for the duration of each phase of the site investigation. This was a conservative approach as the equipment would not be run continuously each day. Modeling results are presented below in **Table 1** along with the FRAQMD thresholds for ROG, NOx, PM_{10}, and $PM_{2.5}$. Based on the air quality modeling results, the emissions from Proposed Project would not exceed FRAQMD thresholds. Full modeling results can be found in **Appendix A**.

Table 1. Construction-generated emissions of criteria air pollutants and precursors.

Parameter	ROG (lb/day)	NOx (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Proposed Project	<1	<1	<1	<1
Threshold of Significance[1]	25, not to exceed 4.5 tons per year	25, not to exceed 4.5 tons per year	80	None
Exceeds Threshold?	No	No	No	Not applicable

Notes:
ROG = reactive organic gases
NOx = oxides of nitrogen
PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less
$PM_{2.5}$ = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less
lb/day = pounds per day

[1] Feather River Air Quality Management District 2010

Past, present, and future development projects contribute to a region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The Yuba County portion of the Northern Sacramento Valley Area Air Basin is currently designated as a non-attainment area relative to the State of California ambient air quality standards for ozone and PM_{10}; the county is in attainment relative to federal air quality standards. Furthermore, in developing thresholds of significance for air pollutants, FRAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As discussed above, project-generated emissions would not exceed FRAQMD thresholds. Therefore, the Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under the California Ambient Air Quality Standards or National Ambient Air Quality Standards. Therefore, the Proposed Project would have a **less-than-significant impact** on the cumulative net increase of any criteria pollutant for which the project region is non-attainment.

c) The FRAQMD guidance for CEQA assessments for construction projects states that the proximity of sensitive receptors to a construction site constitutes a special consideration and may require an evaluation of toxic diesel particulate matter (Feather River Air Quality Management District 2010). Examples of sensitive receptor locations include schools, day care centers, parks/playgrounds, hospitals or nursing centers, and residential dwelling units. If a project is located within 1,000 feet of a sensitive receptor location, then the impact of diesel particulate matter should be addressed in the CEQA assessment. Considering the highly dispersive properties of diesel particulate matter, the relatively low mass of diesel particulate matter emissions that would be generated during the short project duration, and that site investigation activities would not be located in close proximity to off-site sensitive receptors (i.e., nearby residences are located approximately 3,000 feet north of the project site), the

Proposed Project would have a **less-than-significant impact** on sensitive receptors to substantial pollutant concentrations.

d) The Proposed Project does not involve the construction of new structures or other facilities that would generate odors. Therefore, the Proposed Project would have **no impact** on the creation of objectionable odors.

3.4 Biological Resources

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

3.4.1 Setting

The Proposed Project includes completing a series of investigations in the late summer or fall on upland habitat adjacent to the lower Yuba River over a period of six weeks, including completing aerial photogrammetry, geophysical investigations, drilling and testing, and excavation of test pits. The work would be completed by two to four people, depending on project component, workers using drones, seismic refraction lines, drill rigs, and excavators.

This section describes the biological resources that occur in the Proposed Project area including a description of the existing biotic environment, an overview of special status species, a general description of other wildlife, and the analysis of potential impacts from the Proposed Project to biological resources.

Existing Conditions for Plants and Wildlife

Regional Setting

The Proposed Project site is located in a rural setting on the lower Yuba River. The Proposed Project site consists of an elevated knoll with grassland and oak woodland vegetation. Features adjacent to the site include the South Canal Diversion facility and associated canal system, Daguerre Point Dam, Hallwood-Cordua Diversion facility, USACE training levees, and the Yuba Goldfields. The Yuba Goldfields, located south and east of the Project site, is an area encompassing approximately 7,000 acres and located between the Project site and Hammonton-Smartville Road. The Yuba Goldfields were formed by dredging activities associated with hydraulic mining and include significant quantities of irregular gravel and cobble mounds interspersed with ponds. Several unpaved access roads lead to the Project site via access though the Yuba Goldfields. Areas to the north and west of the Proposed Project site consist of Daguerre Point Dam and the lower Yuba River with grazing lands located across the river. The Hallwood-Cordua water diversion facility is located directly across the river from the South Canal Diversion, both upstream of Daguerre Point Dam.

Habitat Types

The project area contains several habitat types that potentially may be affected by the Proposed Project. These habitat types are described below, with a discussion of common plant species that are found in each of the habitat types.

- Mixed Oak Woodland: The Proposed Project site is mixed oak woodland. Mixed oak woodland habitat in the site supports several species of oak, including valley oak (*Quercus lobata*), blue oak (*Q. douglasii*), and live oak (*Q. agrifolia*), and an understory of primarily nonnative annual grassland.

- Disturbed/Developed: Disturbed/developed land cover type is primarily associated with graded access roads that occur within the Proposed Project site and provide access to Daguerre Point Dam and areas of the Goldfields, and includes barren areas adjacent to the access roads. Where vegetation is present, it typically is limited to common annual ruderal species such as oat grass (*Avena fatua*), ripgut brome (*Bromus diandrus*), and yellow star-thistle (*Centaurea solstitialis*).

- Valley Foothill Riparian: Riparian habitat in the project vicinity is associated primarily with the Yuba River, the South Canal Diversion, and adjacent ponds. Common tree species in riparian habitat include valley oak (*Quercus lobata*), Fremont cottonwood (*Populus fremontii*), box elder (*Acer negundo*), common fig (*Ficus carica*), and willow (*Salix* sp.). Understory shrubs include Himalayan blackberry (*Rubus discolor*), California grape (*Vitis californica*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), poison oak (*Toxicodendron diversilobum*), and coyote bush (*Baccharis pilularis*).

- Lacustrine and Lake/Pond: Lacustrine and lake/pond habitat types adjacent to the project site include the South Canal Diversion and forebay and the intake canal.

General Wildlife

Common mammal species in the vicinity of the project site include Columbian black-tailed deer (*Odocoileus hemionus columbianus*), and squirrels, such as western grey squirrel (*Sciurus griseus*). Common bird species expected to occur in the vicinity of the project site, many of which are protected under the Migratory Bird Treaty Act, include raptors, such as American peregrine falcon (*Falco peregrinus*), red-tailed hawk (*Buteo jamaicensis*) and Cooper's hawk (*Accipiter cooperii*); songbirds, including dark-eyed junco (*Junco hyemalis*) and spotted towhee (*Pipilo maculatus*); woodpeckers, such as white-headed woodpecker (*Picoides albolarvatus*) and northern flicker (*Colaptes auratus*); and owls, including great horned owl (*Bubo virginianus*) and western screech owl (*Otus kennicottii*; Yuba County Water Agency 2014).

Special Status Plants and Wildlife

Special status plant species and wildlife that may occur at the Proposed Project site and that are endemic to California are described below. Special status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- officially listed by California or the federal government as endangered, threatened, or rare;
- a candidate for state or federal listing as endangered, threatened, or rare;
- taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- species identified by California Department of Fish and Wildlife (CDFW) as Species of Special Concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local planning documents;
- plant taxa considered by the CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern; and
- bird species protected under the Migratory Bird Treaty Act.

All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW's California Natural Diversity Database (CNDDB), regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, and 2 may qualify as endangered, rare, or threatened species within the definition of the CEQA Guidelines, California Code of Regulations Section 15380. CDFW recommends, and local governments may require, that CRPR 1A, 1B, and 2 species be addressed in CEQA documents.

For wildlife, special status species are considered those listed as threatened or endangered species under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA)

or identified as a federal Species of Concern or California Species of Special Concern. The term "California Species of Special Concern" is applied by CDFW to animals not listed under the ESA or CESA, but that are considered to be declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist.

Special status species considered for this analysis are based on a review of existing documentation, including the CNDDB (2023), the Yuba County 2030 General Plan (Yuba County 2011a), the Yuba County General Plan 2030 Final Environmental Impact Report (Yuba County 2011b), and other recent documents pertaining to biological resources in the region.

The following criteria have been used to determine the potential for special status plants and wildlife species to occur within the Proposed Project area based on species life history characteristics, life history requirements, past observation, and professional expertise.

- **High:** Species is known to occur on or near the project site (based on CNDDB records within five miles and/or based on professional expertise specific to the project site or species), and there is suitable habitat within the project site.

- **Low:** Species is known to occur in the vicinity of the Proposed Project site, and there is marginal habitat within the project site, or species is not known to occur in the vicinity of the site, but there is suitable habitat on the site.

- **None:** Species is not known to occur on or in the vicinity of the project site and there is no suitable habitat within the project site, or species was surveyed for during the appropriate season with negative results, or species is not known in Yuba County. Species with no potential to occur are not discussed further in this analysis.

Special status plant and wildlife species (including the common and scientific names for each species), regulatory status, habitat descriptions, and potential for occurrence at the Proposed Project site are listed in **Table 2**. No special status invertebrates, reptiles, or amphibians would be impacted by the Proposed Project. As such, species in these categories are not discussed further. Daguerre Point Dam appears to form a barrier to the movement of many fish species in the lower Yuba River. Thus, criteria used to determine the potential for fish species to occur at the project site includes potential to occur above Daguerre Point Dam, life history characteristics, life history requirements, past observation, and professional expertise.

Table 2. Special-status plant and wildlife species with the potential to occur at the Proposed Project site.

Species	Status[1] FESA, CESA, CRPR	Habitat	Potential for Occurrence
Plants			
Dwarf downingia *Downingia pusilla*	—, —, 2B.2	Moist valley and foothill grasslands and vernal pools. Blooms March–May.	None; there is no habitat for this species within the project site.
Hartweg's golden sunburst *Pseudobahia bahiifolia*	FE, CE, 1B.1	Clay soils in valley and foothill grasslands. Blooms March–April.	None; extant occurrences are limited to the San Joaquin Valley; a Yuba County occurrence from the 1840s is considered extirpated.

Species	Status[1] FESA, CESA, CRPR	Habitat	Potential for Occurrence
Legenere *Legenere limosa*	—, CT, 1B.1	Moist areas and vernal pools. Blooms April–June.	None; there is no habitat for this species within the project site.
Veiny monardella *Monardella venosa*	—, —, 1B.1	Usually in heavy clay within cismontane woodland, valley, and foothill grassland. Blooms May—July.	None; known from only two extant populations in Butte and Tuolumne counties; a Yuba County occurrence from the 1850s is considered extirpated.
Wildlife			
Invertebrates			
California linderiella *Linderiella occidentialis*	—, CT, —	Vernal pools, swales, and ephemeral freshwater habitat.	None; there is no habitat for this species within the project site.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT, —, —	Blue elderberry shrubs usually associated with riparian areas.	None; The nearest elderberry shrub is located approximately 200 yards from the project site. Since valley elderberry longhorn beetle is only found in close association with the host plant, elderberry shrubs, there is no potential for valley elderberry longhorn beetle to occur at the project site.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT, —, —	Vernal pools, swales, and ephemeral freshwater habitat.	None; there is no habitat for this species within the project site.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE, —, —	Vernal pools, swales, and ephemeral freshwater habitat.	None; there is no habitat for this species within the project site.
Monarch Butterfly *Danaus plexippus*	FC,	Milkweed which serves as its larval host plant. Native flowering plants also provide an important food source.	None; there is no habitat (i.e., milkweed) for this species within the project site.
Reptiles			
Giant garter snake *Thamnophis gigas*	FT, CT, —	Slow-moving streams, sloughs, ponds, marshes, inundated floodplains, rice fields, and irrigation/drainage ditches on the Central Valley floor with mud bottoms, earthen banks, emergent vegetation, abundant small aquatic prey and absence or low numbers of large predatory fish. Also require upland refugia not subject to flooding during the snake's inactive season.	None; there is no habitat for this species within the project site.
Western pond turtle *Emys marmorata*	—, CSC, —	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	None; there is no habitat for this species within the project site.
Birds			
Bank Swallow *Riparia riparia* (nesting)	—, CT, —	Nests in colonies in unvegetated vertical banks with fine-textured, sandy soils, typically next to streams, rivers, or lakes, occasionally in gravel quarries or other eroding bluffs. Forages in a variety of habitats near nests.	Low; individuals from nest colonies along the Feather River could occasionally forage in the project vicinity; but no suitable nesting habitat is present.
Burrowing owl *Athene cunicularia*	—, CSC, —	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils. Suitable burrow sites consist of short, herbaceous vegetation with only sparse cover of shrubs or taller herbs (Schuford and Gardali 2008:221)	High; potential nesting habitat and the annual grassland provides foraging habitat. Has been documented in the project vicinity.

