Initial Study/Proposed Mitigated Negative Declaration

El Dorado Irrigation District
Folsom Lake Intake Improvements Project

Prepared for:

El Dorado Irrigation District

April 2019

Prepared by:

GEI Consultants

Consulting Engineers and Scientists

Initial Study/Proposed Mitigated Negative Declaration

El Dorado Irrigation District Folsom Lake Intake Improvements Project

Prepared for:

El Dorado Irrigation District
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Placerville, CA, 95667

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April 2019

Project No. 1802338.26.1

TEXT CHANGES TO THE DRAFT MITIGATED NEGATIVE DECLARATION

EID has made minor revisions and corrections to the February 2019 Mitigated Negative Declaration (MND) for the Folsom Lake Intake Improvements Project, including revisions in response to written and verbal comments received on the Project's potential environmental effects. The revisions are notated in the MND in underline and ~~strikethrough~~ text. These changes are listed below with rationale for the revisions where appropriate. The minor revisions described are not "substantial revisions" as described in CEQA Guidelines section 15073.5(b), but rather clarify, amplify, and make insignificant modifications to the mitigated negative declaration (See Section 15073.5(c)(2) and (3) of the CEQA Guidelines).

Page	Minor Revisions and Rationale
MND-ii MND-iii	Added Notice of Continued Public Hearing, Notice of additional 10-day public review period, and Notice of Community Meeting
MND-vi MND-vii	A summary of impact conclusions in the Findings section has been adjusted to reflect the Initial Study's conclusion that there would be no impact on tribal cultural resources
MND-vii	A description that EID has revised Mitigation Measure CR-1 (Address Previously Undiscovered Historic Properties and Archaeological Resources) was added in the Findings section: 8. EID has revised Mitigation Measure CR-1 (Address Previously Undiscovered Historic Properties and Archaeological Resources). The edits to this mitigation measure have been made the subject of a public hearing (simultaneous with consideration of the MND), and the new measure is equivalent to or more effective than the previous measure. The new measure would require additional actions and consultation by EID, and would not cause any new potentially significant effect on the environment.
MND-x	Text added to Mitigation Measure CR-1: If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of personnel involved in project implementation.

Page	Minor Revisions and Rationale
1-2	Changed the Summary of Findings to reflect the Initial Study's conclusion that there would be no impact on tribal cultural resources
3-10	The air quality modeling data presented in Table 3.3-2 and Appendix B has been adjusted to reflect updated modeling assumptions. In examining the original air quality modeling inputs, one-time truck trips for removal of debris following removal of the existing pumps and piping had inadvertently been included in the model as daily use of off-road trucks throughout in-water construction. The revised modeling indicates lower total air emissions than were disclosed in the February 2019 MND.
3-22 / 3-23	Text added to Mitigation Measure CR-1: If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of personnel involved in project implementation.
3-29	The Project's total construction-related greenhouse gas (GHG) emissions and Appendix B have been adjusted to reflect updated modeling assumptions. In examining the original air quality modeling inputs, one-time truck trips for removal of debris following removal of the existing pumps and piping had inadvertently been included in the model as daily use of off-road trucks throughout in-water construction. The revised modeling indicates lower total air emissions than were disclosed in the February 2019 MND: Modeling results show that the proposed project's total construction-related GHG emissions would be ~~287~~ 61 metric tons (MT).
3-29	Deleted text describing measures incorporated into the Project to minimize GHG emissions because emissions were below threshold ~~Furthermore, measures to reduce GHG emissions, such as reducing heavy equipment and truck idling time, using properly sized equipment, maintaining equipment (wheel alignment and properly inflated tires), and improving operator training (provide training during tailgate safety meetings to minimize excessive fuel consumption), have been incorporated into project construction.~~

El Dorado Irrigation District

FOLSOM LAKE INTAKE IMPROVEMENTS PROJECT
NOTICE of CONTINUED PUBLIC HEARING
NOTICE OF ADDITIONAL 10-DAY PUBLIC REVIEW PERIOD
NOTICE of COMMUNITY MEETING

NOTICES: Notice is hereby given that the El Dorado Irrigation District (EID) will:

1. Continue the public hearing to consider adoption of the Mitigated Negative Declaration (MND) for the Folsom Lake Intake Improvements Project (Project) on **May 13, 2019 at 9:00 A.M.** during a regularly scheduled meeting of the EID Board of Directors
2. Provide an additional 10-day public review and comment period from **April 16 – April 25, 2019** for the MND
3. Convene a public meeting at the El Dorado Hills Fire Station located at 1050 Wilson Boulevard, El Dorado Hills on Wednesday, **April 24, 2019** at **6:00 P.M.** to discuss the Project with local community members

On April 8, 2019 during a public hearing to consider adopting the MND for the Folsom Lake Intake Improvements Project (Project), the EID Board of Directors voted to continue the public hearing to the regular EID Board of Directors meeting on May 13, 2019, re-open the comment period for an additional 10 days, and directed staff to hold a community meeting for the Project. The Project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake prior to treatment and delivery to EID's drinking water system. The Project includes: 1) constructing a temperature control device for EID's intake facilities in order to preserve the cold-water pool in Folsom Lake to help enhance downstream habitat for anadromous fish species, 2) replacing selected existing pumps with more reliable and efficient equipment, 3) installing infrastructure to provide raw water supply to meet the El Dorado Hills Water Treatment Plant's currently permitted capacity, and 4) improving and optimizing the intake system's appurtenant facilities.

The District will receive comments on the MND during the additional 10-day public review period. The 10-day additional public review period starts on **April 16, 2019** and ends on **April 25, 2019**. Comments regarding the MND may be emailed to bdeason@eid.org or mailed to El Dorado Irrigation District, Folsom Lake Intake Improvements Project Comments, 2890 Mosquito Road, Placerville, CA 95667.

EID has made minor revisions and corrections to the MND, including revisions in response to written and verbal comments received on the Project's potential environmental effects. The revisions are notated in the MND in underline and strikethrough text. The minor revisions described are not "substantial revisions" as described in CEQA Guidelines section 15073.5(b), but rather clarify, amplify, and make insignificant modifications to the mitigated negative declaration (See Section 15073.5(c)(2) and (3) of the CEQA Guidelines).

AVAILABILITY OF DOCUMENTS: The MND is available for review at the following locations:

- EID website at www.eid.org/ceqa
- Placerville Main Public Library, 345 Fair Lane, Placerville
- Cameron Park Public Library, 2500 Country Club Drive
- El Dorado Hills Public Library, 7455 Silva Valley Parkway, El Dorado Hills
- EID Customer Service Building, 2890 Mosquito Road, Placerville

WAYS TO STAY INFORMED:

- **Webpage: Visit the project's webpage to view background and other information at www.eid.org/FolsomLakeIntakeProject.**
- **E-News:** Sign up for **eNews** and receive periodic updates on this project by email. Under the News and Calendar options select "Folsom Lake Intake Project".
- **Phone or Mail:** Call the office at (530) 622-4513 for information, to get on the mailing list, or to speak to a project representative.
- **General Project Questions eMail:** FLIntake@eid.org

ADA ACCESSIBILITY: EID's policy is to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you are a person with a disability and require information or materials in an appropriate alternative format, please contact our ADA Coordinator by phone at (530) 642-4045 or by email at adacoordinator@eid.org.

El Dorado Irrigation District

NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION
(Pursuant to CEQA Section 21092 and CEQA Guidelines Section 15072)
NOTICE OF PUBLIC HEARING
for the
FOLSOM LAKE INTAKE IMPROVEMENTS PROJECT

The El Dorado Irrigation District (EID) proposes to adopt a Mitigated Negative Declaration (MND) pursuant to the California Environmental Quality Act (Section 15000 et seq., Title 14, California Code of Regulations) for the Folsom Lake Intake Improvements Project (proposed project).The proposed project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. The proposed project does not increase the capacity or change the use of the existing facilities being replaced.

The proposed project includes: 1) constructing a temperature control device for EID's intake facilities in order to preserve the cold-water pool in Folsom Lake to help enhance downstream habitat for anadromous fish species, 2) replacing selected existing pumps with more reliable and efficient equipment, 3) installing infrastructure to provide raw water supply to meet the El Dorado Hills Water Treatment Plant's currently permitted capacity, and 4) improving and optimizing the intake system's appurtenant facilities. The project site is not identified on the lists specified in Government Code section 65962.5. Project construction is anticipated to take approximately eighteen (18) months. EID is the lead agency under the California Environmental Quality Act (CEQA) for the Project and has directed the preparation of an Initial Study (IS) on the proposed project in accordance with the requirements of CEQA, the State CEQA Guidelines, and EID's guidelines. The IS describes the proposed project and assesses the proposed project's potentially significant adverse impacts on the physical environment. It concludes that the proposed project's potentially significant or significant adverse effects on the environment could be mitigated to less-than-significant levels; therefore, a proposed Mitigated Negative Declaration (MND) has been prepared.

Agencies and members of the public are invited to comment on the proposed IS/MND. The comment period is from February 6, 2019 to March 7, 2019. The proposed IS/MND can be reviewed at EID's Customer Service Building, 2890 Mosquito Road, Placerville, CA 95667 or on the EID web site at www.eid.org/ceqa. Comments must be received by 5:00 p.m. on March 7, 2019. Comments can be sent to Brian Deason, Environmental Resources Supervisor, El Dorado Irrigation District, at the address above or by email at bdeason@eid.org. EID will hold a public hearing to consider the IS/MND on April 8, 2019 at 9:00 a.m. during a regularly scheduled meeting of the EID Board of Directors. The hearing will be in the EID Customer Service Building Board Room at the above address.

In accordance with the Americans with Disabilities Act (ADA) and California law, it is the policy of the El Dorado Irrigation District to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you are a person with a disability and require information or materials in an appropriate alternative format; or if you require any other accommodation for this meeting, please contact the EID ADA coordinator at 530-642-4045 or e-mail at adacoordinator@eid.org at least 72 hours prior to the meeting. Advance notification within this guideline will enable the District to make reasonable accommodations to ensure accessibility.

PROPOSED MITIGATED NEGATIVE DECLARATION

Project:	**Folsom Lake Intake Improvements Project**
Lead Agency:	**El Dorado Irrigation District**

PROJECT LOCATION

El Dorado Irrigation District's (EID's) intake facilities on Folsom Lake are located on the south bank of Folsom Lake, approximately two (2) miles upstream from Folsom Dam in El Dorado County, California.

PROJECT DESCRIPTION

EID's current intake facility at Folsom Lake includes nine lake pumps with six booster pumps, arranged in series. The Folsom Lake Intake Improvements Project ("proposed project" or "project") involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. The project does not increase the capacity or change the use of the existing facilities being replaced.

The project consists of replacing six lake pumps and three booster pumps with four new, higher-powered pumps capable of pumping water directly from the lake to the El Dorado Hills Water Treatment Plant without the use of booster pumps. The new pumps would be installed in a submersible pump casing grid consisting of slant casings interconnected with cross-pipes installed along the bank. The intake elevations at 325, 370, and 410 feet have been previously reviewed and agreed to in coordination between EID and the U.S. Department of Interior, Bureau of Reclamation (Reclamation) to provide for temperature control for the benefit of downstream fisheries. Each intake would be screened with a cylindrical T-screen with 1-inch slot openings. The individual lake pump discharge pipes would be 12 inches in diameter and would connect to a 30-inch diameter discharge header at the top of bank that would be routed to the existing 30-inch transmission main that leaves the site. A bridge crane structure would be constructed at the top of the bank, sized to allow for access to all existing and future pumps. The overall crane structure would be approximately 65 feet long, 25 feet wide, and 25 feet high.

FINDINGS

An Initial Study (IS) has been prepared to assess the proposed project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed project would not have any significant adverse effects on the physical environment after implementation of mitigation measures. This conclusion is supported by the following findings:

1. The proposed project would have no impacts on land use and planning, mineral resources, population and housing, ~~and~~ public services<u>, and tribal cultural resources</u>.

2. The proposed project would have less-than-significant impacts on aesthetics, agriculture and forestry resources, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, recreation, transportation, and utilities and service systems.

3. The proposed project would have potentially significant impacts on biological resources, cultural resources, and hydrology and water quality, ~~and tribal cultural resources,~~ but mitigation measures are proposed to avoid or reduce these effects to less-than-significant levels.

4. The proposed project would not have the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

5. The proposed project would not have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

6. The proposed project would not have possible environmental effects that are individually limited but cumulatively considerable and contribute to a significant cumulative impact. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

7. The environmental effects of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly.

8. EID has revised Mitigation Measure CR-1 (Address Previously Undiscovered Historic Properties and Archaeological Resources). The edits to this mitigation measure have been made the subject of a public hearing (simultaneous with consideration of the MND), and the new measure is equivalent to or more effective than the previous measure. The new measure would require additional actions and consultation by EID, and would not cause any new potentially significant effect on the environment.

Following are the proposed mitigation measures that would be implemented by EID to avoid or minimize environmental impacts. Implementation of these mitigation measures would reduce the environmental impacts of the proposed project to less-than-significant levels.

Mitigation Measure BIO-1: Minimize Effects to Nesting Swainson's Hawks, Golden Eagles, and Bald Eagles.

EID shall implement the following measures to avoid and minimize potential adverse effects on nesting Swainson's hawk, golden eagles, and bald eagles during project construction.

- Preconstruction surveys for active Swainson's hawk, golden eagle, and bald eagle nests shall be conducted by a qualified biologist in all areas of suitable nesting habitat within 0.25-mile of project disturbance. A minimum of one survey shall be conducted no more than 14 days before project activities commence, if construction begins during the nesting season (February 1 through August 15).

- Appropriate buffers shall be established and maintained around active nest sites to avoid nest failure from project activities. The appropriate size and shape of the buffers shall be determined by a qualified biologist and may vary depending on the nest location, nest stage,

and construction activity. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activities are not resulting in detectable adverse effects on nesting birds or their young. No project activities shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure BIO-2: Avoid and Minimize Effects to Other Nesting Birds.

EID shall implement the following measures to avoid and minimize potential adverse effects on other nesting birds during project construction.

- Vegetation removal shall be conducted between September 1 and January 31, to the extent feasible.

- If vegetation removal must occur during the bird nesting season (February 1 through August 15), surveys for active bird nests shall be conducted by a qualified biologist in areas of suitable nesting vegetation designated for removal. If active nests are found, removal of vegetation in which the nests are located will be delayed until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

- Preconstruction surveys for active nests of special-status birds and common raptor species shall be conducted by a qualified biologist. Surveys for raptor nests shall include suitable habitat within up to 300 feet of areas subject to project disturbance, depending on the potential extent of indirect impact. Surveys for nests of non-raptor special-status birds shall include suitable habitat within up to 50 feet of the disturbance areas. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 1 to August 15) in a given area.

- If any active nests are observed, or behaviors indicating active nests are present, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. Buffer size shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. If buffers are adjusted, monitoring shall be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure BIO-3: Avoid, Minimize, and Mitigate for Unavoidable Impacts on Waters of the United States on a No-Net-Loss Basis.

EID shall implement the following measures to avoid, minimize, and, if necessary, compensate for the direct fill of waters of the United States in Folsom Lake.

- Ground disturbance shall be limited to construction areas, including necessary access routes and staging areas. The total area of the project activity shall be limited to the minimum necessary. When possible, existing access routes and points shall be used. All roads, staging areas, and other facilities shall be placed to avoid and limit disturbance to Folsom Lake when feasible.

- A written spill prevention and control plan (SPCP) shall be prepared and implemented

- Before the commencement of construction activities, high-visibility fencing shall be erected to protect areas of sensitive biological resources that are located adjacent to construction areas from encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed only when the construction within a given area is completed. Limits of waters of the United States shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas.

- Project implementation would result in the need to obtain regulatory permits from USACE, RWQCB, and CDFW for direct impacts to Folsom Lake. All measures developed through consultation with the respective regulatory agencies shall be implemented to mitigate adverse effects.

    - **Section 404:** EID will seek authorization for fill of jurisdictional waters of the United States from USACE via the Section 404 permitting process before project construction. Any mitigation measures determined necessary during the 404 permitting process shall be implemented during project construction. If USACE deems that compensatory mitigation is required, an appropriate and feasible mitigation plan to compensate for loss of waters of the United States shall be developed and provided to the appropriate regulatory agencies for approval. The plan, if required, shall be developed in consultation with and approved by the appropriate regulatory agencies before construction activities begin in waters of the United States.

    - **Section 401:** A water quality certification application pursuant to Section 401 of the Clean Water Act shall be submitted to the Central Valley RWQCB before starting project construction in any areas that may contain waters of the State. Any measures required as part of the issuance of water quality certification shall be implemented.

    - **Section 1602:** A notification of lake and streambed alteration shall be submitted to CDFW under Section 1602 of the California Fish and Game Code before starting project construction in any areas under CDFW's jurisdiction. If CDFW determines a lake or streambed alteration agreement is necessary, any conditions of the lake and streambed alteration agreement, including minimization and compensation measures, shall be implemented as part of project implementation.

Timing: Before, during, and after construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure BIO-4: Minimize and Compensate for Loss of Oaks.

EID has elected to implement the following measure to minimize and compensate for removal of interior live oak woodland.

- Interior live oak woodland shall be avoided during construction, to the extent feasible. A qualified botanist shall clearly mark woodland to be avoided prior to construction. If oak woodland or individual oaks greater than 6 inches in diameter at breast height cannot be avoided, EID will pay in-lieu fees for the removal of oak trees or oak woodlands as described in the County's Oak Resources Management Plan (as adopted on October 24, 2017).

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties and Archaeological Resources.

EID shall implement the following measure to reduce or avoid impacts on undiscovered historic properties and archaeological resources. If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of personnel involved in project implementation. If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot radius of the find shall cease. EID shall retain a professional archaeologist meeting the *Secretary of the Interior's Professional Standards for Archaeologists* to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer and Reclamation, if necessary, and shall be completed before project activities continue in the vicinity of the find.

Timing: During construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure CR-2: Avoid Potential Effects on Undiscovered Burials.

EID shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and a 100-foot radius shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a

discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act (NAGPRA), Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires federal agencies and institutions that receive federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA also has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials as part of their compliance responsibilities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. EID shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Timing: During construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices.

EID shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) as required under the State Water Resources Control Board's General Construction Permit Order 2009-0009-DWQ [and as amended by most current order(s)]) that includes erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after project construction. The SWPPP shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent waters of the U.S. and State.

The SWPPP shall be prepared with the following objectives: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed project discharge points and receiving waters to address post-construction BMP implementation and monitoring; and (e) to address sedimentation, siltation, and turbidity.

The following list describes BMPs that would be implemented under the SWPPP to protect water quality within Folsom Lake.

- Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Folsom Lake, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. Cover or

otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch.

- Immediately after construction is complete, all exposed soil shall be stabilized. Soil stabilization may include, but is not limited to, seeding or planting of native plants and placing rock.

- No refueling, storage, servicing, or maintenance of equipment shall take place on the shore within 100 feet of the ordinary high water mark of Folsom Lake.

- All machinery used during project construction shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water.

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, State, and Federal regulations as described in the SPCP.

- Tightly woven fiber netting (no monofilament netting) or similar material shall be used for erosion control or other purposes within the project footprint to ensure that wildlife are not trapped. This limitation shall be communicated to the construction contractor through the special provisions included in the bid solicitation package. Coconut coir matting and burlap-containing fiber rolls are an example of acceptable erosion control materials.

- Erosion control measures that minimize soil or sediment from entering waterways and wetlands shall be installed, monitored for effectiveness, and maintained throughout construction activities.

- Precautions to minimize turbidity/siltation shall be implemented during construction. This may require placing barriers (e.g., silt curtains) to prevent silt and/or other deleterious materials from entering downstream reaches.

- Petroleum products, chemicals, fresh cement, and construction by-products containing, or water contaminated by, any such materials shall not be allowed to enter flowing waters and shall be collected and transported to an authorized upland disposal area.

Timing: Before, during, and after construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure WQ-2: Prepare and Implement a Spill Prevention and Control Plan and Applicable Hazardous Materials Business Plans.

The contractor shall also prepare a SPCP and applicable hazardous materials business plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent and materials available to clean up, hazardous material and waste spills. The SPCP shall also identify emergency procedures for responding to spills.

The SPCP and all material necessary for its implementation shall be accessible on-site prior to initiation of project construction and throughout the construction period. Employees and construction workers shall be provided the necessary information from the SPCP to prevent or

reduce the discharge of pollutants from construction activities to waters and to use the appropriate measures should a spill occur. In the event of a spill, work shall stop in the immediate vicinity of the spill until cleanup activities are completed. Agency notification of spill events would follow procedures specified in permits obtained for the project.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure WQ-3: Implement Best Management Practices for In-Water Work.

EID shall require that the construction contractor implement best management practices to contain suspended sediments during in-water work. Best management practices may include the use of a continuous length of floating silt curtain, double or triple casing drilling procedures, or other measures as necessary to contain suspended sediments or other deleterious materials from entering surface waters. The construction contractor will be required to monitor the equipment for performance as needed to comply with all regulatory requirements.

A qualified biologist shall monitor at the onset of construction activities in waters of the United States to ensure that avoidance and minimization measures are being properly implemented and no unauthorized activities occur, and conduct weekly inspections thereafter during the duration of in-water construction.

Timing: During in-water construction.

Responsibility: El Dorado Irrigation District.

INITIAL STUDY

Project Information

1. Project title:	Folsom Lake Intake Improvements Project
2. Lead agency name and address:	El Dorado Irrigation District 2890 Mosquito Road Placerville, CA 95667
3. Contact person and phone number:	Brian Deason, Environmental Resources Supervisor 530-642-4064 bdeason@eid.org
4. Project location:	El Dorado Hills in El Dorado County
5. Project sponsor's name and address:	See #2
6. General plan designation:	Open Space
7. Zoning:	Open Space
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The proposed project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. See Chapter 2, "Project Description."
9. Surrounding land uses and setting: Briefly describe the project's surroundings:	EID's intake facilities are located on the south bank of Folsom Lake, accessible via Planeta Way. Surrounding land uses are recreational and open space uses, and single family residential uses. See "Environmental Setting" discussion under each issue area in Chapter 3, "Environmental Checklist."
10. Other public agencies whose approval may be required or requested (e.g., permits, financing approval, or participation agreement.)	U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, Central Valley Regional Water Quality Control Board, California Department of Fish and Wildlife, El Dorado County
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	Yes. Consultation is described in more detail in Sections 3.5 (Cultural Resources) and 3.17 (Tribal Cultural Resources).

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Appendices

Abbreviations and Acronyms

AQMD	Air Quality Management District
BMPs	best management practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CRHR	California Register of Historical Resources
CWA	Clean Water Act
cy	cubic yards
DTSC	Department of Toxic Substances Control
EDHWTP	El Dorado Hills Water Treatment Plant
EID	El Dorado Irrigation District
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Endangered Species Act
GEI	GEI Consultants, Inc.
GHG	greenhouse gas
IS/MND	Initial Study/proposed Mitigated Negative Declaration
ITE	Institute of Transportation Engineers
MMP	mitigation and monitoring plan
MT	metric tons
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places

PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppv	peak particle velocity
project	Folsom Lake Intake Improvements Project
proposed project	Folsom Lake Intake Improvements Project
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
ROG	reactive organic gases
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
SPCP	spill prevention and control plan
SWPPP	Storm Water Pollution Prevention Plan
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WCM	Water Control Manual

Chapter 1. Introduction

The El Dorado Irrigation District (EID) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) to address the potentially significant environmental impacts of the proposed Folsom Lake Intake Improvements Project ("proposed project" or "project") in El Dorado Hills, California. EID is the lead agency under CEQA.

To satisfy CEQA requirements, this document includes:

- an IS (Initial Study),
- a proposed MND, and
- a Notice of Availability and intent to adopt an MND for the proposed project.

After the required public review of this document is complete, EID will consider adopting the proposed MND and a Mitigation Monitoring and Reporting Program and will decide whether to approve the proposed project.

1.1 Purpose of the Initial Study

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

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

CEQA requires that all State and local government agencies consider the potentially significant and significant environmental impacts of projects they propose to carry out or over which they have discretionary authority, before implementing or approving those projects. The public agency that has the principal responsibility for carrying out or approving a proposed project is the lead agency for CEQA compliance (State CEQA Guidelines, CCR Section 15367). EID has principal responsibility for carrying out the proposed project and is therefore the CEQA lead agency for this IS/MND.

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

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

1.2 Summary of Findings

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

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

- Land use and planning
- Mineral resources
- Population and housing
- Public services
- Tribal cultural resources

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

- Aesthetics
- Agriculture and forestry resources
- Air quality
- Energy
- Geology and soils
- Greenhouse gas emissions
- Hazards and hazardous materials
- Noise
- Recreation
- Transportation
- Utilities and service systems
- Wildfire

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

- Biological resources
- Cultural resources
- Hydrology and water quality
- ~~Tribal cultural resources~~
- Mandatory findings of significance

1.3 Document Organization

This document is divided into five key sections:

Chapter 1, "Introduction." This chapter describes the purpose of the IS/MND, summarizes findings, and describes the organization of this IS.

Chapter 2, "Project Description." This chapter describes the project location and background, project need and objectives, project characteristics, construction activities, project operations, and discretionary actions and approvals that may be required.

Chapter 3, "Environmental Checklist." This chapter presents an analysis of environmental issues identified in the CEQA Environmental Checklist and determines whether project implementation would result in a beneficial impact, no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, potentially significant impact, or significant impact, on the physical environment in each issue area. Should any impacts be determined to be potentially significant or significant with mitigation incorporated, an EIR would be required. For the proposed project, however, mitigation measures have been incorporated as needed to reduce all potentially significant and significant impacts to less-than-significant levels.

Chapter 4, "References Cited." This chapter lists the references used to prepare this IS.

Chapter 5, "Report Preparers." This chapter identifies individuals who helped prepare or review this document.

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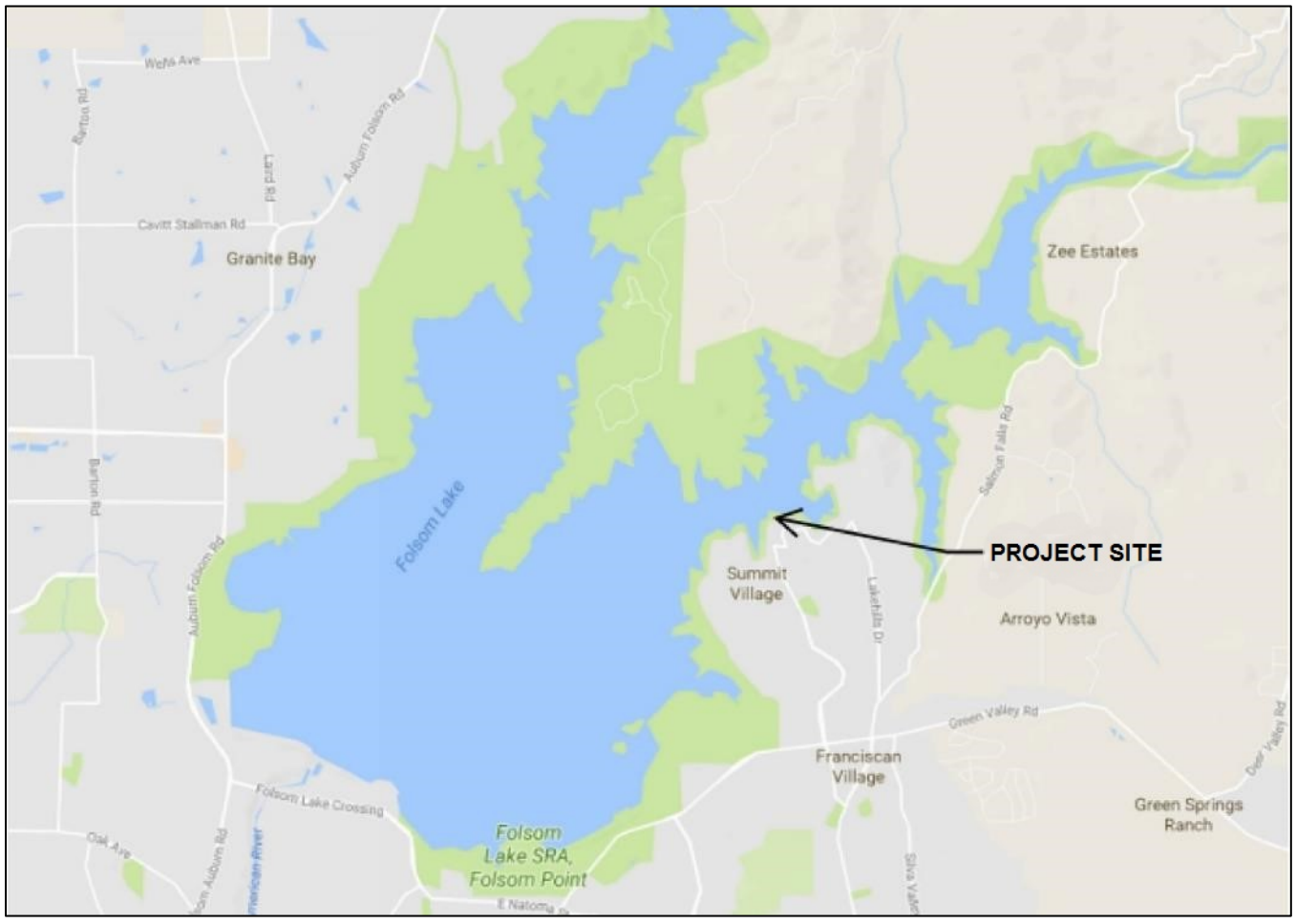
Chapter 2. Project Description

This chapter describes the proposed Folsom Lake Intake Improvements Project (proposed project). The project location and background are described along with project need and objectives, project characteristics, construction activities, project operations, and discretionary actions and approvals that may be required. Appendix A, "Project Photographs," presents photographs of the existing site and facilities.

2.1 Project Location

EID's intake facilities are located on the south bank of Folsom Lake, approximately two (2) miles upstream from Folsom Dam in El Dorado County, California (Figure 2-1). The site is accessible from Planeta Way off Guadalupe Drive, just north of Francisco Drive in El Dorado Hills. EID's intake facilities are located on land leased from the U.S. Department of the Interior, Bureau of Reclamation (Reclamation).

Figure 2-1. Project Site Location



Source: Black & Veatch 2018

2.2 Project Background and Need

The proposed project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. The proposed project does not increase the capacity or change the use of the existing facilities being replaced.

EID's current intake facilities include nine lake pumps with six booster pumps, arranged in series (Figure 2-2). The lake pumps supply water from Folsom Lake to the booster pumps, which in turn boost the water to convey to the El Dorado Hills Water Treatment Plant (EDHWTP). The current maximum pumping capacity of EID's intake facilities is approximately 26 million gallons per day (mgd), and the current maximum permitted treatment capacity of the EDHWTP is 19.5 mgd.

EID's intake facilities include nine lake pumps and six booster pumps designated as follows:

- A-side: two lake pumps and two booster pumps to be replaced as part of the project.
- B-side: three lake pumps and four booster pumps, with one booster pump to be removed as part of the project.
- C-side: four lake pumps to be replaced as part of the project.

The proposed project would replace the six A-side and C-side lake pumps and two A-side booster pumps with four new, higher-powered pumps capable of pumping water directly from the lake to the EDHWTP without the use of booster pumps. An additional B-side booster pump will no longer be needed to accommodate C-site flows and will be removed from the site. The proposed improvements and replacements of these facilities are needed because the existing pumps and casings do not allow selective temperature withdrawal at multiple elevations for the benefit of downstream fisheries, and the existing A-side pumps and boosters, and C-side pumps, have reached the end of their useful life and have undergone multiple repairs over the years. Figure 2-3 illustrates the proposed improvements to the facility.

2.3 Project Objectives

The project objectives are to:

- construct a temperature control device for EID's intake facilities in order to preserve the cold-water pool in Folsom Lake and enhance downstream habitat for anadromous fish species,
- replace selected existing pumps at EID's intake facilities with more reliable and efficient equipment,
- provide adequate raw water supply to meet the EDHWTP's permitted capacity of 19.5 mgd, and
- maintain a supply of at least 17.3 mgd during construction.

