



Initial Study

Merced River Hydroelectric Project (FERC # 2179-043) Relicensing and

Merced Falls Hydroelectric Project (FERC # 2467-020) Relicensing

Merced Irrigation District

Mariposa County, California

February 13, 2025





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Abbreviations/Acronyms

| Abbreviation/Acronym | Definition |
|----------------------|---|
| ac | acre or acres |
| ac-ft | acre-ft |
| ACEC | Area of Critical Environmental Concern |
| AQMP | Air Quality Attainment Plan |
| BLM | Bureau of Land Management |
| BMP | Best Management Practice |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CDFW | California Department of Fish and Wildlife |
| CESA | California Endangered Species Act |
| CEQA | California Environmental Quality Act |
| cfs | cubic feet per second |
| CWA | Clean Water Act |
| DPM | diesel particulate matter |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| FEIS | Final Environmental Impact Statement |
| FEMA | Federal Emergency Management Agency |
| FHSZ | Fire Hazard Severity Zone |
| FERC | Federal Energy Regulatory Commission |
| GWh | gigawatt-hour |
| HPMP | Historic Properties Management Plan |
| IS | Initial Study |
| MCAPCD | Mariposa County Air Pollution Control District |
| Merced ID | Merced Irrigation District |
| MND | Mitigated Negative Declaration |
| MRZ | Mineral Resource Zones |
| msl | mean sea level |
| MW | megawatt |
| NAAQS | National Ambient Air Quality Standards |
| ND | Negative Declaration |
| NEPA | National Environmental Policy Act |
| NERC | North American Electric Reliability Corporation |
| NMFS | National Marine Fisheries Service |
| NOAA | National Oceanic and Atmospheric Administration |
| NWR | National Wildlife Refuge |
| O&M | operations and maintenance |
| PEIR | Programmatic Environmental Impact Report |



| Abbreviation/Acronym | Definition |
|----------------------|---|
| PG&E | Pacific Gas and Electric Company |
| PRC | Public Resources Code |
| SHPO | State Office of Historic Preservation |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SRA | State Responsibility Area |
| SWPPP | Stormwater Pollution Prevention Plan |
| TAC | toxic air contaminant |
| VMT | vehicle miles travelled |
| Water Board | State Water Resources Control Board |
| WQC | Clean Water Act Section 401 Water Quality Certification |

1.0 Introduction

This draft Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared in accordance with California Environmental Quality Act (CEQA), which is found in the California Public Resources Code (PRC), Division 13; and with the CEQA Guidelines, which are found in the California Code of Regulations, Title 14, beginning with Section 15000. The IS/MND format is being used to provide analysis required by CEQA to supplement a National Environmental Policy Act (NEPA) assessment completed on the proposed Project (FERC 2015 FEIS; [FERC 2015 Merced ID FEIS](#)) as CEQA requires some analysis that is not required under NEPA. Further discussion of this is provided in Section 1.1.

Merced Irrigation District (Merced ID) is a local government agency (special district) formed on December 8, 1919, and is therefore subject to the requirements of the CEQA. Merced Irrigation District (Merced ID) owns and operates the Merced River Hydroelectric Project (Merced River Project, FERC No. P-2179-043) and the Merced Falls Hydroelectric Project (Merced Falls Project, FERC No. P-2467-020), collectively referred to as the “projects.” Merced ID currently has a service area spanning over 164,000 acres (ac). Merced ID is overseen by a publicly elected Board of Directors. The total water distribution system of Merced ID spans approximately 862 miles and includes natural waterways, unlined and lined canals, sloughs, and pipelines.

Per CEQA, the lead agency for a project is the public agency with primary responsibility for carrying out or approving the project, as well as implementing CEQA requirements. As such, Merced ID is the CEQA lead agency for acceptance of new licenses because it would implement the terms and conditions in the new hydropower licenses (CEQA Guidelines Section 15051).