Species	Status[1] FESA, CESA, CRPR	Habitat	Potential for Occurrence
California black rail *Laterallus jamaicensis coturniculus*	—, CT, —	Saltwater, brackish, and freshwater marshes. Found in numerous willow, densely vegetated wetlands throughout the northern Sierra Nevada foothills.	None; there is no habitat for this species within the project site.
Loggerhead shrike *Lanius ludovicianus*	—, CSC, —	Forages in grasslands and agricultural fields, and nests in scattered shrubs and trees.	High; riparian and oak woodland provide suitable foraging habitat and suitable nest sites.
Northern harrier *Circus cyaneus*	—, CSC, —	Uses a variety of open grassland, wetland, and agricultural habitats. Breeding habitats include marshy meadows, wet and lightly grazed pastures, and freshwater and brackish marshes; and dry upland habitats, such as grassland, cropland, drained marshland, and shrub-steppe in cold deserts. Wintering habitat includes grassland, pastures, cropland, coastal sand dunes, brackish and freshwater marshes, and estuaries.	Low; potential nesting habitat adjacent to marshy areas is of marginal quality.
Song sparrow (Modesto population) *Melospiza melodia*	—, CSC, —	Emergent freshwater marsh dominated by tules, and cattails; willow riparian scrub; valley oak riparian woodland with dense understory; and along vegetated irrigation canals and levees.	Low; riparian habitat present does not have a dense understory and is considered to be marginal quality for this species.
Swainson's hawk *Buteo swainsoni*	—, CT, —	Nest peripherally to Valley riparian systems in lone trees or groves of trees in agricultural fields. Valley oak, Fremont cottonwood, walnut, and large willow trees, ranging in height from 41 to 82 feet, are the most commonly used nest trees in the Central Valley. This species is known from Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Inyo, Kern, Kings, Lassen, Los Angeles, Madera, Merced, Modoc, Mono, Napa, Placer, Plumas, Sacramento, San Bernardino, San Joaquin, San Luis Obispo, Siskiyou, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba counties in California.	High; the trees provide potential nesting habitat, and the annual grassland provides foraging habitat. Has been documented in the project vicinity.
Tricolored blackbird *Agelaius tricolor*	—, CSC, — (nesting colony)	Nests in dense blackberry, cattail, tule, willow, or wild rose within emergent wetlands throughout the Central Valley and foothills surrounding the valley.	Low; riparian vegetation provides potentially suitable nesting habitat for this species.
Yellow-breasted chat *Icteria virens*	—, CSC, —	Dense riparian thickets of willow and other shrub vegetation along watercourses.	Low; riparian habitat present does not have a dense understory and is considered to be marginal quality for this species.
White-tailed kite *Elanus leucurus*	—, FP, ---	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	High; potential nesting habitat located within project site. Has been documented in project vicinity.
Mammals			
Western red bat *Lasiurus blossevillii*	—, CSC, —	Roosts primarily in tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging, including grasslands, shrublands, and open woodlands.	Low; riparian vegetation on the project provides suitable roosting habitat for this species.

Species	Status[1] FESA, CESA, CRPR	Habitat	Potential for Occurrence

Notes: CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database; CESA = California Endangered Species Act; FESA = Federal Endangered Species Act

[1] Legal Status Definitions

Federal Endangered Species Act:
FE Endangered (legally protected)
FT Threatened (legally protected)
FC Candidate species

California Endangered Species Act:
CE Endangered (legally protected)
CT Threatened (legally protected)
FP Fully Protected (legally protected)
CSC Species of special concern (no formal protection other than CEQA consideration)
CR California Rare

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat ranks:
.1-Seriously threatened in California (greater than 80% of occurrences threatened / high degree and immediacy of threat)
.2-Moderately threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat)
.3-Not very threatened in California (fewer than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Source: California Natural Diversity Database 2023; U.S. Fish and Wildlife Service 2023 (**Appendix B**), Yuba County 2011a, Yuba County 2011b

3.4.2 Discussion

The potential for project-related effects to biological resources is assessed below in responses to the Initial Study checklist questions. The assessment of effects primarily considers the likely presence of biological resources and their habitats in the project area, the magnitude and duration of direct and indirect effects to the species and their habitats, and the availability of feasible mitigation measures to avoid or minimize the effects.

a) The following discussion assesses potential impacts of the Proposed Project, both directly and through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW (formerly California Department of Fish and Game), U.S. Fish and Wildlife Service, and/or Migratory Bird Treaty Act, occurring within the affected environment.

All special status species with the potential to occur in the project site are listed in Table 2 above. Special status species with the potential to occur in the project site and that have the potential to be substantially adversely affected, either directly or through habitat modifications, include species listed under the ESA and CESA, are considered federal species of concern, are considered state species of special concern, or are assigned a CRPR. No additional special status species with the potential to be substantially adversely affected are listed in any local or regional plans, policies, or regulations as candidate or sensitive.

Special Status Plants

No special-status plant species are expected to occur on or adjacent to the project site, and thus the Proposed Project would have **no impact** on special-status plants.

Special Status Wildlife

Eleven special status species, 10 bird and one bat species, have the potential to occur on or adjacent to the project site (Table 2). No other special status wildlife has the potential to occur

near the project site. Effects of the Proposed Project on birds would be temporary in nature since no trees or shrubs would be impacted by the Proposed Project, only non-native grasslands. Potential effects to special status birds and bats are discussed below.

Temporary Effects to Special Status Birds

Temporary construction-related effects which would occur during active construction include:

- disturbance as a result of operating construction equipment to complete boring, test pits, and geophysical investigations.

These construction activities could potentially disturb or harm birds, if present.

Special Status and Migratory Birds

Specific construction related effects of the Proposed Project to special status and migratory birds include disturbance to individual birds, including nesting raptors and passerines, as a result of completing borings, test pits, and geophysical investigations.

Construction activities could produce noise that disturbs special status birds, migratory birds, and ground-nesting species such as burrowing owl. Suitable nesting habitat for white-tailed kite, loggerhead shrike, and other raptors such as Swainson's hawk has been documented in the Proposed Project vicinity. Such potential disturbances could cause birds to temporarily move away from the area or to abandon nests. Importantly, the Proposed Project is expected to be implemented outside of the nesting season (i.e., February 1–August 31), and thus no impacts to nesting birds are expected to occur. However, because the timing of necessary approvals are not assured of being in hand outside of nesting season, the Proposed Project could affect nesting birds and raptors and those effects could be potentially significant. Implementation of **Mitigation Measure BIO-1** would reduce this impact to a **less-than-significant impact**.

Mitigation Measure BIO-1: Avoid impacts to special status and migratory birds

- If implementation of the Proposed Project occurs during the nesting season, February 1 through August 31, a qualified biologist will conduct preconstruction surveys for nesting birds, including all potential special-status bird species (white-tailed kite, loggerhead shrike, burrowing owl, and Swainson's hawk) nesting near the Project site. The surveys will be conducted no more than 10 days before the beginning of construction. If no nests are found, no further mitigation is required.

- If active nests are found, impacts on nesting birds will be avoided by establishing appropriate buffer zones around the nests. No project activity will commence within the buffer zone until a qualified biologist confirms that any young have fledged, or the nest is no longer active. A 500-foot buffer zone around raptor nests, burrows, and colonies are adequate to protect them from disturbance, but the size of the buffer may be adjusted by a qualified biologist in consultation with CDFW depending on site-specific conditions. The necessary buffer zone for a Swainson's hawk nest is 0.25 mile.

Temporary Effects to Western Red Bats

Temporary construction-related effects which would occur during active construction include:

• noise disturbance as a result of operating construction equipment to complete boring, test pits, and geophysical investigations.

These construction activities could potentially disturb bats colonies if present.

Western Red Bats

Specific construction related effects of the Proposed Project to Western red bats include noise disturbance to bats that may roost in the riparian habitat in and adjacent to the project site.

Suitable roosting habitat for Western red bat has been documented in the Proposed Project vicinity. Construction activities will produce noise that could disturb Western red bat roosts. Such potential disturbances could cause interruptions in their abilities to use echolocation for foraging or, if the noise disturbance is significant, cause them to abandon their roosts.

The Proposed Project could affect Western red bats and those effects could be potentially significant. Implementation of **Mitigation Measure BIO-2** would reduce this impact to a **less-than-significant impact**.

Mitigation Measure BIO-2: Avoid impacts to Western Red Bats

- A qualified biologist will conduct preconstruction surveys for Western red bats near the project site. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period) and/or inspection for bat signs (e.g., guano). Visual surveys will include trees within 0.25 mile of Project construction activities. The surveys will be conducted no more than 10 days before the beginning of construction. If no roosts or signs of Western red bats are found, no further mitigation is required.
- If active roosts or signs of Western red bats are found, impacts on Western red bats will be avoided by establishing a 150-foot buffer zone around the roosting tree(s). No project activity will commence within the buffer zone.

b) The Proposed Project would involve very minor clearing of non-native grassland vegetation during boring and test pit activities. No trees of shrubs would be disturbed during implementation of the Proposed Project and thus any effects to riparian habitat would be limited to indirect effects from construction equipment operating nearby. Access to the Proposed Project site would be via existing dirt roads that have previously been used for maintenance-related activities.

Based on these findings, the Proposed Project would have a **less-than-significant impact** on riparian habitat or other sensitive natural communities.

c) There are no state or federally protected wetlands at the Proposed Project site as defined by Section 404 of the Clean Water Act. The Proposed Project site is located adjacent to the lower Yuba River; however, all work will be completed above the ordinary high water mark. Therefore, implementation of the Proposed Project would not involve any impact to wetlands. Thus, the Proposed Project would have **no impact** on state or federally protected wetlands.

d) Although the Project site may serve as a migratory corridor for some terrestrial wildlife species, project implementation would occur within a limited geographic area, allowing wildlife species to avoid the Project site. In addition, Project activities would be limited to daytime hours, which would allow for migration activity to occur at night when no disturbance is occurring. Finally, the Proposed Project would not include any structures or barriers that interfere with wildlife movement. Therefore, the Proposed Project would substantially interfere with the movement of any wildlife species or established native resident or migratory wildlife corridors.

   Based on the assessment provided above, the Proposed Project would have a **less-than-significant impact** on the movement of any native or migratory fish or wildlife species, established native resident of migratory wildlife corridors, or on native wildlife nursery sites.

e) The Proposed Project would not result in removal of any trees. Therefore, the Proposed Project would have **no impact** in regard to conflicting with local policies or ordinances protecting trees.

f) Although a regional conservation plan is currently under development and is intended to serve as a combined federal Habitat Conservation Plan and state Natural Communities Conservation Plan for Yuba and Sutter Counties, this plan has not been adopted and is not expected to be adopted before project implementation. Therefore, the Proposed Project would have **no impact** on consistency with an applicable habitat conservation plan or natural community conservation plan.

3.5 Cultural Resources

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

3.5.1 Standards of Significance

The Project is subject to the requirements of CEQA (Public Resources Code [PRC] 21000 et seq.) 1970, as amended. The lead agency must consider the effects of the Project on historical resources,

traditional cultural resources, and unique archaeological resources. Pursuant to PRC Section 21084.1, a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

"Historical resources" is a term defined within PRC Section 21084.1 and State CEQA Guidelines Section 15064.5(a). The term embraces any resource that is listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR), which is defined in PRC Section 5024.1 and CCR Section 4852. The CRHR includes resources listed in or formally determined to be eligible for listing in the National Register of Historic Places, as well as some California State Landmarks and Points of Historical Interest.

"Unique archaeological resources" (e.g., an archaeological artifact, object, or site that would clearly add to the current body of archaeological knowledge) is a term defined in PRC Section 21083.2(g).

In addition, the Natural Resources Element of the Yuba County General Plan includes goals, policies, and actions designed to identify, protect, and preserve Yuba County's important prehistoric and historic resources.

3.5.2 Setting

Precontact Background

Beginning in the 1930s through the present, archaeological investigations developed a classification and chronological scheme for cultural change for the Sacramento Valley, Sacramento–San Joaquin Delta, and San Joaquin Valley (e.g., Bennyhoff and Fredrickson 1994; Gifford and Schenck 1926; Heizer and Fenenga 1939; Heizer 1949; Fredrickson 1973, 1974, 1994; Lillard et al. 1939; Moratto 2004; Schenck and Dawson 1929). Indeed, Rosenthal et al. (2007) recently summarized the classification and chronological sequence for the Central Valley and identified five periods: Paleo-Indian (11,500–8550 cal [calibrated] B.C.), Lower Archaic (8550–5550 cal B.C.), Middle Archaic (5550–550 cal B.C.), Upper Archaic (550 cal B.C.–cal A.D. 1100), and Emergent or Late Prehistoric Period (cal A.D. 1100–Historic Contact).

Typical indigenous resources in the Project Area Limits (PAL) (i.e., the total area within Project boundaries) include permanent and seasonal residential sites, plant processing sites with bedrock mortars, and lithic scatters. Features associated with these types of sites include hearths, midden, and artifacts (e.g., projectile points, hammerstones, lithic debitage, beads, plant processing implements, and fishing equipment).