2.4 Description of Proposed Improvements

2.4.1 New Facilities and Equipment

Four new replacement lake pumps, each with a 4.33 mgd capacity, would be installed to replace six existing lake pumps and three existing booster pumps; Figure 2-3 illustrates the configuration of the

Figure 2-2. Existing Facilities at the Project Site

Source: Black and Veatch 2018

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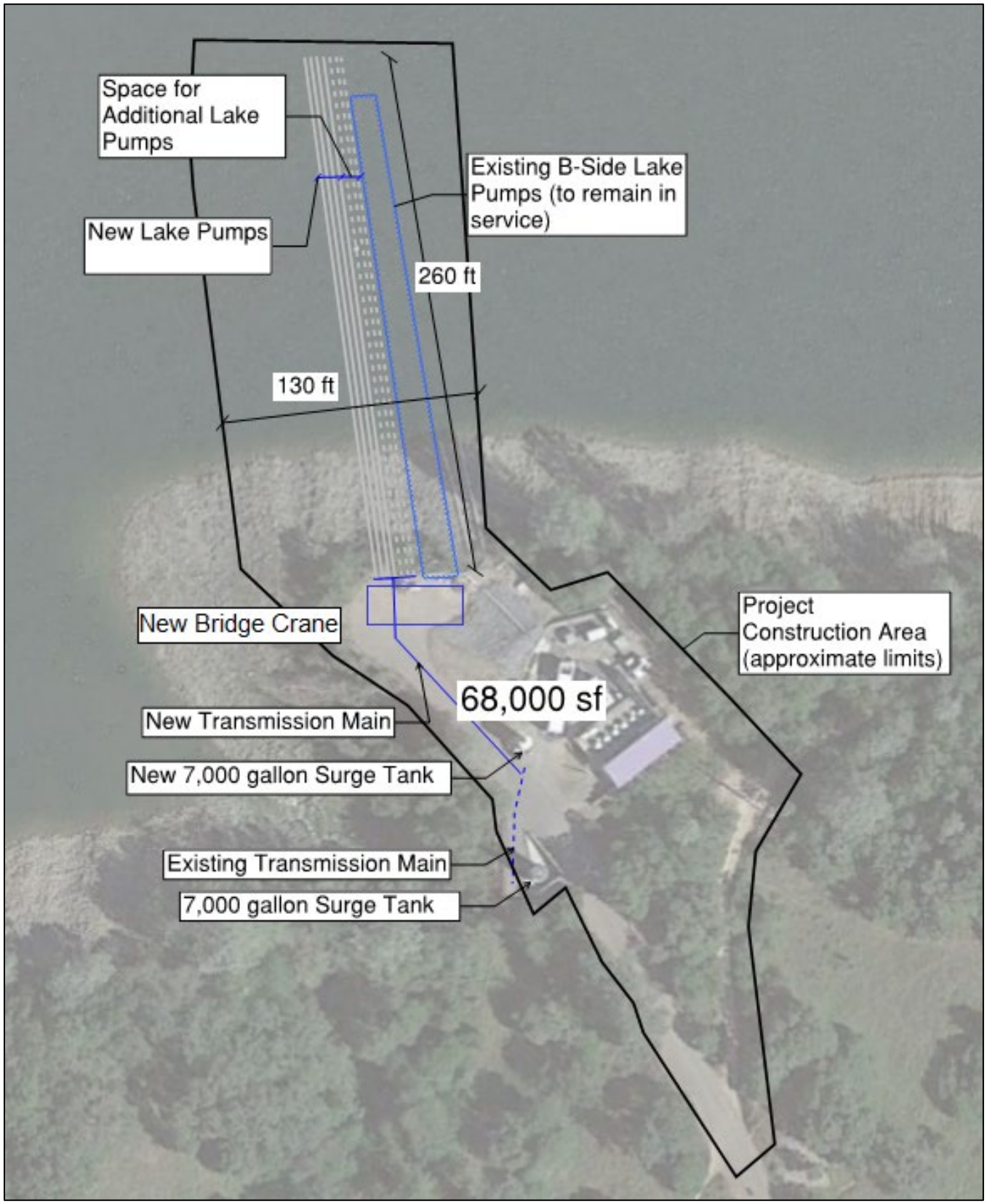
Figure 2-3. Proposed Improvements at the Project Site



Source: Black & Veatch 2018

proposed pumps along with the existing pumps. These new replacement pumps would be designed to pump directly from Folsom Lake to the EDHWTP. The new pumps would be installed in a submersible pump casing grid consisting of slant casings interconnected with cross-pipes installed along the bank. The intake elevations at 325, 370, and 410 feet have been previously reviewed and agreed to in coordination between EID and Reclamation for temperature control for the benefit of downstream fisheries. Each intake would be screened with a cylindrical T-screen with 1-inch slot openings. The lake pump casings would be supported along the bank at regular intervals using a common strip foundation. Cast-in-place concrete foundations would be used along the lake slope at regular intervals to support the new pump casings.

The individual lake pump discharge pipes would be 12 inches in diameter and would connect to a 30-inch-diameter discharge header at the top of bank that would be routed to the existing 30-inch transmission main that leaves off site. The discharge header would include space to enable potential future replacements of the B-side pumps, providing blind flanges capped above ground. There is no immediate plan to replace these B-side pumps.

A bridge crane structure would be constructed at the top of the bank, sized to allow for access to all existing and future pumps. The overall structure would be approximately 65 feet long, 25 feet wide, and 25 feet high.

An existing 5,000-gallon surge tank would be demolished and replaced with a second 7,000-gallon surge tank, increasing the total surge volume from 12,000 to 14,000 gallons.

The site would be expanded to the south of the existing electrical building, with a new, level concrete pad constructed to accommodate new electrical equipment. The expansion area would be fenced and paved. New heating, ventilation, and air conditioning equipment would also be installed south of the building. Overall, the existing 20,000-square-foot site would increase to a 27,000-square-foot site.

The existing pavement on the project site would be repaired or repaved. At the south wall of the electrical building, an area would be regraded to promote drainage away from the building, and a new foundation drain system would be installed in this location.

2.4.2 Demolition or Removal of Existing Facilities and Equipment

Both the existing A-side and C-side lake pumps would be removed. This includes two A-side lake pumps, and four C-side lake pumps. All associated in-lake piping, pipe casings, concrete supports, and anchors would be removed to clear space for the new replacement lake pumps.

Two A-side booster pumps, along with associated piping, valves, electrical, instrumentation, and accessories inside an existing underground concrete vault, would be demolished. The underground piping connecting to the booster pump station vault would be removed where practical and the concrete vault structure would be removed.

One B-side booster pump is located in a prefabricated enclosure next to the trailer-mounted standby generator and would be removed as part of the project. This activity would include removing the existing pump, electrical equipment, prefabricated enclosure and associated piping, valves, and accessories.

Electrical improvements would include removing the A-side and C-side electrical components and rerouting the B-side pump's electrical supply. Existing electrical equipment would be removed to make room in the existing electrical building for the new replacement lake pump electrical equipment. The B-side lake pump starters would be moved to an outdoor motor control center.

2.4.3 Construction Techniques and Equipment

Construction would generally occur between 7 a.m. and 7 p.m., Monday through Friday, or between 8 a.m. and 5 p.m. on weekends or holidays. Material storage space on the project site is limited, so EID would require that the contractor make offsite storage arrangements for materials. Staging of equipment on Planeta Way would require the contractor to obtain an encroachment permit from the County Transportation Department. Offsite storage at other locations could occur within 10 miles of the project site. The contractor would be responsible for obtaining any necessary authorizations or permits for the offsite storage. A local marina or boat lunch at Folsom Lake would be used for staging, loading, and launch activities associated with the barges and in-water work; all staging, loading, and launch activities at the marina would be located in existing disturbed or paved areas. Up to five pickup trucks may be present at any given time. Up to 15 total concrete trucks would deliver concrete to the project site during three separate periods of concrete placement.

Up to 20 construction workers would be present at any given time, including:

- Excavation, grading, clearing, and grubbing – up to a five-person crew.
- Concrete placement – up to a 10-person crew.
- Mechanical piping and equipment installation – up to a five-person crew.
- Electrical installation – up to a five-person crew.
- In-water work (two barges would be used, one for equipment and one for diving) – up to a four-person crew for drilling activities.
- Concrete support construction and casing network installation – up to five divers.

The general contractor would have up to five people on site, and there would be occasional equipment vendors and delivery personnel.

Construction traffic (including truck traffic) accessing the site would follow Planeta Way, Guadalupe Drive, Francisco Drive, Green Valley Road, and El Dorado Hills Boulevard to and from U.S. Highway 50. Construction traffic to and from any of the three anticipated marina staging areas would follow similar high-volume suburban roadways to those described for the project site. Approximately 5 heavy truck trips per day would occur during project construction.

Above-Water Construction

During excavation, subgrade preparation, site grading, and concrete work above the Folsom Lake water elevation, the anticipated construction equipment would include one excavator, one bulldozer, and approximately three haul trucks. During pipe and pump installation, and surge tank installation, a truck-mounted crane would be used, along with occasional pipe and equipment delivery trucks.

During site preparation, vegetation would be cleared from the top of the bank along the north and west edges of the existing paved area to provide equipment access to the work area for installing pumps and casing. Based on the new equipment space needs on the south side of the site, at least five trees (three oak, one pine, and one deciduous tree) with diameters at breast height (dbh) between 6 and 12 inches will be removed.

Ripping or localized shallow blasting (less than 5 feet depth), including a total of up to 20 blasts over approximately a 1-month period, may also be required to install pump casings on the lake shore above the normal lake operating level and in-water for the buried portion of casings. Blasting or drilling and splitting, or possibly hand held hydraulic breakers (jackhammers) may be used to excavate the bedrock. Preparation of the area for installing the new pumps and casings would include removing the existing pumps and casings, disassembling and removing steel supports and three concrete headwalls, and excavating an approximately 30-foot-wide and 150-foot-long area to local depths of up to 10 feet. The four new pump casings would be installed within this excavated area, which would then be backfilled with either engineered fill material or concrete. Rock removed from the excavation would be distributed on the ground surface and lake bed within the construction limits following the installation of the new casings.

Depending on the water level at the time of construction, some portion of this casing and support removal and excavation would occur onshore, with the remaining portion occurring in-water using techniques described below under "In-Water Construction."

During final grading and paving, approximately three haul trucks and paving equipment would be used. The southeast side of the existing electrical building would be regraded to install the new electrical equipment. It is anticipated that approximately 10,800 cubic feet of soil would be excavated. While some of the excavated material can be used as fill onsite, it is expected that about half of the material would be transported away for disposal. Material would be disposed at an existing site up to 15 miles away from the project site.

Approximately 10,000 square feet of area, including an approximately 7,000-square-foot area adjacent to the existing site, would be paved as part of the project. The existing, approximately 6,000 cubic-foot, below-grade concrete structure at the pump station would be demolished and removed or filled with structure backfill. Three approximately 150-foot-long steel casings would be removed from the lake, along with concrete supports and anchors. It is anticipated approximately 10 to 20 truck trips would be used to remove pipe casing, concrete, and other material from demolition of equipment.

In-Water Construction

In-water construction in Folsom Lake is expected to occur using two barges and up to five divers, with additional support staff such as equipment operators and material handlers. Based on previous construction projects in Folsom Lake, marine contractors would likely mobilize and stage equipment and materials at a nearby public marina, such as Granite Bay, Brown's Ravine, or Folsom Point. Use of the marinas would need to be coordinated by the construction contractor with California Department of Parks and Recreation. In-water construction would likely occur when the lake level is low to minimize barge rental and diving costs. For this project, the typical operating level during flood control season is described in the U.S. Army Corps of Engineers (USACE) Water Control Manual (WCM) and occurs between November and February. In-water construction work is expected to be conducted between approximately October and February. Barring any unusual dry weather or drought conditions in the year

of construction, EID expects that in-water work would likely take place below a lake level of elevation 428 above mean sea level (msl).

Slope preparation for the casing network installation would require a combination of above-ground excavator and haul trucks for regrading at the top of the slope. This slope grading at the top is expected to occur above the water level from the land side. Soil excavated from the lake would be reused as casing cover, after cobbles, boulders, and oversize rock fragments have been removed.

Slope grading would be followed by subgrade preparation and micropile (drilled pile) installation through overburden and into bedrock. Micropiles would be used to anchor the pipe supports into the bedrock to prevent uplift and movement. Above lake level, the drill rig for micropiles would operate from the sloped surface; micropile drilling on the remainder of the slope would be done from a barge. Ripping or localized shallow blasting as described above under "Above-Water Construction," may be required to prepare the slope for the in-water pump casings. The four new pump casings would be installed within this excavated area, which would then be backfilled using a barge-mounted excavator with either engineered fill material or concrete using a vertical pipe. Rock removed from the excavation would be distributed on the ground surface and lake bed as a protective layer within the construction limits following the installation of the new casings.

2.4.4 Construction Schedule

Construction activities are expected to commence about May 2019 and continue through about February 2020. In-water construction work is expected to be conducted between approximately October 2019 and February 2020.

2.5 Operations and Maintenance

Following construction activities, facility operations and maintenance would be similar to activities that occur now without the proposed project. No new significant noise sources are anticipated. New outdoor operating equipment would include a bridge crane and a compressed air system for operating intake valves in the lake. The compressed air system would be used seasonally, approximately 2-3 times each year to adjust the intake valve positions in the lake. The duration of valve opening is expected to be a few minutes each time the valve is opened or closed. The crane would be used during scheduled maintenance to inspect a pump or pull a pump for servicing or failure, a 1-day operation performed up to twice a year.

2.6 Regulatory Requirements, Permits, and Approvals

As the CEQA lead agency, EID has the principal responsibility for approving and carrying out the proposed project and for ensuring that CEQA requirements and all other applicable regulations are met. Other permitting agencies that may have permitting approval or review authority over portions of the proposed project are listed below.

- **U. S. Army Corps of Engineers**—Department of the Army, Clean Water Act (CWA) Section 404 Permit for discharge of fill to Waters of the U.S.; National Historic Preservation Act (NHPA) Section 106 compliance.

- **Central Valley Regional Water Quality Control Board**—CWA Section 401 Certification; and CWA Section 402 National Pollutant Discharge Elimination System (NPDES) stormwater permit for general construction.
- **California Department of Fish and Wildlife**—California Fish and Game Code Section 1602 lake or streambed alteration agreement.
- **El Dorado County**—Oak Woodland Mitigation Plan.
- **El Dorado County Department of Transportation**—Encroachment Permit; Traffic Control Plan
- **U.S. Bureau of Reclamation**—Amendment to existing land use authorization

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Chapter 3. Environmental Checklist

Project Information

1. Project title:	Folsom Lake Intake Improvements Project
2. Lead agency name and address:	El Dorado Irrigation District 2890 Mosquito Road Placerville, CA 95667
3. Contact person and phone number:	Brian Deason, Environmental Resources Supervisor 530-642-4064
4. Project location:	El Dorado Hills in El Dorado County
5. Project sponsor's name and address:	See #2
6. General plan designation:	Open Space
7. Zoning:	Open Space
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The proposed project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. See Chapter 2, "Project Description."
9. Surrounding land uses and setting: Briefly describe the project's surroundings:	EID's intake facilities are located on the south bank of Folsom Lake, accessible via Planeta Way. Surrounding land uses are recreational and open space uses, and single family residential uses. See "Environmental Setting" discussion under each issue area in Chapter 3, "Environmental Checklist."
10. Other public agencies whose approval may be required or requested (e.g., permits, financing approval, or participation agreement.)	U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, Central Valley Regional Water Quality Control Board, California Department of Fish and Wildlife, El Dorado County
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	Yes. Consultation is described in more detail in Sections 3.5 (Cultural Resources) and 3.17 (Tribal Cultural Resources).

Environmental Factors Potentially Affected

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

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

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

April 12, 2019

Brian Deason
Environmental Resources Supervisor
El Dorado Irrigation District

Date

Evaluation of Environmental Impacts

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

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for significant impacts to any resource category from project operations and maintenance of the existing and proposed facilities.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required. “Beneficial impacts” are also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.

4) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level.

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

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

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

8) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significant.

   Significance thresholds are identified for certain resources, but others are not necessary because there is clearly no impact or the question itself provides the basis for the significance threshold.

3.1 Aesthetics

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
I. AESTHETICS – Except as provided in PRC Section 21099, **would the project:**					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐	☐
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 a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐	☐

3.1.1 Environmental Setting

The project site is located on the edge of Folsom Lake, within a landscape of wooded rolling foothills. The lake is the dominant visual feature of the area, but single-family homes are also prominently visible within the wooded areas along the lakeshore. The Folsom Lake State Recreation Area (SRA) General Plan (State Parks 2010) identifies dramatic and high-quality panoramic views, including east-facing views from the western shores of Folsom Lake. Due to its location and the configuration of the lake shore, the project site is not directly visible from the western shores of Folsom Lake.

Folsom Lake is a constructed reservoir, and water levels vary substantially from season to season and year to year depending on operation of the facility. As lake levels drop, a ring of bare soil becomes visible around the edge of the lake. During dry periods, this ring can be extensive and a dominant negative feature.

3.1.2 Discussion

a), c) Have a substantial adverse effect on a scenic vista? In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project site is along the edge of Folsom Lake, designated as an SRA. Although the project site is not within an area specifically designated as a scenic vista, views of the lake and its shores contribute to the recreational value of the Folsom Lake SRA. The visual character of the project site is currently defined by a cleared and paved area, building, electrical equipment, and aboveground tank. The primary change to the existing visual characteristics of EID's intake facilities would be the addition of a bridge crane structure. This structure would be approximately 65 feet long, 25 feet wide, and 25 feet high. However, due to the topography of the site, the crane would not create a substantial change in the visual character of the site; the crane would appear in the foreground of the existing building and would obscure views of a cleared area of the slope.

During construction activities, construction equipment, including barges, would be visible from the lake and from surrounding residences. These effects would be temporary.

Because long-term changes would not substantially affect the existing visual character of the site, and construction effects would be temporary, this impact would be **less than significant**.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project site is not located within view of any state scenic highway. The nearest state-designated scenic highway is State Route 49 (Caltrans 2018). There would be **no impact**.

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

The project would not include any new light sources beyond those currently present on the project site. New structures and equipment at the project site would be painted in non-reflective, neutral colors. This impact would be **less than significant**.

3.2 Agriculture and Forestry Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
II. AGRICULTURE AND FORESTRY RESOURCES:					
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐

3.2.1 Environmental Setting

The project site is located in an area designated as Open Space by El Dorado County's general plan and zoning code. The majority of the project site is currently developed with paved areas, buildings, and equipment. The project site is not designated as Farmland, and there is no agricultural zoning or

Williamson Act contract (Department of Conservation 2016, 2018). The project site is in an area characterized by a mix of houses and trees and woodland vegetation.

3.2.2 Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

There is no Farmland on the project site. There would be **no impact**.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

There is no agricultural zoning or Williamson Act contract on the project site. There would be **no impact.**

c), d) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? Result in the loss of forest land or conversion of forest land to non-forest use?

The project site is not zoned for forest land, timberland, or Timberland Production. However, the project site includes wooded area along the shore of Folsom Lake, with recreational facilities (a trail) nearby. The project would expand the existing footprint of EID's intake facilities by approximately 0.16 acre. This expansion would remove trees and vegetation from this area. Additional removal of trees and vegetation would occur along the lakeshore to provide access for construction equipment. Due to the small area being affected, the project's impact related to the loss of forest land would be **less than significant**. Impacts related to the removal of specific trees are addressed in Impact 3.4 (a) and (e) in Section 3.4, "Biological Resources."

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?

There would be no other changes from the proposed project on the existing environment that would convert Farmland to non-agricultural use or forest land to non-forest use. See responses above under Impacts 3.2 (a), (c), and (d).

3.3 Air Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY:					
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	☐
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 Environmental Setting

The project site is located in the Mountain Counties Air Basin. The El Dorado County Air Quality Management District (AQMD) attains and maintains air quality conditions in El Dorado County. The Placer County Air Pollution Control District attains and maintains air quality conditions in Placer County.

The federal Clean Air Act and the California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) to establish health-based air quality standards at the Federal and State levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) were established for the following criteria pollutants: carbon monoxide (CO), ozone, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead. These standards have been established with a margin of safety to protect the public's health. Both EPA and CARB designate areas of the State as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively.

An "attainment" designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A "maintenance" designation indicates that the area previously had nonattainment status and currently has attainment status for the applicable pollutant; the area must demonstrate continued attainment for a specified number of years before it can

be re-designated as an attainment area. An "unclassified" designation signifies that data do not support either an attainment or a nonattainment status.

Under the NAAQS, El Dorado County and Placer County are designated as nonattainment for 8-hour ozone and $PM_{2.5}$, and unclassified for PM_{10}. Under the CAAQS, El Dorado County is designated as nonattainment for ozone and PM_{10} and is unclassified for $PM_{2.5}$. Placer County is designated as nonattainment for ozone and PM_{10} and attainment for $PM_{2.5}$. (CARB 2015).

3.3.2 Discussion

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

At the local level, air quality is managed through land use and development planning practices, which are implemented in El Dorado County through the general planning process. The AQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of Federal and State air quality laws. The AQMD is also responsible for implementing strategies for air quality improvement and recommending mitigation measures for new growth and development. The AQMD has specific criteria pollutant thresholds in its Determining Significance of Air Quality Impact Under the California Environmental Quality Act (CEQA Guide) to assist lead agencies in determining air quality projects located in El Dorado County. These thresholds, along with thresholds for Placer County (the possible location of marina activities), are shown in **Table 3.3-1**.

Table 3.3-1. Air Quality Thresholds of Significance

	O_3 Precursor Emissions				
Emission Type	**ROG**	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Construction (short-term)	82 pounds per day	82 pounds per day	-	Fugitive dust BMPs(ED)/82 pounds per day (P)	Fugitive dust BMPs
Construction (long-term)	82 pounds per day	82 pounds per day	Violations of CAAQS	Violations of CAAQS (ED)/82 pounds per day (P)	Violations of CAAQS

Notes: O_3 = oxides, ROG = reactive organic gases, NOx = nitrogen oxide, CO = carbon monoxide, PM_{10} = particulate matter less than 10 microns in diameter, $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter. PM_{10} standards are provided for El Dorado County (ED) and Placer County (P). Thresholds for ROG and NO_x are the same for both Placer and El Dorado Counties. Placer County does not have established thresholds for CO or $PM_{2.5}$.
Source: El Dorado County Air Quality Management District 2002, Placer County Air Pollution Control District 2017

The proposed project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system.. It would not result in any new stationary or mobile sources or increased population or employment growth. Two criteria are used to determine whether the proposed project would conflict with or obstruct implementation of the air quality plan. The first criterion is whether the proposed project is consistent with the projections for population and vehicle miles traveled that were used as the basis of the air quality plan. The proposed project would not result in an increase in population in the project area and would not add a substantial enough number of vehicle miles traveled to exceed the projections used by the AQMD. The second criterion is whether the proposed project would increase the frequency or severity of existing air quality violations, contribute to new violations, or delay the timely attainment of air quality standards.

The AQMD has developed thresholds of significance for criteria pollutants to evaluate regional impacts of project-specific emissions of air pollutants and their impact on the existing air quality plans. Emissions exceeding these thresholds have not been accommodated in the air quality plans and would not be consistent with such plans and therefore would be considered impacts.

The proposed project would temporarily generate reactive organic gases (ROG) and NO_x, which are associated primarily with mobile equipment exhaust. **Table 3.3-2**, shows the proposed project's estimated daily emissions. The calculated daily emissions are below the thresholds of significance. Emissions from the project construction were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Appendix B, "Air Quality Modeling Data," presents modeling results.

Table 3.3-2. Unmitigated Construction Emissions (Maximum) Pounds Per Day

Construction Phase	*Emissions (lbs/day)*				
	ROG	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
CalEEMod Maximum ~~(2019)~~	~~5.58~~ 0.83	~~55.89~~ 9.54	~~33.49~~ 6.82	~~2.36~~ 1.26	~~1.99~~ 0.67
Drilling Barge ~~(2019)~~	~~2.29~~ 2.54	~~25.10~~ 27.89	~~9.04~~ 10.05	~~1.36~~ 1.51	~~1.21~~ 1.35
Equipment Barge ~~(2019)~~	0.11	0.94	0.40	0.08	0.07
Total	~~7.97~~ 3.48	~~81.93~~ 38.37	~~42.94~~ 17.27	~~3.80~~ 2.85	~~3.28~~ 2.09
Significance Criteria	**82**	**82**	**None**	**None**	**None**
Significant?	*No*	*No*	*N/A*	*N/A*	*N/A*

Notes: lbs/day = pounds per day, ROG = reactive organic gases, NO_x = nitrogen oxide, PM_{10}= particulate matter with aerodynamic diameter less than 10 micrometers, $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 micrometers, CO = carbon monoxide. Calculations account for site preparation, as well as in-water work.
Source: Emissions modeled by GEI Consultants, Inc. using the California Emissions Estimator Model (CalEEMod), version 2016.3.2 computer program. Refer to **Appendix B**, "Air Quality Modeling Results," for model data outputs.

As shown in **Table 3.3-2**, the total emissions for the proposed project are below the significant thresholds. All project emissions would occur in El Dorado County, with the possible exception of emissions associated with marina activities in Placer County in the event that the Folsom Point or Granite Bay marina is used. Impacts from implementing the project would be **less than significant**.

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?

El Dorado County and Placer County are designated as nonattainment for ozone and PM_{10} at the State level and designated as nonattainment for 8-hour ozone and $PM_{2.5}$ at the Federal level. The air basin's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its nature, air pollution is largely a cumulative impact. No single project by itself is sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, the AQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. In general, if a project exceeds its identified project-level significance thresholds, the project's cumulative impact would be cumulatively considerable. Implementation of the project would not exceed any of the significant thresholds as

mentioned in response a); therefore, the project would not result in a cumulatively considerable net increase in any of the criteria pollutants and this impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of the project's air quality impacts. These people include children, older adults, any person with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive receptor, a residence, is located approximately 200 feet from the project site. Because of the distance, the potential impact of exposing sensitive receptors to substantial pollutant concentrations would be **less than significant**.

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

Human response to odors is subjective, and sensitivity to odors varies greatly. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory and respiratory reactions, nausea, vomiting, headaches). The proposed project would not create new objectionable odors. There would be **no impact**.

3.4 Biological Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES – Would the project:					
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐

3.4.1 Environmental Setting

A complete discussion of biological resources is provided in the proposed project's biological technical report (**Appendix C,** "Biological Resources Technical Report for Folsom Lake Intake Improvements Project"**)**. This discussion is a summary of the technical report.

The approximately 2-acre project site is composed of 0.55 acre of interior live oak woodland, 0.51 acre of developed areas, and 0.91 acre of open water, including areas of barren shoreline below the maximum pool elevation of Folsom Lake. Interior live oak (*Quercus wislizeni*) is the dominant tree in the interior live oak woodland (Sawyer 2009). Other tree species present on the project site include blue oak (*Q. douglasii*), foothill pine (*Pinus sabiniana*), and California buckeye (*Aesculus californica*). Toyon (*Heteromeles arbutifolia*) and coyote brush (*Baccharis pilularis*) are common shrub species encountered on the project site and in the vicinity. Dominant herbaceous species include nonnative grasses: ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), and wild oat (*Avena fatua*). This habitat type is also classified as foothill pine-oak woodland under the Holland classification system.

Developed areas include the paved access road, existing EID intake facility buildings, and water tanks. The existing pumping facilities are surrounded by a chain link fence.

The project site includes a portion of Folsom Lake. The spillway for Folsom Lake is located at 481 feet msl, which corresponds to the maximum pool elevation of the lake. Folsom Lake is a jurisdictional water body subject to regulatory requirements under Section 404 and 401 of the Clean Water Act and Section 1602 of the California Fish and Game Code.

3.4.2 Discussion

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Marine Fisheries Service?

Before conducting the field survey, the CDFW California Natural Diversity Database (CNDDB) (CDFW 2018) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2018) were reviewed. A list of resources under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could occur in the project vicinity was obtained from the USFWS Information for Planning and Conservation website (USFWS 2018a). The project site is not located within proposed or designated critical habitat for any Federally listed species. The National Marine Fisheries Service's California Species List Tools (National Marine Fisheries Service 2018) indicate that two Federally listed anadromous fish populations, Central Valley spring-run Chinook salmon and Central Valley Steelhead, have been documented in the Clarksville U.S. Geological Survey (USGS) quadrangle below Folsom Dam. These reviews were centered on the Clarksville USGS 7.5-minute quadrangle and included the eight surrounding quadrangles. Database search results are provided in **Appendix C**, "Biological Resources Technical Report for Folsom Lake Intake Improvements Project."

Special-status species were evaluated for the potential to occur on the project site based on the list of species generated from database searches and on-site habitat conditions. All fish included on the IPaC resource list and the National Marine Fisheries Service species list were eliminated from consideration because the project site is located above Folsom Dam, which prevents these fish from accessing the project site. It was determined that the following special-status species have potential to occur on the project site:

- Western pond turtle;
- Golden eagle;

- Bald eagle;
- Swainson's hawk;
- White-tailed kite;
- Bank swallow;
- Purple merlin; and
- Pallid bat.

Project activities have potential for significant adverse effects on several special-status wildlife species as a result of removal of up to 0.55 acre of interior live oak woodland, and removal and replacement of existing pumps and pipelines below the maximum pool elevation of Folsom Lake that would adversely affect aquatic habitats. Removal of vegetation would be conducted outside the nesting season to the maximum extent possible. If active nests are present on or near the site when vegetation removal and other project activities occur, active nests could be destroyed, and/or nesting birds could be disturbed to an extent that results in nest failure.

Existing structures and trees on the project site are unlikely to provide habitat for roosting colonies of pallid bat but could be used as temporary roost sites for small numbers of individuals. Potential disturbance of small numbers of roosting bats that may be present onsite would not result in a substantial adverse effect to local or regional populations of pallid bat. Proposed project elements would have a **less-than-significant impact** on pallid bat.

Project elements that may occur below the maximum pool elevation include blasting or ripping to install new pumps, spreading of blasted rock, and installation of piers to support the new pipelines. This would result in minor changes to the shoreline of Folsom Lake within the project site but would not change the habitat substantially, because vegetation is absent below the maximum pool elevation and the current substrate is rocky. Existing pipelines may serve as marginal basking habitat for western pond turtle. The project site is situated along the shoreline of Folsom Lake, which is rocky and steep. Sheltered coves, which are not present in the project site, provide higher quality habitat for western pond turtle. The number of turtles that may occur on-site, if present, is likely low, because of the marginal habitat suitability. Therefore, if western pond turtles are present in upland or aquatic habitat that is impacted during construction, relatively few individuals would have potential to be affected, and this potential impact would not result in a substantial adverse effect to the species as a whole and is unlikely to substantially affect local or regional populations. Project implementation would not result in loss of habitat for the species. Proposed project elements would have a **less-than-significant impact** on western pond turtle.

Operations and maintenance of the new and rehabilitated structures would be minor and very similar to current operations and maintenance activities. Impacts to biological resources from these project activities would be **less than significant**.

Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4 would be implemented to reduce potentially significant impacts to less-than-significant levels.

> **Mitigation Measure BIO-1: Minimize Effects to Nesting Swainson's Hawks, Golden Eagles, and Bald Eagles.**
>
> EID shall implement the following measures to avoid and minimize potential adverse effects on nesting Swainson's hawk, golden eagles, and bald eagles during project construction.

- Preconstruction surveys for active Swainson's hawk, golden eagle, and bald eagle nests shall be conducted by a qualified biologist in all areas of suitable nesting habitat within 0.25-mile of project disturbance. A minimum of one survey shall be conducted no more than 14 days before project activities commence, if construction begins during the nesting season (February 1 through August 15).

- Appropriate buffers shall be established and maintained around active nest sites to avoid nest failure from project activities. The appropriate size and shape of the buffers shall be determined by a qualified biologist and may vary depending on the nest location, nest stage, and construction activity. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activities are not resulting in detectable adverse effects on nesting birds or their young. No project activities shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure BIO-2: Avoid and Minimize Effects to Other Nesting Birds.

EID shall implement the following measures to avoid and minimize potential adverse effects on other nesting birds during project construction.

- Vegetation removal shall be conducted between September 1 and January 31, to the extent feasible.

- If vegetation removal must occur during the bird nesting season (February 1 through August 15), surveys for active bird nests shall be conducted by a qualified biologist in areas of suitable nesting vegetation designated for removal. If active nests are found, removal of vegetation in which the nests are located will be delayed until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

- Preconstruction surveys for active nests of special-status birds and common raptor species shall be conducted by a qualified biologist. Surveys for raptor nests shall include suitable habitat within up to 300 feet of areas subject to project disturbance, depending on the potential extent of indirect impact. Surveys for nests of non-raptor special-status birds shall include suitable habitat within up to 50 feet of the disturbance areas. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 1 to August 15) in a given area.

- If any active nests are observed, or behaviors indicating active nests are present, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. Buffer size shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. If buffers are adjusted, monitoring shall be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No

project activity shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure BIO-3: Avoid, Minimize, and Mitigate for Unavoidable Impacts on Waters of the United States on a No-Net-Loss Basis.

EID shall implement the following measures to avoid, minimize, and, if necessary, compensate for the direct fill of waters of the United States in Folsom Lake.

- Ground disturbance shall be limited to construction areas, including necessary access routes and staging areas. The total area of the project activity shall be limited to the minimum necessary. When possible, existing access routes and points shall be used. All roads, staging areas, and other facilities shall be placed to avoid and limit disturbance to Folsom Lake when feasible.

- A written spill prevention and control plan (SPCP) shall be prepared and implemented

- Before the commencement of construction activities, high-visibility fencing shall be erected to protect areas of sensitive biological resources that are located adjacent to construction areas from encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed only when the construction within a given area is completed. Limits of waters of the United States shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas.

- Project implementation would result in the need to obtain regulatory permits from USACE, RWQCB, and CDFW for direct impacts to Folsom Lake. All measures developed through consultation with the respective regulatory agencies shall be implemented to mitigate adverse effects.

    - **Section 404:** EID will seek authorization for fill of jurisdictional waters of the United States from USACE via the Section 404 permitting process before project construction. Any mitigation measures determined necessary during the 404 permitting process shall be implemented during project construction. If USACE deems that compensatory mitigation is required, an appropriate and feasible mitigation plan to compensate for loss of waters of the United States shall be developed and provided to the appropriate regulatory agencies for approval. The plan, if required, shall be developed in consultation with and approved by the appropriate regulatory agencies before construction activities begin in waters of the United States.