As later discussed, a FEIS was prepared by FERC for the relicensing applications. The analysis in this IS will, to the extent possible, rely on, and serve as a supplement to, the analysis contained within the 2015 FEIS ([FERC 2015 Merced ID FEIS](#)) to comply with CEQA. This analysis reflects the *Staff Alternative with Mandatory Conditions* analyzed within the FEIS. The specific conditions placed upon the license are detailed in this IS in Section 2.2.2 Proposed Conditions in New FERC License. Plans, field work, and reporting requirements are more completely described in the FEIS *Staff Alternative with Mandatory Conditions* section of the FEIS that is incorporated by reference into this document. The conditions are also included in Merced ID’s final license applications (FLA) for each of the two hydropower projects (both final applications and FERC FEIS can be found at: [FERC Relicensing - Merced Irrigation District Water & Power](#)).

This document analyzes potential environmental impacts of the Proposed Project in accordance with CEQA. Additionally, a separate Merced ID Programmatic Environmental Impact Report (PEIR), was drafted pursuant to CEQA for Merced ID’s recreational facilities for both projects, which has been published for public review concurrent with this IS. Both this IS and the Recreation PEIR are filed in CEQAnet under SCH# 2024051222 (<https://ceqanet.opr.ca.gov/2024051222>). Therefore, this supplemental analysis will also incorporate by reference the Recreation PEIR analysis of proposed recreation improvements and upgrades, hereinafter referred to as the Recreation PEIR.

Note that almost all of the mitigation measures included in the Recreation PEIR correspond to Merced ID being able to implement recreation projects before Merced ID accepts new hydropower licenses. Those mitigation measures, for the most part, are replaced by measures and conditions included in the 2015 FEIS *Staff Alternative with Mandatory Conditions* section and Merced ID’s FLAs

for the two hydropower projects once relicensing is completed. This IS evaluates the potential for impacts resulting from Merced ID accepting new licenses. Therefore, those mitigation measures for potential work initiated prior to relicensing are not included in this assessment. The Recreation PEIR is available online at CEQAnet under SCH# 2024051222 (<https://ceqanet.opr.ca.gov/2024051222>).

Impacts identified in the Recreation PEIR are summarized in Table 1-1. Table 1-2 lists mitigation measures to reduce identified impacts to a less than significant level. Note that these impacts are separate from the analysis in this project and the associated mitigation would be applied as part of the Recreation Facilities Improvement Project analyzed in the PEIR.

Table 1-1. Potential Impacts of the Merced ID Recreation Facilities Improvement Project

| Impact | Level of Significance Before Mitigation | Mitigation Measure | Level of Significance | |
|---|---|----------------------------|--|---|
| Air Quality | | | | |
| Impact AIR-1: Conflict with or Obstruct implementation of an applicable air quality plan | Less than Significant | N/A | Less than Significant | |
| Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard | Less than Significant | N/A | Less than Significant | |
| Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations | Less than Significant | N/A | Less than Significant | |
| Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people | Less than Significant | N/A | Less than Significant | |
| Biological Resources | | | | |
| Impact BIO-1: 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 CDFW or USFWS | Significant Impact | MM-BIO-1 through MM-BIO-33 | Before Acceptance of New License: Less than Significant | After Acceptance of New License: Less than Significant |
| Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CFW or USFWS | Significant Impact | MM-BIO-1 through MM-BIO-33 | Before Acceptance of New License: Less than Significant | After Acceptance of New License: Less than Significant |
| Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands | Significant Impact | MM-BIO-1 through MM-BIO-33 | Before Acceptance of New License: Less than Significant | After Acceptance of New License: Less than Significant |