Historic Background

The discovery of gold in 1848 on Dry Creek near its confluence with the Yuba River led to the establishment of numerous mining communities along the Yuba River and the delineation of Yuba County in 1850 as one of the original 27 California counties (Hoover 2002:572–575). Indeed, Yuba County and the Project area have a long history of mineral extraction and mining remains an important part of the county's economy and identity.

Mining in the area initially focused on sand bars in the Yuba River that had a relatively high gold content and were easily accessible. Mining efforts soon moved further from the river as the bars were exhausted and with the introduction of hydraulic mining and dredging. Consequently, goldfields were developed along both sides of the lower Yuba River, starting ten miles northeast of Marysville and encompassing approximately 9,700 acres. The goldfields were formed by the dredging of hydraulic mining debris from the Yuba River floodplain beginning in the early 1900s. The debris, consisting of sands, gravels, and cobbles, was deposited along the active riverbank and interior floodplain, generating irregular gravel/cobble mounds and an undulating terrain interspersed with ponds (AECOM 2015; Bureau of Land Management 2006; Clark 1970:62–63).

The Hammonton Gold District on the lower Yuba River (now commonly referred to as the Yuba Goldfields) was one of the two largest dredging fields in California. The Hammonton dredge field, named after Wendell P. Hammon who owned land and a dredging company in the area, extends for about 8 miles along the lower Yuba River and is 3 miles wide, mostly on the south side of the present channel of the river. In 1905, the newly organized Yuba Consolidated Gold Fields (Yuba Consolidated) was founded by Hammon for the extraction of gold (AECOM 2011:4.5-7; Clark 1970:19, 62–63; Durham 1998:496; Gudde 1998:158; Kirshenbaum 2000:14–19).

In the early 1900s, Hammon entered into an agreement with the federal government to manage the mining debris on the Yuba River that included the Daguerre Point Project (Hagwood 1981:42-49). As part of this agreement, Hammon agreed to build impound basins to contain mining debris on the upper reaches of the Yuba River. Embankments were also built to separate the impounding basins from the main channel of the Yuba River.

Daguerre Point Dam and South Canal Diversion History

The combined water of the North Yuba, Middle Yuba, and South Yuba rivers enters the Yuba Goldfields a few miles above the Daguerre Point Dam. Daguerre Point Dam was authorized for construction by the Rivers and Harbor Act of 1902. The California Debris Commission built the original dam in 1906 as a component of the Yuba River Debris Control Project, although the river was not diverted over the dam until 1910. The dam was built to prevent hydraulic mining debris from washing into the Feather and Sacramento rivers. The dam was fully reconstructed in 1964 following damage from floods, and currently provides hydraulic head for upstream water diversions.

Administration and operation of Daguerre Point Dam was assumed by the USACE in 1986 and the cost of operations and maintenance are shared with the California Department of Water Resources (California Department of Water Resources 2016; Corps n.d.; Wood Rodgers 2003). Upstream fish passage over the dam is presently provided by two fish ladders, one on the north end of the dam and one on the south end of the dam. Crude fish ladders were constructed at each end of the dam in 1911. These were destroyed in 1927/28 and reconstructed in 1938. The ladders were destroyed again in 1950. The existing fish ladders were reconstructed and modified in 1965 (California Department of Water Resources 2016; U.S. Army Corps of Engineers n.d.; Wood Rodgers 2003).

In 1984, the CDFW (California Department of Fish and Game in 1984) and the South Yuba Water District entered into an agreement to construct diversion facilities and the subsequent diversion of

irrigation water at the location of the South Yuba-Brophy Diversion Canal (South Canal Diversion) on the lower Yuba River. Under the 1984 Agreement, the South Yuba Water District was required to construct a fish protection device to prevent fish from being entrained into the South Canal Diversion. The South Yuba Water District elected to construct a graded rock gabion fish barrier located off the river. The South Canal Diversion rock gabion fish barrier was completed in 1985. The rock gabion is 30 feet wide at its base, narrowing to 10 feet wide at the top. The porous rock gabion fish screen is fitted with a fine-mesh barrier within the gabion. Water flows from the river into a small side channel, where it either is diverted through the gabion or flows through the channel back into the river mainstream.

Typical historic resources in the Project area include sites primarily associated with mining. Features associated with these types of sites include building foundations, privy pits, trash scatters, tailings piles, dredge ponds, and artifacts (e.g., cans, bottles, glass, and ceramics).

Ethnographic Background

The Project is located in the ethnographic territory of the Nisenan tribe (also known as the Southern Maidu). Prior to European-American contact, Nisenan territory included the southern extent of the Sacramento Valley, east of the Sacramento River between the North Fork Yuba River and Cosumnes Rivers on the north and south, respectively, and extended east into the foothills of the Sierra Nevada Range. Neighboring groups included the Plains Miwok to the south, Southern Patwin to the west across the Sacramento River beyond the Yolo Basin, and Konkow and Maidu to the north. Three Maiduan languages, Konkow, Maiduan, and Nisenan are regarded as a subgroup of Penutian stock. Ethnographers have also distinguished three Nisenan dialects; Northern Hill, Southern Hill, and Valley (Kroeber 1925; Wilson and Towne 1978).

The United Auburn Indian Community (UAIC) is a federally recognized Tribe comprised of both Miwok and Maidu (Nisenan) Tribal members who are traditionally and culturally affiliated with the Project area. The Tribe has a deep spiritual, cultural, and physical ties to their ancestral land and are contemporary stewards of their culture and landscapes. The Tribal community represents a continuity and endurance of their ancestors by maintaining their connection to their history and culture. It is the Tribe's goal to ensure the preservation and continuance of their cultural heritage for current and future generations.

3.5.3 Research Methodology

Natural Investigations Company, Inc. (Natural Investigations) conducted cultural resources investigations for the Project site and an area in a 0.5-mile radius of it. These investigations are documented in a report titled *Cultural Resources for the Daguerre Point Dam Fishway and South Diversion Upgrade Project, Yuba County, California* and included a search of the California Historical Resources Information System (CHRIS) conducted by the North Central Information Center (NCIC) at California State University, Sacramento; a search of the Sacred Lands File conducted by the Native American Heritage Commission (NAHC); outreach (i.e., letters and a telephone call regarding the Proposed Project) to Native American tribes and individuals identified on a contact list provided by the NAHC; a buried archaeological site sensitivity analysis; and a pedestrian surface survey of the entire PAL.

3.5.4 Results of Cultural Resources Investigations

The CHRIS records search completed by the NIC on April 26, 2023, (File Nos.: YUB 23-13) identified four previously recorded cultural resources, P-58-000332, -000582, -000596, and -003032, in the PAL. The NAHC search of the Sacred Lands File completed on May 30, 2023, was negative. In response to the Native American outreach letter, Natural Investigations received an e-mail on June 1, 2023, from Pamela Cubbler, Tribal Council Vice Chairwoman, Treasurer, and Cultural Preservation Officer of the Colfax-Todds Valley Consolidated Tribe, stating that the Tribe had an interest in the Proposed Project and was requesting formal consultation regarding it. Natural Investigations also received an email on June 7, 2023, from Anna Starkey of the UAIC stating that the Tribe was requesting formal consultation regarding the Proposed Project.

Buried site sensitivity analysis determined that a large part of the PAL and surrounding area (i.e., the Yuba Goldfields) was dredged several times to depths ranging from 60–125 feet. Consequently, due to the level of disturbance across the Proposed Project site and the surrounding area, the sensitivity of the area for the presence of buried deposits of cultural resources is very low, particularly for indigenous cultural resources (Meyer and Rosenthal 2008).

Natural Investigations' professionally qualified archaeological staff conducted a pedestrian surface survey of the entire PAL on April 26, 2023, using transects spaced no greater than 15 meters apart. During the pedestrian survey, all visible ground surface across the PAL was carefully examined for cultural material (e.g., flaked stone tools, tool-making debris, stone milling tools, and/or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes and foundations), or historic-era debris (e.g., metal, glass, ceramics). Surface visibility across the PAL varied from excellent (75–100%) along an access road and parking area to poor (1–25%) across the other areas due to thick grass cover. A pedestrian surface survey identified six new sites, NIC-2023-YCWA-01, -02, -03, -04, -05, and -06 and seven historic isolated artifacts.

3.5.5 Discussion

a) Cultural resources investigations determined that sites P-58-000596 (Yuba Goldfields), P-58-003032, and NIC-2023-YCWA-05 meet the criteria for an historical resource and are eligible for the CRHR. Cultural resources investigations did not determine the significance of sites P-58-000332 and P-58-000582 because the sites could not be relocated due to dense vegetation. Since the significance of sites P-58-000332 and P-58-000582 could not be determined, they should be considered potentially significant and eligible for the CRHR. Consequently, Proposed Project geophysical testing could occur in boundaries of historical resources and could cause a substantial adverse change in the significance of the historical resource. Implementation of **Mitigation Measures CULT-1, CULT-2, and CULT-3**, however, would reduce any potential impacts to a potentially significant historical resource to a **less-than-significant impact.**

Mitigation Measure CULT-1. Avoidance of historical and archaeological resources.

Project activity would occur in boundaries of site P-58-000596 (Yuba Goldfields) and could impact it. Therefore, the geophysical testing locations for the Project in boundaries of site P-58-000596 will be located to avoid historical and archaeological features (e.g., tailings piles and ponds) associated with that site. The location of

geophysical testing locations will be identified in consultation with Yuba Water staff and a professionally qualified archaeologist (i.e., an archaeologist that meets the Secretary of Interior's Qualifications Standards at 36 CFR Part 61) to ensure that any features that could contribute to the significance of site P-58-000596 would not be impacted by any Project activities. Implementation of Mitigation Measure CULT-1 would reduce any potential Project related impacts to site P-58-000596 to a less than significant level.

Mitigation Measure CULT-2. Provide buffers around historical and archaeological resources.

Project activity could occur in boundaries of sites P-58-000332, P-58-000582, P-58-003032 and NIC-2023-YCWA-05 and could impact those sites. Therefore, any geophysical testing locations will be placed at a minimum of 50 feet from the currently identified boundaries of sites P-58-000332, P-58-000582, P-58-003032 and NIC-2023-YCWA-05. The placement of geophysical testing locations near sites P-58-000332, P-58-000582, P-58-003032 and NIC-2023-YCWA-05 will be determined in consultation with Project staff and a professionally qualified archaeologist (i.e., an archaeologist that meets the Secretary of Interior's Qualifications Standards at 36 CFR 61). Implementation of Mitigation Measure CULT-2 would eliminate any potential Project related impacts to sites P-58-000332, P-58-000582, P-58-003032 and NIC-2023-YCWA-05 because Project activities would not occur in site boundaries.

Mitigation Measure CULT-3. Provide archaeological and Native American monitors during excavations.

Archaeological and Native American monitors should be present for geophysical test excavations to ensure appropriate treatment of any inadvertent discoveries of cultural resources. In the event of an inadvertent discovery of cultural resources, Project activity shall immediately cease within 25 feet of the discovery. Project work may continue at other geophysical testing locations while the discovery is examined. The potential significance of the discovery will be determined by the archaeological monitor in consultation with the Native American monitor pursuant to the standards at CCR Section 15064.5 (a)(3) and PRC Section 21083.2 (g). If it is determined that the discovery is not significant, no further investigations are necessary and Project activity may resume. If the discovery is determined to be significant, additional investigations (e.g., data recovery excavations) may be necessary before resuming Project activities at the site of the discovery. Any additional archaeological investigations would be designed and conducted in consultation with Yuba Water, a professionally qualified archaeologist (i.e., an archaeologist that meets the Secretary of Interior's Qualifications Standards at 36 CFR 61), and appropriate Native American tribes. Regardless of the significance of an inadvertent discovery, all inadvertent discoveries of cultural resources shall be appropriately documented and reburied on the Project site in a location where the cultural resources will not be disturbed in the future. Implementation of Mitigation Measure CULT-3 would reduce any potential Project related impacts to the inadvertent discovery of cultural resources to a less than significant level.

b) Cultural resources investigations did not identify any unique archaeological resources in the PAL and the sensitivity of the area for buried archaeological resources is very low. Consequently, it is not anticipated that the Project would impact any unique archaeological resources, but there is a potential for inadvertently discovering unique archaeological resources during implementation of the Project. If an inadvertent discovery were to occur, it could result in a potentially significant impact to a unique archaeological resource. Implementation of **Mitigation Measure CULT-3** would reduce any potential impacts to a potentially significant inadvertently discovered unique archaeological resource to a **less-than-significant impact**.

c) The Sacred Lands File search for the PAL was negative and cultural resources investigations did not identify any human remains or evidence to suggest the presence of human burials in the PAL. On the contrary, the area is previously disturbed by dredge and other mining activities. Consequently, it is not anticipated that the Project would impact any human remains, but there is a potential for encountering previously undiscovered human remains during implementation of the Project. If an inadvertent discovery of human remains were to occur, it could result in a potentially significant impact to the remains. Implementation of **Mitigation Measure CULT-4** would reduce any potential impacts to inadvertently discovered human remains to a **less-than-significant impact**.