    - **Section 401:** A water quality certification application pursuant to Section 401 of the Clean Water Act shall be submitted to the Central Valley RWQCB before starting project construction in any areas that may contain waters of the State. Any measures required as part of the issuance of water quality certification shall be implemented.

- **Section 1602:** A notification of lake and streambed alteration shall be submitted to CDFW under Section 1602 of the California Fish and Game Code before starting project construction in any areas under CDFW's jurisdiction. If CDFW determines a lake or streambed alteration agreement is necessary, any conditions of the lake and streambed alteration agreement, including minimization and compensation measures, shall be implemented as part of project implementation.

Timing: Before, during, and after construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure BIO-4: Minimize and Compensate for Loss of Oaks.

EID has elected to implement the following measure to minimize and compensate for removal of interior live oak woodland.

- Interior live oak woodland shall be avoided during construction, to the extent feasible. A qualified botanist shall clearly mark woodland to be avoided prior to construction. If oak woodland or individual oaks greater than 6 inches in diameter at breast height cannot be avoided, EID will pay in-lieu fees for the removal of oak trees or oak woodlands as described in the County's Oak Resources Management Plan (as adopted on October 24, 2017).

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices.

Please refer to Impact 3.10.2(a) for the full text of this mitigation measure.

Mitigation Measure WQ-2: Prepare and Implement a Spill Prevention and Control Plan and Applicable Hazardous Materials Business Plans.

Please refer to Impact 3.10.2(a) for the full text of this mitigation measure.

Mitigation Measure WQ-3: Implement Best Management Practices for In-Water Work.

Please refer to Impact 3.10.2(a) for the full text of this mitigation measure.

With implementation of Mitigation Measures BIO-1 through BIO-4 and WQ-1 through WQ-3, the potentially significant impacts on special-status species would be reduced to a less-than-significant level because the proposed project would avoid and minimize nest disturbance and ensure no active Swainson's hawk or bald eagle nests are lost as a result of the proposed project, and avoid and minimize nest disturbance and destruction for other birds. Direct and indirect impacts to waters of the United States would be avoided, minimized, and mitigated for on a no-net-loss basis, and any protected trees that would be removed would be compensated for either on- or off-site. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

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

The project site is characterized by developed areas associated with the existing pump facilities, open water habitat associated with Folsom Lake, and interior live oak woodland. Riparian habitat is absent, because the shoreline of Folsom Lake is steep and lake levels are subject to fluctuation beyond the root zone typical of riparian species. Interior live oak woodland habitat is not identified as a sensitive natural community. Therefore, the project would have **no impact** on riparian habitat or other sensitive natural communities.

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?

Project implementation would include construction activities below the maximum pool elevation of Folsom Lake, which is a water of the United States subject to regulation under Section 404 of the CWA. Blasting below the maximum pool elevation to install pumps, spreading blasted rock along the shoreline, removing existing pipelines, and installing new pipelines on elevated piers, could result in a **potentially significant impact** to waters of the United States.

Mitigation Measures BIO-3 and WQ-1 through WQ-3 would be implemented to reduce the impact to a less-than-significant level.

> **Mitigation Measure BIO-3: Avoid, Minimize, and Mitigate for Unavoidable Impacts on Waters of the United States on a No-Net-Loss Basis**
>
> Please refer to Impact 3.4.2(a) for the full text of this mitigation measure.
>
> **Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices.**
>
> Please refer to Impact 3.10.2(a) for the full text of this mitigation measure.
>
> **Mitigation Measure WQ-2: Prepare and Implement a Spill Prevention and Control Plan and Applicable Hazardous Materials Business Plans.**
>
> Please refer to Impact 3.10.2(a) for the full text of this mitigation measure.
>
> **Mitigation Measure WQ-3: Implement Best Management Practices for In-Water Work.**
>
> Please refer to Impact 3.10.2(a) for the full text of this mitigation measure.

Implementing Mitigation Measures BIO-3 and WQ-1 through WQ-3 would ensure that direct and indirect impacts to waters of the United States would be avoided, minimized, and mitigated on a no-net-loss basis. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site is part of a much larger extent of aquatic and woodland habitats and does not serve as a corridor or other primary route for fish or wildlife movement. It also is not known or anticipated to serve as a nursery site for any wildlife species. Therefore, implementing the proposed project would not substantially interfere 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. This would be a **less-than-significant** impact.

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

El Dorado County Ordinance 5061 protects any living native oak resources including valley oak (*Q. lobata*), blue oak (*Q. douglasii*), black oak (*Q. kelloggii*), interior live oak, canyon live oak (*Q. chrysolepis*), Oregon oak (*Q. garryana*) and oracle oak (*Quercus x morehus*) that are greater than 6 inches in diameter at breast height (i.e., as measured at 54 inches above natural grade). Up to 20 oak trees (*Q. wislizeni* and *Q. douglasii*) would be removed, although several of these are less than 6 inches in diameter at breast height. This would be a **significant impact**.

Since the District is an agency of equal authority with the County (Government Code sections 53091(D) and (E)), the District is not bound by the County's ordinance, but aims to implement mitigation consistent with the County's plans and policies associated with oak woodlands management as a metric for formulating avoidance and minimization measures. The District elects to utilize the County's policy in this MND to ensure impacts to oak trees and oak woodlands are sufficiently mitigated to a less than significant impact. Thus, with the implementation of Mitigation Measure BIO-4, the proposed Project would be consistent with the County Ordinance 5061 and would not conflict with a local plan or policy protecting biological resources and therefore reduce the impact of this tree removal to a less-than-significant level.

> **Mitigation Measure BIO-4: Minimize and Compensate for Loss of Interior Live Oak Woodland.**
>
> Please refer to Impact 3.4.2(a) for the full text of this mitigation measure.

Implementing Mitigation Measure BIO-4 would reduce impacts related to conflict with local policies or ordinance because any protected trees that would be removed would be compensated for either on- or off-site. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

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?

There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other conservation plan applicable to the project site. Therefore, there would be **no impact** related to conflict with such a plan.

3.5 Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
V. CULTURAL RESOURCES – Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐	☐
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 Environmental Setting

This brief overview of the prehistory of the region is taken from Rosenthal et al.'s 2007 synthesis and analysis of the archaeology of central California including the Sierra Nevada foothills.

There is scant physical evidence for human occupation of the region prior to 5550 calibrated radiocarbon years Before Common Era (cal. B.C.E.), with most finds consisting of dubious association or isolated artifacts such as stemmed pints, crescent shaped tools, and early concave base points. Far more evidence for prehistoric occupation dates between 5550 cal. B.C.E. and 550 cal. B.C.E. In the Sierra Nevada foothills buried archaeological sites are common during this period and are characterized by expedient, cobble-based tools. Archaeo-botanical studies indicated a heavy reliance on acorns and pine nuts. Most material sources for stone tools are of local material and some imported obsidian artifacts.

Later, from 550 cal. B.C.E. to calibrated radiocarbon years Common Era (cal. C.E.) 1100, a cooler and more stable climate was introduced at the beginning of the Late Holocene. Archaeological evidence for human use is far more common during this period. It is generally characterized by economies that emphasize resources that can be harvested and processed in bulk. Exploited bulk resources included acorn, rabbit, salmon, shellfish, and deer. Based on similar burial patterns, the lower foothills of the Sierra Nevada may have been visited or occupied by valley populations.

The archaeological record from cal. C.E. 1100 to European Contact is the most substantial and comprehensive of any period. Many earlier technologies and traditions are no longer represented while the most distinctive technology of the period, the bow and arrow, appears. There are also more complex social forms as implied by greater burial diversity. During this period, the record indicates a change in obsidian use and production using different artifact forms and switching to different sources, decentralized bead manufacture as opposed to more centralized production earlier in time, regionally unique arrow point types, changes in burial practices from earlier periods, and possibly a monetized system of exchange.

3.5.2 Discussion

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

A records search conducted at the North Central Information Center (NCIC), part of the California Historical Resources Information System, indicated that the entire project boundary is encompassed by CA-SAC-308H, also known as the Folsom Mining District Dredger Tailings, the American River Placer Mining District, or the Capitol Dredging Company Diggings. The resource has been found eligible for listing in National Register of Historic Places (NRHP) and therefore is listed in the California Register of Historical Resources (CRHR).

CA-SAC-308H extends from west of Rancho Cordova to north of Folsom Lake. The resource contains cabins, ditches sluice workings, tailings piles, and various other mining features. Despite its number of features and size, roughly 120 square miles, its extent is more conceptual than real, with relatively few features for its size (AECOM 2014; Gross 2015; Perez and Fisher 2013; Windmiller 2006). Within the project boundary there is no evidence of CA-SAC-308H whatsoever.

An earlier investigation identified CA-ELD-1238H, the Natoma Ditch, as within the project boundary (Ashkar et al. 2007). The Natoma Ditch is eligible for listing on the NRHP; however, the segment found within the current project boundary was found not to be a contributing element to the resource's eligibility because the segment lacked integrity and therefore a finding of No Historic Properties Affected was recommended. SHPO concurred with that recommendation (Donaldson 2008). . Because the segment of the Natoma Ditch located on the project site lacks integrity, GEI Consultants, Inc. (GEI) recommends the resource as ineligible for listing in the CRHR.

A recent pedestrian archeological survey by a GEI archaeologist did not identify any other cultural resources in the project boundary. The archaeologist also noted that the steep terrain and location made it unlikely that prehistoric resources are present within the project site, making the archaeological sensitivity for the site low.

Despite this, there remains the very low possibility that buried historical or archaeological resources are present within the project boundary. If buried historical or archaeological resources were inadvertently discovered and impacted during project construction, this would be a **potentially significant impact**.

Mitigation Measure CR-1 would be implemented to reduce this potentially significant impact to a less-than-significant level.

> **Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties and Archaeological Resources.**
>
> EID shall implement the following measure to reduce or avoid impacts on undiscovered historic properties and archaeological resources. If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of

personnel involved in project implementation. If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot radius of the find shall cease. EID shall retain a professional archaeologist meeting the *Secretary of the Interior's Professional Standards for Archaeologists* to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer and Reclamation, if necessary, and shall be completed before project activities continue in the vicinity of the find.

Timing: During construction.

Responsibility: El Dorado Irrigation District.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown cultural resources to a less-than-significant level because the find would be assessed by an archaeologist and treated or investigated in accordance with Reclamation and SHPO standards. This impact would be **less-than-significant with mitigation incorporated**.

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

There is no indication, either from the records search conducted at the NCIC or the archaeological pedestrian survey, that human remains are present on the project site. Nevertheless, it is possible that human remains may be disturbed during project-related, earth-moving activities, causing a **potentially significant impact**.

Mitigation Measure CR-2 would be implemented to reduce this potentially significant impact to a less-than-significant level.

Mitigation Measure CR-2: Avoid Potential Effects on Undiscovered Burials.

EID shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and a 100-foot radius shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act (NAGPRA), Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires federal agencies and institutions that receive federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA also has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation

with potential lineal descendants or Tribal officials as part of their compliance responsibilities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. EID shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Timing: During construction.

Responsibility: El Dorado Irrigation District.

Implementing Mitigation Measure CR-2 would reduce the potentially significant impact related to discovery of human remains to a less-than-significant level because the find would be assessed by an archaeologist and treated or investigated in accordance with State and Federal laws. This impact would be **less-than-significant with mitigation incorporated**.

3.6 Energy

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

3.6.1 Environmental Setting

EID's intake facilities currently operate using pumps in series, with one set of lake pumps drawing raw water from Folsom Lake, and then additional booster pumps to convey the water to the EDHWTP, which is located at a higher elevation than the intake facilities on the project site.

3.6.2 Discussion

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

The project would replace six existing lake pumps and three existing booster pumps with a total of four pumps, increasing efficiency and reducing overall electrical use at the facility. Energy use during project construction was modeled indirectly in Section 3.3, "Air Quality," and the project construction would not include unnecessary, inefficient, or wasteful energy use. The project would have a **beneficial** impact on operational energy use and a **less-than-significant** impact for project construction.

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

The project would not include change the source of energy in use during operation of EID's intake facility, and would reduce the facility's overall energy use due to efficiency improvements and upgraded equipment. There would be **no impact**.

3.7 Geology and Soils

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VII. GEOLOGY AND SOILS – Would the project:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in 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, as updated), creating substantial direct or indirect 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 Environmental Setting

The project site is located on Auburn very rocky silt loam soils, at 30 to 50 percent slopes (NRCS 2018). Nearby faults include the Maidu fault (active within the past 1.6 million years, approximately 6 miles northeast of the project site) and the Bear Mountains fault zone (active within the past 700,000 years, approximately 7 miles east of the project site). The active Calaveras, Hayward, and San Andreas faults are located more than 80 miles southwest of the site. The active Cleveland Hill fault is located

approximately 50 miles northwest of the project site. (CGS 2010a.) There are no Alquist-Priolo Earthquake Fault Zones in El Dorado County (CGS 2010b).

3.7.2 Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)

The project site is not located within an Alquist-Priolo Earthquake Fault Zone or in the immediate vicinity of an active fault. Surface fault rupture is most likely to occur on active faults (i.e., faults showing evidence of displacement within the last 11,700 years). Damage from surface fault rupture is generally limited to a linear zone a few yards wide. There would be **no impact**.

ii) Strong seismic ground shaking?

Strong earthquakes generally create ground shaking, with reduced effects as distance increases from the earthquake's epicenter. The area affected by ground shaking in any given earthquake will vary depending on the earthquake's intensity, duration, distance from the project site, and the underlying material. Although there are no active faults within 50 miles of the project site, ground shaking could occur. However, project designs would comply with California Uniform Building Code (UBC), which is based on the Federal UBC but is more detailed and stringent. Chapter 16 of the California UBC regulates structural design, and Chapter 18 regulates the excavation and construction of foundations, retaining walls, and embedded posts and poles. UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (BSC 2016). All project facilities would be designed in accordance with the requirements of the UBC, and this impact would be **less than significant**.

iii) Seismic-related ground failure, including liquefaction?

Seismic shaking can cause ground failure, including liquefaction. Although there are no active faults within 50 miles of the project site, ground failure could occur. However, project designs would comply with the California UBC, which is based on the Federal UBC but is more detailed and stringent. Chapter 16 of the California UBC regulates structural design, and Chapter 18 regulates the excavation and construction of foundations, retaining walls, and embedded posts and poles. UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (BSC 2016). All project facilities would be designed in accordance with UBC requirements, and this impact would be **less than significant**.

iv) Landslides?

The project site slopes steeply down to Folsom Lake, and slope failures have occurred on the project site and in the immediate vicinity. However, project designs would comply with California UBC, which is based on the Federal UBC but is more detailed and stringent. Chapter 16 of the California UBC regulates structural design, and Chapter 18 regulates the excavation and construction of foundations,

retaining walls, and embedded posts and poles. UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (BSC 2016). All project facilities would be designed in accordance with the requirements of the UBC, and this impact would be **less than significant**.

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

The project site slopes steeply down to Folsom Lake, and soils could erode or become unstable as a result of the project. However, project designs would comply with California UBC, which is based on the Federal UBC but is more detailed and stringent. Chapter 18 regulates the excavation and construction of foundations, retaining walls, and embedded posts and poles, and UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (BSC 2016). All project facilities would be designed in accordance with UBC requirements, and this impact would be **less than significant**.

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

The project site is not located on an expansive soil (NRCS 1974, 2018). There would be **no impact**.

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?

No septic systems or on-site wastewater disposal systems would be constructed on the project site. There would be **no impact**.

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

The project site is located on Mesozoic metavolcanic rocks (CGS 2010). Because the metamorphic bedrock underlying the site is volcanic in origin, paleontological resources, which are found almost exclusively in sedimentary rocks, are not likely to be encountered. There would be **no impact**.

3.8 Greenhouse Gas Emissions

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

3.8.1 Environmental Setting

Neither EID nor El Dorado County has adopted a local plan for reducing greenhouse gas (GHG) emissions.

3.8.2 Discussion

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

Implementing the proposed project would generate temporary construction-related GHG emissions that would cease following construction of the proposed project. Construction emissions would be generated by vehicle engine exhaust from heavy-duty construction equipment, haul trips, and construction worker trips. Construction would be temporary and short-term and is expected to occur over the course of approximately 19 months. Construction-related GHG emissions were modeled using CalEEMod (see **Appendix B**, "Air Quality Modeling Results"). Modeling results show that the proposed project's total construction-related GHG emissions would be ~~287~~ 61 metric tons (MT).

The El Dorado County Air Quality Management District (AQMD) has not established a CEQA threshold for GHG emissions; however, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted a CEQA threshold of 1,100 MT CO_2e (carbon dioxide equivalent per year) for construction-related GHG emissions related to land development and construction, and stationary source construction and operation (SMAQMD 2015). In the absence of a local threshold, the SMAQMD threshold was used to evaluate the significance of GHG emissions.

Because the total construction emissions would not exceed SMAQMD's threshold of significance, the proposed project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the physical environment. ~~Furthermore, measures to reduce GHG emissions, such as reducing heavy equipment and truck idling time, using properly sized equipment, maintaining equipment (wheel alignment and properly inflated tires), and improving operator training (provide training during tailgate safety meetings to minimize excessive fuel consumption), have been incorporated into project construction.~~ Therefore, this impact would be **less than significant**.

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

The proposed project would not conflict with plans, policies, or regulations prepared or established to reduce GHG emissions. The proposed project's incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs would be less than cumulatively considerable. The impact would be **less than significant**.

3.9 Hazards and Hazardous Materials

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

3.9.1 Environmental Setting

The project site is not located in an area identified as more likely to contain asbestos by the California Department of Conservation, or an area where Naturally Occurring Asbestos has been found as of August 22, 2018 (El Dorado County 2018). This issue is not discussed further in this IS.

3.9.2 Discussion

a), b) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Create a significant hazard to

the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The project consists of short-term construction activities and upgrades to an existing facility, and would not result in any new or changed long-term activities that would include the use, transport, or disposal of hazardous materials. Project-related activities would entail the storage and use of small amounts of hazardous substances necessary for the routine operation of construction equipment, such as fuels, lubricants, and oils. The transport and use of hazardous materials is strictly regulated by local, State, and Federal agencies to minimize adverse hazards from accidental release. EPA, the California Highway Patrol, the California Department of Transportation (Caltrans), and the California Department of Toxic Substances Control. (DTSC) implement and enforce State and Federal laws regarding hazardous materials transportation. Contractors would be required to use, store, and dispose of any hazardous materials in accordance with all applicable regulations. Compliance with existing regulations and programs would minimize potential risks to the public and the environment associated with the use, storage, and transport of hazardous materials associated with the proposed project. Therefore, this impact would be **less than significant**.

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

There are no schools within one-quarter mile of the project site; the nearest school is the Rescue Union School District's Marina Village Middle School, located approximately 0.9 mile south of the project site at 1901 Francisco Drive. There would be **no impact**.

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

The project site is not identified on any of the lists compiled pursuant to Government Code Section 65962.5 (DTSC 2018a and 2018b, SWRCB 2018a and 2018b, CalEPA 2018). There would be **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?

The project site is not located within an airport land use plan area or within 2 miles of a public or public use airport (El Dorado County Transportation Commission 2018). There would be **no impact**.

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

The project includes replacement of existing raw water pumps and would not substantially change the operation of EID's intake facility. The project would have no effect on an adopted emergency response plan. The facility is located on a dead-end road, and the small volumes of construction traffic (see Section 3.16, "Transportation and Traffic," for additional details) associated with the proposed project would not impede emergency evacuation. This impact would be **less than significant**.

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

The project site is located in a moderate fire hazard severity zone (El Dorado County 2003). The proposed project would not substantially change operations and maintenance at the project site, and construction activities would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact would be **less than significant**.

3.10 Hydrology and Water Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐	☐
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 due to project inundation?	☐	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐	☐

3.10.1 Environmental Setting

The project site is located on the bank of Folsom Lake, a reservoir on the American River. Releases from Folsom Lake regulate flow into Lake Natoma with Nimbus Dam re-regulating releases to the lower American River. Folsom lake can fill during winter rainfall or with snowmelt in the spring; lake elevations decline through the summer and fall when flow out of the reservoir exceeds inflow.

The project site is not located within a 100-year flood zone (FEMA 2018), and is not located in a dam inundation zone (El Dorado County 2004).

Folsom Lake is on the 303(d) list for mercury from an unknown source (SWRCB 2017). Beneficial uses identified for Folsom Lake include municipal and domestic supply, irrigation, power, contact and non-contact recreation, warm and cold freshwater habitat, warm spawning habitat, and wildlife habitat (Central Valley RWQCB 2018).

3.10.2 Discussion

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

Constructing the project could affect water quality in Folsom Lake in the immediate vicinity of the work areas by contributing sediment or other contaminants directly or indirectly into Folsom Lake. Excavation and demolition of existing facilities, including facilities below the water level of the lake, and construction of new facilities, could produce sediment runoff or contamination by other materials used during construction and demolition. Blasting and drilling below the water level could also entrain sediment in the water. This impact would be **significant**.

Mitigation Measure WQ-1 would be implemented to reduce these significant impacts to less-than-significant levels.

> **Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices.**
>
> EID shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) as required under the State Water Resources Control Board's General Construction Permit Order 2009-0009-DWQ [and as amended by most current order(s)]) that includes erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after project construction. The SWPPP shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent waters of the U.S. and State.
>
> The SWPPP shall be prepared with the following objectives: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed project discharge points and receiving waters to address post-construction BMP implementation and monitoring; and (e) to address sedimentation, siltation, and turbidity.
>
> The following list describes BMPs that would be implemented under the SWPPP to protect water quality within Folsom Lake.
>
> - Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Folsom Lake, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. Cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch.

- Immediately after construction is complete, all exposed soil shall be stabilized. Soil stabilization may include, but is not limited to, seeding or planting of native plants and placing rock.

- No refueling, storage, servicing, or maintenance of equipment shall take place on the shore within 100 feet of the ordinary high water mark of Folsom Lake.

- All machinery used during project construction shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water.

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, State, and Federal regulations as described in the SPCP.

- Tightly woven fiber netting (no monofilament netting) or similar material shall be used for erosion control or other purposes within the project footprint to ensure that wildlife are not trapped. This limitation shall be communicated to the construction contractor through the special provisions included in the bid solicitation package. Coconut coir matting and burlap-containing fiber rolls are an example of acceptable erosion control materials.

- Erosion control measures that minimize soil or sediment from entering waterways and wetlands shall be installed, monitored for effectiveness, and maintained throughout construction activities.

- Precautions to minimize turbidity/siltation shall be implemented during construction. This may require placing barriers (e.g., silt curtains) to prevent silt and/or other deleterious materials from entering downstream reaches.

- Petroleum products, chemicals, fresh cement, and construction by-products containing, or water contaminated by, any such materials shall not be allowed to enter flowing waters and shall be collected and transported to an authorized upland disposal area.

Timing: Before, during, and after construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure WQ-2: Prepare and Implement a Spill Prevention and Control Plan and Applicable Hazardous Materials Business Plans.

The contractor shall also prepare a SPCP and applicable hazardous materials business plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent and materials available to clean up, hazardous material and waste spills. The SPCP shall also identify emergency procedures for responding to spills.

The SPCP and all material necessary for its implementation shall be accessible on-site prior to initiation of project construction and throughout the construction period. Employees and construction workers shall be provided the necessary information from the SPCP to prevent or reduce the discharge of pollutants from construction activities to waters and to use the appropriate measures should a spill occur. In the event of a spill, work shall stop in the

immediate vicinity of the spill until cleanup activities are completed. Agency notification of spill events would follow procedures specified in permits obtained for the project.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure WQ-3: Implement Best Management Practices for In-Water Work.

EID shall require that the construction contractor implement best management practices to contain suspended sediments during in-water work. Best management practices may include the use of a continuous length of floating silt curtain, double or triple casing drilling procedures, or other measures as necessary to contain suspended sediments or other deleterious materials from entering surface waters. The construction contractor will be required to monitor the equipment for performance as needed to comply with all regulatory requirements.

A qualified biologist shall monitor at the onset of construction activities in waters of the United States to ensure that avoidance and minimization measures are being properly implemented and no unauthorized activities occur, and conduct weekly inspections thereafter during the duration of in-water construction.

Timing: During in-water construction.

Responsibility: El Dorado Irrigation District.

Implementing Mitigation Measures WQ-1 and WQ-2 would reduce the significant impact from accidental violation of water quality standards, increased erosion or siltation, and otherwise degrading water quality during construction to a **less-than-significant** level because EID will prepare and implement a SWPPP to prevent and control erosion during landside construction activities and would implement in-water construction protection measures during in-water construction activities.

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

Project construction is not expected to come into contact with groundwater based on the limited depths of excavation or drilling, and operation of the replacement pumps constructed as part of the proposed project would not change the timing or quantity of EID's water diversions from the lake. Therefore, there would be no change in Folsom Lake water levels or other effects to the rate of groundwater recharge. There would be **no impact**.

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), ii, iii, iv Result in substantial erosion or siltation on- or off-site? Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? 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? Impede or redirect flood flows?

The proposed project would not permanently alter the drainage pattern of the site, impede, or redirect flood flows. Stormwater would be diverted during construction in accordance with Mitigation Measure WQ-1 to avoid erosion or siltation, but these temporary changes would not result in substantial erosion, siltation, or flooding on- or off-site. The project would increase the impervious area on the project site, but would not result in new stormwater runoff in excess of drainage systems. The project would not substantially change operation of EID's intake facility in any way that would produce substantial additional sources of polluted runoff. This impact would be **less than significant**.

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

The project site is located on the shore of Folsom Lake, and is not in a 100-year flood hazard area. If a seiche or mudflow were to occur on the project site, it could damage project facilities, but the risk of damage to these facilities would not change from the existing facility; the project would not expose people or structures to additional danger from such an event. There is no tsunami risk at the project site. This impact would be **less than significant**.

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

Please refer to the discussion above under (a), (b), and (c). The project would not result in other effects that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. impact would be **less than significant**.

3.11 Land Use and Planning

	Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XI.	**LAND USE AND PLANNING – Would the project:**					
a)	Physically divide an established community?	☐	☐	☐	☒	☐
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 Environmental Setting

The project site is located on land designated Open Space (OS) in the General Plan, and zoned Recreational Facilities, Low Intensity (RF-L) (El Dorado County GIS 2018). The project is proposed by EID, a special district that supplies water to customers throughout much of El Dorado County. Pursuant to Government Code sections 53091(D) and (E), many of EID's activities are not subject to local zoning or land use requirements, as stated below.

> *Building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, or for the production or generation of electrical energy, facilities that are subject to Section 12808.5 of the Public Utilities Code.*

As a special district with equal authority, EID is exempt from local land use controls and the goals and policies within the County's General Plan and Zoning Ordinance. However, EID aims to comply with the General Plan and Zoning Ordinance and considers these documents in evaluating impacts.

3.11.2 Discussion

a) Physically divide an established community?

The project site is located on the fringe of an established community, along the shore of Folsom Lake. The proposed project would modify existing water supply facilities and would not physically divide an established community. There would be **no impact**.

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?

The proposed project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system.. There would be no change in land use associated with implementing the project, and the project

would not conflict with any land use plans or policy adopted for the purpose of avoiding or mitigating an environmental effect. There would be **no impact**.

3.12 Mineral Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XII. MINERAL RESOURCES – Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒	☐
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 Environmental Setting

There are no known mineral resources on the project site (CGS 2001, El Dorado County 2003).

3.12.2 Discussion

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

There are no known mineral resources on the project site. There would be **no impact**.

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?

There are no locally designated mineral resources on the project site. There would be **no impact**.

3.13 Noise

	Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIII.	**NOISE – Would the project:**					
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☐	☒	☐	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐
c)	For a project located within the vinicity 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 Environmental Setting

The project site is located adjacent to a residential neighborhood. The closest sensitive noise receptors (in this case, a single-family residence) are approximately 200 feet from the site boundary. The El Dorado County General Plan establishes a protection standard of 50 decibels (dB) L_{eq} between 7 a.m. and 7 p.m. (El Dorado County 2015).

3.13.2 Discussion

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

Construction noise impacts typically occur when construction activities take place during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when construction activities occur immediately adjacent to noise sensitive land uses, or when construction durations last over extended periods of time.

The project would generate construction noise from equipment operating at the project site, from blasting, and from the transport of construction workers, construction materials, and equipment to and from the project site and the marina. The list of construction equipment that would be used for project construction activities is shown in **Table 3.12-1** with typical noise levels generated at 50 feet from the equipment (reference levels).

Table 3.13-1. Construction Equipment and Typical Equipment Noise Levels

Type of Equipment	Typical Noise Levels (dBA) L_{max} at 50 Feet
Bulldozer	82
Concrete Mixer Truck	79
Drill Rig	85
Dump Truck	76
Excavator	81
Grader/Paving Equipment	85
Jackhammer	89
Paver	77
Pick-up Truck	75
Rock Drill	81

Notes:
L_{max} = maximum instantaneous sound level; L_{eq} = 1-hour equivalent sound level (the sound energy averaged over a continuous 1-hour period)
Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI Consultants, Inc. in 2016 and 2017

The County's General Plan sets a noise standard of 50 dB L_{eq} between 7 a.m. and 7 p.m. Chapter 130.37.020 (Exemptions) of the El Dorado County Code exempts construction noise from its noise standards, provided that construction noise occurs during daylight hours, provided that all construction equipment is fitted with factory-installed muffling devices and maintained in good working order. Since all project-related construction activities would only occur within the hours specified in the County's code, the proposed project would not result in a violation of the County's construction noise standards, and this impact would be **less than significant**.

Following construction activities, facility operations and maintenance would be similar to activities that occur now without the proposed project. No new significant noise sources are anticipated. New outdoor operating equipment would include a bridge crane and a compressed air system for operating intake valves in the lake. The compressed air system would be used seasonally, approximately 2-3 times each year to adjust the intake valve positions in the lake. The duration of valve opening is expected to be a few minutes each time the valve is opened or closed. The crane would be used during scheduled maintenance to inspect a pump or pull a pump for servicing or failure, a 1-day operation performed up to twice a year. This impact would be **less than significant**.

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

Ground vibration would only be caused by construction activities and varies based on the equipment and activities. **Table 3.12-2** presents ground vibration levels associated with various construction equipment used during project construction.

Vibration from blasting varies depending on the weight of the charge, geological characteristics, and distance to the source. Typical blasting vibration has been measures between 0.26 and 0.5 inch per second peak particle velocity (ppv) at approximately 260 feet and 0.09 and 0.13 inch per second ppv at 400 feet, based on a 4-pound detonation charge (U.S. Army 1989). Blasting would occur below the bank of the lake, and the nearest receptor to the blasting location is a residence located approximately 450 feet away from the lake shore. Caltrans recommends thresholds of 0.5 inch per second ppv for transient

sources such as blasting, or 0.3 inch per second ppv for continuous sources such as piledrivers to avoid structural damage to older residential structures (Caltrans 2013).

Table 3.13-2 Representative Vibration Source Levels for Construction Equipment

Type of Equipment	Peak Particle Velocity at 25 feet (in/sec)	Estimated Peak Particle Velocity at Nearest Residential Structure
Large Bulldozer	0.089	0.004
Caisson Drilling	0.089	0.004
Loaded Trucks	0.076	0.003
Jackhammer	0.035	0.001
Small Bulldozer	0.003	0.000

Notes: Estimated ppv at the nearest structure calculated using $PPV_{Equipment} = PPV_{Ref} (25/D)^n$ (in/sec), where D is the distance from the equipment to the receiver (in this case, 450), and n is 1.1, a value related to the attenuation rate through ground. (Caltrans 2013 Equation 12)
Source: Federal Transit Administration 1995

The project may cause groundborne vibration from construction equipment use (such as a jackhammer) or blasting. This vibration may be detectable at nearby residences for brief periods. However, based on the vibration levels discussed above and presented in Table 3.12-2 and a distance of 450 feet to the nearest residence, predicted vibration levels would not be anticipated to exceed the threshold of 0.3 inch per second ppv for continuous vibration sources at the nearest residential structure, which is located approximately 200 feet from the nearest point on the project site, and approximately 450 feet from the nearest location on the project site at which blasting or jackhammering would occur. This impact would be **less than significant**.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project is not located within two miles of a public airport or private airstrip. There would be **no impact**.

3.14 Population and Housing

	Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIV.	**POPULATION AND HOUSING – Would the project:**					
a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	☐
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

3.14.1 Environmental Setting

The project site is located in El Dorado County, in the unincorporated community of El Dorado Hills. The county's 2018 population is estimated to be 188,399 (DOF 2018a), forecast to increase to 206,010 by 2030 (DOF 2018b)

3.14.2 Discussion

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

The current maximum pumping capacity of EID's intake facilities is approximately 26 mgd, and the current maximum permitted treatment capacity of the EDHWTP is 19.5 mgd. The project objectives include maintaining an adequate raw water supply to meet the EDHWTP's maximum permitted treatment capacity of 19.5 mgd.

No additional water supplies or treatment capacity are proposed as part of the proposed project. Therefore, the proposed project would have no potential to directly or indirectly induce population growth. There would be **no impact**. Any future water supply or treatment capacity increases in the future could not occur without additional environmental review.

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

The proposed project would not displace any houses or people. There would be **no impact**.