| Impact | Level of Significance Before Mitigation | Mitigation Measure | Level of Significance | |
|--|---|--|--|----------------------------------|
| | | | Before Acceptance of New License: | After Acceptance of New License: |
| Impact BIO-4: 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 wildlife nursery sites | Less than Significant | N/A | Less than Significant | Less than Significant |
| Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance | Significant Impact | MM-BIO-1 through MM-BIO-33 | Less than Significant | Less than Significant |
| Impact BIO-6: Conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan | No Impact | N/A | No Impact | No Impact |
| Cultural Resources | | | | |
| Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. | No Impact | N/A | No Impact | |
| Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. | Significant Impact | MM-CUL-1: Archaeologically Sensitive Areas – Pre-Construction Measures MM-CUL-2: Archaeological Resources and Tribal Cultural Resources – Discovery During Construction | Less than Significant with Mitigation Incorporated | |
| Impact CUL-3: Disturb any human remains, including those interred outside of dedicated cemeteries. | Significant Impact | MM-CUL-3: Human Remains – Discovery During Construction | Less than Significant with Mitigation Incorporated | |
| Geology and Soils | | | | |
| Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault | No Impact | N/A | No Impact | |



| Impact | Level of Significance Before Mitigation | Mitigation Measure | Level of Significance |
|--|---|---|--|
| Impact GEO-2: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking | No Impact | N/A | No Impact |
| Impact GEO-3: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction | No Impact | N/A | No Impact |
| Impact GEO-4: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides | No Impact | N/A | No Impact |
| Impact GEO-5: Result in substantial soil erosion or the loss of topsoil | Significant Impact | MM-HYD-1: Construction Stormwater Management and Treatment Plan | Less than Significant After Mitigation |
| Impact GEO-6: 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 | No Impact | N/A | No Impact |
| Impact GEO-7: Be located on expansive soil, as defined in table 18-1B of the Uniform Building code (1994), creating substantial direct or indirect risk to life or property | No Impact | N/A | No Impact |
| Impact GEO-8: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater | No Impact | N/A | No Impact |
| Impact GEO-9: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature | Significant Impact | MM-GEO-1: Inadvertent Discovery Protocol | Less than Significant after Mitigation |
| Greenhouse Gas Emissions | | | |
| Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment | Less than Significant | N/A | Less than Significant |
| Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG | Less than Significant | N/A | Less than Significant |

| Impact | Level of Significance Before Mitigation | Mitigation Measure | Level of Significance |
|--|---|--------------------|-----------------------|
| Hazards and Hazardous Materials | | | |
| Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials | Less than Significant | N/A | Less than Significant |
| Impact HAZ-2: 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 | Less than Significant | N/A | Less than Significant |
| Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school | No Impact | N/A | No Impact |
| Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result would it create a significant hazard to the public or the environment | No Impact | N/A | No Impact |
| Impact HAZ-5: 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 | No Impact | N/A | No Impact |
| Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan | No Impact | N/A | No Impact |
| Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires | Less than Significant | N/A | Less than Significant |
| Hydrology and Water Quality | | | |
| Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality | Less than Significant | N/A | |
| Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin | No Impact | N/A | No Impact |

| Impact | Level of Significance Before Mitigation | Mitigation Measure | Level of Significance |
|--|---|---|--|
| Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on- or off-site | Significant Impact | MM HYD-1: Construction Stormwater Management and Treatment Plan | Less than Significant with Mitigation Incorporated |
| Impact HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site | Less than Significant | N/A | Less than Significant |
| Impact HYD-5: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water what would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff | Less than Significant | N/A | Less than Significant |
| Impact HYD-6: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Impede or redirect flood flows | Less than Significant | N/A | Less than Significant |
| Impact HYD-7: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation | No Impact | N/A | No Impact |
| Impact HYD-8: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan | No Impact | N/A | No Impact |
| Recreation | | | |
| Impact REC-1: 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 | No Impact | N/A | No Impact |



| Impact | Level of Significance Before Mitigation | Mitigation Measure | Level of Significance |
|---|---|--|--|
| Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment | Significant Impact | MM-REC-1: Site Development and Construction Plans ₂ | Less than Significant with Mitigation Incorporated |
| Tribal Cultural Resources | | | |
| Impact TCR-1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, 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) | No Impact | N/A | No Impact |
| Impact TCR-2: Would the project cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | Significant Impact | CUL-2: Archaeological Resources and Tribal Cultural Resources – Discovery During Construction MM-CUL-3: Human Remains – Discovery During Construction | Less than Significant with Mitigation Incorporated |
| Wildfire | | | |
| Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan | No Impact | N/A | No Impact |
| Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire | No Impact | N/A | No Impact |
| Impact FIRE-3: 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 | No Impact | N/A | No Impact |
| Impact FIRE-4: 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 | No Impact | N/A | No Impact |