Mitigation Measure CULT-4. Inadvertent discovery of human remains.

In the event of an inadvertent discovery of human remains, the provisions of the California Health and Safety Code Section 7050.5 and 8010-8011, and PRC Sections 5097.1 and 5097.98 as amended by 5097.98, and Assembly Bill 2641 shall be implemented. In addition, all work within 25 feet of the discovery shall immediately cease until the discovery can be evaluated by the County Coroner. Project work may continue at other geophysical testing locations while the discovery is examined. If the remains are determined to be Native American, the County Coroner must contact the NAHC who will identify a Most Likely Descendant for the remains. The Most Likely Descendant will make recommendations for the recovery, treatment, and disposition of any Native American remains. Final disposition of any inadvertently discovered human remains will be decided in consultation with the Most Likely Descendant and Yuba Water.

3.6 Energy

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

3.6.1 Setting

The location of the Proposed Project site has no existing power source.

Given the nature of the Proposed Project, the source of energy that would be most relevant is fuel for vehicle trips to the project site to conduct investigations. As described above in Section 3.3, Air Quality, CARB regulates mobile air pollution sources such as those from motor vehicles. These regulations also ensure that wasteful, inefficient, or unnecessary consumption of energy resources does not occur by off-road diesel vehicles, such as construction equipment.

3.6.2 Discussion

a, b) The Proposed Project would involve consumption of energy resources related to use of oil, gasoline, and diesel fuel to operate equipment to complete the site investigations. The site investigations would not require the use of natural gas appliances or equipment. Diesel-powered equipment includes a track-mounted drill rig, small excavator, and pick-up trucks for support and transport. The use of off-road heavy-duty diesel equipment would be limited to the six week site investigation period .

The operation of all equipment would be regulated by the FRAQMD Regulation III, Rule 3.0, "Visible Emissions Limitations" (40 percent opacity or Ringelmann 2.0) and the State of California idling rule. These regulations are intended to reduce emissions from in-use off-road, heavy-duty diesel vehicles by limiting idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into construction fleets, requiring emissions by retiring, replacing, or repowering older engines. These regulations would result in the use of fuel-efficient vehicles.

Based on FRAQMD's Indirect Source Review Guidelines, the Proposed Project is a "Type 2" project, which is a non-land use project that has no operational phase. In other words, once the project is complete, it would not utilize energy resources.

Based on the above, the Proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Further, the Proposed Project would not conflict with or obstruct a State or local plan for renewable energy and energy efficiency. As such, the Proposed Project would have a **less-than-significant impact** on energy.

3.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic ground shaking?	☐	☐	☐	☑
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☑
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☑

3.7.1 Setting

The Proposed Project site is located on the south bank of the lower Yuba River, entirely within the Yuba Goldfields. Soils in the project area are thickly bedded quaternary alluvial deposits. The south bank of the lower Yuba River in the vicinity of the project area is composed entirely of gravel mine tailings. The north bank of the river is a composite of various alluvial deposits composed of chiefly of gravelly loam, with minor components of clay and sand (Natural Resources Conservation Service 2023).

The U.S. Geological Survey carried out investigations upstream of Daguerre Point, immediately adjacent to the Proposed Project area, which suggested that the Yuba River is a losing stream along the stretch upstream of Daguerre Point Dam (Hunerlach et al. 2004) This suggestion supports the conclusion that the mine tails have a high hydraulic conductivity. On the north bank of the Yuba River, across from the Proposed Project area, the Redding Gravelly Loam has a very low hydraulic conductivity that contrasts with the south bank at the Project site. This suggests that the main transmission of subsurface flow occurs on the south bank and within the mine tailings themselves.

The Proposed Project area is located within a region of California that has relatively low seismic activity and corresponding seismic hazard. The gentle western flank of the Sierra Nevada does not exhibit very active fault zones, contrasting with the sharp eastern flank that is marked by many active, normal-type basin and range faults. The nearest fault system to the Project site is the expansive Foothills Fault System of the Sierra Nevada. In the vicinity of the Project site, that fault system is comprised of a series of smaller fault zones and individual faults, the nearest of which is the Prairie Creek Fault Zone, an inactive expanse of faults beginning in the west roughly beneath the Project site. To the immediate east of the project area is the Swain Ravine Fault Zone, which has exhibited movement during the Quaternary. The Swain Ravine Fault Zone extends northward and becomes the Cleveland Hill Fault Zone about 13 miles north of the project area. The Cleveland Hill Fault is the most active fault in the vicinity of the Project site, with movement as recently as 1975; however, it is not currently covered by the Alquist-Priolo Act.

Paleontological Resources

Project plans, geologic maps of the Project site, and relevant geological and paleontological literature were reviewed to determine which geologic units are present within the Project site and whether fossils have been recovered within the Project site or from those or similar geologic units elsewhere in the region. A search for known fossil localities was also conducted by Natural Investigations Company in 2023 through the online collections database of the University of California Museum of Paleontology in order to determine the status and extent of previously recorded paleontological resources within and surrounding the project site.

The University of California Museum of Paleontology database indicates there are no vertebrate localities, one invertebrate locality, and two fossil plant localities in Yuba County, none of which are in the Project vicinity (University of California Museum of Paleontology 2023 as cited in Natural Investigations Company 2023). The invertebrate locality, which is Recent in age, (i.e., the present epoch, which is the second epoch in the Quaternary period and followed the Pleistocene) and the Tertiary-age marine plant localities have no specimens listed in the database.

None of the rock units listed in the University of California Museum of Paleontology database for Yuba County are present within the Project site, which is underlain by Jurassic and Triassic-aged (251.9 to 145 million years ago) metavolcanic rocks (Jrv and Mzv).

Paleontological Sensitivity

Holocene-age deposits (less than 11,700 years old), like the alluvial deposits most likely underlying the pre-Goldfields landscape at the Project site, are considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms (fossilization processes take place over millions of years). The volcanic bedrock outcrops in the Daguerre Point area also have no potential to contain significant paleontological resources. Thus, based on the Society for Vertebrate Paleontology, the paleontological resource sensitivity within the Proposed Project area is estimated to be low (Natural Investigations Company 2016). Additionally, the Project site contains no unique geologic features (Natural Investigations Company 2016).

3.7.2 Discussion

a-i−iii) The Project site is located a considerable distance (13 miles) from the nearest fault that is considered active. Although there is a low probability for earthquake hazards, there is potential for some ground shaking to occur if an earthquake were to occur The Proposed Project does not involve the construction of new structures or other major modifications that would be affected by seismic ground shaking or seismic-related ground failure. The Proposed Project site is relatively flat, thus would not be subject to landslides. Therefore, the Proposed Project would have **no impact** on the exposure of people or structures to adverse effects involving fault lines or seismic-related ground shaking and failure.

a-iv) The Proposed Project does not include any tree, root, or vegetation removal. The Proposed Project does not include any activities that would create or exacerbate slope failure. As such there would be **no impact** related to landslides.

b) The Proposed Project involves excavation of ten shallow test pits. Approximately 720 square feet in total, or less than 0.02 acre, of topsoil would be disturbed. The Proposed Project would involve increased travel activity along the access route to and from the Project site, which could loosen road fill, making it more susceptible to erosion. This travel activity would be of temporary and short duration. Therefore, the Proposed Project would have a **less-than-significant impact** on soil erosion and loss of topsoil.

c) The Project site is not located in an area of unstable geological materials. Furthermore, the Proposed Project would not affect the stability of the underlying materials. Therefore, the Proposed Project would have **no impact** on the potential for on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

d) The Proposed Project is not in an area containing expansive soils. Therefore, the Proposed Project would have **no impact** on the risk to life or property from expansive soils.

e) The Proposed Project would not involve the construction of septic tanks or alternative wastewater disposal systems. Therefore, the Proposed Project would have **no impact** on soils utilized for septic tanks or alternative wastewater disposal systems.

f) No paleontological resources or unique geologic features are known to exist within or near the project site. As noted, the project site is underlain by Holocene-age deposits (less than 11,700 years old), like the alluvial deposits most likely underlying the pre-Goldfields which have a low sensitivity for paleontological resources. No mitigation measures for paleontological resources are required. Therefore, the Proposed Project would have **no impact** on a unique paleontological resource or site or unique geologic feature.

3.8 Greenhouse Gas Emissions

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

3.8.1 Setting

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to

a trend of unnatural warming of the earth's climate, known as global climate change or global warming.

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of carbon dioxide are byproducts of fossil fuel combustion. Methane is a highly potent GHG that primarily results from escaped emissions of natural gas and from anaerobic decomposition of organic substances in agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb carbon dioxide through sequestration and dissolution (dissolving into the water), respectively.

In December 2017, CARB adopted its Climate Change Scoping Plan Update, which contains the main strategies California will use to reduce GHGs in order to reach the State's 2030 GHG emissions reduction target (California Air Resources Board 2017). CARB has drafted the 2022 Scoping Plan, however, it has not been formally adopted as of the date of this report. The 2017 Scoping Plan strategies include a low carbon fuel standard; cleaner technologies and fuels; energy sector efficiencies; freight efficiencies; and a cap and trade program.

FRAQMD has not established quantitative significance thresholds for evaluating GHG emissions in CEQA analyses. Instead, FRAQMD, in its *Indirect Source Review Guidelines*, recommends using the California Air Pollution Control Officers Association CEQA and Climate Change white paper and other resources when developing GHG evaluations (Feather River Air Quality Management District 2010). The CEQA and Climate Change paper provides a common platform of information and tools to support local governments and was prepared as a resource, not as a guidance document. However, CEQA Guidelines Section 15064.4 expressly provides that a "lead agency shall have discretion to determine, in the context of a particular project," whether to "[u]se a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use." A lead agency also has discretion under the CEQA Guidelines to "[r]ely on a qualitative analysis or [quantitative] performance-based standards."

The *Yuba County 2030 General Plan* includes the following applicable policies related to reducing GHG emissions in Yuba County (Yuba County 2011b):

- **Policy HS6:** New developments shall implement emission control measures recommended by the Feather River Air Quality Management District for construction, grading, excavation, and demolition, to the maximum extent feasible.

Given the lack of a specific GHG threshold from FRAQMD, it is considered appropriate to refer to guidance from other agencies when discussing GHG emissions. Thus, for the purposes of this analysis, thresholds developed by the Sacramento Metropolitan Air Quality Management District are considered to determine the significance of GHG emissions. These thresholds are intended to evaluate a project for consistency with GHG targets established in Assembly Bill 32 (Chapter 488, Division 25.5, commencing with Section 38500). For the evaluation of construction-related emissions for development projects, Sacramento Metropolitan Air Quality Management District recommends using the mass emission threshold of 1,100 metric tons of carbon dioxide-equivalent per year ($MTCO_2e$/year) (Sacramento Metropolitan Air Quality Management District 2021).

3.8.2 Discussion

a) GHG emissions generated by the Proposed Project predominantly would be in the form of carbon dioxide from the exhaust associated with worker truck trips and equipment used on-site. As described in Section 3.3, Air Quality, modeling was conducted to estimate the emissions that would occur during the site investigation. Modeling assumed CalEEMod's default values for trip lengths and assumed equipment would be used for 8 hours each day. This was a conservative approach as the equipment would not be run continuously each day. The modeled carbon dioxide emission is 11 MT CO_2e for the year, which is well below the threshold of significance of 1,100 MT CO_2e/year. Therefore, the project would have a **less-than-significant impact** on the generation of GHGs.

b) Although the project would result in a net increase in GHG emissions, as discussed above under criterion "a," the annual GHG emissions associated with this project would be substantially less than the threshold of 1,100 MT CO_2e/year. The FRAQMD has not developed a threshold for GHG emissions while the Yuba County General Plan GHG emission policy is focused on new developments. The small amount of emissions also would not conflict with the 2017 Climate Change Scoping Plan, which identifies scenarios for reducing GHG generation within California to meet the 2030 and 2045 GHG targets. Therefore, the project would have a **less-than-significant impact** relative to conflicts with plans, policies and regulations adopted for the purpose of reducing the emissions of greenhouse gases.

3.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☑
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☑	☐

3.9.1 Setting

Hazardous materials and waste are regulated by federal and state laws and are required to be recycled or properly disposed. Based on a search of the State of California EnviroStor database, the Project site is not located on, or near, any federal-, state-, or local-designated hazardous wastes site (California Department of Toxic Substances Control 2023). The potential severity of a hazardous material incident depends on the type, location, and quantity of the material released. The potential for hazardous material or waste spills during transport generally reflects the greatest risk of public exposure given residences that are typically close to transportation corridors.