3.15 Public Services

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

3.15.1 Environmental Setting

The project site is located within the boundaries of the Folsom Lake SRA in the unincorporated community of El Dorado Hills. State park rangers provide police services within the SRA. Because the project site is in an unincorporated area of El Dorado County, the El Dorado Sheriff's Office also provides police services in the project vicinity. Fire protection services are provided by the El Dorado Hills Fire Department, with the nearest fire station located approximately 2 miles away at 2180 Francisco Drive (El Dorado Hills Fire Department 2018).

3.15.2 Discussion

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

The proposed project would not result in new or more intense uses or population at the project site, and would not change needs for public services from existing conditions. The project site is located adjacent to Folsom Lake and would not impede or increase response times for fire protection, police protection, or other public services. There would be **no impact**.

3.16 Recreation

	Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVI.	**RECREATION – Would the project:**					
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐	☐
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐	☐

3.16.1 Environmental Setting

Folsom Lake State Recreation Area provides camping, hiking, biking, boating, and other outdoor recreation opportunities, including equestrian trails. The SRA has an average of 1.5 million visitors per year, with about 75 percent of visits during spring and summer. Several areas of the SRA, including marinas, typically reach capacity by midday on summer weekends (State Parks 2010).

3.16.2 Discussion

a), b) 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? Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The proposed project would not generate new demand for recreational facilities, so there would be no increase in use of existing neighborhood and regional parks or need for new or expanded recreational facilities as a result of implementing the project.

However, project construction would require use of a boat launch for staging barges for in-water work. The marina at Brown's Ravine is the most likely location for this staging, but other boat launches at Folsom Lake could also be considered by the contractor. In-water work would occur during the season with the lowest water levels, between October 2019 and February 2020, and would not conflict with the busiest period for the marina facilities. This impact would be **less than significant**.

3.17 Transportation

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

3.17.1 Environmental Setting

The project site is located in the El Dorado Hills community in El Dorado County. Primary access to the project site is via Planeta Way, Guadalupe Drive, Francisco Drive, and El Dorado Hills Boulevard. The El Dorado County General Plan identifies a standard of Level of Service (LOS) E for County-maintained roads in Community Regions of the County. There are no transit or on-street bicycle/pedestrian facilities in the vicinity of the project site. A pedestrian and equestrian trail operated by State Parks is located adjacent to the project site, and follows the banks of Folsom Lake between Brown's Ravine and points east (State Parks 2014).

The Institute of Transportation Engineers (ITE) has recommended a screening criterion for assessing the effects of construction projects that create temporary traffic increases (ITE 1988). To account for the large percentage of heavy trucks associated with typical construction projects, ITE recommends a threshold level of 50 or more new peak-direction truck trips during the peak-hour. Therefore, a project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system, and result in a significant effect related to traffic, if they would result in 50 or more new truck trips (100 passenger car equivalent [PCE] trips) during the a.m. or p.m. peak hours. This is considered an "industry standard" and is the most current guidance for significance thresholds.

3.17.2 Discussion

a), b) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

The project would include improvements at an existing facility and would not result in any land use changes or change in vehicle miles traveled (VMT) compared to the existing operations of the facility. Construction-related activity from the proposed project may potentially disrupt the existing

transportation network in the surrounding project area. No lane, street, sidewalk, or bikeway closures are planned, but heavy construction vehicles, materials, and workers would travel to and from the site and marina staging area. As a result of these activities, existing roadway operation conditions may be degraded. Based on the construction details provided in the Project Description, approximately 5,400 cubic yards (cy) of soil material would be transported offsite as part of project construction (approximately 540 truck trips). An additional 10 to 20 trips would be required to haul off demolition debris. The construction period would extend for 10 months, with 5 months for in-water construction. With additional incidental truck trips, including for paving materials, up to 1,000 truck trips could occur, for an average of approximately five truck trips per day. Up to 20 construction workers would be present at any given time. Construction-related activity would therefore include substantially less (5 heavy truck trips per day) than the threshold of 50 heavy truck trips (or 100 PCE trips) during the peak a.m. or p.m. hour. This impact would be **less than significant**.

There are no transit or bicycle facilities that would be affected by the proposed project. A trail for pedestrian and equestrian use travels along the lakeshore near the project site. The construction traffic crossing this trail on the existing access road would not significantly affect the trail; estimated project-related traffic is approximately five trucks per day, plus incidental construction worker traffic. Project operations and maintenance would be similar to current operations and maintenance of EID's intake facilities and would not affect the trail. This impact would be **less than significant**.

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

The project would not change any design features for roadways or introduce incompatible uses. There would be **no impact**.

d) Result in inadequate emergency access?

The project would not require any road closures or other changes which could result in inadequate emergency access. The increased number of construction-related trucks to and from the project site during construction activities would be small and not effect emergency access. There would be **no impact**.

3.18 Tribal Cultural Resources

	Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVIII.	**TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**					
a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒	☐
b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒	☐

3.18.1 Environmental Setting

The project is situated in the traditional territory of the Nisenan. Large, permanent villages were placed on higher ground such as natural levees, knolls, and mounds along major water ways. A vast variety of resources were used including fish, birds, small and large mammals such as rabbits and brown bears, and a variety of plant resources (Johnson 1978; Kroeber 1925, 1932; Wilson and Towne 1978).

The Nisenan manufactured a variety of textiles, including rabbit skin blankets, goose-feather blankets, belts, headbands, and nets for capturing game. The Nisenan made woven/coiled basket items such as seed beaters, water bottles, and burden baskets with feathers (Beals 1933; Kroeber 1932). Bows were made of gray pine or yew with sinew backing attached with glue. Glue was made by boiling salmon heads or soaproot. Bowstrings were made of deer sinew. Projectile points were sometimes made of hard oak as well as stone (Beals 1933; Kroeber 1929). Harpoons were bone-pointed (Beals 1933; Du Bois 1935; Kroeber 1932). Nisenan made balsas out of tule but also had rafts made of two logs lashed together or sometimes a single large log. Boats for long-distance travel could be up to 20 feet long with the edges built up for storage (Kroeber 1929, 1932).

Nisenan social organization tended to be on a small scale with the tribelet as the broadest unit. Tribelet territory was generally not very extensive and included a relatively large main village that was

permanently inhabited and one or more satellite villages that could be temporarily inhabited. Nisenan succession to chief was usually from father to son, with the new chief chosen while he was still young; on occasion, there could be two chiefs. Succession could, however, go to any eligible candidate including a brother, nephew or, if no other candidates available, then a widow, daughter, niece, or son-in-law. There was a feast or ceremony, to which everyone contributed, when a new chief was installed. In addition to chiefs, the Nisenan had three different kinds of spokesman or crier, each with a distinct area of concern. Nisenan chiefs had little direct power but had considerable influence (Beals 1933; Johnson 1978; Kroeber 1929, 1932).

EID notified the El Dorado County Wopumnes Nisenan-Mewuk Nation, the United Auburn Indian Community, the Torres Martinez Desert Cahuilla Indians, and the Wilton Rancheria of its intention to undertake the project. The United Auburn Indian Community responded by letter and the Wilton Rancheria responded by email. Neither Tribe identified any known tribal cultural resources within the project boundary. Refer to Appendix D for consultation information.

3.18.2 Discussion

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

There are no known tribal cultural resources within the project boundary therefore the project will not cause a substantial adverse change in the significance of a tribal cultural resource listed in the California Register of Historical Resources.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

No tribal cultural resources were identified within the project boundary therefore the project will not cause a substantial adverse change in the significance of a tribal cultural resource as determined by the lead agency.

3.19 Utilities and Service Systems

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

3.19.1 Environmental Setting

The project site and vicinity are served by Pacific Gas & Electric Company for electrical power, and the El Dorado Hills Wastewater Treatment Plant for wastewater treatment. EID provides water service in the project site vicinity. The solid waste facility likely to be used for construction debris generated by the project is the Kiefer Landfill, located approximately 20 miles southwest of the project site.

3.19.2 Discussion

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

The proposed project replaces existing facilities. The project would not generate any new water or wastewater demand requiring new or expanded facilities. The proposed project would not require new stormwater facilities. The project would increase the paved or built-up area on the project site by

approximately 7,000 square feet. Surface runoff from the project site drains directly into Folsom Lake with no off-site stormwater infrastructure. There would be **no impact**.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The proposed project would provide more reliable raw water pumping capacity to meet the existing 19.5 mgd treatment capacity of the EDHWTP. No new or expanded entitlements are needed to serve the project. There would be **no impact**.

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The proposed project would not generate new wastewater. There would be **no impact**.

d), e) 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? Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The proposed project would generate demolition debris during the construction phase, which would be disposed in compliance with Federal, State, and local regulations related to solid waste. The most likely site for disposal of construction debris is the Kiefer Landfill, located approximately 21 miles southwest of the project site. Kiefer Landfill is currently permitted through 2064, with a maximum capacity of 10,815 tons per day (CalRecycle 2018). Kiefer Landfill has adequate capacity to meet the project's disposal needs. This impact would be **less than significant**.

3.20 Wildfire

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XX. WILDFIRE.					
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, **would the project:**					
f) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐
g) 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?	☐	☐	☐	☒	☐
h) 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?	☐	☐	☐	☒	☐
i) 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 Environmental Setting

The project site is located in a moderate fire hazard severity zone adjacent a state responsibility area (El Dorado County 2003, CAL FIRE 2007).

3.20.2 Discussion

a), b), c), d) Substantially impair an adopted emergency response plan or emergency evacuation plan? 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? 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? Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not located in a very high fire hazard severity zone. The project would include replacement and minor alternation of existing facilities. New electrical equipment would be installed on a level, concrete pad with a retaining wall to maintain separation from nearby vegetation.

Due to its location on a cul-de-sac, the project would not affect evacuation routes, and the project would not require any infrastructure that would, exacerbate fire risk. No people or structures are located downstream of the project site. There would be **no impact**.

3.21 Mandatory Findings of Significance

	Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XXI.	**MANDATORY FINDINGS OF SIGNIFICANCE – Would the project:**					
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	☐

Authority: Public Resources Code Sections 21083, 21083.5.
Reference: Government Code Sections 65088.4.
Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

3.21.1 Environmental Setting

3.21.2 Discussion

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

The analysis conducted in this IS concludes that implementation of the proposed project would not have a significant impact on the environment. As evaluated in Section 3.4, "Biological Resources," impacts on biological resources would be less than significant with mitigation incorporated. 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; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Section 3.5, "Cultural Resources," the proposed project would not eliminate important examples of the major periods of California history or prehistory. This impact would be **less than significant**.

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

As discussed in this IS, the proposed project would result in less-than-significant impacts or no impacts on aesthetics, air quality, biological resources, cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, and utilities and services systems.

The temporary nature of the proposed project's construction impacts (approximately 10 months), and the minor, negligible changes to long-term operations and maintenance at the project site would result in no impacts or less-than-significant environmental impacts on the physical environment. None of the proposed project's impacts make cumulatively considerable, incremental contributions to significant cumulative impacts. This impact would be **less than significant**.

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

The proposed project would result in less-than-significant impacts and would not cause substantial adverse effects on human beings, either directly or indirectly. The impact would be **less than significant**.

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Proposed Mitigated Negative Declaration

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1. Introduction

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2. Project Description

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3. Environmental Checklist

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Chapter 5. Report Preparers

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Charisse Case .....Document Production

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Appendix A. Project Photographs

View of existing facilities within developed area of project site.

View of Folsom Lake and existing pipes.

View of existing pumps to be replaced within developed portion of project site.

View of interior live oak woodland habitat located along southeastern edge of project site.

Appendix B. Air Quality Modeling Data

Folsom Lake Raw Water Pumping Station Pump Replacement Project

El Dorado County AQMD Air District, Winter

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	68,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Folsom Lake Raw Water Pumping Station Pump Replacement Project - El Dorado County AQMD Air District, Winter

Project Characteristics -

Land Use - proposed improvements to Folsom Lake are around 68,000 sq.ft.

Construction Phase - Phases will occur in 2019 and 2020

Off-road Equipment - Phase 2 has haul trucks, paving equipment, truck mounted crane

Off-road Equipment - Phase 1 only has an excavator and bulldozer

Off-road Equipment - Phase 3 will have a jackhammer, excavator, and haul trucks that we will assume have a HP of 360.

Trips and VMT - Assuming that

Demolition -

Grading - assuming 1 acre of grading

Consumer Products -

Area Coating -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	60.00
tblConstructionPhase	NumDays	0.00	82.00
tblConstructionPhase	NumDays	0.00	10.00
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LandUseSquareFeet	0.00	68,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		In-Water Construction

tblOffRoadEquipment	PhaseName		Excavation, grading, clearing and grubbing
tblOffRoadEquipment	PhaseName		In-Water Construction
tblOffRoadEquipment	PhaseName		Construction Out of Water
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	16.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	27.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	27.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	29.00	10.00
tblTripsAndVMT	WorkerTripNumber	29.00	10.00
tblTripsAndVMT	WorkerTripNumber	29.00	8.00
tblTripsAndVMT	WorkerTripNumber	29.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.8315	7.7129	6.8204	0.0155	1.0478	0.3040	1.2574	0.4757	0.2975	0.6687	0.0000	1,540.8548	1,540.8548	0.2041	0.0000	1,544.4344
2020	0.8138	9.5378	5.3625	0.0163	0.3882	0.2945	0.6828	0.1064	0.2716	0.3779	0.0000	1,629.4165	1,629.4165	0.2652	0.0000	1,636.0461
Maximum	**0.8315**	**9.5378**	**6.8204**	**0.0163**	**1.0478**	**0.3040**	**1.2574**	**0.4757**	**0.2975**	**0.6687**	**0.0000**	**1,629.4165**	**1,629.4165**	**0.2652**	**0.0000**	**1,636.0461**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.8315	7.7129	6.8204	0.0155	0.5755	0.3040	0.7850	0.2418	0.2975	0.4348	0.0000	1,540.8548	1,540.8548	0.2041	0.0000	1,544.4344
2020	0.8138	9.5378	5.3625	0.0163	0.3882	0.2945	0.6828	0.1064	0.2716	0.3779	0.0000	1,629.4165	1,629.4165	0.2652	0.0000	1,636.0461
Maximum	**0.8315**	**9.5378**	**6.8204**	**0.0163**	**0.5755**	**0.3040**	**0.7850**	**0.2418**	**0.2975**	**0.4348**	**0.0000**	**1,629.4165**	**1,629.4165**	**0.2652**	**0.0000**	**1,636.0461**

	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**	**32.89**	**0.00**	**24.35**	**40.18**	**0.00**	**22.35**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Excavation, grading, clearing and grubbing	Grading	6/3/2019	6/14/2019	5	10	
2	In-Water Construction	Building Construction	6/17/2019	9/6/2019	5	60	
3	Construction Out of Water	Building Construction	1/1/2020	4/23/2020	5	82	

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
Excavation, grading, clearing and grubbing	Excavators	1	8.00	158	0.38
Excavation, grading, clearing and grubbing	Rubber Tired Dozers	1	1.00	247	0.40
In-Water Construction	Crushing/Proc. Equipment	1	6.00	85	0.78
In-Water Construction	Excavators	1	4.00	158	0.38
Construction Out of Water	Cranes	2	4.00	231	0.29
Construction Out of Water	Paving Equipment	1	4.00	132	0.36

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
Excavation, grading, clearing and grubbing	2	10.00	0.00	27.00	10.80	7.30	15.00	LD_Mix	HDT_Mix	HHDT
Excavation, grading, clearing and grubbing	2	8.00	0.00	6.00	10.80	7.30	12.00	LD_Mix	HDT_Mix	HHDT
In-Water Construction	2	10.00	11.00	27.00	10.80	7.30	2.00	LD_Mix	HDT_Mix	HHDT
In-Water Construction	2	10.00	11.00	8.00	10.80	7.30	16.00	LD_Mix	HDT_Mix	HHDT
Construction Out of Water	3	8.00	11.00	6.00	10.80	7.30	12.00	LD_Mix	HDT_Mix	HHDT
Construction Out of Water	3	20.00	11.00	30.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation, grading, clearing and grubbing - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8588	0.0000	0.8588	0.4252	0.0000	0.4252			0.0000			0.0000
Off-Road	0.4026	4.1912	3.7987	6.2300e-003		0.2029	0.2029		0.1867	0.1867		616.8041	616.8041	0.1952		621.6829
Total	**0.4026**	**4.1912**	**3.7987**	**6.2300e-003**	**0.8588**	**0.2029**	**1.0617**	**0.4252**	**0.1867**	**0.6119**		**616.8041**	**616.8041**	**0.1952**		**621.6829**

3.2 Excavation, grading, clearing and grubbing - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0281	0.9745	0.2956	2.0100e-003	0.0411	5.4800e-003	0.0466	0.0112	5.2500e-003	0.0165		210.4397	210.4397	3.8000e-003		210.5348
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0675	0.6744	1.4200e-003	0.1479	1.1600e-003	0.1490	0.0392	1.0700e-003	0.0403		141.3354	141.3354	5.1100e-003		141.4631
Total	**0.1350**	**1.0419**	**0.9701**	**3.4300e-003**	**0.1890**	**6.6400e-003**	**0.1956**	**0.0505**	**6.3200e-003**	**0.0568**		**351.7752**	**351.7752**	**8.9100e-003**		**351.9980**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3865	0.0000	0.3865	0.1914	0.0000	0.1914			0.0000			0.0000
Off-Road	0.4026	4.1912	3.7987	6.2300e-003		0.2029	0.2029		0.1867	0.1867	0.0000	616.8041	616.8041	0.1952		621.6829
Total	**0.4026**	**4.1912**	**3.7987**	**6.2300e-003**	**0.3865**	**0.2029**	**0.5894**	**0.1914**	**0.1867**	**0.3780**	**0.0000**	**616.8041**	**616.8041**	**0.1952**		**621.6829**

3.2 Excavation, grading, clearing and grubbing - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0281	0.9745	0.2956	2.0100e-003	0.0411	5.4800e-003	0.0466	0.0112	5.2500e-003	0.0165		210.4397	210.4397	3.8000e-003		210.5348
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0675	0.6744	1.4200e-003	0.1479	1.1600e-003	0.1490	0.0392	1.0700e-003	0.0403		141.3354	141.3354	5.1100e-003		141.4631
Total	**0.1350**	**1.0419**	**0.9701**	**3.4300e-003**	**0.1890**	**6.6400e-003**	**0.1956**	**0.0505**	**6.3200e-003**	**0.0568**		**351.7752**	**351.7752**	**8.9100e-003**		**351.9980**

3.3 In-Water Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5855	4.4490	4.9107	7.8400e-003		0.2760	0.2760		0.2709	0.2709		753.9604	753.9604	0.1212		756.9904
Total	**0.5855**	**4.4490**	**4.9107**	**7.8400e-003**		**0.2760**	**0.2760**		**0.2709**	**0.2709**		**753.9604**	**753.9604**	**0.1212**		**756.9904**

3.3 In-Water Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7000e-003	0.0927	0.0318	1.5000e-004	2.6200e-003	4.0000e-004	3.0300e-003	7.2000e-004	3.9000e-004	1.1000e-003		15.8256	15.8256	5.0000e-004		15.8380
Vendor	0.1245	3.0963	1.1285	5.8900e-003	0.1480	0.0262	0.1742	0.0425	0.0251	0.0676		614.0295	614.0295	0.0158		614.4248
Worker	0.1187	0.0750	0.7494	1.5800e-003	0.1643	1.2900e-003	0.1656	0.0436	1.1900e-003	0.0448		157.0393	157.0393	5.6800e-003		157.1813
Total	**0.2460**	**3.2639**	**1.9097**	**7.6200e-003**	**0.3149**	**0.0279**	**0.3428**	**0.0868**	**0.0267**	**0.1135**		**786.8944**	**786.8944**	**0.0220**		**787.4440**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5855	4.4490	4.9107	7.8400e-003		0.2760	0.2760		0.2709	0.2709	0.0000	753.9604	753.9604	0.1212		756.9904
Total	**0.5855**	**4.4490**	**4.9107**	**7.8400e-003**		**0.2760**	**0.2760**		**0.2709**	**0.2709**	**0.0000**	**753.9604**	**753.9604**	**0.1212**		**756.9904**

3.3 In-Water Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7000e-003	0.0927	0.0318	1.5000e-004	2.6200e-003	4.0000e-004	3.0300e-003	7.2000e-004	3.9000e-004	1.1000e-003		15.8256	15.8256	5.0000e-004		15.8380
Vendor	0.1245	3.0963	1.1285	5.8900e-003	0.1480	0.0262	0.1742	0.0425	0.0251	0.0676		614.0295	614.0295	0.0158		614.4248
Worker	0.1187	0.0750	0.7494	1.5800e-003	0.1643	1.2900e-003	0.1656	0.0436	1.1900e-003	0.0448		157.0393	157.0393	5.6800e-003		157.1813
Total	**0.2460**	**3.2639**	**1.9097**	**7.6200e-003**	**0.3149**	**0.0279**	**0.3428**	**0.0868**	**0.0267**	**0.1135**		**786.8944**	**786.8944**	**0.0220**		**787.4440**

3.4 Construction Out of Water - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5571	6.4622	3.3826	7.8100e-003		0.2758	0.2758		0.2538	0.2538		756.0537	756.0537	0.2445		762.1668
Total	**0.5571**	**6.4622**	**3.3826**	**7.8100e-003**		**0.2758**	**0.2758**		**0.2538**	**0.2538**		**756.0537**	**756.0537**	**0.2445**		**762.1668**

3.4 Construction Out of Water - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9400e-003	0.1908	0.0540	4.7000e-004	0.0102	8.0000e-004	0.0110	2.7900e-003	7.6000e-004	3.5500e-003		49.3297	49.3297	5.8000e-004		49.3441
Vendor	0.0971	2.7914	0.9892	5.8500e-003	0.1480	0.0162	0.1642	0.0426	0.0155	0.0580		611.0002	611.0002	0.0132		611.3297
Worker	0.1546	0.0934	0.9367	2.1400e-003	0.2300	1.7400e-003	0.2318	0.0610	1.6100e-003	0.0626		213.0328	213.0328	6.9100e-003		213.2055
Total	**0.2566**	**3.0756**	**1.9799**	**8.4600e-003**	**0.3882**	**0.0187**	**0.4070**	**0.1064**	**0.0178**	**0.1242**		**873.3627**	**873.3627**	**0.0207**		**873.8793**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5571	6.4622	3.3826	7.8100e-003		0.2758	0.2758		0.2538	0.2538	0.0000	756.0537	756.0537	0.2445		762.1668
Total	**0.5571**	**6.4622**	**3.3826**	**7.8100e-003**		**0.2758**	**0.2758**		**0.2538**	**0.2538**	**0.0000**	**756.0537**	**756.0537**	**0.2445**		**762.1668**

3.4 Construction Out of Water - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9400e-003	0.1908	0.0540	4.7000e-004	0.0102	8.0000e-004	0.0110	2.7900e-003	7.6000e-004	3.5500e-003		49.3297	49.3297	5.8000e-004		49.3441
Vendor	0.0971	2.7914	0.9892	5.8500e-003	0.1480	0.0162	0.1642	0.0426	0.0155	0.0580		611.0002	611.0002	0.0132		611.3297
Worker	0.1546	0.0934	0.9367	2.1400e-003	0.2300	1.7400e-003	0.2318	0.0610	1.6100e-003	0.0626		213.0328	213.0328	6.9100e-003		213.2055
Total	**0.2566**	**3.0756**	**1.9799**	**8.4600e-003**	**0.3882**	**0.0187**	**0.4070**	**0.1064**	**0.0178**	**0.1242**		**873.3627**	**873.3627**	**0.0207**		**873.8793**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined 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	9.50	7.30	7.30	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	0.512962	0.041542	0.225677	0.140684	0.035619	0.007151	0.016044	0.009270	0.001580	0.001207	0.005638	0.000826	0.001801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Folsom Lake Raw Water Pumping Station Pump Replacement Project

El Dorado County AQMD Air District, Summer

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	68,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Folsom Lake Raw Water Pumping Station Pump Replacement Project - El Dorado County AQMD Air District, Summer

Project Characteristics -

Land Use - proposed improvements to Folsom Lake are around 68,000 sq.ft.

Construction Phase - Phases will occur in 2019 and 2020

Off-road Equipment - Phase 2 has haul trucks, paving equipment, truck mounted crane

Off-road Equipment - Phase 1 only has an excavator and bulldozer

Off-road Equipment - Phase 3 will have a jackhammer, excavator, and haul trucks that we will assume have a HP of 360.

Trips and VMT - Assuming that

Demolition -

Grading - assuming 1 acre of grading

Consumer Products -

Area Coating -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	60.00
tblConstructionPhase	NumDays	0.00	82.00
tblConstructionPhase	NumDays	0.00	10.00
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LandUseSquareFeet	0.00	68,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		In-Water Construction

tblOffRoadEquipment	PhaseName		Excavation, grading, clearing and grubbing
tblOffRoadEquipment	PhaseName		In-Water Construction
tblOffRoadEquipment	PhaseName		Construction Out of Water
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	16.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	27.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	27.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	29.00	10.00
tblTripsAndVMT	WorkerTripNumber	29.00	10.00
tblTripsAndVMT	WorkerTripNumber	29.00	8.00
tblTripsAndVMT	WorkerTripNumber	29.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.8237	7.6230	6.7348	0.0157	1.0478	0.3034	1.2573	0.4757	0.2970	0.6686	0.0000	1,568.8487	1,568.8487	0.2042	0.0000	1,572.4066
2020	0.8062	9.4517	5.3131	0.0166	0.3882	0.2942	0.6825	0.1064	0.2713	0.3776	0.0000	1,663.5317	1,663.5317	0.2647	0.0000	1,670.1479
Maximum	**0.8237**	**9.4517**	**6.7348**	**0.0166**	**1.0478**	**0.3034**	**1.2573**	**0.4757**	**0.2970**	**0.6686**	**0.0000**	**1,663.5317**	**1,663.5317**	**0.2647**	**0.0000**	**1,670.1479**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.8237	7.6230	6.7348	0.0157	0.5755	0.3034	0.7849	0.2418	0.2970	0.4347	0.0000	1,568.8487	1,568.8487	0.2042	0.0000	1,572.4066
2020	0.8062	9.4517	5.3131	0.0166	0.3882	0.2942	0.6825	0.1064	0.2713	0.3776	0.0000	1,663.5317	1,663.5317	0.2647	0.0000	1,670.1479
Maximum	**0.8237**	**9.4517**	**6.7348**	**0.0166**	**0.5755**	**0.3034**	**0.7849**	**0.2418**	**0.2970**	**0.4347**	**0.0000**	**1,663.5317**	**1,663.5317**	**0.2647**	**0.0000**	**1,670.1479**

	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**	**32.89**	**0.00**	**24.35**	**40.18**	**0.00**	**22.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Excavation, grading, clearing and grubbing	Grading	6/3/2019	6/14/2019	5	10	
2	In-Water Construction	Building Construction	6/17/2019	9/6/2019	5	60	
3	Construction Out of Water	Building Construction	1/1/2020	4/23/2020	5	82	

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
Excavation, grading, clearing and grubbing	Excavators	1	8.00	158	0.38
Excavation, grading, clearing and grubbing	Rubber Tired Dozers	1	1.00	247	0.40
In-Water Construction	Crushing/Proc. Equipment	1	6.00	85	0.78
In-Water Construction	Excavators	1	4.00	158	0.38
Construction Out of Water	Cranes	2	4.00	231	0.29
Construction Out of Water	Paving Equipment	1	4.00	132	0.36

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
Excavation, grading, clearing and grubbing	2	10.00	0.00	27.00	10.80	7.30	15.00	LD_Mix	HDT_Mix	HHDT
Excavation, grading, clearing and grubbing	2	8.00	0.00	6.00	10.80	7.30	12.00	LD_Mix	HDT_Mix	HHDT
In-Water Construction	2	10.00	11.00	27.00	10.80	7.30	2.00	LD_Mix	HDT_Mix	HHDT
In-Water Construction	2	10.00	11.00	8.00	10.80	7.30	16.00	LD_Mix	HDT_Mix	HHDT
Construction Out of Water	3	8.00	11.00	6.00	10.80	7.30	12.00	LD_Mix	HDT_Mix	HHDT
Construction Out of Water	3	20.00	11.00	30.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation, grading, clearing and grubbing - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8588	0.0000	0.8588	0.4252	0.0000	0.4252			0.0000			0.0000
Off-Road	0.4026	4.1912	3.7987	6.2300e-003		0.2029	0.2029		0.1867	0.1867		616.8041	616.8041	0.1952		621.6829
Total	**0.4026**	**4.1912**	**3.7987**	**6.2300e-003**	**0.8588**	**0.2029**	**1.0617**	**0.4252**	**0.1867**	**0.6119**		**616.8041**	**616.8041**	**0.1952**		**621.6829**

3.2 Excavation, grading, clearing and grubbing - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0272	0.9463	0.2763	2.0400e-003	0.0411	5.3500e-003	0.0465	0.0112	5.1200e-003	0.0164		213.4898	213.4898	3.5600e-003		213.5789
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1049	0.0546	0.7168	1.5700e-003	0.1479	1.1600e-003	0.1490	0.0392	1.0700e-003	0.0403		156.3716	156.3716	5.4500e-003		156.5077
Total	**0.1321**	**1.0009**	**0.9931**	**3.6100e-003**	**0.1890**	**6.5100e-003**	**0.1955**	**0.0505**	**6.1900e-003**	**0.0566**		**369.8614**	**369.8614**	**9.0100e-003**		**370.0866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3865	0.0000	0.3865	0.1914	0.0000	0.1914			0.0000			0.0000
Off-Road	0.4026	4.1912	3.7987	6.2300e-003		0.2029	0.2029		0.1867	0.1867	0.0000	616.8041	616.8041	0.1952		621.6829
Total	**0.4026**	**4.1912**	**3.7987**	**6.2300e-003**	**0.3865**	**0.2029**	**0.5894**	**0.1914**	**0.1867**	**0.3780**	**0.0000**	**616.8041**	**616.8041**	**0.1952**		**621.6829**

3.2 Excavation, grading, clearing and grubbing - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0272	0.9463	0.2763	2.0400e-003	0.0411	5.3500e-003	0.0465	0.0112	5.1200e-003	0.0164		213.4898	213.4898	3.5600e-003		213.5789
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1049	0.0546	0.7168	1.5700e-003	0.1479	1.1600e-003	0.1490	0.0392	1.0700e-003	0.0403		156.3716	156.3716	5.4500e-003		156.5077
Total	**0.1321**	**1.0009**	**0.9931**	**3.6100e-003**	**0.1890**	**6.5100e-003**	**0.1955**	**0.0505**	**6.1900e-003**	**0.0566**		**369.8614**	**369.8614**	**9.0100e-003**		**370.0866**

3.3 In-Water Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5855	4.4490	4.9107	7.8400e-003		0.2760	0.2760		0.2709	0.2709		753.9604	753.9604	0.1212		756.9904
Total	**0.5855**	**4.4490**	**4.9107**	**7.8400e-003**		**0.2760**	**0.2760**		**0.2709**	**0.2709**		**753.9604**	**753.9604**	**0.1212**		**756.9904**

3.3 In-Water Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5300e-003	0.0920	0.0274	1.6000e-004	2.6200e-003	3.8000e-004	3.0100e-003	7.2000e-004	3.6000e-004	1.0800e-003		16.3647	16.3647	4.5000e-004		16.3759
Vendor	0.1191	3.0214	1.0003	5.9900e-003	0.1480	0.0258	0.1737	0.0425	0.0246	0.0672		624.7774	624.7774	0.0146		625.1428
Worker	0.1165	0.0606	0.7964	1.7500e-003	0.1643	1.2900e-003	0.1656	0.0436	1.1900e-003	0.0448		173.7462	173.7462	6.0500e-003		173.8975
Total	**0.2381**	**3.1740**	**1.8241**	**7.9000e-003**	**0.3149**	**0.0274**	**0.3423**	**0.0868**	**0.0262**	**0.1130**		**814.8883**	**814.8883**	**0.0211**		**815.4162**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5855	4.4490	4.9107	7.8400e-003		0.2760	0.2760		0.2709	0.2709	0.0000	753.9604	753.9604	0.1212		756.9904
Total	**0.5855**	**4.4490**	**4.9107**	**7.8400e-003**		**0.2760**	**0.2760**		**0.2709**	**0.2709**	**0.0000**	**753.9604**	**753.9604**	**0.1212**		**756.9904**

3.3 In-Water Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5300e-003	0.0920	0.0274	1.6000e-004	2.6200e-003	3.8000e-004	3.0100e-003	7.2000e-004	3.6000e-004	1.0800e-003		16.3647	16.3647	4.5000e-004		16.3759
Vendor	0.1191	3.0214	1.0003	5.9900e-003	0.1480	0.0258	0.1737	0.0425	0.0246	0.0672		624.7774	624.7774	0.0146		625.1428
Worker	0.1165	0.0606	0.7964	1.7500e-003	0.1643	1.2900e-003	0.1656	0.0436	1.1900e-003	0.0448		173.7462	173.7462	6.0500e-003		173.8975
Total	**0.2381**	**3.1740**	**1.8241**	**7.9000e-003**	**0.3149**	**0.0274**	**0.3423**	**0.0868**	**0.0262**	**0.1130**		**814.8883**	**814.8883**	**0.0211**		**815.4162**

3.4 Construction Out of Water - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5571	6.4622	3.3826	7.8100e-003		0.2758	0.2758		0.2538	0.2538		756.0537	756.0537	0.2445		762.1668
Total	**0.5571**	**6.4622**	**3.3826**	**7.8100e-003**		**0.2758**	**0.2758**		**0.2538**	**0.2538**		**756.0537**	**756.0537**	**0.2445**		**762.1668**

3.4 Construction Out of Water - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8500e-003	0.1836	0.0527	4.8000e-004	0.0102	7.9000e-004	0.0110	2.7900e-003	7.5000e-004	3.5400e-003		49.7460	49.7460	5.6000e-004		49.7599
Vendor	0.0924	2.7303	0.8757	5.9600e-003	0.1480	0.0159	0.1639	0.0426	0.0152	0.0577		622.0134	622.0134	0.0122		622.3170
Worker	0.1518	0.0756	1.0022	2.3700e-003	0.2300	1.7400e-003	0.2318	0.0610	1.6100e-003	0.0626		235.7186	235.7186	7.4200e-003		235.9042
Total	**0.2490**	**2.9895**	**1.9305**	**8.8100e-003**	**0.3882**	**0.0184**	**0.4066**	**0.1064**	**0.0175**	**0.1239**		**907.4779**	**907.4779**	**0.0201**		**907.9811**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5571	6.4622	3.3826	7.8100e-003		0.2758	0.2758		0.2538	0.2538	0.0000	756.0537	756.0537	0.2445		762.1668
Total	**0.5571**	**6.4622**	**3.3826**	**7.8100e-003**		**0.2758**	**0.2758**		**0.2538**	**0.2538**	**0.0000**	**756.0537**	**756.0537**	**0.2445**		**762.1668**

3.4 Construction Out of Water - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8500e-003	0.1836	0.0527	4.8000e-004	0.0102	7.9000e-004	0.0110	2.7900e-003	7.5000e-004	3.5400e-003		49.7460	49.7460	5.6000e-004		49.7599
Vendor	0.0924	2.7303	0.8757	5.9600e-003	0.1480	0.0159	0.1639	0.0426	0.0152	0.0577		622.0134	622.0134	0.0122		622.3170
Worker	0.1518	0.0756	1.0022	2.3700e-003	0.2300	1.7400e-003	0.2318	0.0610	1.6100e-003	0.0626		235.7186	235.7186	7.4200e-003		235.9042
Total	**0.2490**	**2.9895**	**1.9305**	**8.8100e-003**	**0.3882**	**0.0184**	**0.4066**	**0.1064**	**0.0175**	**0.1239**		**907.4779**	**907.4779**	**0.0201**		**907.9811**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined 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	9.50	7.30	7.30	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	0.512962	0.041542	0.225677	0.140684	0.035619	0.007151	0.016044	0.009270	0.001580	0.001207	0.005638	0.000826	0.001801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.8870	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4552					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.8870**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Folsom Lake Raw Water Pumping Station Pump Replacement Project

El Dorado County 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	68,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - proposed improvements to Folsom Lake are around 68,000 sq.ft.