Table 1-2. Mitigation Measures Associated with the Merced ID Recreation Facilities Project

| Mitigation Measure Description | Post License Acceptance |
|--|--|
| MM-BIO-1 through BIO-33 | Not applicable for the purpose of this IS. Omitted for brevity. |
| <p>MM-CUL-1: Archaeologically Sensitive Areas – Pre-Construction Measures</p> | <p>Pre-construction Measure MM-CUL-1A: Intensive Pre-Construction Study. Merced ID shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by Merced ID prior to soil-disturbing activities occurring on the Project site. The purpose of the site-specific, intensive archaeological resource study is to build upon the data collected during the relicensing studies and confirm the boundaries of previously identified resources vis-à-vis the Proposed Project ground-disturbing activity and to make further assessments, as necessary, regarding the presence of archaeological resources on the Project site. At a minimum, the study shall include:</p> <ul style="list-style-type: none"> a. Pedestrian survey, site documentation, and subsurface presence/absence studies, where necessary, of the Project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources. b. A summary report disseminating the results of this research. c. Recommendations for any additional measures, including avoidance measures if feasible, that could be necessary to mitigate any adverse impacts to previously recorded and/or inadvertently discovered cultural resources. <p>If the results of the study indicate presence of precontact or historic-period archaeological resources on the Project site, or a resource is discovered, Merced ID shall hire a qualified archaeologist to monitor any ground disturbing activities on the Project site during construction and prepare a worker information sheet pursuant to Measure B below that details what could potentially be found at the Project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the worker training and information sheet, required per Measure C below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior’s Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction.</p> <p>Pre-Construction Measure MM-CUL-1B: Implementation of Avoidance Measures During Construction. Based on the results of the archaeological resources analysis noted above under MM-CUL-1A, any archaeological resource not previously determined ineligible for CRHR and/or NRHP listing and within 50 feet of ground disturbing activity will be protected by site-specific measures. These measures may include re-routing access routes and staging areas, avoiding vegetation removal, installing exclusion or protective fencing, periodic monitoring, and post-construction damage assessments. If, during construction, it is determined that the site cannot be avoided, the resource will be treated as an inadvertent discovery during construction and MM-CUL-2 will be implemented.</p> <p>Pre-Construction Measure MM-CUL-1C: Construction Worker Training and Information Resources. Merced ID shall prepare a construction worker training and information sheet developed by a qualified archaeologist for review and approval prior to soil-disturbing activities occurring on the Project site. The worker training and information sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the Project site. Training by the qualified archaeologist</p> |

| Mitigation Measure Description | Post License Acceptance |
|--|--|
| | <p>shall be provided to the Project's prime contractor, any Project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the Project site.</p> <p>The training and information sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop within 50 feet of the discovery and Merced ID contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains; clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the worker training and information sheet is circulated to all field personnel, including machine operators, field crew, and supervisory personnel. The worker and information sheet shall also be posted in a visible location at the Project site.</p> |
| <p>MM-CUL-2: Archaeological Resources and Tribal Cultural Resources – Discovery During Construction</p> | <p>During construction, pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic-era or precontact subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and Merced ID will consult with a qualified archaeologist, as applicable, to assess the significance of the find. Resources inadvertently discovered during construction are defined as either a newly discovered archaeological, built environment, or Tribal resource or as an unidentified or unknown component of a previously recorded archaeological, built environment, or Tribal resource.</p> <p>If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by Merced ID must be followed unless avoidance is determined unnecessary or infeasible by Merced ID. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, Project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the Project site while measures for the cultural resources are implemented.</p> <p>In the event of data recovery of archaeological resources, Merced ID's consultant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the Proposed Project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. Merced ID shall implement the ARDTP at their expense.</p> <p>Archaeological monitoring and/or data recovery programs required by this measure</p> |