The Project site is in an area with moderate fire hazard severity (California Department of Forestry and Fire Protection 2022). The Project site is located within the Smartsville Fire Protection District of the Yuba County Foothill Community Wildfire Protection Plan jurisdiction. The Project site is located within the "threat" zone of the Smartsville Fire Protection District, which is the lowest level of risk, aside from unrated lands. Wildfires have ignited in the vicinity of the Project site (within a 10-mile radius) and are documented in the wildfire protection plan (Yuba County Watershed Protection and Fire Safe Council 2014). However, the primary source of fuel in the area is grassland, which poses a reduced risk relative to nearby woodland areas. Moreover, no ignitable structures are located at the Project site or in the immediate vicinity. Altogether, the results of the Wildfire Protection Plan assessment place the Project area in an area of low wildland fire hazard.

One military base, Beale Air Force Base, is located three miles south of the Project site. Two general-aviation airports, Yuba County Airport and Sutter County Airport, are located approximately 11 miles southwest and 11 miles west of the site, respectively. A small private airstrip, Hammonton Airstrip, is located approximately 1.5 miles south of the Project site.

3.9.2 Discussion

a-b) Fuel for equipment to be used during the site investigation could be present on the Project site for the Proposed Project. All potentially hazardous materials would be used in accordance

with applicable federal, state, and local laws, including Cal-OSHA requirements and manufacturer's instructions. The Proposed Project does not involve any other hazardous materials or affect or generate hazardous wastes. Therefore, the Proposed Project would have **a less-than-significant impact** on the creation of a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, or upset or accident conditions involving release of hazardous materials into the environment.

c) There is no existing or proposed school located within one-quarter mile of the Project site. Therefore, the Proposed Project would have **no impact** on a school as related to the emission of hazardous materials, substances, or waste.

d) The Project site is not located on, or near, any federal-, state-, or local-designated hazardous wastes site (California Department of Toxic Substances Control 2023). Therefore, the Proposed Project would have **no impact** on the creation of a significant hazard to the public or environment.

e) The Proposed Project is not located within an airport land use plan or within two miles of a public airport. There is a small private airstrip (Hammonton Airstrip) approximately 1.5 miles south of the Project site. The Project site investigation equipment would not create noise that would be heard at the airport 1.5 miles away. Therefore, the Proposed Project would have **no impact** on safety hazards or excessive noise for people residing or working in an airport land use plan area or within two miles of a public or public use airport.

f) Access to the Project site would primarily be on county- and state-maintained roads with the last five miles occurring via dirt roads located on Western Aggregates, Inc. property. The few trips by site investigation workers to access the Project site would not impact use of the county, state, or private dirt roads by emergency vehicles. Thus, the Proposed Project would have **no impact** on an emergency response plan or emergency evacuation plan.

g) The Project site is located in an area of moderate fire hazard severity based on the California Department of Forestry and Fire Protection Fire Hazard Severity Zone map and an area of low fire hazard assessment based on local planning by Yuba County. Fuels within the area of the Project are limited primarily to grasses and mixed oak woodland with open space between tree stands. The Yuba Goldfields itself is largely un-vegetated, except in the areas immediately bounding waterbodies. In the event of a wildland fire at the Project site, workers would be evacuated, and Project work would be suspended or cease until the threat has passed. No habitable structures are located within the Project site or immediate vicinity, nor would any be constructed as part of the Proposed Project. Therefore, the Proposed Project would have a **less-than-significant impact** on the exposure of people or structures involving wildland fires.

3.10 Hydrology and Water Quality

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

3.10.1 Setting

The Project site is located adjacent to the lower Yuba River in the vicinity of Daguerre Point Dam, which is owned and operated by the USACE. The portion of the river downstream of Daguerre Point Dam is a Designated Floodway under the jurisdiction of the Central Valley Flood Protection Board.

The Lower Yuba River Watershed (Hydrologic Unit Code #18020107) is within the greater Sacramento River hydrologic region. The Sacramento River hydrologic region covers approximately 17.4 million acres (27,200 square miles). The Yuba River has three forks: North, Middle, and South Yuba. The North and Middle Yuba Rivers converge below New Bullards Bar Reservoir and form the mainstem Yuba River. Englebright Dam marks the division between the Upper and Lower Yuba River. Storm drainage in the area is provided through natural drainage.

Two groundwater subbasins occur in Yuba County, the North Yuba Subbasin located north of the lower Yuba River and the South Yuba Subbasin located south of the lower Yuba River. Yuba Water manages the two subbasins together as a unit. For at least the last 70 years, groundwater levels have been stable in the North Yuba Subbasin. In 1984, Yuba Water began delivering surface water to southern Yuba County, which has resulted in groundwater elevation rise in the South subbasin to near-historical levels. Regional groundwater quality in the Yuba Subbasins is considered good to excellent for municipal, domestic, and agricultural uses and does not have a significant adverse impact on the beneficial uses of groundwater in the subbasins. The California Department of Water Resources, which oversees the Sustainable Groundwater Management Act, formally approved the Groundwater Sustainability Plan for the North and South Yuba subbasins in Yuba County in 2021.

3.10.2 Discussion

a) Site investigation activities, including the drilling and test pit excavation, have the potential to result in temporary disturbance of soils. However, the area affected would be less than 0.02 acre and would be located away from the Lower Yuba River and a distance such that there is low risk of disturbed soils being transported into the river. Therefore, the Proposed Project would have **a less-than-significant impact** on lower Yuba River and groundwater quality in regard to violation of water quality standards or water quality degradation.

b) The Proposed Project would not involve extraction of groundwater or a change in surface water diversion capacity or impervious surface area that would impede groundwater recharge. Therefore, the Proposed Project would have **no impact** on groundwater supplies or recharge or the sustainable groundwater management of the underlying basin.

c-i-iii) The Proposed Project would disturb less than 0.02 acres of the Project site for the purpose of drilling and test pit excavations and would not alter its natural drainage pattern or add impervious area. Therefore, the Proposed Project would have **no impact** on the existing drainage pattern of the site.

c-iv) The Project site would involve geophysical investigations within a portion of the lower Yuba River floodpain. These investigations would be temporary activities and would not be conducted when river flows are low and site is not inundated. The Proposed Project would not involve placement of structures or other impediments to river flows in the floodplain. Therefore, the Proposed Project would have **no impact** on flood flows.

d) The Proposed Project is not located in a region subject to seiche, tsunami, or mudflow. Therefore, the Proposed Project would have **no impact** on inundation by seiche or tsunami.

e) As described above in paragraph "a," the Proposed Project would have a less-than-significant impact on water quality. Furthermore, as described above in paragraph "b," the Proposed Project would not result in depletion of groundwater or impeded groundwater recharge in the area of the Project. As such, it would not conflict with or obstruct the groundwater sustainability plans adopted and implemented by Yuba Water for the North and South Yuba subbasins. Therefore, the Proposed Project would have **no impact** with regard to conflicting

with or obstructing the implementation of a water quality control plan or groundwater sustainability plans.

3.11 Land Use and Planning

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

3.11.1 Setting

The Proposed Project is located in an unincorporated area of Yuba County on property owned by USACE and Western Aggregates, Inc. Several unpaved access roads lead to the Project site, and riparian and oak woodland vegetation grow adjacent to the river channel.

3.11.2 Discussion

a) There is no residential community within or near vicinity of the Proposed Project. Therefore, the Proposed Project would have **no impact** on an established community.

b) The Proposed Project does not include changes to existing land uses at the Project site. Therefore, the Proposed Project would have **no impact** on consistency with applicable land use plans, policies, or regulations.

3.12 Mineral Resources

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

3.12.1 Setting

The Project site is located on the south bank of the Lower Yuba River, entirely within the Yuba Goldfields. The Yuba Goldfields are located within the Yuba City-Marysville Production-Consumption Region for aggregate resources (Habel and Campion 1988). The dredge tailings that

comprise the Yuba Goldfields are classified as Mineral Resource Zone-2 for both aggregate and gold resources. Zone-2 means adequate information indicates that significant mineral deposits are present, or it is judged that a high likelihood exists for their presence (Habel and Campion 1988). Mineral Resource Zone-2 zones are eligible for designation as mineralogical areas of regional or statewide significance.

The area is actively mined by Western Aggregates for high-grade Portland cement-concrete-grade aggregate. Aggregate mining is geographically variable, but generally consists of extracting aggregate from one location for a defined period of time, until either the mineral is spent, or conditions become untenable for continued mining. As a result, mining is planned ahead of time, and company resources are scheduled and allocated to the appropriate area for extraction activities.

3.12.2 Discussion

a-b) The Proposed Project would not result in the removal of any mineral resources potentially underlying the Proposed Project area, nor preclude any future mineral extraction activities that might arise. Therefore, the Proposed Project would have **no impact** on the availability of mineral resources.

3.13 Noise

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

3.13.1 Setting

Sound is mechanical energy transmitted in the form of a pressure wave from a disturbance or vibration. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. Sound levels are measured using the decibel scale, developed to relate to the range of human hearing. A decibel (dB) is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a noise level of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound by 3 dB). A sound level increase of 10 dB corresponds to 10 times the

acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy. As sound travels through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on distance, ground absorption characteristics, atmospheric conditions, and the presence of physical barriers. Noise generated from mobile sources (e.g., construction equipment) generally attenuates at a rate of 4.5 dB per doubling of distance from the source. Noise from stationary sources spread with more spherical dispersion patterns that attenuate at a rate of 6 to 7.5 dB per doubling of distance from the source.

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Vibration amplitudes are commonly expressed in peak particle velocity or root-mean-square vibration velocity. Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 vibration decibels, which is the typical background vibration-velocity level, to 100 vibration decibels, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate ground vibrations, which can pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants. The Federal Transit Administration (2018) identifies the maximum acceptable vibration standard as 80 vibration decibels with respect to human response for residential uses (e.g., annoyance, sleep disturbance) at nearby vibration-sensitive land uses.

The following is a policy the *Yuba County 2030 General Plan Public Health & Safety Element* (Yuba County 2011b):

- **Policy HS10-4:** If existing noise levels exceed the maximum allowable levels listed in Table Public Health & Safety-2 [**Table 3**], projects are required to incorporate mitigation to reduce noise exposure in outdoor activities areas to the maximum extent feasible and include mitigation to achieve acceptable interior levels, as defined in Table Public Health & Safety-1.

Table 3. Maximum allowable noise exposure from non-transportation noise sources at noise-sensitive land uses.

Noise Descriptor	Daytime (7 a.m. – 10 p.m.)	Nighttime (10 p.m. – 7 a.m.)
Hourly Energy-Equivalent Noise Level (Leq)	60 dBA	45 dBA
Maximum Noise Level (Lmax)	75 dBA	65 dBA
Notes: dBA=A-weighted decibel Each of the noise levels specific shall be lowered by 5 dBA for simple tone noises, noises consisting primarily of speech, music or for recurring impulsive noises. These noise-level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). Noise-sensitive land uses include schools, hospitals, rest homes, long-term care facilities, mental care facilities, residences, and other similar land uses. Source: Yuba County 2011a		

Section 8.20.310 of the Yuba County Code identifies noise limits for construction activities. Noise limits under the code prohibit the use of construction devices between the hours of 10:00 p.m. and 7:00 a. m. in such a manner that a reasonable person of normal sensitiveness residing the area is caused discomfort or annoyance unless a permit has been granted.

Typical noise levels generated by the types of construction equipment anticipated are identified in **Table 4**.

Table 4. Typical equipment noise levels.

Type of Equipment	Maximum Instantaneous Noise Level (dB) at 50 feet
Backhoe	80
Dozer	85
Construction Trucks	84
Pile Driver (Impact)	101
Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment. Source: Federal Transit Administration 2018:176	

Noise-sensitive land uses in the Project's vicinity include numerous rural residences located along the north side of the Yuba River. The project would be located along the southern bank of the Yuba River, upstream from the Daguerre Point Dam, more than 0.5 mile from any existing sensitive receptor. Noise sources in the area are primarily natural, including birds, wind, and water. Human-made noise sources include vehicles in the distance and the occasional aircraft flyover.

3.13.2 Discussion

a) The effects of Project activities on noise largely depend on the type of activities occurring on any given day; noise levels generated by those activities; distances to noise-sensitive receptors; potential noise attenuating features such as topography, vegetation, and existing structures; and the existing ambient noise environment in the receptor's vicinity. Variations in the operational characteristics of the equipment change the effect they have on the noise environment of a given Project site and in the surrounding area.