Construction Phase - Phases will occur in 2019 and 2020

Off-road Equipment - Phase 2 has haul trucks, paving equipment, truck mounted crane

Off-road Equipment - Phase 1 only has an excavator and bulldozer

Off-road Equipment - Phase 3 will have a jackhammer, excavator, and haul trucks that we will assume have a HP of 360.

Trips and VMT - Assuming that

Demolition -

Grading - assuming 1 acre of grading

Consumer Products -

Area Coating -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	60.00
tblConstructionPhase	NumDays	0.00	82.00
tblConstructionPhase	NumDays	0.00	10.00
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LandUseSquareFeet	0.00	68,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		In-Water Construction

tblOffRoadEquipment	PhaseName		Excavation, grading, clearing and grubbing
tblOffRoadEquipment	PhaseName		In-Water Construction
tblOffRoadEquipment	PhaseName		Construction Out of Water
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	16.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	27.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	27.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	29.00	10.00
tblTripsAndVMT	WorkerTripNumber	29.00	10.00
tblTripsAndVMT	WorkerTripNumber	29.00	8.00
tblTripsAndVMT	WorkerTripNumber	29.00	20.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0271	0.2574	0.2261	5.2000e-004	0.0143	0.0102	0.0244	4.8900e-003	9.8800e-003	0.0148	0.0000	46.6191	46.6191	4.8100e-003	0.0000	46.7392
2020	0.0326	0.3908	0.2172	6.7000e-004	0.0153	0.0121	0.0274	4.2100e-003	0.0111	0.0153	0.0000	61.0204	61.0204	9.8500e-003	0.0000	61.2665
Maximum	**0.0326**	**0.3908**	**0.2261**	**6.7000e-004**	**0.0153**	**0.0121**	**0.0274**	**4.8900e-003**	**0.0111**	**0.0153**	**0.0000**	**61.0204**	**61.0204**	**9.8500e-003**	**0.0000**	**61.2665**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0271	0.2574	0.2261	5.2000e-004	0.0119	0.0102	0.0221	3.7200e-003	9.8800e-003	0.0136	0.0000	46.6191	46.6191	4.8100e-003	0.0000	46.7392
2020	0.0326	0.3908	0.2172	6.7000e-004	0.0153	0.0121	0.0274	4.2100e-003	0.0111	0.0153	0.0000	61.0203	61.0203	9.8500e-003	0.0000	61.2665
Maximum	**0.0326**	**0.3908**	**0.2261**	**6.7000e-004**	**0.0153**	**0.0121**	**0.0274**	**4.2100e-003**	**0.0111**	**0.0153**	**0.0000**	**61.0203**	**61.0203**	**9.8500e-003**	**0.0000**	**61.2665**

	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**	**7.98**	**0.00**	**4.56**	**12.86**	**0.00**	**3.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2019	9-2-2019	0.2598	0.2598
2	9-3-2019	12-2-2019	0.0121	0.0121
3	12-3-2019	3-2-2020	0.2292	0.2292
4	3-3-2020	6-2-2020	0.1915	0.1915
		Highest	0.2598	0.2598

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	0.3444	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	**0.3444**	**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**

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	0.3444	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	**0.3444**	**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

Folsom Lake Raw Water Pumping Station Pump Replacement Project - El Dorado County AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Excavation, grading, clearing and grubbing	Grading	6/3/2019	6/14/2019	5	10	
2	In-Water Construction	Building Construction	6/17/2019	9/6/2019	5	60	
3	Construction Out of Water	Building Construction	1/1/2020	4/23/2020	5	82	

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
Excavation, grading, clearing and grubbing	Excavators	1	8.00	158	0.38
Excavation, grading, clearing and grubbing	Rubber Tired Dozers	1	1.00	247	0.40
In-Water Construction	Crushing/Proc. Equipment	1	6.00	85	0.78
In-Water Construction	Excavators	1	4.00	158	0.38
Construction Out of Water	Cranes	2	4.00	231	0.29
Construction Out of Water	Paving Equipment	1	4.00	132	0.36

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
Excavation, grading, clearing and grubbing	2	10.00	0.00	27.00	10.80	7.30	15.00	LD_Mix	HDT_Mix	HHDT
Excavation, grading, clearing and grubbing	2	8.00	0.00	6.00	10.80	7.30	12.00	LD_Mix	HDT_Mix	HHDT
In-Water Construction	2	10.00	11.00	27.00	10.80	7.30	2.00	LD_Mix	HDT_Mix	HHDT
In-Water Construction	2	10.00	11.00	8.00	10.80	7.30	16.00	LD_Mix	HDT_Mix	HHDT
Construction Out of Water	3	8.00	11.00	6.00	10.80	7.30	12.00	LD_Mix	HDT_Mix	HHDT
Construction Out of Water	3	20.00	11.00	30.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation, grading, clearing and grubbing - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.2900e-003	0.0000	4.2900e-003	2.1300e-003	0.0000	2.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0100e-003	0.0210	0.0190	3.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	2.7978	2.7978	8.9000e-004	0.0000	2.8199
Total	**2.0100e-003**	**0.0210**	**0.0190**	**3.0000e-005**	**4.2900e-003**	**1.0100e-003**	**5.3000e-003**	**2.1300e-003**	**9.3000e-004**	**3.0600e-003**	**0.0000**	**2.7978**	**2.7978**	**8.9000e-004**	**0.0000**	**2.8199**

3.2 Excavation, grading, clearing and grubbing - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.8600e-003	1.4300e-003	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	5.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.9626	0.9626	2.0000e-005	0.0000	0.9630
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	4.8000e-004	3.1000e-004	3.3200e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6547	0.6547	2.0000e-005	0.0000	0.6553
Total	**6.2000e-004**	**5.1700e-003**	**4.7500e-003**	**2.0000e-005**	**9.1000e-004**	**4.0000e-005**	**9.4000e-004**	**2.4000e-004**	**4.0000e-005**	**2.7000e-004**	**0.0000**	**1.6173**	**1.6173**	**4.0000e-005**	**0.0000**	**1.6183**

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					1.9300e-003	0.0000	1.9300e-003	9.6000e-004	0.0000	9.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0100e-003	0.0210	0.0190	3.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	2.7978	2.7978	8.9000e-004	0.0000	2.8199
Total	**2.0100e-003**	**0.0210**	**0.0190**	**3.0000e-005**	**1.9300e-003**	**1.0100e-003**	**2.9400e-003**	**9.6000e-004**	**9.3000e-004**	**1.8900e-003**	**0.0000**	**2.7978**	**2.7978**	**8.9000e-004**	**0.0000**	**2.8199**

3.2 Excavation, grading, clearing and grubbing - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.8600e-003	1.4300e-003	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	5.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.9626	0.9626	2.0000e-005	0.0000	0.9630
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	4.8000e-004	3.1000e-004	3.3200e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6547	0.6547	2.0000e-005	0.0000	0.6553
Total	**6.2000e-004**	**5.1700e-003**	**4.7500e-003**	**2.0000e-005**	**9.1000e-004**	**4.0000e-005**	**9.4000e-004**	**2.4000e-004**	**4.0000e-005**	**2.7000e-004**	**0.0000**	**1.6173**	**1.6173**	**4.0000e-005**	**0.0000**	**1.6183**

3.3 In-Water Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0176	0.1335	0.1473	2.4000e-004		8.2800e-003	8.2800e-003		8.1300e-003	8.1300e-003	0.0000	20.5194	20.5194	3.3000e-003	0.0000	20.6019
Total	**0.0176**	**0.1335**	**0.1473**	**2.4000e-004**		**8.2800e-003**	**8.2800e-003**		**8.1300e-003**	**8.1300e-003**	**0.0000**	**20.5194**	**20.5194**	**3.3000e-003**	**0.0000**	**20.6019**

3.3 In-Water Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.8000e-003	8.9000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4392	0.4392	1.0000e-005	0.0000	0.4395
Vendor	3.6400e-003	0.0929	0.0321	1.8000e-004	4.2900e-003	7.8000e-004	5.0700e-003	1.2400e-003	7.4000e-004	1.9800e-003	0.0000	16.8807	16.8807	4.1000e-004	0.0000	16.8911
Worker	3.2100e-003	2.0800e-003	0.0221	5.0000e-005	4.7200e-003	4.0000e-005	4.7600e-003	1.2600e-003	4.0000e-005	1.2900e-003	0.0000	4.3647	4.3647	1.5000e-004	0.0000	4.3685
Total	**6.9300e-003**	**0.0978**	**0.0551**	**2.3000e-004**	**9.0900e-003**	**8.3000e-004**	**9.9200e-003**	**2.5200e-003**	**7.9000e-004**	**3.3000e-003**	**0.0000**	**21.6846**	**21.6846**	**5.7000e-004**	**0.0000**	**21.6992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0176	0.1335	0.1473	2.4000e-004		8.2800e-003	8.2800e-003		8.1300e-003	8.1300e-003	0.0000	20.5194	20.5194	3.3000e-003	0.0000	20.6019
Total	**0.0176**	**0.1335**	**0.1473**	**2.4000e-004**		**8.2800e-003**	**8.2800e-003**		**8.1300e-003**	**8.1300e-003**	**0.0000**	**20.5194**	**20.5194**	**3.3000e-003**	**0.0000**	**20.6019**

3.3 In-Water Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.8000e-003	8.9000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4392	0.4392	1.0000e-005	0.0000	0.4395
Vendor	3.6400e-003	0.0929	0.0321	1.8000e-004	4.2900e-003	7.8000e-004	5.0700e-003	1.2400e-003	7.4000e-004	1.9800e-003	0.0000	16.8807	16.8807	4.1000e-004	0.0000	16.8911
Worker	3.2100e-003	2.0800e-003	0.0221	5.0000e-005	4.7200e-003	4.0000e-005	4.7600e-003	1.2600e-003	4.0000e-005	1.2900e-003	0.0000	4.3647	4.3647	1.5000e-004	0.0000	4.3685
Total	**6.9300e-003**	**0.0978**	**0.0551**	**2.3000e-004**	**9.0900e-003**	**8.3000e-004**	**9.9200e-003**	**2.5200e-003**	**7.9000e-004**	**3.3000e-003**	**0.0000**	**21.6846**	**21.6846**	**5.7000e-004**	**0.0000**	**21.6992**

3.4 Construction Out of Water - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0228	0.2650	0.1387	3.2000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	28.1211	28.1211	9.0900e-003	0.0000	28.3485
Total	**0.0228**	**0.2650**	**0.1387**	**3.2000e-004**		**0.0113**	**0.0113**		**0.0104**	**0.0104**	**0.0000**	**28.1211**	**28.1211**	**9.0900e-003**	**0.0000**	**28.3485**

3.4 Construction Out of Water - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	7.7800e-003	2.1800e-003	2.0000e-005	4.0000e-004	3.0000e-005	4.4000e-004	1.1000e-004	3.0000e-005	1.4000e-004	0.0000	1.8438	1.8438	2.0000e-005	0.0000	1.8443
Vendor	3.8600e-003	0.1145	0.0384	2.4000e-004	5.8600e-003	6.6000e-004	6.5200e-003	1.6900e-003	6.3000e-004	2.3200e-003	0.0000	22.9634	22.9634	4.7000e-004	0.0000	22.9752
Worker	5.7200e-003	3.5400e-003	0.0379	9.0000e-005	9.0400e-003	7.0000e-005	9.1100e-003	2.4000e-003	7.0000e-005	2.4700e-003	0.0000	8.0921	8.0921	2.6000e-004	0.0000	8.0986
Total	**9.7800e-003**	**0.1258**	**0.0785**	**3.5000e-004**	**0.0153**	**7.6000e-004**	**0.0161**	**4.2000e-003**	**7.3000e-004**	**4.9300e-003**	**0.0000**	**32.8993**	**32.8993**	**7.5000e-004**	**0.0000**	**32.9180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0228	0.2650	0.1387	3.2000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	28.1211	28.1211	9.0900e-003	0.0000	28.3484
Total	**0.0228**	**0.2650**	**0.1387**	**3.2000e-004**		**0.0113**	**0.0113**		**0.0104**	**0.0104**	**0.0000**	**28.1211**	**28.1211**	**9.0900e-003**	**0.0000**	**28.3484**

3.4 Construction Out of Water - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	7.7800e-003	2.1800e-003	2.0000e-005	4.0000e-004	3.0000e-005	4.4000e-004	1.1000e-004	3.0000e-005	1.4000e-004	0.0000	1.8438	1.8438	2.0000e-005	0.0000	1.8443
Vendor	3.8600e-003	0.1145	0.0384	2.4000e-004	5.8600e-003	6.6000e-004	6.5200e-003	1.6900e-003	6.3000e-004	2.3200e-003	0.0000	22.9634	22.9634	4.7000e-004	0.0000	22.9752
Worker	5.7200e-003	3.5400e-003	0.0379	9.0000e-005	9.0400e-003	7.0000e-005	9.1100e-003	2.4000e-003	7.0000e-005	2.4700e-003	0.0000	8.0921	8.0921	2.6000e-004	0.0000	8.0986
Total	**9.7800e-003**	**0.1258**	**0.0785**	**3.5000e-004**	**0.0153**	**7.6000e-004**	**0.0161**	**4.2000e-003**	**7.3000e-004**	**4.9300e-003**	**0.0000**	**32.8993**	**32.8993**	**7.5000e-004**	**0.0000**	**32.9180**

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	9.50	7.30	7.30	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	0.512962	0.041542	0.225677	0.140684	0.035619	0.007151	0.016044	0.009270	0.001580	0.001207	0.005638	0.000826	0.001801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	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**

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**

5.3 Energy by Land Use - Electricity

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

	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	0.3444	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	0.3444	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	0.0788					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2656					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	**0.3444**	**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**

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	0.0788					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2656					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	**0.3444**	**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

	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

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

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

A. Equipment List

Equipment Type	Number of Units
Excavator	1
Bulldozer	1
Haul Trucks	3
Haul Trucks	3
Paving Equipment	1
Truck Mounted Crane	2
Jackhammer	1
Barge	2
Excavator - On Shore	1
Haul Trucks	4

B. SMAQMD Harborcraft, Dredge, and Barge Emission Factor Calculator - Main Engine Emission Rates

Calendar Year: 2019 **Numbe** 2

Vessel/Engine Information								Emission Rates (lb/hr)									
Vessel Name	Vessel Number	Home Port	Vessel Type	Engine Model Year	Engine Rated Power (hp)	Engine Load Factor	Number of engines	PM10	PM2.5	NOx	ROG	CO	SO2	CO2	CH4	N2O	CO2e
Drilling Barge			Barge	2002	3000	0.45	1	1.51	1.35	27.89	2.54	10.04	0.02	1776.42	0.07	0.01	1782.52
Equipment Barge			Barge	2002	100	0.45	1	0.08	0.07	0.94	0.11	0.40	0.00	70.77	0.00	0.00	71.01

Appendix C. Biological Resources Technical Report for Folsom Lake Intake Improvements Project

GEI Consultants

January 30, 2019

Geotechnical
Environmental
Water Resources
Ecological

Brian Deason
Hydroelectric Compliance Analyst
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Subject: Biological Resources Technical Report for Folsom Lake Intake Improvements Project

Dear Mr. Deason:

The El Dorado Irrigation District (EID) is conducting studies to support the Folsom Lake Intake Improvements Project (proposed project). The project need and objectives, characteristics, construction activities, operations and maintenance, and discretionary actions and approvals that may be required are described in detail in Chapter 2 of the Initial Study/proposed Mitigated Negative Declaration. A field investigation of the project site and assessment of the potential for the project to significantly impact sensitive biological resources was conducted by GEI Consultants, Inc. (GEI). This letter report describes the methods and results of the assessment.

Project Location

The project site is located in northwestern El Dorado County, along the south edge of Folsom Lake (**Attachment A, Figure 1**). The project site is located in Section 10 of the Clarksville U.S. Geological Survey (USGS) 7.5-minute Quadrangle, Township 10 North, Range 8 East (**Attachment A, Figure 2**).

Pre-field Investigation and Field Survey

Before conducting the field survey, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2018) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2018) were reviewed. These reviews were centered on the Clarksville USGS 7.5-minute quadrangle and included the eight surrounding quadrangles. Database search results are provided in **Attachment B**.

A list of resources under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could occur in the project vicinity was obtained from the USFWS Information for Planning and Conservation (IPaC) website (USFWS 2018a); the IPaC resource list is provided in **Attachment B**. Seven fish and wildlife species and five plant species are listed as "threatened" or "endangered" under the Federal Endangered Species Act (ESA) are included on this list. The project site is not located within proposed or designated critical habitat for any Federally listed species. The National Marine Fisheries Service's (NMFS's) California Species List Tools (NMFS 2018) indicate that two Federally listed anadromous fish populations have been documented in the Clarksville USGS quadrangle: Central Valley spring-run Chinook salmon and Central Valley steelhead.

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Aerial imagery on Google Earth®, National Wetlands Inventory data, and the Natural Resources Conservation Service *Soil Survey of El Dorado Area, California* (NRCS 2017) also were reviewed.

A field survey of the project site and immediate vicinity was conducted by GEI biologist Sarah A. Norris on November 28, 2018. Photographs taken during the field survey are provided in **Attachment C**. The field survey included an assessment of habitat types present, including potential waters of the United States, and evaluation of habitat suitability and potential for special-status species to occur at, or adjacent to, the project site and to be affected by implementation of the proposed project.

Environmental Setting

Elevation at the approximately 2-acre project site ranges from approximately 550 feet above mean sea level at the southern end of the site to approximately 300 feet at the northern boundary (**Attachment A, Figure 2**).

Habitat and Land Cover Types

The project site is composed of interior live oak woodland, developed areas, and open water, including areas of currently barren shoreline below the maximum pool elevation of Folsom Lake (**Attachment A, Figure 3**). Interior live oak (*Quercus wislizeni*) is the dominant tree in interior live oak woodland (Sawyer 2009). Other tree species present on the project site include blue oak (*Q. douglasii*), foothill pine (*Pinus sabiniana*), and California buckeye (*Aesculus californica*). Toyon (*Heteromeles arbutifolia*) and coyote brush (*Baccharis pilularis*) are common shrub species encountered on the project site and in the vicinity. Dominant herbaceous species include nonnative grasses: ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), and wild oat (*Avena fatua*). This habitat type is also classified as foothill pine-oak woodland under the Holland classification system.

Developed areas include the paved access road, existing EID pumping facility buildings, and water tanks. The existing pumping facilities are surrounded by a chain link fence.

The project site includes a portion of Folsom Lake. Folsom Lake is described below under "Sensitive Habitats."

Sensitive Biological Resources

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

Special-status Species

For the purposes of this assessment, special-status species include plants and animals that fall into any of the following categories:

- species officially listed by the Federal government or the State of California as endangered, threatened, or rare;
- candidate species for Federal or State listing as endangered or threatened;
- species proposed for Federal or State listing as endangered or threatened;

- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing;
- wildlife species identified by CDFW as species of special concern and plant taxa considered by CDFW to be "rare, threatened, or endangered in California;"
- species listed as Fully Protected under the FGC; or
- species afforded protection under local or regional planning documents.

Plant taxa are assigned by CDFW to one of the following six California Rare Plant Ranks (CRPRs):

- CRPR 1A—Plants presumed to be extinct in California;
- CRPR 1B—Plants that are rare, threatened, or endangered in California and elsewhere;
- CRPR 2A—Plants that are presumed extirpated in California, but are more common elsewhere;
- CRPR 2B—Plants that are rare, threatened, or endangered in California but more common elsewhere;
- CRPR 3—Plants about which more information is needed (a review list); or
- CRPR 4—Plants of limited distribution (a watch list).

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 plant taxa inventoried in the CNDDB, regardless of their legal or protection status. As indicated above, only plant taxa considered by CDFW to be "rare, threatened, or endangered in California" (i.e., CRPR 1B and 2B plants) are considered special-status for purposes of this analysis. CDFW applies the term "California species of special concern" to wildlife species that are not listed under CESA but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers and are subject to current known threats to their persistence.

Figure 4 and Figure 5 in **Attachment A** show all CNDDB occurrences of plant and wildlife species that meet the definition of special-status species described above that have been documented within 3 miles of the project site. Results of the CNDDB search (see **Attachment B**) yielded occurrences of a total of 49 special-status plants and animals within the USGS 9-quad search area; only 10 of these species have been documented within 3 miles of the project site. Several occurrences of special-status plants have been documented east of the project site, on the Pine Hill Ecological Reserve (Note: Not all species tracked in the CNDDB and included in the search results in Attachment B meet the definition of a special-status species described above.)

Table 1 provides information on special-status plant species that were evaluated for potential to occur on the project site. Species included in the CNDDB or CNPS search results but that occupy elevation ranges higher or lower than the elevation of the project site, or otherwise could be determined to have no potential to occur in the project vicinity, were eliminated from consideration and are not included in **Table 1**. Based on the review of existing documentation and observations made during the field survey, habitat for all special-status plant species that were evaluated is absent from the project site.

Table 1. Special-status Plants Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Blooming Period	Status[1]		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Jepson's onion *Allium jepsonii*	April-August	–	1B.2	Foothill woodland and yellow pine forest on serpentinite or volcanic soils	None; no suitable habitat is present on or adjacent to the project site.
Big-scale balsamroot *Balsamorhiza macrolepis*	March-June	–	1B.2	Valley grassland and foothill woodland, chaparral, and cismontane woodland, sometimes on serpentinite soils	None; no suitable habitat is present on or adjacent to the project site.
Stebbins' morning-glory *Calystegia stebbinsii*	April-July	FE	SE, 1B.1	Chaparral and foothill woodland on serpentinite or gabbroic soils	None; no suitable habitat is present on or adjacent to the project site.
Chaparral sedge *Carex xerophila*	March-June	–	1B.2	Chaparral, lower montane coniferous forest, and foothill woodland on serpentinite or gabbroic soils	None; no suitable habitat is present on or adjacent to the project site.
Pine Hill ceanothus *Ceanothus roderickii*	April-June	FE	SR, 1B.1	Chaparral and foothill woodland on serpentinite or gabbroic soils	None; no suitable habitat is present on or adjacent to the project site.
Red Hills soaproot *Chlorogalum grandiflorum*	May-June	–	1B.2	Chaparral, foothill woodland, and yellow pine forest on serpentinite or gabbroic soils	None; no suitable habitat is present on or adjacent to the project site.
Dwarf downingia *Downingia pusilla*	March-May	–	2B.2	Vernal pools and similar seasonal wetlands in valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Starved daisy *Erigeron miser*	June–October	–	1B.3	Upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Tuolumne button-celery *Eryngium pinnatisectum*	May-August	–	1B.2	Foothill woodland, yellow pine forest, freshwater wetlands, and wetland-riparian	None; no suitable habitat is present on or adjacent to the project site.
Pine Hill flannelbush *Fremontodendron decumbens*	April-July	FE	SR, 1B.2	Chaparral and foothill woodland on gabbroic or serpentinite rocky soils	None; no suitable habitat is present on or adjacent to the project site.
El Dorado bedstraw *Galium californicum* ssp. *sierrae*	May-June	FE	SR, 1B.2	Chaparral, foothill woodland, and yellow pine forest	None; no suitable habitat is present on or adjacent to the project site.

Table 1. Special-status Plants Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Blooming Period	Status[1]		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Boggs Lake hedge-hyssop *Gratiola heterosepala*	April-August	–	SE 1B.2	Lake margins and vernal pools on clay soils	None; no suitable habitat is present on or adjacent to the project site.
Parry's horkelia *Horkelia parryi*	April–September	–	1B.2	Chaparral and foothill woodlands on Ione soils	None; no suitable habitat is present on or adjacent to the project site.
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	March-May	–	1B.2	Vernal pool margins and swales in valley and foothill grassland, often on gopher mounds	None; no suitable habitat is present on or adjacent to the project site.
Legenere *Legenere limosa*	April-June	–	1B.1	Vernal pools	None; no suitable habitat is present on or adjacent to the project site.
Pincushion navarretia *Navarretia myersii* ssp. *myersii*	April-May	–	1B.1	Vernal pools, often on acidic soils	None; no suitable habitat is present on or adjacent to the project site.
Slender Orcutt grass *Orcuttia tenuis*	May-September	FT	SE, 1B.1	Vernal pools, often on gravelly soils	None; no suitable habitat is present on or adjacent to the project site.
Sacramento Orcutt grass *Orcuttia viscida*	April-July	FE	SE, 1B.1	Vernal pools	None; no suitable habitat is present on or adjacent to the project site.
Layne's ragwort *Packera layneae*	April-August	FT	SR, 1B.2	Chaparral and foothill woodland on gabbroic or serpentinite soils	None; no suitable habitat is present on or adjacent to the project site.
Sanford's arrowhead *Sagittaria sanfordii*	May-October	–	1B.2	Assorted shallow freshwater marshes and swamps; generally, occurs in standing or slow-moving freshwater ponds, marshes, ditches, and sloughs	None; no suitable habitat is present on or adjacent to the project site.
El Dorado County mule ears *Wyethia reticulata*	April-August	–	1B.2	Chaparral, foothill woodland, and yellow pine forest on clay or gabbroic soils	None; no suitable habitat is present on or adjacent to the project site.

Table 1. Special-status Plants Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Blooming Period	Status[1] Federal	Status[1] State	Habitat Associations	Potential to Occur on the Project Site

[1] Status Definitions

Federal Status
FE = Listed as Endangered under the Federal Endangered Species Act
FT = Listed as Threatened under the Federal Endangered Species Act
– = No status

State Status
SE = Listed as Endangered under the California Endangered Species Act
SR = Listed as Rare under the California Endangered Species Act

California Rare Plant Ranks
1B = Plant species considered rare or endangered in California and elsewhere
2B = Plant species considered rare or endangered in California but more common elsewhere

California Rare Plant Rank Extensions
.1 = Seriously endangered in California (greater than 80 percent of occurrences are threatened and/or have a high degree and immediacy of threat)
.2 = Fairly endangered in California (20 to 80 percent of occurrences are threatened and/or have a moderate degree and immediacy of threat)
.3 = Not very endangered in California

Sources: CDFW 2018; CNPS 2018; USFWS 2018a; data compiled by GEI Consultants, Inc. in 2018

Table 2 provides information on special-status terrestrial wildlife species that were evaluated for potential to occur on the project site. All fish included on the IPaC resource list and NMFS species list were eliminated from consideration and are not included in **Table 2**, because the project site is located above Folsom Dam, which prevents these fish from accessing the project site. Based on the review of existing documentation and observations made during the field survey, habitat on the project site is unsuitable or only marginally suitable for the special-status wildlife species that were evaluated. Therefore, potential for many of the species to occur onsite is low. Some species that are known to occur in the vicinity or that are highly mobile and use a variety of habitat types have moderate potential to occur onsite.

As noted on **Figure 5**, there is an occurrence of California red-legged frog (CRLF) (*Rana draytonii*) within 1 mile of the project site (CDFW 2018). EID has had past communications with the resource agencies regarding this documented occurrence of CRLF. It has been concluded that this occurrence is likely a misidentification. There is no suitable habitat for CRLF on the project site or vicinity.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Invertebrates				
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	–	Vernal pools and other seasonal wetlands, typically small but including a wide range of sizes.	None; no suitable habitat is present on or adjacent to the project site.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT	–	Closely associated with blue elderberry (*Sambucus* sp.), which is an obligate host for the beetle larvae.	None; no suitable habitat is present on or adjacent to the project site.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE	–	Vernal pools and other seasonal wetlands, typically medium to large but including a wide range of sizes with relatively long inundation period.	None; no suitable habitat is present on or adjacent to the project site.
Amphibians				
Foothill yellow-legged frog *Rana boylii*	–	CT, SSC	Partially shaded, rocky streams, in areas of chaparral, open woodland, and forest. Breeds in partially shaded, perennial streams and rivers with some cobble-sized rocks, riffle areas and water less than 1 meter deep.	None; no suitable habitat is present on or adjacent to the project site.
California red-legged frog *Rana draytonii*	FT	SSC	Lowlands and foothill streams, and marshes; requires permanent or late season sources of deep water with dense, shrubby, riparian, or emergent vegetation for breeding.	None; no suitable habitat is present on or adjacent to the project site.
Western spadefoot *Spea hammondii*	–	SSC	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	None; no suitable habitat is present on or adjacent to the project site.
Reptiles				
Western pond turtle *Emys marmorata*	–	SSC	A variety of permanent or nearly permanent water bodies, typically deep water, in a wide range of habitats; nests in sunny upland habitats, typically within several hundred feet of aquatic habitat.	Moderate; Folsom Lake provides suitable aquatic habitat for this species, potential basking habitat along shoreline of Folsom Lake.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Coast horned lizard *Phrynosoma blainvillii*	–	SSC	A variety of habitats including scrublands, grasslands, coniferous and broadleaf forests, and woodlands. Requires sandy soils and open areas for basking.	None; no suitable habitat is present on or adjacent to the project site.
Giant garter snake *Thamnophis gigas*	FT	ST	Agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands.	None; no suitable habitat is present on or adjacent to the project site.
Birds				
Tricolored blackbird *Agelaius tricolor*	–	CE, SSC	Nests in freshwater marsh, riparian scrub, grain crops, and other dense, low vegetation and forages in grasslands and agricultural fields.	None; no suitable habitat is present on or adjacent to the project site.
Grasshopper sparrow *Ammodramus savannarum*	–	SSC	Nests and forages in grasslands, with a mix of grasses, forbs, and scattered shrubs, on rolling hills and lowland plains.	None; no suitable habitat is present on or adjacent to the project site.
Golden eagle *Aquila chrysaetos*	–	FP	Variety of habitats in foothills, mountains, high plains, and dessert; primarily nests on cliffs in steep canyons, but also in large trees in open areas.	Low; unlikely to nest in the immediate vicinity, but transient and other non-breeding individuals could occur in the area.
Burrowing owl *Athene cunicularia*	–	SSC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with natural or artificial burrows or friable soils.	None; no suitable habitat is present on or adjacent to the project site.
Swainson's hawk *Buteo swainsoni*	–	ST	Nests in woodlands and scattered trees and forages in grasslands and agricultural fields.	Moderate; could nest in the immediate vicinity, and transient and other non-breeding individuals could occur in the area.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
White-tailed kite *Elanus leucurus*	–	FP	Nests in woodlands and isolated trees and forages in grasslands, pasture, and agricultural fields.	Moderate; unlikely to nest in the immediate vicinity, but transient and other non-breeding individuals could occur in the area.
Bald eagle *Haliaeetus leucocephalus*	–	SE, FP	Coastal shorelines and wetlands, lakes, reservoirs, and rivers. Nests in large trees, typically in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers.	Moderate; unlikely to nest in the immediate vicinity because suitable nest trees are not present within the project site, but transient and other non-breeding individuals could occur in the area. Folsom Lake provides suitable foraging habitat. Known to nest at Lake Natoma.
California black rail *Laterallus jamaicensis coturniculus*	–	ST, FP	Salt marshes, freshwater marshes, and wet meadows.	None; no suitable habitat is present on or adjacent to the project site.
Purple martin *Progne subis*	–	SSC	Deciduous woodland and coniferous forest; typically nests in old woodpecker cavities in tall, isolated tree or snag; also nests in human-made structures.	Moderate; could forage over the project site, but woodland on and adjacent to the site provides only marginally suitable nesting habitat.
Bank swallow *Riparia riparia*	–	ST	Forages in a variety of habitats and nests in vertical banks or bluffs of suitable soil, typically adjacent to water.	Moderate; no suitable nesting habitat occurs on or adjacent to the project site, but transient and other non-breeding individuals likely occur in the area.
Mammals				
Pallid bat *Antrozous pallidus*	–	SSC	Variety of habitats, including woodland, forest, grassland, and desert; roosts in tree cavities, rock crevices, mines, caves, and human structures.	Moderate; woodland may provide suitable roosting habitat and lake provides suitable foraging habitat.
Fisher *Pekania pennanti*	–	ST, SSC	Large areas of mature, dense conifer forest and deciduous riparian areas with high canopy closure; uses cavities, snags, logs, and rocky areas for cover and den sites.	None; no suitable habitat is present on or adjacent to the project site, and the site is below the elevational range for this species.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
American badger *Taxidea taxus*	–	SSC	Arid, open grassland, shrubland, and woodland with soils suitable for burrowing.	None; no suitable habitat is present on or adjacent to the project site.