| Mitigation Measure Description | Post License Acceptance |
|--|--|
| | could suspend Project operations in the vicinity of the discovery for up to 4 weeks. At the direction of Merced ID, the suspension of construction can extend beyond 4 weeks only if such suspension is the only feasible means to reduce potential effects on a significant archaeological resource, as defined in CEQA Guidelines Section 15064(a) and 15064.5(c) to less than significant with mitigation. |
| MM-CUL-3: Human Remains - Discovery During Construction | Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the Project site during construction activities, all work shall immediately halt and the Project sponsor shall notify Merced ID and the appropriate County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, Merced ID shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of Merced ID. |
| MM-GEO-1: Inadvertent Discovery Protocol | If paleontological resources are discovered during earth-moving activities, the construction crew will immediately cease work within a 50-foot radius of the find and notify Merced ID's Project manager. Construction work will be halted until the collection of fossil specimens has been completed. The collection and treatment actions will occur after recovery of specimens and once scientific value can be confirmed and documented. If fossils are found, treatment actions will include sampling for microfossils, conducting paleomagnetic analysis, identifying and preparing fossils, arranging for a repository, and preparing a final report. These actions will comply with guidance from the Society for Vertebrate Paleontology. |
| MM-HYD-1: Construction Stormwater Management and Treatment Plan | As special conditions to site-specific construction plan documentation, Merced ID will prepare and implement, or if a contractor is hired, will require contractor to do so, a project-specific Stormwater Management and Treatment Plan that addresses construction-related activities. The plan will be enforceable as a contract provision, and will include all of the SWPPP and Small MS4 permits. Further, Prior to initiation of ground-disturbing activities within 250 feet of vernal pools or 100 feet of other aquatic resources, construction BMPs will be employed on-site to prevent degradation to on-site and off-site aquatic resources. Methods will include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs will be in place prior to initiation of any construction activities and will remain until construction activities are completed. All erosion control methods will be maintained until all on-site soils are stabilized. |
| MM-REC-1: Site Development and Construction Plans | <p>The Site Development and Construction Plan for individual recreation improvement projects would include:</p> <ul style="list-style-type: none"> ○ Identifying site-specific erosion and sedimentation control measures that will be used; ○ Identifying any necessary measures to address traffic circulation and parking issues associated with recreation use during the reconstruction activity; ○ Reviewing other sensitive resource inventories (cultural, archeological, and biological resources); ○ Identifying appropriate procedures to avoid impacts to other key resources at the site; and ○ Identification of any regulatory and permitting requirements needed prior to commencing construction. |

1.1 Project History and Context

Both hydropower projects are located on the Merced River (see Figure 1-1 and Figure 1-2). The Merced River Project consists of the New Exchequer and McSwain developments (dams, reservoirs, and hydropower facilities), which are located at river miles (RM) 62.5 and 56.3, respectively, about 23 miles northeast of the city of Merced in Mariposa County, California. The Merced River Project occupies 3,155 ac of federal land administered by the U.S. Department of the Interior, Bureau of Land Management (BLM).

The Merced Falls Project is located at RM 55 on the border of Merced and Mariposa Counties, California. The Merced Falls Diversion Dam and Powerhouse is on the north bank of the Merced River about six miles east of Snelling, California, at 348 ft. The Merced Falls Project occupies approximately 75.6 ac, with 1 ac of federal land administered by BLM.