   Project-related noise levels in the vicinity of the Project site would fluctuate depending on the phase of the site investigation. Based on the information provided in Table 4 and accounting for typical usage factors of individual pieces of equipment and activity types, Project-related equipment (i.e., drill rig, excavator) could result in a maximum instantaneous noise level as high as 88 dB at a distance of 50 feet. The Project component with the potential to generate the greatest noise is the geophysical investigation, which involves hammering a steel plate in contact with the ground. This activity would be not louder than noise generated by an impact pile driver, which has an instantaneous noise level of 101 dB at 50 feet. Through distance alone, this noise level would attenuate to less than the 75 dB daytime noise standard established by Yuba County for daytime construction-generated noise at a distance of 360 feet, whereas the nearest residence is approximately 3,000 feet away. Thus, the Proposed Project would not expose any off-site noise-sensitive receptors to noise levels that exceed applicable standards established by Yuba County. Therefore, the Project would have a **less-than-significant impact** on the exposure of persons to noise levels in excess of standards.

b) There are no sensitive receptors located within 3,000 feet of the Project site where vibration from construction equipment could cause human disturbance. Therefore, the Proposed Project would have a **less-than-significant impact** on the exposure of persons to excessive groundborne vibration or noise levels.

c) The Project site is not located within an airport land use plan, within two miles of a public airport or public use airport, or in the vicinity of a private air strip. Beale Air Force Base is located approximately 3 miles south of the Project site. The private Hammonton Air Strip is located approximately 1.5 miles southeast of the Project site. The nearest residence is located approximately 0.5 mile north of the site. Therefore, the Proposed Project would have **no impact** on the exposure of people residing or working in close proximity to airports to excessive noise levels.

3.14 Population and Housing

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

3.14.1 Setting

The Proposed Project is in a rural area of unincorporated Yuba County on property owned by USACE and Western Aggregates, Inc. The closest residences to the Project site are located approximately 0.5 mile to the north and west; there are no major developments in this area or within a one-mile radius.

3.14.2 Discussion

a-b) The Proposed Project would not include construction of new housing or commercial businesses, and no additional permanent staff would be needed for the project. The Proposed Project would not remove any homes or result in displacement of people. Therefore, the Proposed Project would have **no impact** on population growth, displacement of existing housing, or displacement of people.

3.15 Public Services

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☐	☑
ii) Police protection?	☐	☐	☐	☑
iii) Schools?	☐	☐	☐	☑
iv) Parks?	☐	☐	☐	☑
v) Other public facilities?	☐	☐	☐	☑

3.15.1 Setting

The Proposed Project is in a rural area of unincorporated Yuba County on property owned by USACE and Western Aggregates, Inc. The provision of public services in the Proposed Project area is the responsibility of Yuba County (e.g., police) and other local and regional agencies (e.g., fire protection, schools, parks).

3.15.2 Discussion

a) The Proposed Project would involve temporary site investigation activities. The Proposed Project would not involve or require any changes in public services. Therefore, the Proposed Project would have **no impact** on fire and police protection services, schools, parks, or other public facilities.

3.16 Recreation

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

3.16.1 Setting

Yuba County offers a variety of outdoor recreational opportunities, including boating, swimming, fishing, hunting, and wildlife viewing. Regional recreational resources include New Bullards Bar Reservoir, the North Yuba River between New Bullards Bar Reservoir and Englebright Reservoir, Englebright Reservoir, the lower Yuba River from below Englebright Dam to the confluence with the Feather River, and numerous county parks.

The area surrounding the Proposed Project site is rural and is used primarily for mining and agriculture. The closest residences to the Project site are located across the river approximately 0.5 mile to the north and west; there are no major developments in this area or within a one-mile radius. The Project site is located on private property with restricted access but nearby residents and boaters may access the Project site and surrounding area from the river for fishing, boating, or passive recreation, but it is not specifically designated for such users.

The closest recreational facilities to the Project site are Sycamore Ranch and Hammon Grove Park, which are located across the river and approximately two miles northeast of the Project site in Browns Valley, California. These facilities offer camping, picnicking, and access to the north side of the Yuba River and to Dry Creek.

Thirty-nine miles of the South Yuba River between Lake Spaulding and Englebright Reservoir are designated as a California Wild and Scenic River and federally recommended as a Wild and Scenic River. The Project site is located approximately 10 miles southwest of Englebright Reservoir, and not located within any river segment designated Wild and Scenic.

3.16.2 Discussion

a, b) The Proposed Project involves temporary site investigation activities on a relatively small area adjacent to the Lower Yuba River. The site investigation activities would not affect use of the river by anglers, boaters, and other recreationists. The Proposed Project does not include any housing and would not otherwise increase population levels, and would therefore not increase use of recreational facilities. Therefore, the Proposed Project would have a **no impact**

on the physical deterioration of existing neighborhood or regional parks or other recreational facilities, or the need for the construction or expansion of recreational facilities.

3.17 Transportation

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☑	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☑	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☑	☐
d) Result in inadequate emergency access?	☐	☐	☐	☑

3.17.1 Setting

The Project site is located within the area covered by the Yuba County 2030 General Plan (Yuba County 2011a). Traffic and transportation are discussed in the Community Development Element of the General Plan, which includes the following policies that are relevant to the project:

- **Policy CD16.4:** On County roads in rural areas, Level of Service "D" shall be maintained, as feasible, during the PM Peak Hour.

- **Policy CD16.11:** The County will analyze and mitigate transportation impacts in CEQA documents according to their relative increase in vehicular travel demand.

Several unpaved access roads lead to the Project site via access though the Yuba Goldfields. Major roadways within the Project's vicinity include the following facilities:

- State Route 20 is a regional east-west highway extending west from Marysville through the Yuba County foothills and into Nevada County. In the Project's vicinity, State Route 20 provides one travel lane in each direction. Average daily traffic volumes on State Route 20 are approximately 7,300 vehicles at the Yuba/Nevada County line (California Department of Transportation 2021).

- State Route 70 is a two- and four-lane highway that extends from State Route 99 in Sutter County to the Butte County line through Yuba County. State Route 70 runs north-south, linking Marysville and other northern regions with the Sacramento metropolitan area. In the Project's vicinity, State Route 70 provides two travel lanes in each direction. Average daily traffic volumes on State Route 70 are approximately 55,000 vehicles at Feather River Boulevard and 68,000 at the North Beale Road interchange (California Department of Transportation 2021).

- Hammonton-Smartville Road is a paved two-lane road, generally providing one travel lane in each direction. The General Plan states that the average daily traffic volume between Smartville Road and North Erle Road is 5,736 vehicles (Yuba County 2011a).

The nearest bicycle facility is a Class II bicycle lane located along Hammonton-Smartville Road, east of Simpson Lane, more than 10 miles from the Project site. The nearest bus route is Route 6, the Linda Shuttle, which is more than 9 miles from the Project site (Yuba County 2011a).

One military base (Beale Air Force Base) is located three miles south of the project site; two general-aviation airports (Yuba County Airport and Sutter County Airport) are located approximately 11 miles southwest and 11 miles west of the site, respectively; and a small private airstrip (Hammonton Airstrip) is located approximately 1.5 miles south of the Proposed Project site.

3.17.2 Discussion

a) During the Proposed Project, there would be a minor temporary increase in related traffic from delivery of equipment and workers traveling to and from the Project site. The primary roadways that would be used to access the Project site would be access roads internal to the Goldfields, Hammonton Road, Hammonton-Smartville Road, and State Route 20. Vehicle trips would disperse from there to State Route 70 and other surface streets depending on the direction the vehicles are traveling. The primary roadways that would be affected by Project traffic are operating (as of 2011) at acceptable levels of service and the addition of Project-related vehicle trips would not cause any level of service thresholds to be exceeded nor result in a substantial increase in overall traffic volumes. State Route 70 was not operating at an acceptable level of service as of 2011; however, very few vehicle trips would be added to State Route 70 as a result of the Proposed Project, and they would be limited to workers commuting from Marysville or other areas west of the site. Consequently, the temporary vehicle trips for the Proposed Project would not substantially affect the capacity or congestion patterns on affected roads.

   The Proposed Project is not located near public transit, bicycle, or pedestrian facilities. As such, the Proposed Project would not affect public transit, bicycle, or pedestrian facilities, or the performance or safety of such facilities.

   Therefore, the Proposed Project would have a **less-than-significant impact** on the performance of the local and regional circulation system, including transit, roadway, bicycle, and pedestrian facilities.

b) Section 15064.3 of the State CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Per Section 15064.3, generally analysis of vehicle miles traveled (VMT) attributable to a project is the most appropriate measure of transportation impacts. VMT refers to the amount of distance of automobile travel attributable to a specific project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in Section 15064.3(b)(2) regarding roadway capacity, a project's effect on automobile delay does not constitute a significant environmental impact

under CEQA. Based on the number of days for each phase of the investigation and required equipment, the VMT for the Proposed Project is estimated to be 300 miles.

The Proposed Project would not create new developments or other infrastructure that would result in additional VMT relative to existing conditions. Although the Proposed Project would cause additional VMT for six weeks, the VMT would be small and temporary. Furthermore, the temporary additional VMT would not substantially affect transit and non-motorized vehicle travel or regional VMT. As such, the Proposed Project would have a **less-than-significant impact** on the potential to conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision(b).

c) The Proposed Project would not make any permanent changes to the roads in the vicinity of the Project site. Existing access roads within the Goldfields have the potential to be narrow, with steep grades and curves, and limited sight distance. However, the existing access roads are designed for use by aggregate trucks and heavy equipment associated with mining operations. Thus, it is expected that the roads are adequately designed and constructed to accommodate construction and maintenance trucks associated with the Proposed Project.

Therefore, the Proposed Project would have a **less-than-significant impact** on increased transportation hazards due to a geometric design feature or incompatible uses.

d) Construction, operation, and maintenance activities would occur within the channel of the Lower Yuba River. This area is not open to the public. Emergency access for construction and maintenance workers would continue to be provided via Hammonton Road and the existing access roads within the Goldfields. Further, as described above in "a," the temporary construction traffic associated with the Proposed Project would not substantially affect the capacity or congestion patterns on affected roads, as the number of vehicle trips would be small compared to the overall traffic volumes. Therefore, the Proposed Project would have **no impact** on emergency access.

3.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?, or	☐	☐	☐	☑

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☐	☑

3.18.1 Standards of Significance

The Proposed Project is subject to the requirements of CEQA (PRC Section 21000 et seq.). The lead agency must consider the effects of the Project on historical resources, traditional cultural resources, and unique archaeological resources. Pursuant to PRC Section 21084.1, a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

"Tribal cultural resources" (e.g., sites, features, places, cultural landscapes, sacred places, and/or objects with cultural value to a California Native American tribe) is a term defined in PRC Section 21074. The stipulations of PRC Sections 21073, 21080.3.1, 21080.3.2, 21082.3, and 21084.3 as amended by Assembly Bill (AB) 52 are the responsibility of Yuba Water.

3.18.2 Research Methodology

Natural Investigations conducted cultural resources investigations for the PAL and an area in a 0.5-mile radius of it. These investigations included a search of the CHRIS conducted by the NCIC at California State University, Sacramento; a search of the Sacred Lands File conducted by the NAHC; outreach (i.e., letters and a telephone call regarding the Project) to Native American tribes and individuals identified on the NAHC Native American contact list; a buried archaeological site sensitivity analysis; and a pedestrian surface survey of the PAL.

Yuba Water, pursuant to CEQA (e.g., PRC Section 21080.3.2), engaged in formal consultation with the Colfax-Todds Valley Consolidated Tribe and the UAIC. In addition, the UAIC conducted background research for the identification of Tribal Resources for the Project that included a review of pertinent literature, historic maps, and a records search using UAIC's Tribal Historic Information System (THRIS). UAIC's THRIS database is composed of UAIC's areas of oral history, ethnographic history, and places of cultural and religious significance, including UAIC's Sacred Lands that are submitted to the NAHC. The THRIS resources shown in this region also include previously recorded indigenous resources identified through the CHRIS as well as historic resources and survey data.

3.18.3 Discussion

The CHRIS records search completed by the NIC on April 26, 2023 (File Nos.: YUB 23-13) identified four previously recorded cultural resources, P-58-000332, -000582, -000596, and -003032, in the PAL. Sites P-58-000332 and P-58-003032 are indigenous cultural resources.

The NAHC search of the Sacred Lands File completed on May 30, 2023, was negative. In response to the Native American outreach letter, Natural Investigations received an e-mail on June 1, 2023, from Pamela Cubbler, Tribal Council Vice Chairwoman, Treasurer, and Cultural Preservation Officer of the Colfax-Todds Valley Consolidated Tribe, stating that the Tribe had an interest in the Project and was requesting formal consultation regarding the Project. Natural Investigations also received an email on June 7, 2023, from Anna Starkey of the UAIC stating that the Tribe was requesting formal consultation regarding the Project. The UAIC also requested Tribal monitoring during ground disturbance, possible fencing around indigenous resources, and excavation of subsurface test units near known indigenous resources.

Buried site sensitivity analysis determined that a large part of the PAL and surrounding area (i.e., the Yuba Goldfields) was dredged several times to depths ranging from 60-125 feet. Consequently, due to the level of disturbance across the PAL and the surrounding area the sensitivity of the area for the presence of buried deposits of cultural resources is very low, particularly indigenous cultural resources (Meyer and Rosenthal 2008).