Notes: CNDDB = California Natural Diversity Database

[1] **Status Definitions**

Federal Status
FE = Listed as Endangered under the Federal Endangered Species Act
FT = Listed as Threatened under the Federal Endangered Species Act
– = No status

State Status
CE = Candidate for Listing as Endangered under the California Endangered Species Act
CT = Candidate for Listing as Threatened under the California Endangered Species Act
FP = Fully Protected under the California Fish and Game Code
SE = Listed as Endangered under the California Endangered Species Act
SSC = California Species of Special Concern
ST = Listed as Threatened under the California Endangered Species Act
– = No status

Sources: CDFW 2018; GEI data 2018; USFWS 2018a

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, ESA, Section 1602 of the FGC, Section 404 of the CWA, and the Porter-Cologne Act. Sensitive habitats may be of special concern for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to special-status species.

Critical Habitat

Critical habitat is a geographic area containing features determined to be essential to the conservation of a species listed as threatened or endangered under the ESA. The project site is not located within proposed or designated critical habitat for any listed species (USFWS 2018b).

Other Habitats Protected under Federal and State Regulations

Under Section 404 of the Federal CWA, the U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into aquatic features that qualify as waters of the United States; wetlands that support hydrophytic vegetation, hydric soil types, and wetland hydrology may also qualify for USACE jurisdiction under Section 404 of the CWA. Under Section 401 of the CWA, the Central Valley Regional Water Quality Control Board (RWQCB) regulates discharge of dredged or fill material into waters of the United States that drain to the Central Valley, to ensure such activities do not violate State or Federal water quality standards; the Central Valley RWQCB also regulates waters of the State, in compliance with the Porter-Cologne Act. In addition, all diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources is subject to the regulatory approval of CDFW pursuant to Section 1602 of the FGC.

The northern end of the project site extends into Folsom Lake (see **Figure 3**). Folsom Lake has a maximum pool elevation of 481 feet above mean sea level; this also represents the ordinary high-water mark of the lake. Folsom Lake is deep and generally lacks vegetation surrounding the open water surface, because the lake volume fluctuates with water storage and release during reservoir operations. The lake bottom is composed of unconsolidated sediments. Folsom Lake is a jurisdictional water of the United States subject to regulation under Sections 404 and 401 of the CWA and Section 1602 of the FGC.

Natural Communities of Special Concern

CDFW maintains a list of terrestrial natural communities that are native to California, the *List of Vegetation Alliances and Associations* (CDFG 2010). Within that list, CDFW identifies and ranks natural communities of special concern considered to be highly imperiled. Interior live oak woodland is not identified as a community of special concern by CDFW.

Potential Project Impacts

Impacts of the proposed project on biological resources could result from vegetation removal and grading during construction. In-water work could result in temporary disturbance to aquatic biological resources. In general, terrestrial impacts are anticipated to be relatively minor, because project implementation would result in ground disturbance to approximately 0.55 acre and the project site is surrounded by similar interior live oak woodland habitat. Vegetation removal would be conducted outside the nesting season to the maximum extent possible. In-water construction would be restricted to approximately October to February. In addition, species that occur on or adjacent to the project site are accustomed to human disturbance due to the proximity of residential housing located south of the project site and recreational boat use on Folsom Lake.

Potential for sensitive biological resources, including special-status species and regulated habitats, to be impacted by implementing the proposed project is evaluated below. This impact discussion focuses on resources with reasonable potential to be affected by implementing the proposed project. Therefore, special-status plant and wildlife species that are unlikely to occur on the project site (because of a lack of suitable conditions, known extant range of the species, and/or lack of occurrence records) are not addressed in this discussion.

Special-status Species

Reptiles

Western pond turtle (*Emys marmorata*) has the potential to occur on or adjacent to the project site. Natural basking sites, such as partially submerged logs or rocks, vary with lake elevation, and such features were absent from the shoreline of Folsom Lake at the time of the field survey, when lake levels were at elevation 392. Existing pipelines may serve as marginal basking habitat for western pond turtle. The project site is situated along the shoreline of Folsom Lake, which is rocky and steep. Sheltered coves, which are not present in the project site, provide higher quality habitat for western pond turtle. Breeding is not anticipated in the project site or vicinity due to the steep rocky slopes and shaded upland habitat.

Ripping or localized shallow blasting may be required to install intake pumps on the lake shore above the normal lake operating level. Excavation of bedrock could result in sound pressure waves that may cause pond turtles to move out of the area, if present. Blasted rock would be distributed along the shoreline to reduce off-site haul. This would result in minor changes to the

shoreline but would not change the habitat substantially, because vegetation is absent below the maximum pool elevation and the current substrate is rocky. Aquatic habitat where western pond turtles may be present could be affected if construction activities degrade water quality and other habitat conditions in Folsom Lake.

Western pond turtle was not observed at the time of the field survey, and the number of turtles that may occur on-site, if present, is likely low, because of the marginal habitat suitability. Therefore, if western pond turtles are present in upland or aquatic habitat that is impacted during construction, relatively few individuals would have potential to be affected, and this potential impact would not result in a substantial adverse effect to the species as a whole and is unlikely to substantially affect local or regional populations. Project implementation would not result in loss of habitat for the species. Proposed project elements would have a **less-than-significant impact**.

Birds

Six special-status bird species—golden eagle, bald eagle, Swainson's hawk, white-tailed kite, bank swallow, and purple merlin—have low or moderate potential to occur on or adjacent to the project site (see **Table 2**). All these species are known or likely to occur in the general region, but potential for most of them to occur onsite is likely limited to foraging and/or roosting. The project site and immediately adjacent areas provide potential nesting habitat for several species, but extensive areas of similar or higher quality and less disturbed woodland are present in the project vicinity. Implementation of the proposed project would require removal of approximately 20 trees, resulting in loss of up to 0.55 acre of interior live oak woodland. This very small amount of habitat loss would not substantially reduce the overall populations or distribution of any special-status bird species. If active nests are present on or near the site when vegetation removal and other project activities occur, active nests could be destroyed, and/or nesting birds could be disturbed to an extent that results in nest failure. Failure of active nests as a result of the proposed project is unlikely to substantially affect any of the species, because the area of disturbance is very small and relatively few nests would be affected. However, such an impact would be a violation of FGC Section 3503. Mitigation Measures BIO-1and BIO-2 have been identified to reduce the impact to less than significant. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

Mammals

The only mammal species with potential to occur onsite is pallid bat (*Antrozous pallidus*). Pallid bats could forage over the project site, but foraging activities are unlikely to be disturbed by construction activities. Nearby areas of rock outcrops surrounding Folsom Lake may support colonial bat roost sites, but project activities are unlikely to create enough disturbance to disrupt bats that may roost in such areas. Existing structures and trees on the project site are unlikely to provide habitat for roosting colonies but could be used as temporary roost sites for small numbers of individuals. Potential disturbance of small numbers of roosting bats that may be present onsite would not result in a substantial adverse effect to local or regional populations of either species. Proposed project elements would have a **less-than-significant impact**.

Sensitive Habitats

The project site is located along the south shore of Folsom Lake, which is a water of the United States subject to regulation under Sections 404 and 401 of the CWA and Section 1602 of the FGC. Implementing the proposed project would result in direct modification and fill of up to 0.91 acre of the lake bed and shoreline but would not result in the loss of reservoir capacity. Project activities also could degrade water quality in the lake. Mitigation Measure BIO-3 has been

identified to reduce this impact to less than significant. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

El Dorado County Ordinance 5061 protects any living native oak resources including valley oak (*Q. lobata*), blue oak (*Q. douglasii*), black oak (*Q. kelloggii*), interior live oak (*Q. wislzeni*), canyon live oak (*Q. chrysolepis*), Oregon oak (*Q. garryana*) and oracle oak (*Quercus x morehus*) that are greater than 6 inches in diameter at beast height (i.e., as measured at 54 inches above natural grade). Up to 20 oak trees (*Q. wislizeni* and *Q. douglasii*) would be removed during project implementation, although several are less than 6 inches in diameter at breast height. Mitigation Measure BIO-4 has been identified to reduce this impact to less than significant. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

Other Potential Impacts on Biological Resources

The project site is part of a much larger extent of woodland habitats and does not serve as a corridor or other primary route for wildlife movement. It also is not known or anticipated to serve as a nursery site for any wildlife species. Therefore, implementing the proposed project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

The project site is not within any special designated management areas for species or other biological resources. The project site is also not within an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, implementing the proposed project would not conflict with any provisions, guidelines, goals, or objectives related to biological resources outlined in such plans and programs.

Implementing the proposed project would result in removal of up to 0.55 acre of interior live oak woodland. Project implementation could result in removal of active nests of special-status and common raptors, and common bird species, if removal of trees or ground vegetation occurs during the bird nesting season. Loss of active nests of common species would not substantially reduce their abundance or cause any species to drop below self-sustaining levels, but it could be considered a violation of the FGC. Mitigation Measures BIO-1 and BIO-2 described below would reduce potential for loss of active bird nests.

Mitigation Measures

The following measures have been identified to reduce potential impacts on biological resources to less than significant.

Mitigation Measure BIO-1: Minimize Effects to Nesting Swainson's Hawks, Golden Eagles, and Bald Eagles.

EID shall implement the following measures to avoid and minimize potential adverse effects on nesting Swainson's hawk, golden eagles, and bald eagles during project construction.

- Preconstruction surveys for active Swainson's hawk, golden eagle, and bald eagle nests shall be conducted by a qualified biologist in all areas of suitable nesting habitat within 0.25-mile of project disturbance. A minimum of one survey shall be

conducted no more than 14 days before project activities commence, if construction begins during the nesting season (February 1 through August 15).

- Appropriate buffers shall be established and maintained around active nest sites to avoid nest failure from project activities. The appropriate size and shape of the buffers shall be determined by a qualified biologist and may vary depending on the nest location, nest stage, and construction activity. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activities are not resulting in detectable adverse effects on nesting birds or their young. No project activities shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

Timing: Before and during construction.

Responsibility: ***El Dorado Irrigation District.***

Significance after Mitigation: With implementation of Mitigation Measure BIO-1, the potentially significant impact associated with adverse effects to Swainson's hawk, golden eagle, and bald eagle would be reduced to a **less-than-significant** level because the proposed project would avoid and minimize nest disturbance and ensure no active nests are lost as a result of the proposed project.

Mitigation Measure BIO-2: Avoid and Minimize Effects to Other Nesting Birds.

EID shall implement the following measures to avoid and minimize potential adverse effects on other nesting birds during project construction.

- Vegetation removal shall be conducted between September 1 and January 31, to the extent feasible.

- If vegetation removal must occur during the bird nesting season (February 1 through August 15), surveys for active bird nests shall be conducted by a qualified biologist in areas of suitable nesting vegetation designated for removal. If active nests are found, removal of vegetation in which the nests are located will be delayed until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

- Preconstruction surveys for active nests of special-status birds and common raptor species shall be conducted by a qualified biologist. Surveys for raptor nests shall include suitable habitat within up to 300 feet of areas subject to project disturbance, depending on the potential extent of indirect impact. Surveys for nests of non-raptor special-status birds shall include suitable habitat within up to 50 feet of the disturbance areas. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 1 to August 15) in a given area.

- If any active nests are observed, or behaviors indicating active nests are present, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. Buffer size shall depend on the species, nest location, nest stage, and specific construction activities to be performed

while the nest is active. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. If buffers are adjusted, monitoring shall be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Significance after Mitigation: With implementation of Mitigation Measure BIO-2, the potentially significant impact associated with adverse effects to nesting birds would be reduced to a **less-than-significant** level because the proposed project would avoid and minimize nest disturbance and destruction as a result of the proposed project.

Mitigation Measure BIO-3: Avoid, Minimize, and Mitigate for Unavoidable Impacts on Waters of the United States on a No-Net-Loss Basis.

EID shall implement the following measures to avoid, minimize, and, if necessary, compensate for the direct fill of waters of the United States in Folsom Lake.

- Ground disturbance shall be limited to construction areas, including necessary access routes and staging areas. The total area of the project activity shall be limited to the minimum necessary. When possible, existing access routes and points shall be used. All roads, staging areas, and other facilities shall be placed to avoid and limit disturbance to Folsom Lake when feasible.

- A written spill prevention and control plan (SPCP) shall be prepared and implemented

- Before the commencement of construction activities, high-visibility fencing shall be erected to protect areas of sensitive biological resources that are located adjacent to construction areas from encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed only when the construction within a given area is completed. Limits of waters of the United States shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas.

- Project implementation would result in the need to obtain regulatory permits from USACE, RWQCB, and CDFW for direct impacts to Folsom Lake. All measures developed through consultation with the respective regulatory agencies shall be implemented to mitigate adverse effects.

    - **Section 404: EID will seek** authorization for fill of jurisdictional waters of the United States from USACE via the Section 404 permitting process before project construction. Any mitigation measures determined necessary during the 404 permitting process shall be implemented during project construction. If USACE deems that compensatory mitigation is required, an appropriate and feasible mitigation plan to compensate for loss of waters of the United States shall be developed and provided to the appropriate regulatory agencies for approval. The plan, if required, shall be developed in consultation with and approved by the

appropriate regulatory agencies before construction activities begin in waters of the United States.

- **Section 401: A** water quality certification application pursuant to Section 401 of the Clean Water Act shall be submitted to the Central Valley RWQCB before starting project construction in any areas that may contain waters of the State. Any measures required as part of the issuance of water quality certification shall be implemented.

- **Section 1602:** A notification of lake and streambed alteration shall be submitted to CDFW under Section 1602 of the California Fish and Game Code before starting project construction in any areas under CDFW's jurisdiction. If CDFW determines a lake or streambed alteration agreement is necessary, any conditions of the lake and streambed alteration agreement, including minimization and compensation measures, shall be implemented as part of project implementation.

Timing: Before, during, and after construction.

Responsibility: El Dorado Irrigation District.

Significance after Mitigation: With implementation of Mitigation Measure BIO-3, the potentially significant impact associated with potential disturbance and loss of sensitive habitats would be reduced to a **less-than-significant** level because direct and indirect impacts to sensitive habitats would be avoided, minimized, and mitigated for on a no-net-loss basis.

Mitigation Measure BIO-4: Minimize and Compensate for Loss of Interior Live Oak Woodland.

EID has elected to implement the following measure to minimize and compensate for removal of interior live oak woodland.

- Interior live oak woodland shall be avoided during construction, to the extent feasible. A qualified botanist shall clearly mark woodland to be avoided prior to construction. If oak woodland or individual oaks greater than 6 inches in diameter at breast height cannot be avoided, EID will pay in-lieu fees for the removal of oak trees or oak woodlands as described in the County's Oak Resources Management Plan (as adopted on October 24, 2017).

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Significance after Mitigation: With implementation of Mitigation Measure BIO-4, the potentially significant impact associated with loss of interior live oak woodland on the project site would be reduced to a **less-than-significant** level because any protected trees that would be removed would be compensated for either on- or off-site.

Conclusions

Potential significant impacts on biological resources from implementing the proposed project can be reduced to less than significant by implementing appropriate mitigation measures identified in

this report. Construction activities would result in temporary disturbance below the maximum pool elevation of Folsom Lake and removal of up to 0.55 acre of interior live oak woodland. With implementation of recommended impact avoidance and minimization measures, the proposed project is not anticipated to have substantial adverse effects on any special-status species. Impacts associated with loss of interior live oak woodland can be reduced to less than significant by replacing trees or contributing to the El Dorado County in-lieu fee program. Impacts on waters of the United States and waters of the State from alteration of the lake shore can be reduced to less than significant by implementing avoidance and minimization measures and developing and implementing an appropriate compensation plan, if necessary, in coordination with the appropriate regulatory agencies. Therefore, implementing the proposed project, including the proposed mitigation measures, would not result in any significant impacts to biological resources.

If you have any questions or concerns regarding this monitoring report, please contact me by phone at 916-912-4941 or e-mail at snorris@geiconsultants.com.

Sincerely,

Sarah A. Norris
Senior Regulatory Specialist, Biologist

Anne King
Senior Wildlife Biologist

Attachment A: Figures 1-5
Attachment B: Special-status Species Query Results
Attachment C: Photographs of Project Site

1802338

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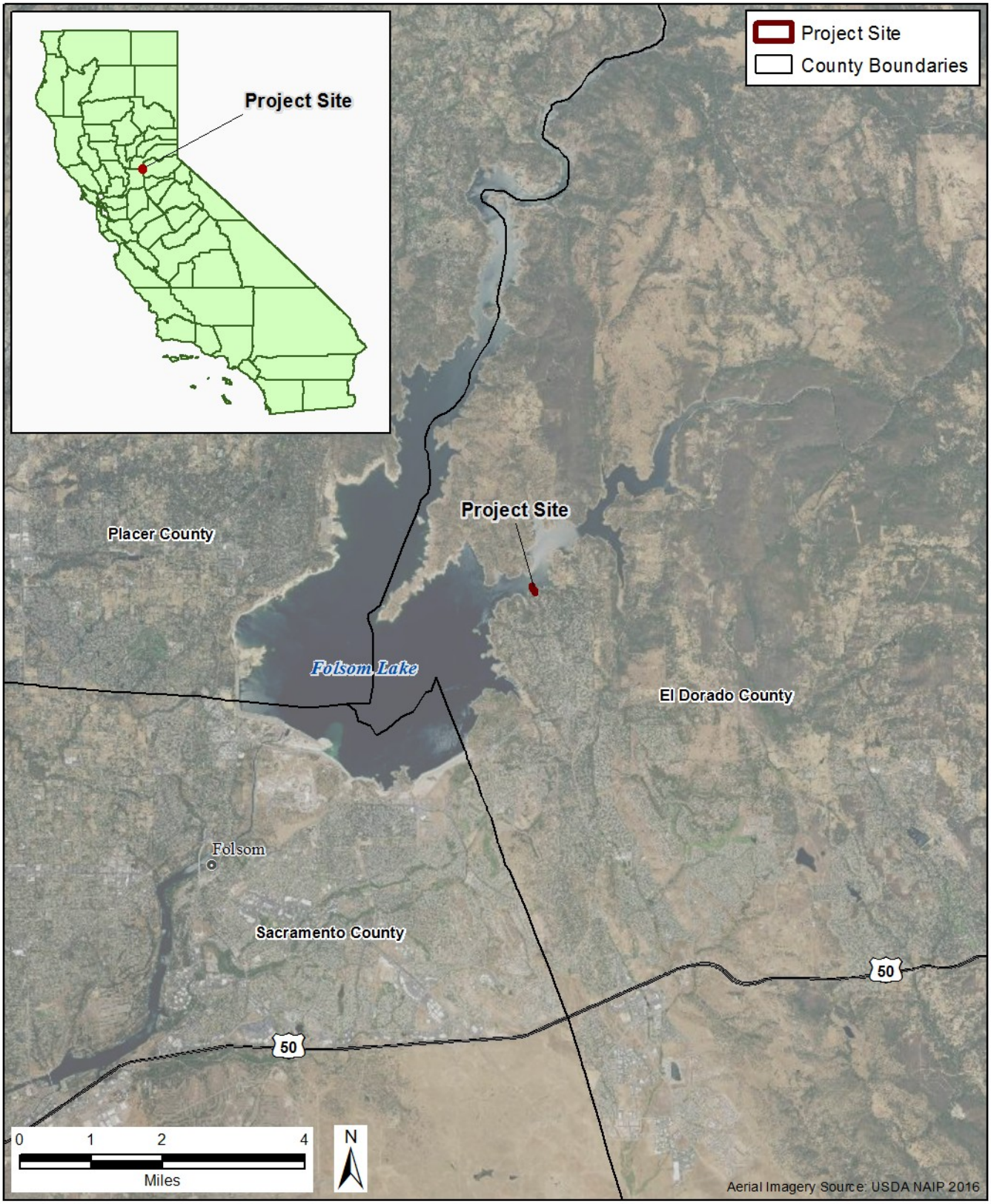
USFWS. See U.S. Fish and Wildlife Service.

USGS. See U.S. Geological Survey.

Attachment A

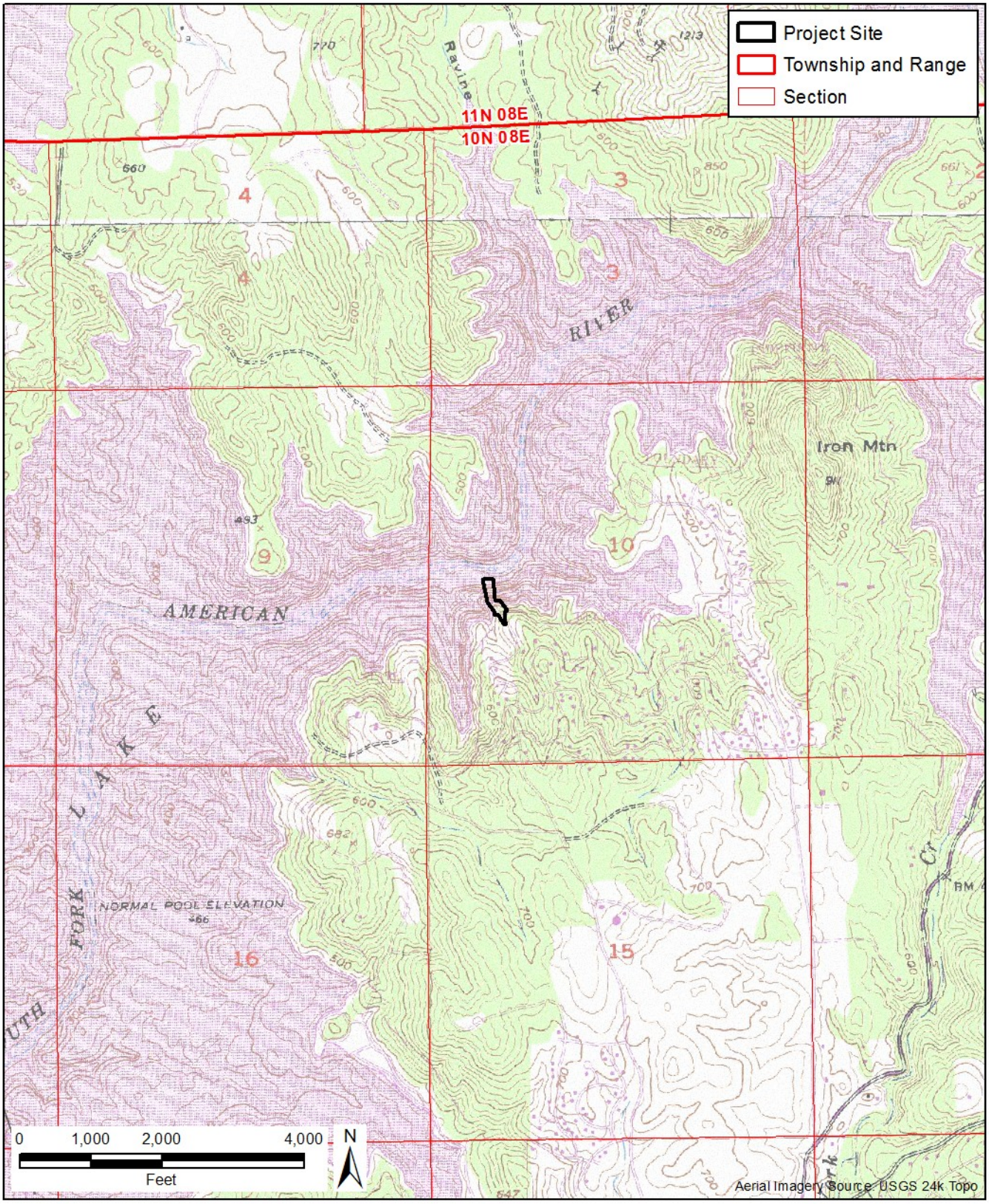
Figure 1. Regional Location



Z:\Projects\1802338_EID_FLRWPS\1802338_G002_RegionalLocation.mxd
2018-12-12 BMC

Source: GEI Consultants, Inc. 2017

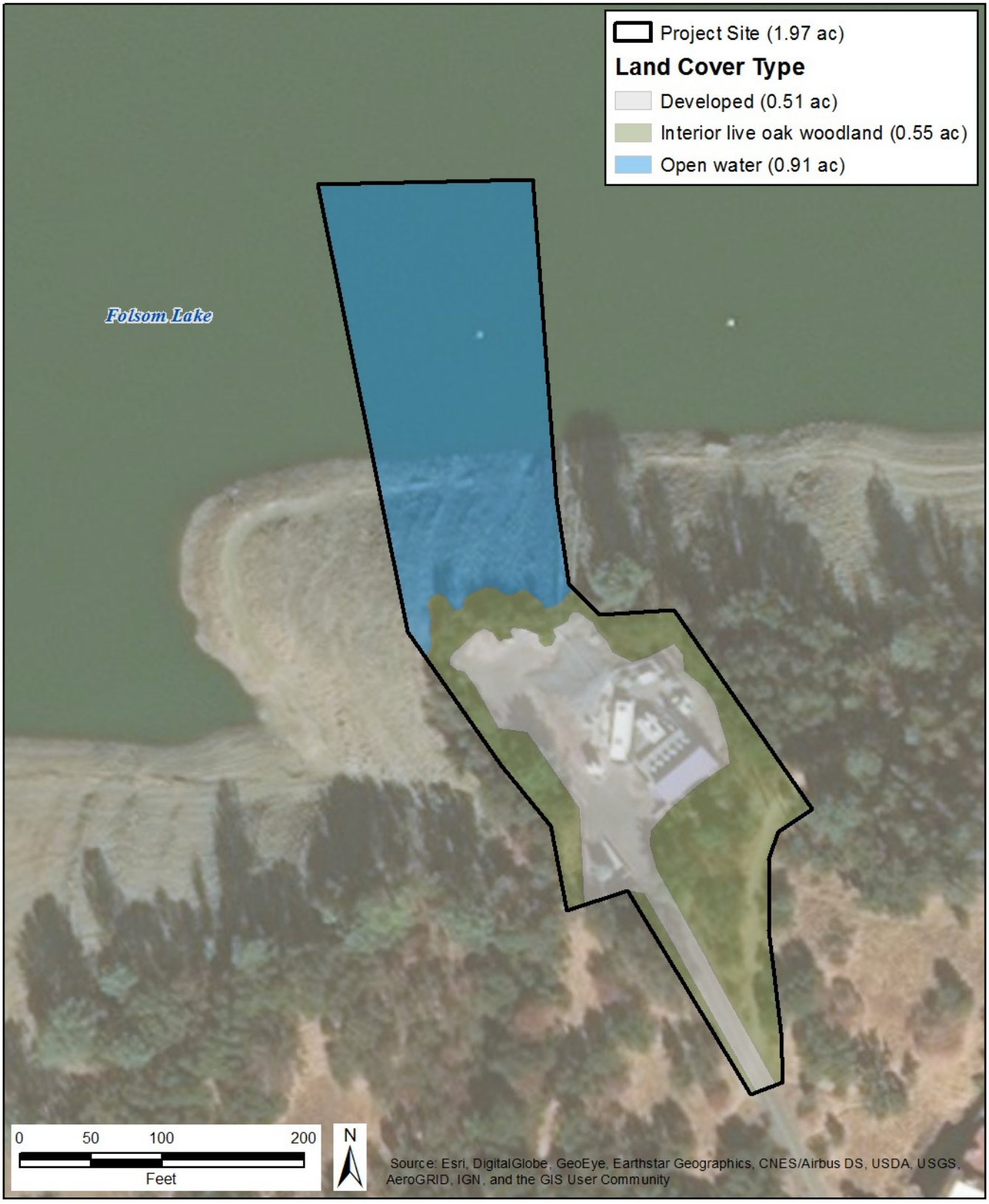
Figure 2. Topographic Map



Z:\Projects\1802338_EID_FLRWPS\1802338_G003_Topo.mxd
2018-12-07 BMC

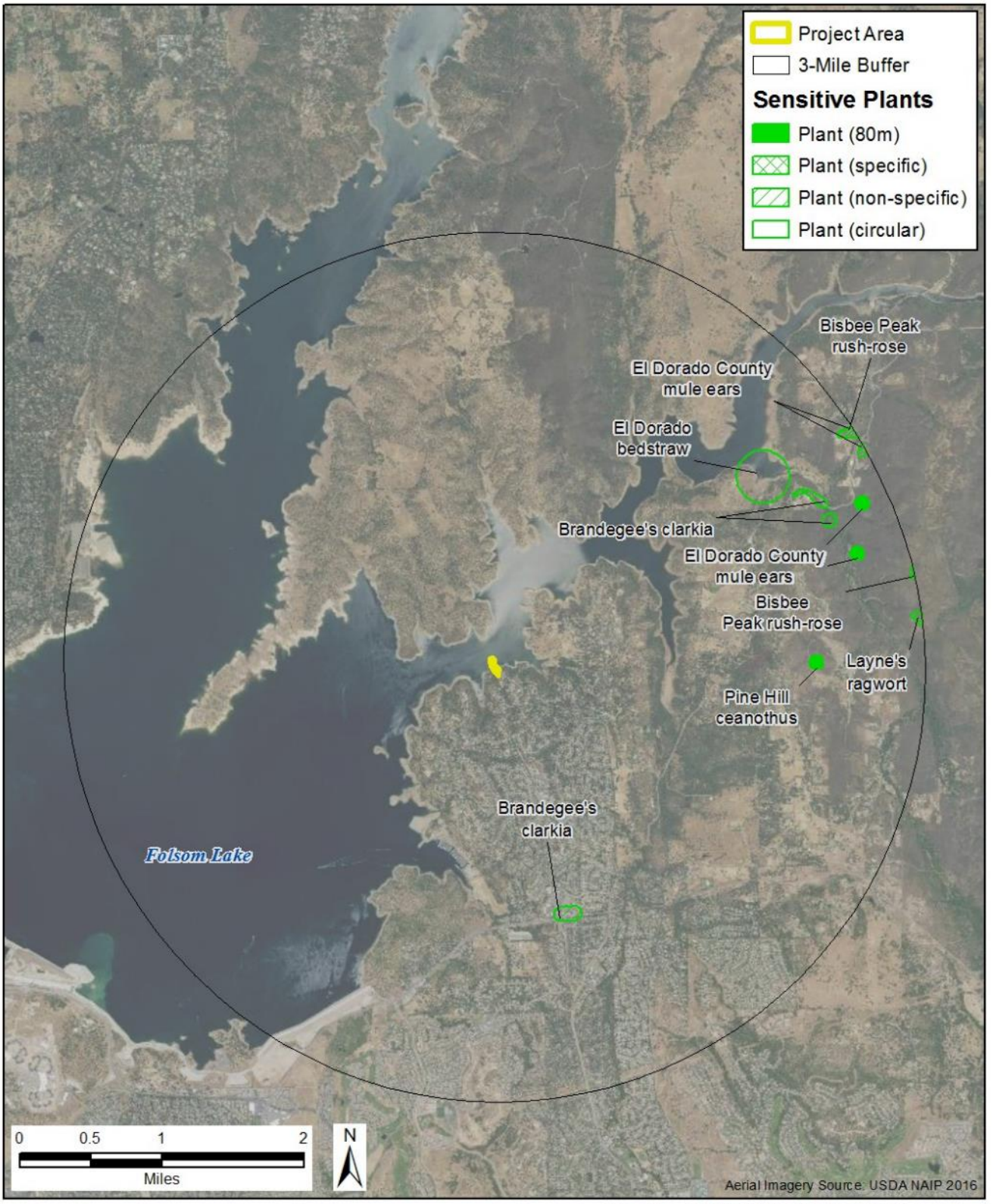
Source: El Dorado Irrigation District 2018