Natural Investigations' professionally qualified archaeological staff conducted a pedestrian surface survey of the entire PAL on April 26, 2023, using transects spaced no greater than 15 meters apart. During the pedestrian survey, all visible ground surface across the Project site was carefully examined for cultural material (e.g., flaked stone tools, tool-making debris, stone milling tools, and/or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes and foundations), or historic-era debris (e.g., metal, glass, ceramics). Surface visibility across the PAL varied from excellent (75–100%) along an access road and parking area to poor (1–25%) across the other areas due to thick grass cover. The pedestrian surface survey identified six new sites, NIC-2023-YCWA-01, -02, -03, -04, -05, and -06 and seven historic isolated artifacts. Site NIC-2023-YCWA-05 is an indigenous cultural resource.

In summary, cultural resources investigations for the Project identified three indigenous cultural resources, sites P-58-000332, P-58-003032, and NIC-2023-YCWA-05. These three indigenous resources are bedrock milling sites used primarily for processing plant resources. Sites P-58-000332, P-58-003032, and NIC-2023-YCWA-05 meet the criteria for a historical resource, but were not identified as Tribal Cultural Resources pursuant to PRC Section 21074. Therefore, there are no Tribal Cultural Resources in the PAL.

Cultural resources investigations for the Project identified three indigenous cultural resources, sites P-58-000332, P-58-003032, and NIC-2023-YCWA-05, in the PAL. These sites would be protected from any Project impacts by implementation of Mitigation Measure CULT-2 (i.e., Project activity would avoid the sites). Cultural resources investigations did not identify sites P-58-000332, P-58-003032, and NIC-2023-YCWA-05 as Tribal Cultural Resources. Therefore, there are no known

Tribal Cultural Resources in the PAL and there would be **no impact** to any Tribal Cultural Resources by implementation of the Project.

3.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☑
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☑
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments?	☐	☐	☐	☑
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☑
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☑

3.19.1 Setting

The Project site is in a rural setting on the lower Yuba River on property owned by USACE and Western Aggregates, Inc. Several unpaved access roads lead to the site through Western Aggregates Inc. land, and riparian and oak woodland vegetation grow adjacent to the river channel.

The nearest solid waste disposal transfer station is the Recology Yuba-Sutter facility near Marysville approximately eight miles to the west of the Proposed Project site.

3.19.2 Discussion

a) The Proposed Project does not involve any changes to wastewater, storm water drainage, electrical power, natural gas, or telecommunication services in the Proposed Project area, or involve any changes in wastewater disposal activities. Further, the Proposed Project would not generate wastewater that would require a wastewater treatment facility or involve any changes in wastewater disposal activities. Therefore, the Proposed Project would have **no impact** on

the need for new or expanded water or wastewater treatment plant, storm water drainage, electrical power, natural gas, or telecommunication facilities.

b) The Proposed Project would not create the need for an increased water supply. Therefore, the Proposed Project would have **no impact** on the need for new or expanded water supplies to serve the Proposed Project.

c) As described above in "b," the Proposed Project does not require water service, thus it would not involve any changes to wastewater services in the Proposed Project area. Therefore, there would be **no impact** on wastewater treatment plant capacity.

d, e) The Proposed Project would not result in a new, permanent waste stream requiring disposal that would affect available landfill capacity. The only waste that may be temporarily generated by the Proposed Project is trash or refuse produced by project personnel. This waste would be disposed of in compliance with applicable federal, state, or local regulations for solid waste disposal. Due to the very minimal amount of temporary waste that may be constructed by construction works, and no potential for long-term wase, the Proposed Project would not impair the attainment of solid waste reduction goals. Therefore, the Proposed Project would have a **no impact** on compliance with statutes and regulations related to solid waste.

3.20 Wildfire

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

3.20.1 Setting

The Project site consists of grasslands and woodlands, intermixed with disturbed areas and unpaved roads. Some areas within the Project site have moderate slope. The areas adjacent to the project site consist of the Yuba Goldfields, which are largely un-vegetated, except in the areas immediately bounding waterbodies and the lower Yuba River.

The Project site is in an area identified with moderate fire hazard severity (California Department of Forestry and Fire Protection 2022). Wildfires have ignited in the vicinity of the Project site (within a 10-mile radius), which are documented in the Yuba Foothills Community Wildfire Protection Plan (Yuba County Watershed Protection and Fire Safe Council 2014). However, the primary source of fuel in the area is grassland, which poses a reduced risk relative to nearby woodland areas. Moreover, no ignitable structures are located at the Project site or in the immediate vicinity. Altogether, the results of the Wildfire Protection Plan assessment place the Project site in an area of low wildland fire hazard.

To prepare the County for future wildland fires, the Yuba Watershed Protection and Firesafe Council developed the *Yuba Foothills Community Wildfire Protection Plan* (Yuba County Watershed Protection and Fire Safe Council 2014). A component of that plan is designed to assist public agencies in making valid and timely decisions for wildfires and evacuation. Yuba Water also prepared a Fire Prevention and Response Plan as part of its application for Federal Regulatory Energy Commission relicensing of its Yuba River Development Project (Fire Plan). This Fire Plan provides fire prevention procedures, reporting, and safe fire practices for Yuba Water personnel and contractors responsible for operating and maintaining the Yuba River Development Project.

Yuba Water does not own fire suppression equipment suitable for combating wildland fires. The only fire suppression equipment in the vicinity of the Proposed Project would be fire extinguishers and hand tools located in construction-related and Yuba Water-associated vehicles.

3.20.2 Discussion

a) As described above in Section 3.9, Hazards and Hazardous Materials, the few trips by site investigation workers to access the Project site would not impact use of the county or state roads by emergency vehicles. As such the Proposed Project would have **no impact** on *The Yuba Foothills Community Wildfire Protection Plan*, or any other emergency response or emergency evacuation plan.

b) Operating equipment and vehicles at the Project site during completion of the investigations could result in an increased wildfire risk as a result of an accidental ignition and thus expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of a wildfire. The Proposed Project could expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of a wildfire and those effects could be potentially significant. Implementation of **Mitigation Measure WDF-1** would reduce this impact to a **less-than-significant impact**.

Mitigation Measure WDF-1: Wildfire Prevention Measures

- All earthmoving and portable equipment with internal combustion engines shall be equipped with spark arrestors.
- Work crews shall have appropriate fire suppression equipment available at the work site.
- On days declared a Fire Weather Watch or Red Flag Warning, as issued by the Feather River Air Quality Management District, flammable materials, including flammable vegetation slash, shall be kept at least 10 feet away from any equipment that could produce a spark, fire, or flame.

c) The Proposed Project activities would be temporary and would not require installation or maintenance of infrastructure such as roads, fuel breaks, emergency water sources, power lines or other utilities. Therefore, the Proposed Project would have **no impact** on fire risk or other temporary or ongoing impacts to the environment related to installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities).

d) The Proposed Project would not involve construction of structures or changes to site drainage. As such, the Proposed Project would have **no impact** on risks to people or structures as a result of runoff, post-fire slope instability, or drainage changes.

3.21 Mandatory Findings of Significance

Does the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-significant impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current	☐	☐	☑	☐
c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☑

3.21.1 Discussion

a) Based on the information provided in this Initial Study, the Proposed Project would not substantially degrade the overall quality of the environment in the Proposed Project's area. The majority of the impact determinations are either no impact or less than significant. For those impacts where the potential for significant impacts exists, the implementation of mitigation measures would ensure that the Proposed 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Consequently, this impact is considered **less than significant with mitigation**.

b) Cumulative environmental effects are multiple individual affects that, when considered together, would be considerable or compound or increase other environmental impacts. Individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time.

The Proposed Project would result in a significant cumulative effect if:

- the cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the Proposed Project is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or

- the cumulative effects of related projects (past, current, and probable future projects) are already significant, and implementation of the Proposed Project would make a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

The Proposed Project would have no impact on Agricultural and Forestry Resources, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, or Utilities and Service Systems. As such, there would be no cumulative effects to these resource categories.

Proposed Project activities would cause less-than-significant impacts to Aesthetics, Air Quality, Biological Resources (with mitigation), Cultural Resources (with mitigation), Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, Tribal Cultural Resources, and Wildfire (with mitigation). Project activities would be short-term and localized and, therefore, would not combine in such a way that a significant cumulative effect could occur to these resource categories. In addition, as described in Section 2.4.6, the Proposed Project includes avoidance and minimization measures that would avoid or minimize potential contributions to cumulative environmental impacts.

Consequently, the Proposed Project would not have impacts that are individually limited, but cumulatively considerable and this impact would be **less than significant**.

c) Based on the nature and scope of the project (i.e., temporary) and the analysis herein, the Proposed Project would not result in any direct or indirect substantial adverse effects on human beings. All the identified potential impacts to human beings would be temporary and have a low potential for occurring, as the nearest residence to the project site is over 0.5 mile away. Each of the impacts that may cause adverse effects on human beings have been evaluated and

found to be less than significant. No substantial adverse effects on human beings would occur; the impact would be **less than significant**.

4 LIST OF PREPARERS

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5 REFERENCES

AECOM. 2015. *Cultural Resources Assessment, Yuba Goldfields 200-Year Flood Protection Project, Yuba County, California*. Prepared for Three Rivers Levee Improvement Authority, Marysville, CA. On file, North Central Information Center, California State University, Sacramento.

Bennyhoff, J. A., and D. A. Fredrickson. 1994. *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*. Contributions of the University of California Archaeological Research Facility No. 52. University of California, Archaeological Research Facility, Berkeley.

Bureau of Land Management. 2006. *BLM Approves Lease for Yuba Goldfields Training Center*. August 31, 2006. Folsom Field Office.

California Air Resources Board. 2017. *California's 2017 Climate Change Scoping Plan*. Available: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

———. 2022. *2022 Area Designations for State Ambient Air Quality Standards*. Available: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

California Department of Forestry and Fire Protection. 2022. *Fire Hazard Severity Zone Maps*. Available https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed August 10, 2023.

California Department of Toxic Substances Control. 2023. *EnviroStor Database*. Available https://www.envirostor.dtsc.ca.gov/public/. Accessed August 10, 2023.

California Department of Transportation. 2021. *Traffic Census Program*. Available: https://dot.ca.gov/programs/traffic-operations/census.

California Department of Water Resources. 2016. *Yuba River – Daguerre Point Dam. Fish Passage Improvement Program (FPIP)*.

California Natural Diversity Database. 2023. *Bios*. An Online Subscription Database Application for the Use of the California Department of Fish and Wildlife's Natural Diversity Database. California Department of Fish and Wildlife, Sacramento, CA. Available: https://wildlife.ca.gov/Data/CNDDB. Accessed April 2023.

Clark, W. B. 1970. *Gold Districts of California*. Bulletin 193, California Division of Mines and Geology, Sacramento, CA.

Durham, D. L. 1998. *California's Geographic Names: A Gazetteer of Historic and Modern Names of the State*. Quill Driver Books, Clovis, CA.

Feather River Air Quality Management District. 2010. *Indirect Source Review Guidelines*. Available: https://www.fraqmd.org/ceqa-planning.

Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment Manual*. September 2018. FTA Report No. 0123.

Fredrickson, D. A. 1973. *Early Cultures of the North Coast Ranges, California*. Ph.D. Dissertation, University of California, Davis.

———. 1974. Cultural Diversity in Early Central California: A View from the North Coast Ranges. *The Journal of California Anthropology* 1(1). April 1:41–53.

———. 1994. *Archaeological Taxonomy in Central California Revisited. In Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A Bennyhoff and David A. Fredrickson*. Richard E. Hughs, editor, pp. 91–103. Contributions of the University of California Archaeological Research Facility. Berkeley.

Gifford, E. W., and W. E. Schenk. 1926. *Archaeology of the Southern San Joaquin Valley*. University of California Publications in American Archaeology and Ethnology 23:1-122.

Gudde, E. G. 1998. *California Place Names: The Origin and Etymology of Current Geographical Names*. University of California Press, Berkeley.

Habel, R. S., and L. F. Campion. 1988. *Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Yuba City-Marysville Production-Consumption Region*. Special Report 132. California Department of Conservation, Division of Mines and Geology, Sacramento, CA.

Hagwood, J.J. Jr. 1981. *The California Debris Commission: A History*. U.S. Army Corps of Engineers, Sacramento District.

Heizer, R. F. 1949. *The Archaeology of Central California, I: The Early Horizon*. University of California Anthropological Records 12(1):1–83.

Heizer, R. F., and F. Fenenga. 1939. Archaeological Horizons in Central California. *American Anthropologist* 41(3):378–399.

Hoover, M. B., H. E. Rensch, E. G. Rensch, and W. N. Abeloe. 2002. *Historic Spots in California*. 5th ed., revised by Douglas E. Kyle. Stanford University Press, Stanford, California.

Hunerlach, M.P., Alpers, C.N., Marvin-DiPasquale, M., Taylor, H.E., and De Wild, J.F., 2004, Geochemistry of mercury and other trace elements in fluvial tailings upstream of Daguerre Point Dam, Yuba River, California, August 2001: U.S. Geological Survey Scientific Investigations Report 2004-5165, 66 p.

Kirshenbaum, N. W. 2000. The Giant Gold Diggers: California's Land-Going Fleet of Dredges. *Mining History Journal* 7:11–23.

Kroeber, A. L. 1925. *Handbook of the Indians of California*. Smithsonian Institution Bureau of American Ethnology Bulletin 78. Government Printing Office, Washington.

Lillard, J. B., R. F. Heizer, and F. Fenenga. 1939. *An Introduction to the Archaeology of Central California*. Sacramento Junior College, Department of Anthropology Bulletin 2. Sacramento, California.

Meyer, J., and J. S. Rosenthal. 2008 *A Geoarchaeological Overview and Assessment of Caltrans District 3: Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways*. Report prepared by Far Western Anthropological Research Group, Davis, California, for California Department of Transportation, District 3, Marysville, CA.

Moratto, M. J. 2004. *California Archaeology, New World Archaeological Record*. Coyote Press, Salinas, CA.

Natural Investigations Company. 2016. *Cultural Resources Inventory for the South Canal Diversion Fish Screen Project*. Prepared for the Yuba County Water Agency, Yuba County, California. Citrus Heights, CA.

———. 2023. *Cultural Resources Investigations for the Daguerre Point Dam Fishway and SCD Upgrade Project*. Prepared for the Yuba County Water Agency, Yuba County, California. Citrus Heights, CA.

Natural Resources Conservation Service. 2023. *Web Soil Survey*. Available: https://websoilsurvey.nrcs.usda.gov/app/. Accessed August 10, 2023.

Rosenthal, J. S., G. G. White, and M. Q. Sutton. 2007. *The Central Valley: A View from the Catbird's Seat*. In California Prehistory: Colonization, Culture, and Complexity, Terry L. Jones and Kathryn A. Klar, editors, pp. 147–163. AltaMira Press, Lanham, Maryland, July 16.

Sacramento Metropolitan Air Quality Management District. 2021. *Guide to Air Quality Assessment in Sacramento County, Chapter 6, Greenhouse Gases*. Revised February 2021. Available: https://www.airquality.org/residents/climate-change/ceqa-guidance-tools.

Schenck, W. E., and E. J. Dawson. 1929. *Archaeology of the Northern San Joaquin Valley*. University of California Publications in Archaeology and Ethnology, 25(4). Berkeley, California.

Schuford, W. D., and T. Gardali. 2008. *California Bird Species of Special Concern*. Western Field Ornithologists, Camarillo, CA, and California Department of Fish and Game, Sacramento, CA.

U.S. Army Corps of Engineers. n.d. *Yuba River Ecosystem Restoration Study*. Electronic document. Available: http://www.spk.usace.army.mil/Missions/Environmental-Projects/Englebright-Daguerre-Point-dams-fish-passage/.

U.S. Environmental Protection Agency. 2018. *Criteria Air Pollutant*. Available: https://www.epa.gov/criteria-air-pollutants.

U.S. Fish and Wildlife Service. 2023. *Species List*. Available: https://ipac.ecosphere.fws.gov/. Accessed August 16, 2023.

Wilson, N. L., and A. H. Towne. 1978. *Nisenan*. In California, edited by Robert F. Heizer, pp. 387–397. Handbook of North American Indians, Vol. 8, William G. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

Wood Rodgers. 2003. *Daguerre Point Dam Fish Passage Improvement Project, Draft Alternative Concepts Evaluation*. Prepared by Wood Rodgers, Inc., Sacramento, CA for Entris, Inc., Sacramento, CA.

Yuba County. 2011a. *Yuba County 2030 General Plan, Chapter 5, Community Development Element*. Available: https://www.yuba.org/departments/community_development/planning_department/general_plan.php.

———. 2011b. *Yuba County General Plan, Chapter 8, Public Health & Safety Element*. Available: https://www.yuba.org/departments/community_development/planning_department/general_plan.php.

Yuba County Water Agency. 2014 (April). *Terrestrial Resources*. Yuba River Development Project FERC Project No. 2246.

Yuba County Watershed Protection and Fire Safe Council. 2014. *Yuba County Foothills Community Wildfire Protection Plan*. Prepared By: Deer Creek Resources, LLC and WildlandRx, Inc.

Appendix A: CalEEMod Report

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

YCWA NLF Site Investigation Program

Feather River AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

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

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	67
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Project is a site investigation consisting of the defined elements for the specified periods, per the Project Description.

Off-road Equipment - Equipment type and units per Project Description.

Off-road Equipment - Equipment type and units per Project Description.

Off-road Equipment - Equipment type and units per Project Description.

Trips and VMT - Worker trips from Project Description.

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	10.00
tblConstructionPhase	NumDays	0.00	15.00

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	0.00	5.00
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.44	0.44
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	3.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	4.00
tblTripsAndVMT	WorkerTripNumber	3.00	2.00

2.0 Emissions Summary

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	5.2500e-003	0.0465	0.0745	1.2000e-004	5.5000e-004	2.3000e-003	2.8500e-003	1.5000e-004	2.1100e-003	2.2600e-003	0.0000	10.3883	10.3883	3.2300e-003	1.0000e-005	10.4726
Maximum	**5.2500e-003**	**0.0465**	**0.0745**	**1.2000e-004**	**5.5000e-004**	**2.3000e-003**	**2.8500e-003**	**1.5000e-004**	**2.1100e-003**	**2.2600e-003**	**0.0000**	**10.3883**	**10.3883**	**3.2300e-003**	**1.0000e-005**	**10.4726**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	5.2500e-003	0.0465	0.0745	1.2000e-004	5.5000e-004	2.3000e-003	2.8500e-003	1.5000e-004	2.1100e-003	2.2600e-003	0.0000	10.3883	10.3883	3.2300e-003	1.0000e-005	10.4725
Maximum	**5.2500e-003**	**0.0465**	**0.0745**	**1.2000e-004**	**5.5000e-004**	**2.3000e-003**	**2.8500e-003**	**1.5000e-004**	**2.1100e-003**	**2.2600e-003**	**0.0000**	**10.3883**	**10.3883**	**3.2300e-003**	**1.0000e-005**	**10.4725**

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

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Geophysical Investigation	Site Preparation	10/2/2023	10/13/2023	5	10	Involves 2 worker hammer and steel plate in contact with groundr
2	Drilling and Testing	Site Preparation	10/16/2023	11/3/2023	5	15	Involves 4 worker two tracked vehicler two pickup trucksr
3	Test Pit Excavations	Site Preparation	11/6/2023	11/10/2023	5	5	Involves 2 worker excavatorr

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Geophysical Investigation	Other Construction Equipment	1	8.00	172	0.42
Drilling and Testing	Off-Highway Tractors	2	8.00	124	0.44
Test Pit Excavations	Excavators	1	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Geophysical Investigation	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Drilling and Testing	2	4.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Test Pit Excavations	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Geophysical Investigation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0170	0.0198	3.0000e-005		8.9000e-004	8.9000e-004		8.1000e-004	8.1000e-004	0.0000	2.6840	2.6840	8.7000e-004	0.0000	2.7057
Total	**1.7200e-003**	**0.0170**	**0.0198**	**3.0000e-005**	**0.0000**	**8.9000e-004**	**8.9000e-004**	**0.0000**	**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.6840**	**2.6840**	**8.7000e-004**	**0.0000**	**2.7057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0965	0.0965	0.0000	0.0000	0.0973
Total	**4.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0965**	**0.0965**	**0.0000**	**0.0000**	**0.0973**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Geophysical Investigation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0170	0.0198	3.0000e-005		8.9000e-004	8.9000e-004		8.1000e-004	8.1000e-004	0.0000	2.6839	2.6839	8.7000e-004	0.0000	2.7057
Total	**1.7200e-003**	**0.0170**	**0.0198**	**3.0000e-005**	**0.0000**	**8.9000e-004**	**8.9000e-004**	**0.0000**	**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.6839**	**2.6839**	**8.7000e-004**	**0.0000**	**2.7057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0965	0.0965	0.0000	0.0000	0.0973
Total	**4.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0965**	**0.0965**	**0.0000**	**0.0000**	**0.0973**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Drilling and Testing - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8700e-003	0.0255	0.0449	7.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	6.1303	6.1303	1.9800e-003	0.0000	6.1798
Total	**2.8700e-003**	**0.0255**	**0.0449**	**7.0000e-005**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**1.1200e-003**	**1.1200e-003**	**0.0000**	**6.1303**	**6.1303**	**1.9800e-003**	**0.0000**	**6.1798**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	1.0900e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2895	0.2895	1.0000e-005	1.0000e-005	0.2920
Total	**1.2000e-004**	**9.0000e-005**	**1.0900e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2895**	**0.2895**	**1.0000e-005**	**1.0000e-005**	**0.2920**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Drilling and Testing - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8700e-003	0.0255	0.0449	7.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	6.1303	6.1303	1.9800e-003	0.0000	6.1798
Total	**2.8700e-003**	**0.0255**	**0.0449**	**7.0000e-005**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**1.1200e-003**	**1.1200e-003**	**0.0000**	**6.1303**	**6.1303**	**1.9800e-003**	**0.0000**	**6.1798**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	1.0900e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2895	0.2895	1.0000e-005	1.0000e-005	0.2920
Total	**1.2000e-004**	**9.0000e-005**	**1.0900e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2895**	**0.2895**	**1.0000e-005**	**1.0000e-005**	**0.2920**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Test Pit Excavations - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-004	3.8900e-003	8.1900e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.8000e-004	1.8000e-004	0.0000	1.1399	1.1399	3.7000e-004	0.0000	1.1491
Total	**4.7000e-004**	**3.8900e-003**	**8.1900e-003**	**1.0000e-005**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**1.1399**	**1.1399**	**3.7000e-004**	**0.0000**	**1.1491**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0482	0.0482	0.0000	0.0000	0.0487
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0482**	**0.0482**	**0.0000**	**0.0000**	**0.0487**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Test Pit Excavations - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-004	3.8900e-003	8.1900e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.8000e-004	1.8000e-004	0.0000	1.1399	1.1399	3.7000e-004	0.0000	1.1491
Total	**4.7000e-004**	**3.8900e-003**	**8.1900e-003**	**1.0000e-005**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**1.1399**	**1.1399**	**3.7000e-004**	**0.0000**	**1.1491**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0482	0.0482	0.0000	0.0000	0.0487
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0482**	**0.0482**	**0.0000**	**0.0000**	**0.0487**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.501205	0.048264	0.173979	0.159914	0.042609	0.009103	0.012183	0.016399	0.000418	0.000428	0.029388	0.001810	0.004302

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

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

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

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

7.0 Water Detail

7.1 Mitigation Measures Water

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

7.2 Water by Land Use

Unmitigated

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

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

YCWA NLF Site Investigation Program - Feather River AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B: 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:
Project Code: 2023-0118462
Project Name: YCWA NLF Site Investigations Project

August 17, 2023

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, 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 U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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 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 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:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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 Code 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".

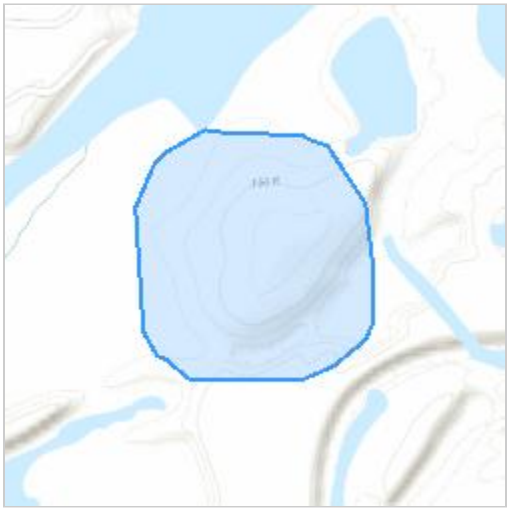
This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2023-0118462
Project Name: YCWA NLF Site Investigations Project
Project Type: Scientific Research/Monitoring
Project Description: The proposed project will complete necessary site investigations, including borings, test pits, geophysical investigations, and mapping to assist in determining the feasibility of the YCWA Nature Like Fishway.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.206078649999995,-121.44257611128023,14z



Counties: Yuba County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

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

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

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

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap 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.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: County of Yuba
Name: Keith Whitener
Address: 3200 64th Street
City: Sacramento
State: CA
Zip: 95820
Email keith@robertson-bryan.com
Phone: 9164167014