Figure 3. Land Cover at the Project Site



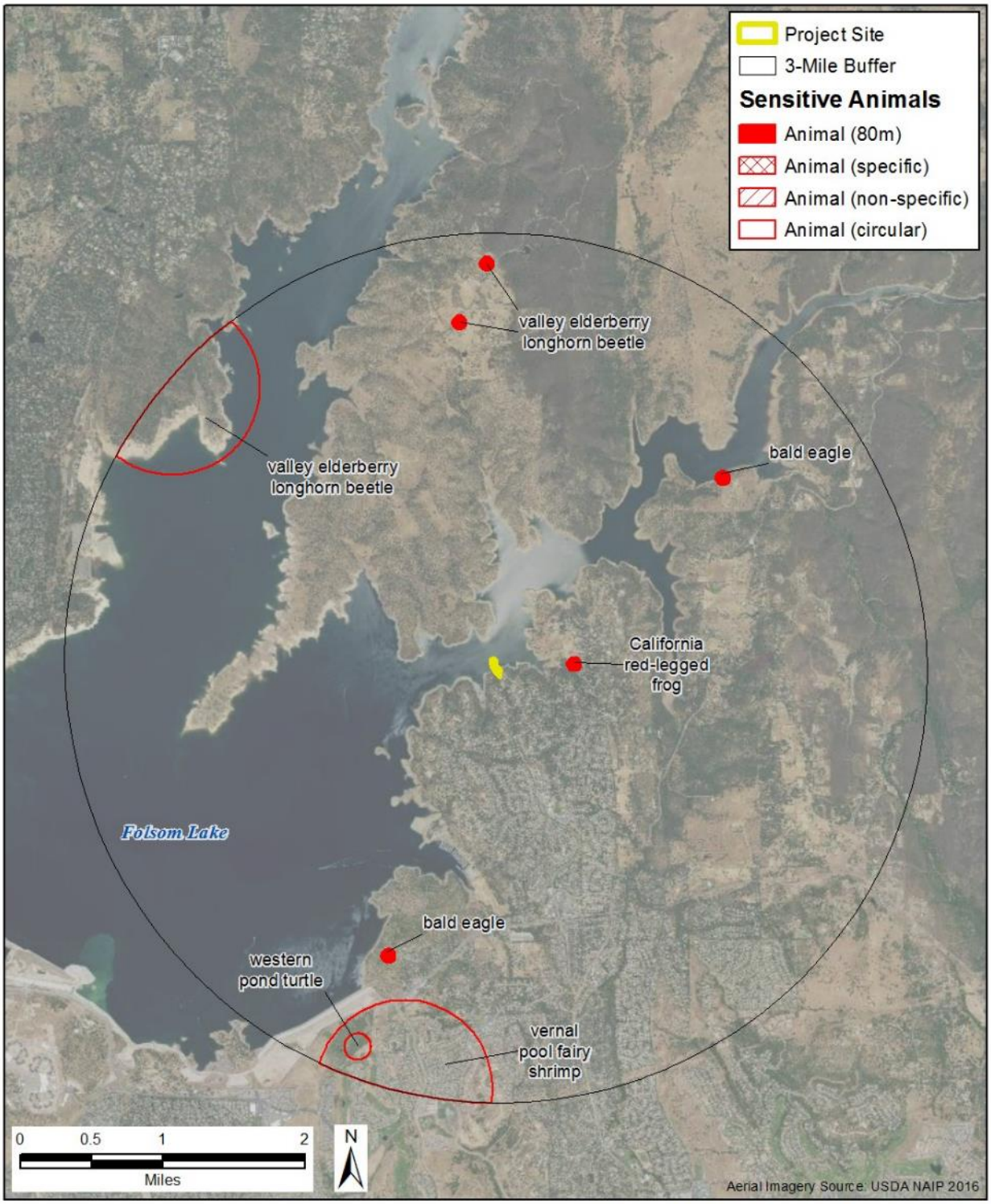
Source: GEI Consultants, Inc. 2018

Figure 4. California Natural Diversity Database Plant Occurrences within 3 Miles of Project Site



Source: GEI Consultants, Inc. 2018

Figure 5. California Natural Diversity Database Wildlife Occurrences within 3 Miles of Project Site



Source: GEI Consultants, Inc. 2018

Attachment B

Special-status Species Query Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Clarksville (3812161) OR Folsom (3812162) OR Rocklin (3812172) OR Pilot Hill (3812171) OR Coloma (3812078) OR Shingle Springs (3812068) OR Latrobe (3812058) OR Folsom SE (3812151) OR Buffalo Creek (3812152))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Allium jepsonii Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Andrena blennospermatis Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Banksula californica Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calystegia stebbinsii Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
Carex xerophila chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ceanothus roderickii Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Cosumnoperla hypocrena Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Crocanthemum suffrutescens Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Dumontia oregonensis hairy water flea	ICBRA23010	None	None	G1G3	S1	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eryngium pinnatisectum Tuolumne button-celery	PDAPI0Z0P0	None	None	G2	S2	1B.2
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Fremontodendron decumbens Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
Galium californicum ssp. sierrae El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Juncus leiospermus var. ahartii Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G5	S3S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Navarretia myersii ssp. myersii pincushion navarretia	PDPLM0C0X1	None	None	G2T2	S2	1B.1
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Northern Volcanic Mud Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Orcuttia tenuis slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
Orcuttia viscida Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Packera layneae Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Pekania pennanti fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Taxidea taxus	AMAJF04010	None	None	G5	S3	SSC
American badger						
Thamnophis gigas	ARADB36150	Threatened	Threatened	G2	S2	
giant gartersnake						
Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Valley Needlegrass Grassland						
Wyethia reticulata	PDAST9X0D0	None	None	G2	S2	1B.2
El Dorado County mule ears						

Record Count: 65

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

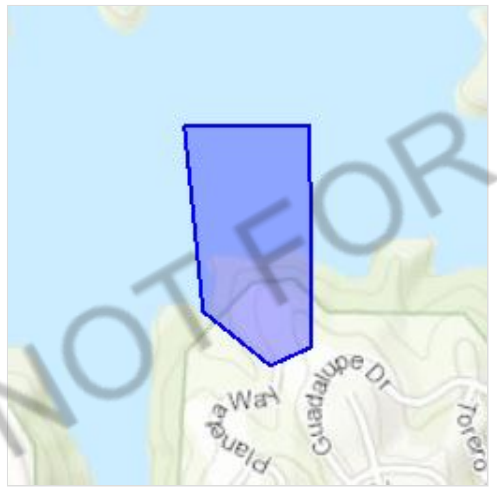
IPaC resource list

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

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

Location

El Dorado County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

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

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

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

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

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

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

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

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Reptiles

NAME	STATUS

Giant Garter Snake Thamnophis gigas — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

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

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
El Dorado Bedstraw Galium californicum ssp. sierrae No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5209	Endangered
Layne's Butterweed Senecio layneae No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4062	Threatened
Pine Hill Ceanothus Ceanothus roderickii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3293	Endangered
Pine Hill Flannelbush Fremontodendron californicum ssp. decumbens No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4818	Endangered
Stebbins' Morning-glory Calystegia stebbinsii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3991	Endangered

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

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

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

Additional information can be found using the following links:

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

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

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

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

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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

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

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

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

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

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

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

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

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

Probability of Presence (▪)

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

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

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

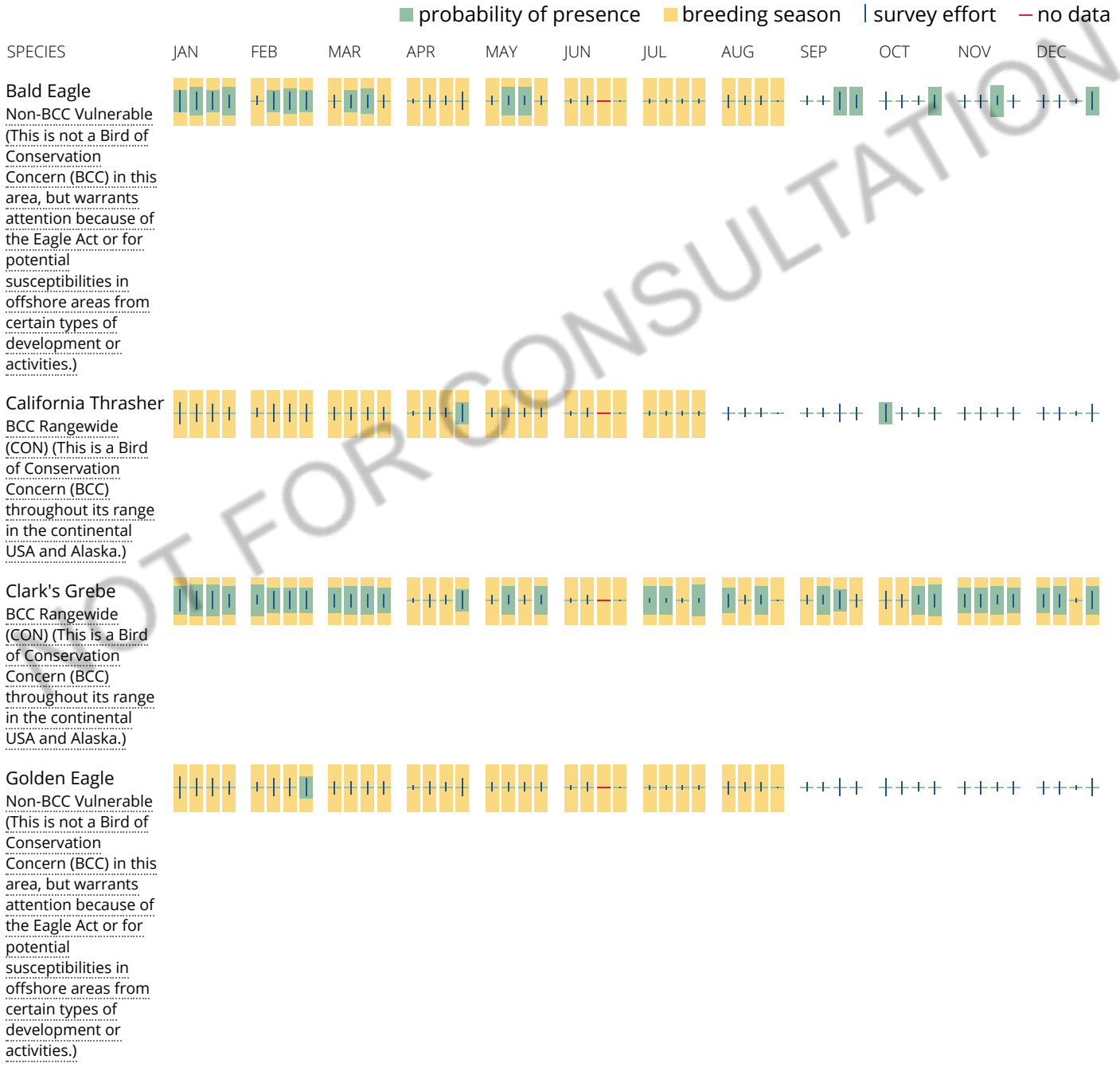
Survey Effort (|)

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

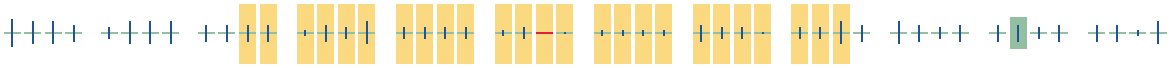
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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

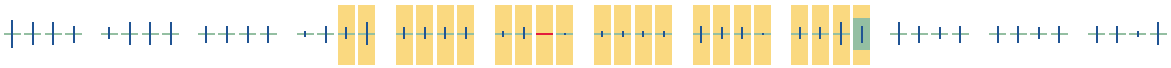
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



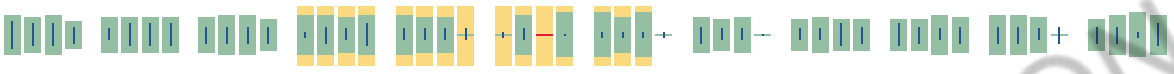
Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



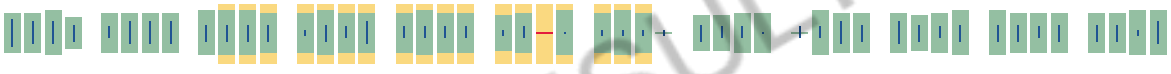
Lewis's Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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



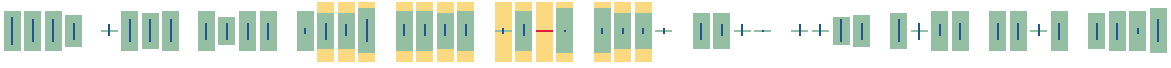
Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

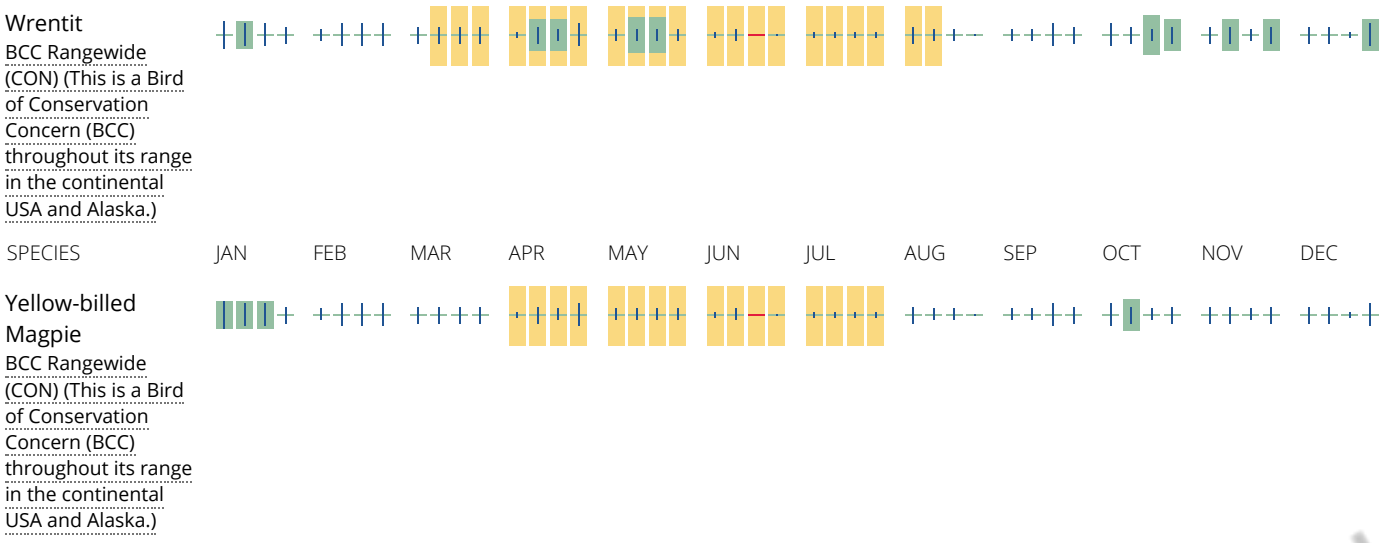


Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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

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





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

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Plant List

30 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812172, 3812171, 3812078, 3812162, 3812161, 3812068, 3812152 3812151 and 3812058;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Federal Listing Status	State Listing Status	CA Rare Plant Rank	Habitats
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug			1B.2	• Chaparral • Cismontane woodland • Lower montane coniferous forest
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep			4.2	• Chaparral • Cismontane woodland • Lower montane coniferous forest
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun			1B.2	• Chaparral • Cismontane woodland • Valley and foothill grassland
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun			4.2	• Chaparral • Coastal scrub
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	1B.1	• Chaparral (openings) • Cismontane woodland
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun			1B.2	• Chaparral • Cismontane woodland • Lower montane coniferous forest
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul			4.3	• Cismontane woodland (openings) • Lower montane coniferous forest
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	FE	CR	1B.1	• Chaparral • Cismontane woodland
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun			1B.2	• Chaparral • Cismontane woodland • Lower montane coniferous forest
	Brandegee's	Onagraceae	annual herb	May-Jul			4.2	• Chaparral

Clarkia biloba ssp. brandegeeae	clarkia							• Cismontane woodland • Lower montane coniferous forest
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May			4.2	• Cismontane woodland
Crocanthemum suffrutescens	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug			3.2	• Chaparral
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May			2B.2	• Valley and foothill grassland (mesic) • Vernal pools
Erigeron miser	starved daisy	Asteraceae	perennial herb	Jun-Oct			1B.3	• Upper montane coniferous forest (rocky)
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun			4.3	• Chaparral • Cismontane woodland • Coastal scrub
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual / perennial herb	May-Aug			1B.2	• Cismontane woodland • Lower montane coniferous forest • Vernal pools
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	FE	CR	1B.2	• Chaparral • Cismontane woodland
Galium californicum ssp. sierrae	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	FE	CR	1B.2	• Chaparral • Cismontane woodland • Lower montane coniferous forest
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug		CE	1B.2	• Marshes and swamps (lake margins) • Vernal pools
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep			1B.2	• Chaparral • Cismontane woodland
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May			1B.2	• Valley and foothill grassland (mesic)
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun			1B.1	• Vernal pools
Lilium humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)			4.2	• Chaparral • Cismontane woodland • Lower montane coniferous forest
Navarretia myersii ssp. myersii	pincushion navarretia	Polemoniaceae	annual herb	Apr-May			1B.1	• Vernal pools
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	1B.1	• Vernal pools
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	1B.1	• Vernal pools
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	1B.2	• Chaparral • Cismontane woodland
Sagittaria sanfordii	Sanford's	Alismataceae	perennial rhizomatous	May-			1B.2	• Marshes and swamps (assorted

	arrowhead		herb (emergent)	Oct(Nov)		shallow freshwater)
Trichostema rubisepalum	Hernandez bluecurls	Lamiaceae	annual herb	Jun-Aug	4.3	• Broadleafed upland forest • Chaparral • Cismontane woodland • Lower montane coniferous forest • Vernal pools
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	1B.2	• Chaparral • Cismontane woodland • Lower montane coniferous forest

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 21 December 2018].

https://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html

Quad Name **Clarksville**
Quad Number **38121-F1**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

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

ESA Whales

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

ESA Pinnipeds

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

Essential Fish Habitat

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

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Attachment C

Photographs of the Project Site

View of existing facilities within developed area of project site.

View of Folsom Lake and existing pipes.

View of existing pumps to be replaced within developed portion of project site.

View of interior live oak woodland habitat located along southeastern edge of project site.

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Appendix D. Native American Correspondence for Folsom Lake Intake Improvements Project

El Dorado Irrigation District

Letter No.: EEO 2018-3756

December 14, 2018

VIA CERTIFIED MAIL

Steven Hutchason, Executive Director
Environmental Resources Department
Wilton Rancheria
9728 Kent Street
Elk Grove, CA 95624

Subject: AB 52 Notification of the Folsom Lake Intake Improvements Project

Dear Mr. Hutchason:

This is a formal notification that the El Dorado Irrigation District (EID) has decided to undertake the Folsom Lake Intake Improvements Project (Project). The Project is located on the south bank of Folsom Lake approximately 2 miles upstream from Folsom Dam in El Dorado County, California. Project location maps are enclosed with this letter.

The proposed Project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. The Project objectives include constructing a temperature control device for EID's intake facilities in order to preserve the cold-water pool in Folsom Lake and enhance downstream habitat for anadromous fish species, replacing selected existing pumps at the intake with more reliable and efficient equipment, providing adequate raw water supply to meet the El Dorado Hills Water Treatment Plant's currently permitted capacity, maintaining the ability to withdraw raw water during construction, and improving and optimizing system operation and maintenance. Please note that this Project does not increase the capacity or change the use of the existing facilities being replaced.

Please respond to my contact information provided below within 30 days if you are interested in beginning consultation regarding this Project activity.

Lead Agency Contact Information:

Brian Deason, Environmental Resources Supervisor
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Sincerely,

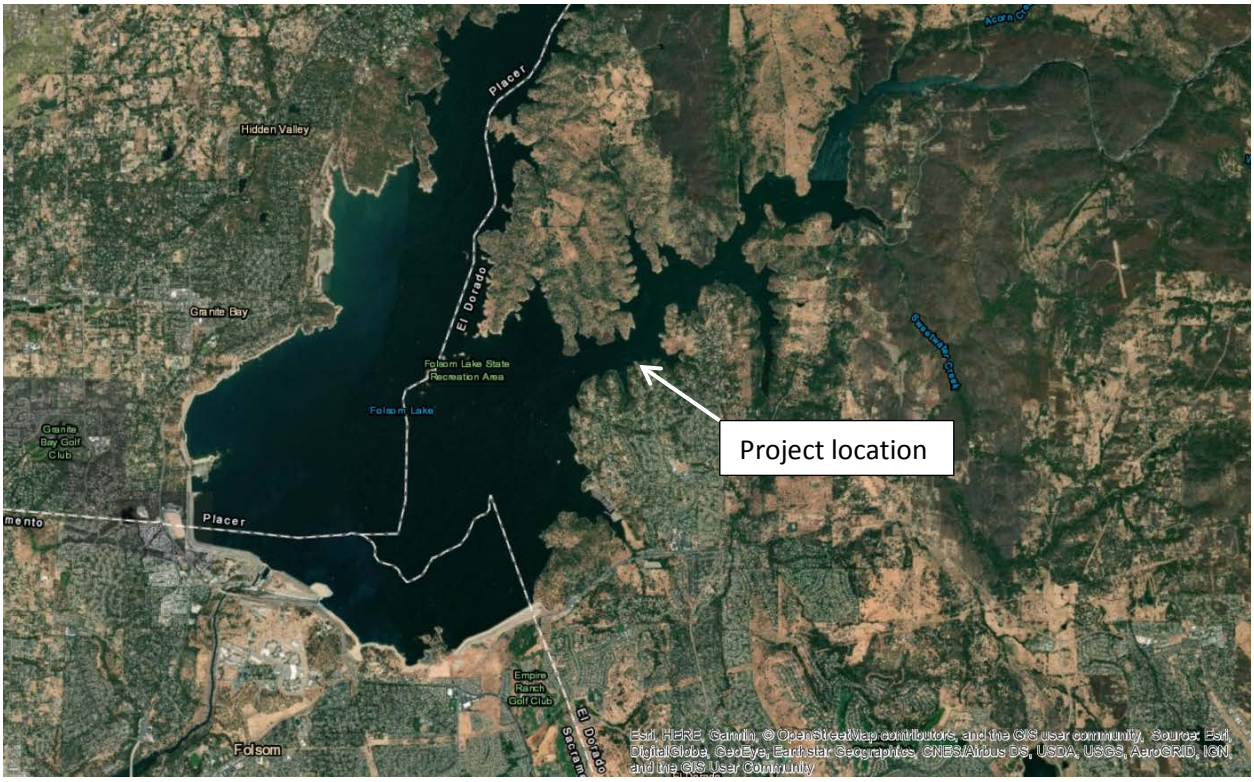
Brian Deason
Environmental Resources Supervisor

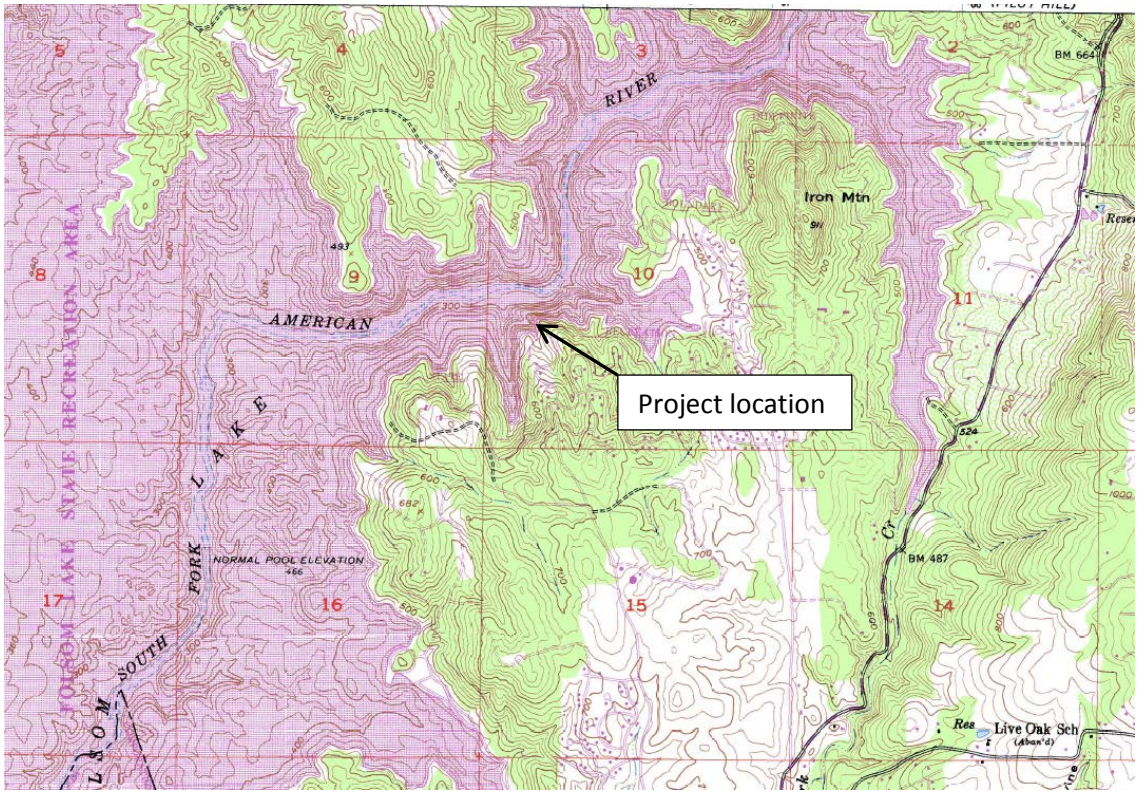
BD:krc

Enclosure: Project Location Maps (1page)

cc w/enclosure:
El Dorado Irrigation District:
Brian Mueller, P.E., Engineering Director
Elizabeth D. Wells, P.E., Engineering Division Manager
Jon Money, P.E., Senior Civil Engineer

Folsom Lake Intake Improvements Project





USGS Clarksville 7.5" Quadrangle, Township 10N, Range 8E, Section 10

El Dorado Irrigation District

Letter No.: EEO 2018-3757

December 14, 2018

VIA CERTIFIED MAIL

Erin Young
The El Dorado County Wopumnes Nisenan-Mewuk Nation
PO Box 1712
Shingle Springs, CA 95682

Subject: AB 52 Notification of the Folsom Lake Intake Improvements Project

Dear Ms. Young:

This is a formal notification that the El Dorado Irrigation District (EID) has decided to undertake the Folsom Lake Intake Improvements Project (Project). The Project is located on the south bank of Folsom Lake approximately 2 miles upstream from Folsom Dam in El Dorado County, California. Project location maps are enclosed with this letter.

The proposed Project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. The Project objectives include constructing a temperature control device for EID's intake facilities in order to preserve the cold-water pool in Folsom Lake and enhance downstream habitat for anadromous fish species, replacing selected existing pumps at the intake with more reliable and efficient equipment, providing adequate raw water supply to meet the El Dorado Hills Water Treatment Plant's currently permitted capacity, maintaining the ability to withdraw raw water during construction, and improving and optimizing system operation and maintenance. Please note that this Project does not increase the capacity or change the use of the existing facilities being replaced.

Please respond to my contact information provided below within 30 days if you are interested in beginning consultation regarding this Project activity.

Lead Agency Contact Information:

Brian Deason, Environmental Resources Supervisor
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Sincerely,

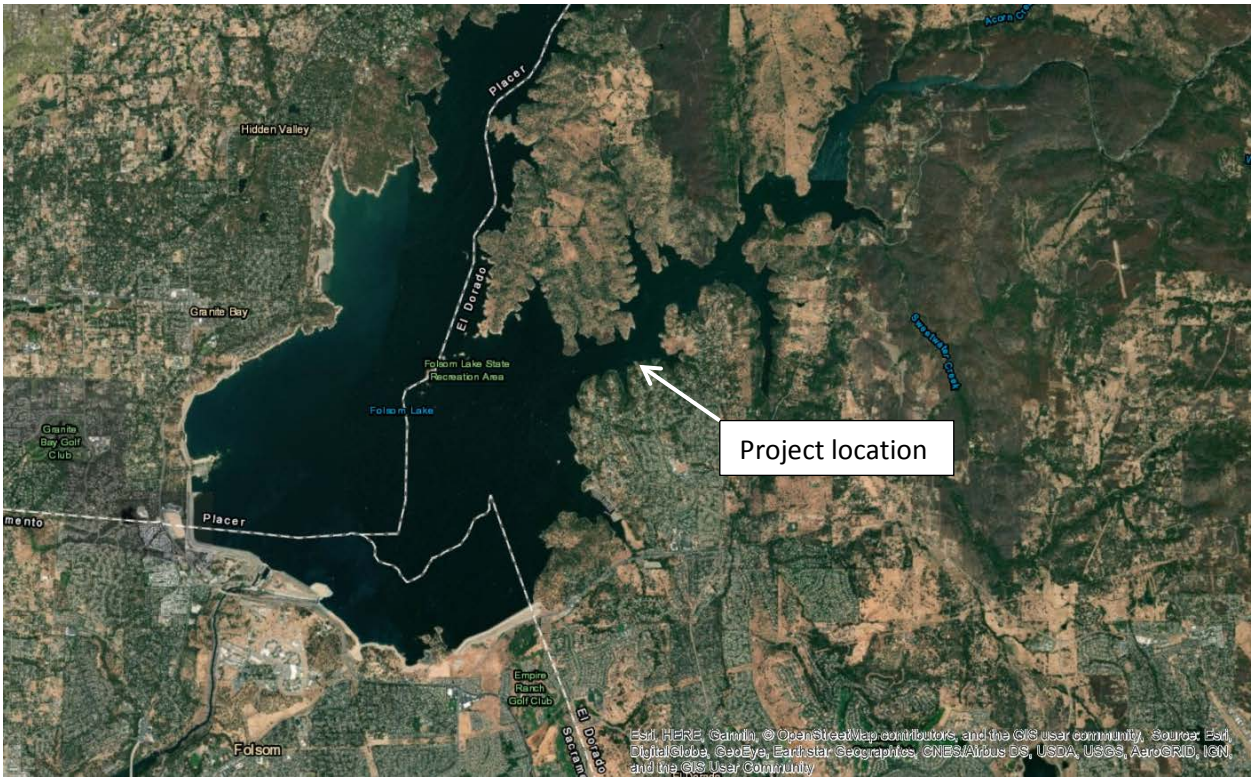
Brian Deason
Environmental Resources Supervisor

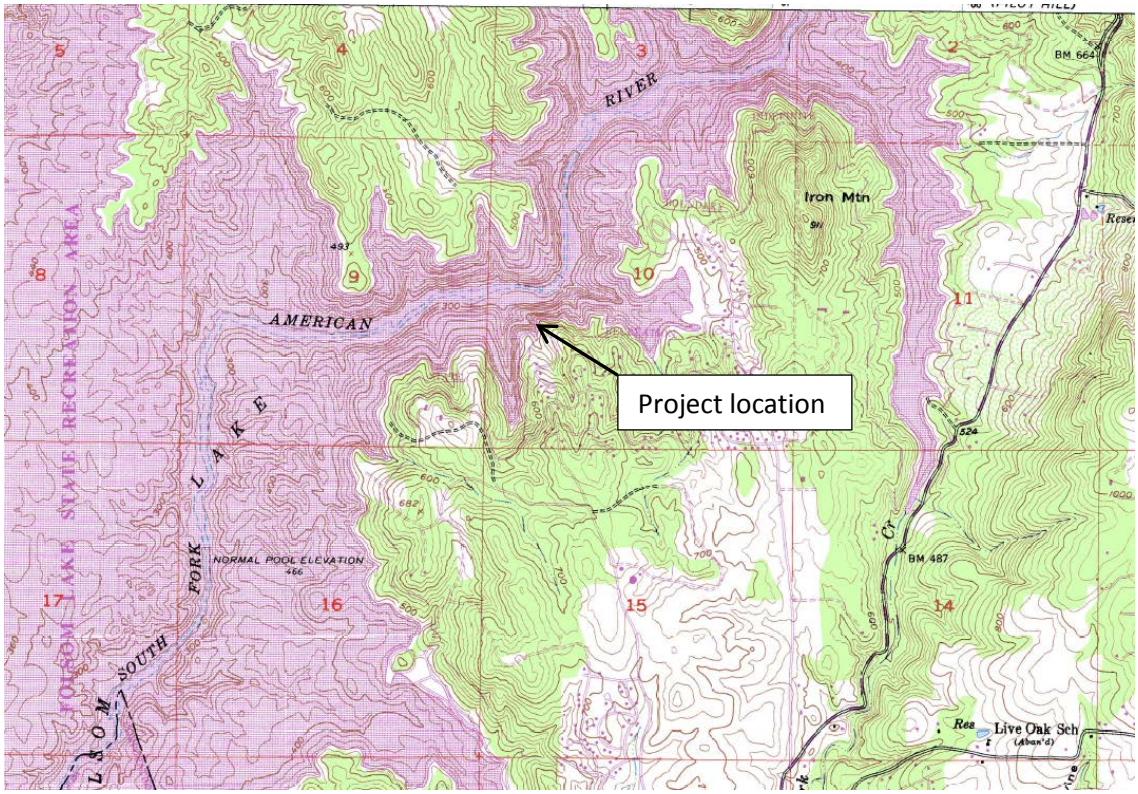
BD:krc

Enclosure: Project Location Maps (1page)

cc w/enclosure:
El Dorado Irrigation District:
Brian Mueller, P.E., Engineering Director
Elizabeth D. Wells, P.E., Engineering Division Manager
Jon Money, P.E., Senior Civil Engineer

Folsom Lake Intake Improvements Project





USGS Clarksville 7.5" Quadrangle, Township 10N, Range 8E, Section 10

El Dorado Irrigation District

Letter No.: EEO 2018-3758

December 14, 2018

VIA CERTIFIED MAIL

Gene Whitehouse, Chairman
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

Subject: AB 52 Notification of the Folsom Lake Intake Improvements Project

Dear Mr. Whitehouse:

This is a formal notification that the El Dorado Irrigation District (EID) has decided to undertake the Folsom Lake Intake Improvements Project (Project). The Project is located on the south bank of Folsom Lake approximately 2 miles upstream from Folsom Dam in El Dorado County, California. Project location maps are enclosed with this letter.

The proposed Project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. The Project objectives include constructing a temperature control device for EID's intake facilities in order to preserve the cold-water pool in Folsom Lake and enhance downstream habitat for anadromous fish species, replacing selected existing pumps at the intake with more reliable and efficient equipment, providing adequate raw water supply to meet the El Dorado Hills Water Treatment Plant's currently permitted capacity, maintaining the ability to withdraw raw water during construction, and improving and optimizing system operation and maintenance. Please note that this Project does not increase the capacity or change the use of the existing facilities being replaced.

Please respond to my contact information provided below within 30 days if you are interested in beginning consultation regarding this Project activity.

Lead Agency Contact Information:

Brian Deason, Environmental Resources Supervisor
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Sincerely,

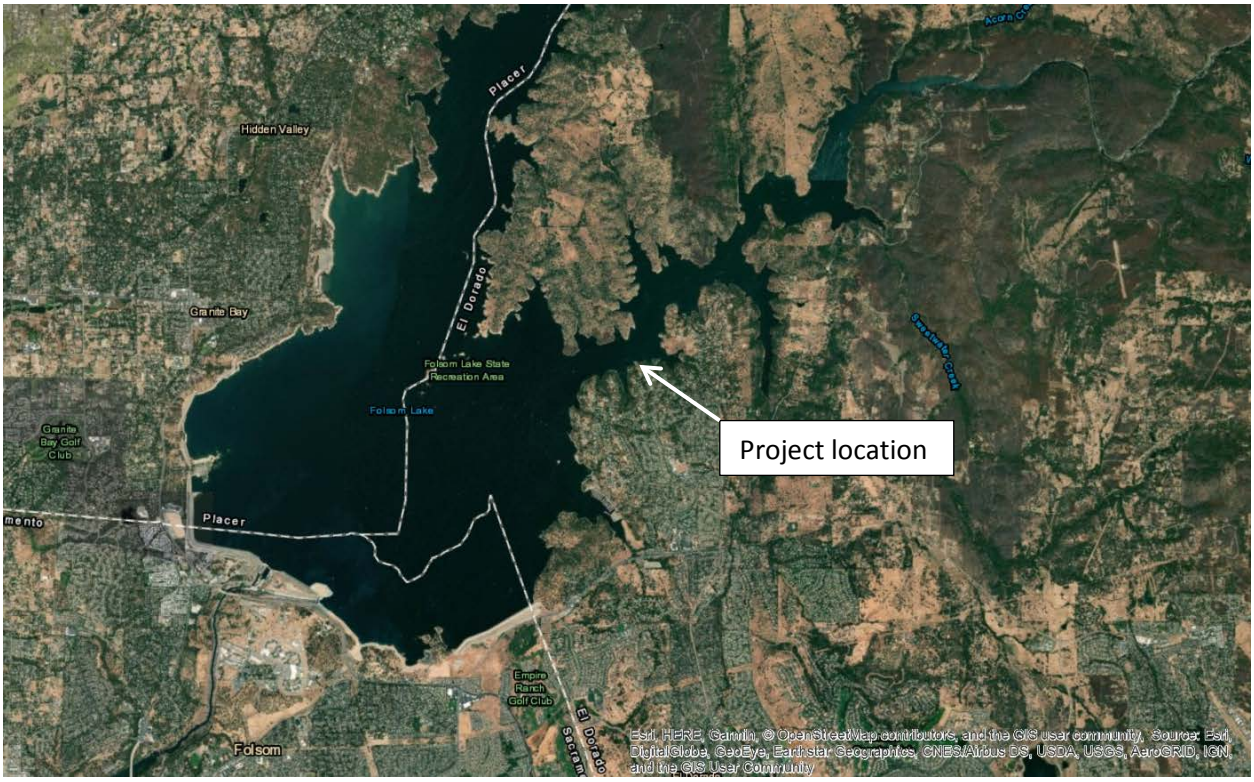
Brian Deason
Hydroelectric Compliance Analyst

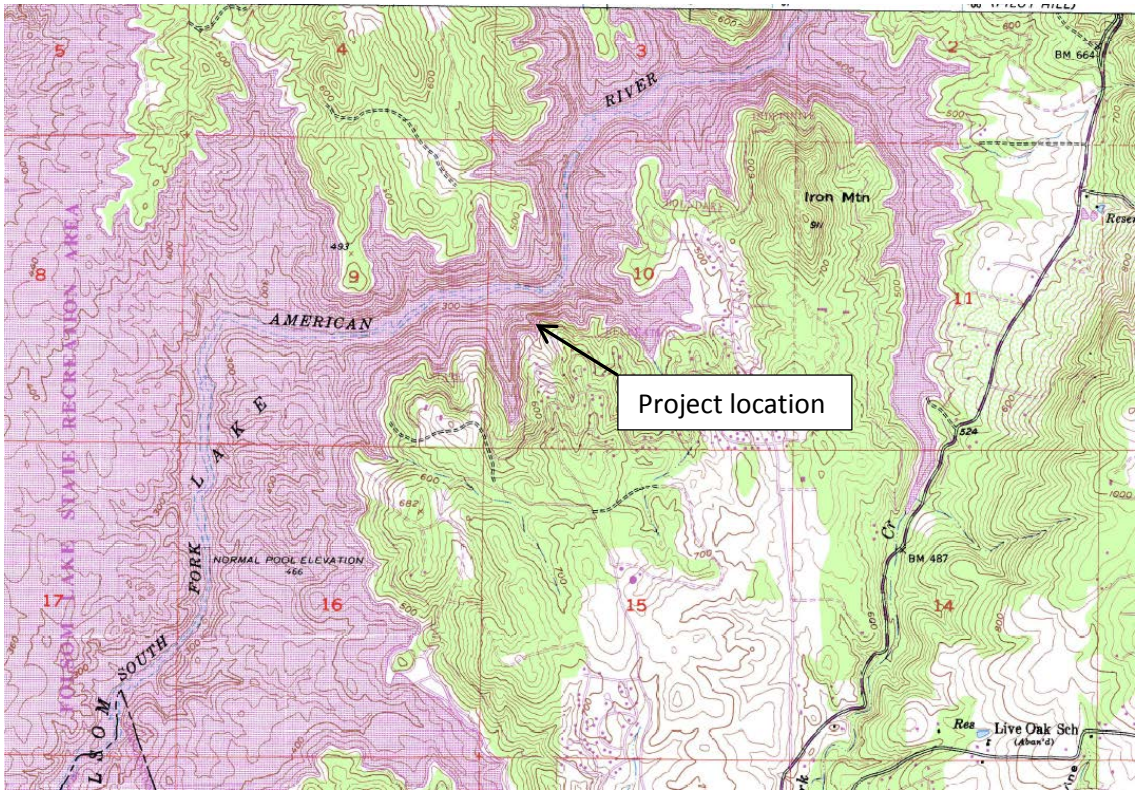
BD:krc

Enclosure: Project Location Maps (1page)

cc w/enclosure:
El Dorado Irrigation District:
Brian Mueller, P.E., Engineering Director
Elizabeth D. Wells, P.E., Engineering Division Manager
Jon Money, P.E., Senior Civil Engineer

Folsom Lake Intake Improvements Project





USGS Clarksville 7.5" Quadrangle, Township 10N, Range 8E, Section 10

El Dorado Irrigation District

Letter No.: EEO 2018-3759

December 14, 2018

VIA CERTIFIED MAIL

Michael Mirelez, Cultural Resource Coordinator
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Subject: AB 52 Notification of the Folsom Lake Intake Improvements Project

Dear Mr. Mirelez:

This is a formal notification that the El Dorado Irrigation District (EID) has decided to undertake the Folsom Lake Intake Improvements Project (Project). The Project is located on the south bank of Folsom Lake approximately 2 miles upstream from Folsom Dam in El Dorado County, California. Project location maps are enclosed with this letter.

The proposed Project involves improvements to and replacement of existing facilities associated with the raw water intake where water is diverted from Folsom Lake for delivery to EID's drinking water system. The Project objectives include constructing a temperature control device for EID's intake facilities in order to preserve the cold-water pool in Folsom Lake and enhance downstream habitat for anadromous fish species, replacing selected existing pumps at the intake with more reliable and efficient equipment, providing adequate raw water supply to meet the El Dorado Hills Water Treatment Plant's currently permitted capacity, maintaining the ability to withdraw raw water during construction, and improving and optimizing system operation and maintenance. Please note that this Project does not increase the capacity or change the use of the existing facilities being replaced.

Please respond to my contact information provided below within 30 days if you are interested in beginning consultation regarding this Project activity.

Lead Agency Contact Information:

Brian Deason, Environmental Resources Supervisor
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Sincerely,

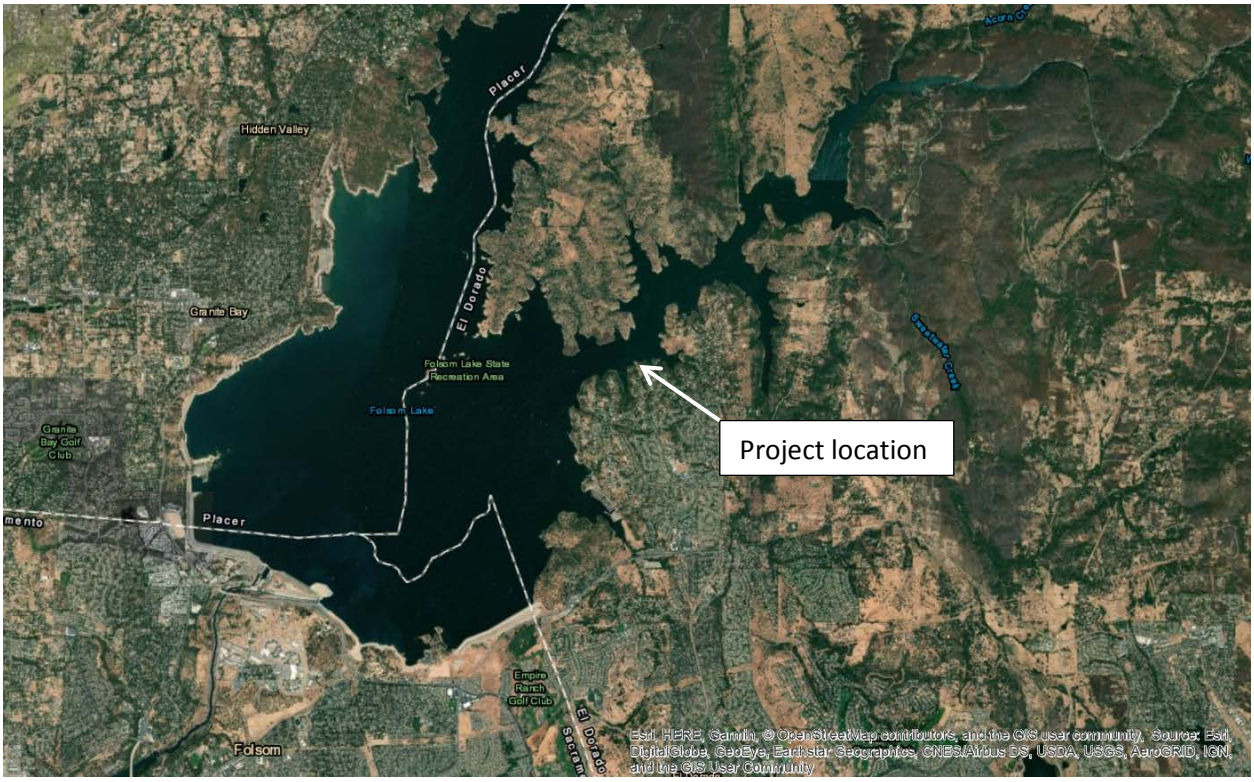
Brian Deason
Environmental Resources Supervisor

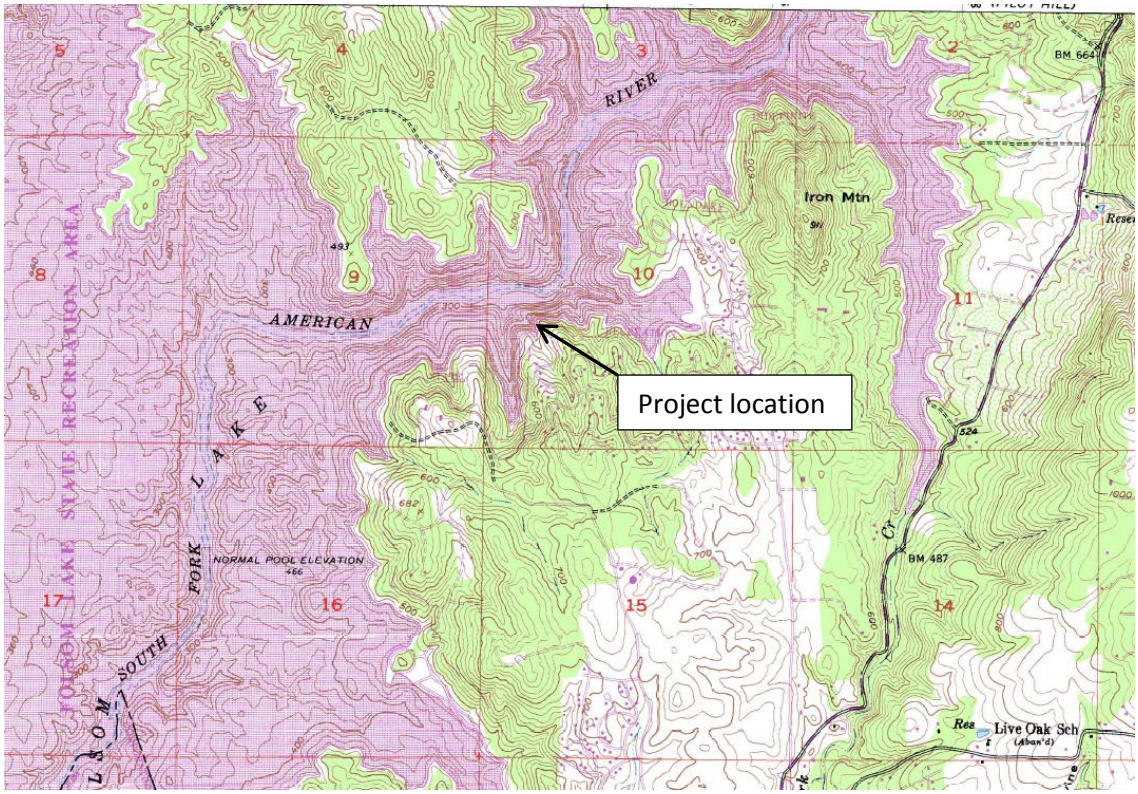
BD:krc

Enclosure: Project Location Maps (1page)

cc w/enclosure:
El Dorado Irrigation District:
Brian Mueller, P.E., Engineering Director
Elizabeth D. Wells, P.E., Engineering Division Manager
Jon Money, P.E., Senior Civil Engineer

Folsom Lake Intake Improvements Project





USGS Clarksville 7.5" Quadrangle, Township 10N, Range 8E, Section 10

MIWOK United Auburn Indian Community
MAIDU of the Auburn Rancheria

Gene Whitehouse, Chairman
John L. Williams, Vice Chairman
Calvin Moman, Secretary
Jason Camp, Treasurer
Gabe Cayton, Council Member

January 2, 2019

Brian Deason
Environmental Resources Supervisor
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

RE: AB 52 Consultation Request for the Proposed Folsom Lake Intake Improvements Project, Folsom Lake, CA

Dear Environmental Resources Supervisor Brian Deason,

The United Auburn Indian Community (UAIC) received a letter from the El Dorado Irrigation District dated 12/17/2018, formally notifying us of a proposed project, the Folsom Lake Intake Improvements Project in Folsom Lake, and an opportunity to consult under AB 52. This letter is notice that UAIC would like to initiate consultation under AB 52.

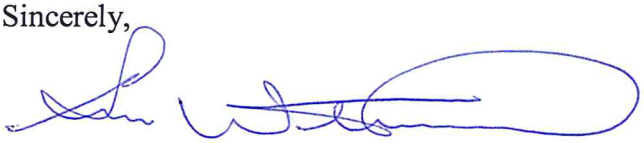
We would like to discuss the topics listed in Cal. Public Resources Code section 21080.3.2(a), including the type of environmental review to be conducted for the project; project alternatives; the project's significant effects; and mitigation measures for any direct, indirect, or cumulative impacts the project may cause to tribal cultural resources. As consultation progresses, we may also wish to discuss design options that would avoid impacts to tribal cultural resources; the scope of any environmental document that is prepared for the project; pre-project surveys; and tribal cultural resource identification, significance evaluations and culturally-appropriate treatment.

This letter is also a formal request to allow UAIC tribal representatives to observe and participate in all cultural resource surveys, including initial pedestrian surveys for the project. Please send us all existing cultural resource assessments, as well as requests for, and the results of, any records searches that may have been conducted prior to our first consultation meeting. If tribal cultural resources are identified within the project area, it is UAIC's policy that tribal monitors must be present for all ground disturbing activities. Finally, please be advised that UAIC's strong preference is to preserve tribal cultural resources in place and avoid them whenever possible. Subsurface testing and data recovery must not occur without first consulting with UAIC and receiving UAIC's written consent.

In the letter, Environmental Resources Supervisor Brian Deason is identified as the lead contact person for consultation on the proposed project. Melodi McAdams, our Cultural Resources Supervisor, will be UAIC's point of contact for this consultation. Please contact Ms. McAdams, Cultural Resources Supervisor, at (530) 328-1109 or email at mmcadams@auburnrancheria.com if you have any questions.

Thank you for involving UAIC in the planning process at an early stage. We ask that you make this letter a part of the project record and we look forward to working with you to ensure that tribal cultural resources are protected.

Sincerely,



Gene Whitehouse
Chairman

CC: Matthew Moore, UAIC Tribal Historic Preservation Officer

This message was sent to:
Abercrombie
Sullivan
Poulsen
Johnson, P
Leeper
Mueller
Corcoran
Wells
Odzakovich
Deason
Money
Petterson

SHINGLE SPRINGS BAND
OF MIWOK INDIANS

Shingle Springs Rancheria
(Verona Tract), California
5168 Honpie Road
Placerville, CA 95667
Phone: 530-676-8010
shinglespringsrancheria.com

CULTURAL RESOURCES

February 13, 2019

EID, Brian Deason
2890 Mosquito Rd
Placerville, CA 95667

Dear Brian Deason,

The Most Likely Descendant, Daniel Fonseca would like to initiate consultation process with you in regard to the NOI to Adopt a Mitigated Negative Declaration for the Folsom Lake Intake Improvements. Among other things, we would like this consultation to address the cultural and historic resource issues, pursuant to the regulations implementing Section 106 of the National Historic Preservation Act and Assembly Bill 52.

Prior to meeting we would like to request any and all completed record searches and/or surveys that were done in/around the project area up to and including environmental, archaeological and cultural reports.

Please let this letter serve as a formal request for the Shingle Springs Band Of Miwok Indians to be added as a consulting party in identifying any Tribal Cultural Properties (TCPs) that may exist within the project's Area of Potential Effects (APE).

Please contact Kara Perry, Cultural Outreach Coordinator, (530) 488-4049, kperry@ssband.org, to schedule a consultation pursuant to Section 106 of the NHPA and Assembly 52.

Sincerely,

Daniel Fonseca
Cultural Resource Director
Tribal historic Preservation Officer (THPO)
Most Likely Descendant (MLD)

From: Ed Silva
To: Deason, Brian
Cc: Ed Silva
Subject: AB52 Folsom Lake Intake Improvements
Date: Thursday, January 3, 2019 7:35:16 AM
Attachments: image003.png
2019-01-03-1889 Folsom Lake Intake Improvements.pdf

Hi Brian,

After review, the only concern that the Tribe has with the above projects is that when ground disturbance occurs, even in areas of existing or prior development, there is a possibility that Native American artifacts and/or human remains may be uncovered. Therefore, the Applicant should immediately stop construction and notify Wilton Rancheria and the appropriate Federal and State Agencies. Such provisions are stated in the; Archaeological Resources Protection Act (ARPA) [16 USC 469], Native American Graves Protection and Repatriation Act (NAGPRA) [25 U.S.C. 3001-30013], Health and Safety Code section 7050.5, and Public Resources Code section 5097.9 et al.

Thank you,

Ed Silva

Ed Silva
Tribal Resources Coordinator
Wilton Rancheria
9728 Kent St.
Elk Grove, CA 95624
(916) 683-6000 ext.2013
Fax: (916) 683-6015
http://www.wiltonrancheria-nsn.gov

Office Hours: M-F 8:00am-3:00pm
Please be aware phone calls and emails will be answered only during these hours.

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Appendix E. Mitigation, Monitoring, and Reporting Program for Folsom Lake Intake Improvements Project

Mitigation Monitoring and Reporting Program

El Dorado Irrigation District
Folsom Lake Intake Improvements Project

Prepared for:

El Dorado Irrigation District

March 2019

Prepared by:

GEI Consultants

Consulting Engineers and Scientists

Mitigation Monitoring and Reporting Program

El Dorado Irrigation District
Folsom Lake Intake Improvements Project

Prepared for:

El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Contact:

Brian Deason
Environmental Resources Supervisor
(530) 642-4064

Prepared by:

GEI Consultants, Inc.
2868 Prospect Park Drive, Suite 400
Sacramento, CA 95670

Contact:

Drew Sutton
Project Manager
(916) 631-4532

March 2019

GEI Project No. 1802338

Table of Contents

Table

Acronyms and Other Abbreviations

BMPs	best management practices
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
EID	El Dorado Irrigation District
GEI	GEI Consultants, Inc.
IS/MND	Initial Study/proposed Mitigated Negative Declaration
MMRP	Mitigation Monitoring and Reporting Program
NAGPRA	Native American Graves Protection and Repatriation Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
project	Folsom Lake Intake Improvements Project
proposed project	Folsom Lake Intake Improvements Project
SHPO	State Historic Preservation Officer
SPCP	spill prevention and control plan
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

Mitigation Monitoring and Reporting Program

In accordance with the California Environmental Quality Act (CEQA), the El Dorado Irrigation District (EID) prepared an initial study/proposed mitigated negative declaration (IS/MND) in February 2019 to provide the public and responsible and trustee agencies with information about the potential environmental impacts associated with implementation of the Folsom Lake Intake Improvements Project (hereafter referred to as the "project").

The IS/MND concludes that implementation of the proposed project would generate significant and potentially significant adverse effects on the environment. The IS/MND identifies feasible mitigation measures that avoid, mitigate, or reduce these impacts to a less-than-significant level.

Section 21081.6(a)(1) of the California Public Resources Code (PRC) and Section 15097 of the State CEQA Guidelines require a public agency to adopt a reporting and monitoring program on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental impacts on the physical environment.

This Mitigation Monitoring and Reporting Program (MMRP) will be used by EID to ensure that mitigation measures identified in the MND are implemented as described in the MND and that their implementation is documented.

The MMRP is presented in tabular format. The table columns contain the following information:

Mitigation Number: Lists the mitigation measures by number, as designated in the MND.

Mitigation Measure: Provides the text of the mitigation measures, each of which has been adopted and incorporated into the project.

Timing/Schedule: Lists the time frame in which the mitigation measure is expected to take place.

Implementation Responsibility: Identifies the entity responsible for implementing the mitigation measure.

Completion of Implementation: EID is responsible for reporting on implementation of the mitigation measures. The "Completion of Implementation" column is to be used by EID to indicate when implementation of a mitigation measure has been completed. EID, at its discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors.

Table 1. Mitigation Monitoring and Reporting Program for the Folsom Lake Intake Improvement Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
Biological Resources				
BIO-1	**Minimize Effects to Nesting Swainson's Hawks, Golden Eagles, and Bald Eagles.** EID shall implement the following measures to avoid and minimize potential adverse effects on nesting Swainson's hawk, golden eagles, and bald eagles during project construction. ▪ Preconstruction surveys for active Swainson's hawk, golden eagle, and bald eagle nests shall be conducted by a qualified biologist in all areas of suitable nesting habitat within 0.25-mile of project disturbance. A minimum of one survey shall be conducted no more than 14 days before project activities commence, if construction begins during the nesting season (February 1 through August 15). ▪ Appropriate buffers shall be established and maintained around active nest sites to avoid nest failure from project activities. The appropriate size and shape of the buffers shall be determined by a qualified biologist and may vary depending on the nest location, nest stage, and construction activity. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activities are not resulting in detectable adverse effects on nesting birds or their young. No project activities shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.	Before and during construction	EID	
BIO-2	**Avoid and Minimize Effects to Other Nesting Birds.** EID shall implement the following measures to avoid and minimize potential adverse effects on other nesting birds during project construction. ▪ Vegetation removal shall be conducted between September 1 and January 31, to the extent feasible. ▪ If vegetation removal must occur during the bird nesting season (February 1 through August 15), surveys for active bird nests shall be conducted by a qualified biologist in areas of suitable nesting vegetation designated for removal. If active nests are found, removal of vegetation in which the nests are located will be delayed until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use. ▪ Preconstruction surveys for active nests of special-status birds and common raptor species shall be conducted by a qualified biologist. Surveys for raptor nests shall include suitable habitat within up to 300 feet of areas subject to project disturbance, depending on the potential extent of indirect impact. Surveys for nests of non-raptor special-status birds shall include suitable habitat within up to 50 feet of the disturbance areas. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 1 to August 15) in a given area. ▪ If any active nests are observed, or behaviors indicating active nests are present, appropriate buffers around the nest sites shall be determined by a qualified	Before and during construction	EID	

Table 1. Mitigation Monitoring and Reporting Program for the Folsom Lake Intake Improvement Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	biologist to avoid nest failure resulting from project activities. Buffer size shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. If buffers are adjusted, monitoring shall be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist determines that the young have fledged or the nest site is otherwise no longer in use.			
BIO-3	**Avoid, Minimize, and Mitigate for Unavoidable Impacts on Waters of the United States on a No-Net-Loss Basis.** EID shall implement the following measures to avoid, minimize, and, if necessary, compensate for the direct fill of waters of the United States in Folsom Lake. ▪ Ground disturbance shall be limited to construction areas, including necessary access routes and staging areas. The total area of the project activity shall be limited to the minimum necessary. When possible, existing access routes and points shall be used. All roads, staging areas, and other facilities shall be placed to avoid and limit disturbance to Folsom Lake when feasible. ▪ A written spill prevention and control plan (SPCP) shall be prepared and implemented ▪ Before the commencement of construction activities, high-visibility fencing shall be erected to protect areas of sensitive biological resources that are located adjacent to construction areas from encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed only when the construction within a given area is completed. Limits of waters of the United States shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas. ▪ Project implementation would result in the need to obtain regulatory permits from USACE, RWQCB, and CDFW for direct impacts to Folsom Lake. All measures developed through consultation with the respective regulatory agencies shall be implemented to mitigate adverse effects. • Section 404: EID will seek authorization for fill of jurisdictional waters of the United States from USACE via the Section 404 permitting process before project construction. Any mitigation measures determined necessary during the 404 permitting process shall be implemented during project construction. If USACE deems that compensatory mitigation is required, an appropriate and feasible mitigation plan to compensate for loss of waters of the United States shall be developed and provided to the appropriate regulatory agencies for approval. The plan, if required, shall be developed in consultation with and approved by the appropriate regulatory agencies before construction activities begin in waters of	Before, during, and after construction	EID	

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Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	the United States. • Section 401: A water quality certification application pursuant to Section 401 of the Clean Water Act shall be submitted to the Central Valley RWQCB before starting project construction in any areas that may contain waters of the State. Any measures required as part of the issuance of water quality certification shall be implemented. • Section 1602: A notification of lake and streambed alteration shall be submitted to CDFW under Section 1602 of the California Fish and Game Code before starting project construction in any areas under CDFW's jurisdiction. If CDFW determines a lake or streambed alteration agreement is necessary, any conditions of the lake and streambed alteration agreement, including minimization and compensation measures, shall be implemented as part of project implementation.			
BIO-4	**Minimize and Compensate for Loss of Oaks.** EID has elected to implement the following measure to minimize and compensate for removal of interior live oak woodland. ▪ Interior live oak woodland shall be avoided during construction, to the extent feasible. A qualified botanist shall clearly mark woodland to be avoided prior to construction. If oak woodland or individual oaks greater than 6 inches in diameter at breast height cannot be avoided, EID will pay in-lieu fees for the removal of oak trees or oak woodlands as described in the County's Oak Resources Management Plan (as adopted on October 24, 2017).	Before and during construction	EID	
Cultural Resources				
CR-1	**Address Previously Undiscovered Historic Properties and Archaeological Resources.** EID shall implement the following measure to reduce or avoid impacts on undiscovered historic properties and archaeological resources. If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist to 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of personnel involved in project implementation. If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot radius of the find shall cease. EID shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes	During construction	EID	

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	providing recommendations and shall be coordinated with the State Historic Preservation Officer and Reclamation, if necessary, and shall be completed before project activities continue in the vicinity of the find.			
CR-2	**Avoid Potential Effects on Undiscovered Burials.** EID shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and a 100-foot radius shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act (NAGPRA), Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires federal agencies and institutions that receive federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA also has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials as part of their compliance responsibilities. California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. EID shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.	During construction	EID	
Hydrology and Water Quality				
WQ-1	**Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices.** EID shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) as required under the State Water Resources Control Board's General Construction Permit Order 2009-0009-DWQ [and as amended by most current order(s)]) that includes erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after project construction. The SWPPP shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent waters of the U.S. and State. The SWPPP shall be prepared with the following objectives: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed project; (b) to identify BMPs to reduce	Before, during, and after construction	EID	

Table 1. Mitigation Monitoring and Reporting Program for the Folsom Lake Intake Improvement Project

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	or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed project discharge points and receiving waters to address post-construction BMP implementation and monitoring; and (e) to address sedimentation, siltation, and turbidity. The following list describes BMPs that would be implemented under the SWPPP to protect water quality within Folsom Lake. ▪ Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Folsom Lake, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. Cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch. ▪ Immediately after construction is complete, all exposed soil shall be stabilized. Soil stabilization may include, but is not limited to, seeding or planting of native plants and placing rock. ▪ No refueling, storage, servicing, or maintenance of equipment shall take place on the shore within 100 feet of the ordinary high water mark of Folsom Lake. ▪ All machinery used during project construction shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water. ▪ Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, State, and Federal regulations as described in the SPCP. ▪ Tightly woven fiber netting (no monofilament netting) or similar material shall be used for erosion control or other purposes within the project footprint to ensure that wildlife are not trapped. This limitation shall be communicated to the construction contractor through the special provisions included in the bid solicitation package. Coconut coir matting and burlap-containing fiber rolls are an example of acceptable erosion control materials. ▪ Erosion control measures that minimize soil or sediment from entering waterways and wetlands shall be installed, monitored for effectiveness, and maintained throughout construction activities. ▪ Precautions to minimize turbidity/siltation shall be implemented during construction. This may require placing barriers (e.g., silt curtains) to prevent silt and/or other deleterious materials from entering downstream reaches. ▪ Petroleum products, chemicals, fresh cement, and construction by-products containing, or water contaminated by, any such materials shall not be allowed to enter flowing waters and shall be collected and transported to an authorized upland disposal area.			

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WQ-2	**Prepare and Implement a Spill Prevention and Control Plan and Applicable Hazardous Materials Business Plans.** The contractor shall also prepare a SPCP and applicable hazardous materials business plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent and materials available to clean up, hazardous material and waste spills. The SPCP shall also identify emergency procedures for responding to spills. The SPCP and all material necessary for its implementation shall be accessible on-site prior to initiation of project construction and throughout the construction period. Employees and construction workers shall be provided the necessary information from the SPCP to prevent or reduce the discharge of pollutants from construction activities to waters and to use the appropriate measures should a spill occur. In the event of a spill, work shall stop in the immediate vicinity of the spill until cleanup activities are completed. Agency notification of spill events would follow procedures specified in permits obtained for the project.	Before and during construction	EID	
WQ-3	**Implement Best Management Practices for In-Water Work.** EID shall require that the construction contractor implement best management practices to contain suspended sediments during in-water work. Best management practices may include the use of a continuous length of floating silt curtain, double or triple casing drilling procedures, or other measures as necessary to contain suspended sediments or other deleterious materials from entering surface waters. The construction contractor will be required to monitor the equipment for performance as needed to comply with all regulatory requirements. A qualified biologist shall monitor at the onset of construction activities in waters of the United States to ensure that avoidance and minimization measures are being properly implemented and no unauthorized activities occur, and conduct weekly inspections thereafter during the duration of in-water construction.	During in-water construction	EID	