The initial FERC licenses for the Merced River and Merced Falls projects were issued by the Federal Power Commission, FERC's predecessor, effective on March 1, 1964, for a term ending on February 28, 2014. At that time, the Merced Falls Hydroelectric Project was owned and managed by PG&E. On February 8, 2012, PG&E filed an application to relicense the Merced Falls Project with FERC. The licensing process was not completed, and on July 6, 2015, FERC approved transfer of the Merced Falls Project license and associated project lands to Merced ID; formal transfer of ownership and management of the Merced Falls Project, along with lands owned by PG&E, were transferred to Merced ID on March 17, 2017. On February 26, 2012, Merced ID applied to FERC for a new license for the Merced River Project.

To continue operation and maintenance of the projects, Merced ID must either obtain new federal licenses from FERC that will apply to the projects over multiple decades (proposed 50 years), or continue to apply and be granted annual temporary licenses until a permanent license is accepted by Merced ID. FERC is an independent agency that, among other responsibilities, regulates the interstate transmission of electricity, natural gas, and oil, and licenses hydroelectric projects. Hydroelectric (or hydropower) projects generate electricity from waves or directly from water flow in ocean currents, tides, or inland waterways. Until new non-temporary licenses are granted for both projects, Merced ID is required to abide by the previous 1964-2014 license conditions.

In the New License Applications (NLA) for each of the projects, Merced ID proposed 50-year licenses to continue to operate the existing Merced River and Merced Falls Hydroelectric projects with no new capacity additions and no new construction, other than construction related to upgrades at recreation facilities. The *Application for a New License for Major Project – Existing Dam for Merced ID's 103.5 megawatt Merced River Hydroelectric Project, FERC Project No. 2179* is being processed in tandem with the *Application for New License for the Merced Falls Hydroelectric Project* for multiple reasons, including the reliance of operations at Merced Falls Project on flows released by the upstream Merced River Hydroelectric Project, and the interrelationship of environmental effects downstream of the two projects. Therefore, FERC prepared a single NEPA document that included both projects and, on March 30, 2015, FERC issued a Draft multi-project Environmental Impact Statement (EIS). In December 2015, FERC prepared a *Final Environmental Impact Statement for the Merced River Hydroelectric Project – FERC Project No. 2179-043 and the Merced Falls Hydroelectric Project – FERC Project No. 2467-020* ([FERC 2015 Merced ID FEIS](#)) in accordance with the NEPA. Final License Applications (FLA; [FERC Relicensing - Merced Irrigation District Water & Power](#)) were filed with FERC in 2015.



Once FERC issues the new licenses, Merced ID may either (1) accept the new licenses and operate and maintain the hydropower projects, (2) contest the new licenses by seeking a rehearing before FERC, or (3) reject either one or both licenses. As such, the proposed Project is for Merced ID to accept the new licenses, to include construction, operations and maintenance of the hydropower projects consistent with the terms and conditions assumed to be set forth by FERC in the new hydropower licenses. The proposed Project description is generally consistent with those terms proposed by Merced ID in their FLAs, as well as FERC’s 2015 FEIS ([FERC 2015 Merced ID FEIS](#)) preferred alternative of *Staff Alternative with Mandatory Conditions*, except as outlined in Section 2.1.2 Supplemental Analysis.

1.2 Purpose of the Initial Study

CEQA applies to all discretionary activities proposed to be implemented or approved by a California public agency unless an exemption applies. As noted, Merced ID is the lead agency that would make the discretionary decision whether to approve the Proposed Project.

CEQA requires an agency to review the potential effects of a Proposed Project’s actions on environmental resources, and the CEQA Guidelines are the primary rules and source of interpretation of CEQA (Public Resources Code [PRC] Section 21083). In this case, the IS format is being used to create a Supplement to the NEPA FEIS to meet additional CEQA regulatory requirements. As such, the parameters used in this document are consistent with guidelines for completing an IS analysis. Per CEQA Guidelines, the Initial Study shall contain in brief form a project description, description of the environmental setting, identification of environmental effects, and a discussion of mitigation of any identified significant effects, among other required content. The initial study may use a checklist format, such as the one provided in CEQA Guidelines Appendix G, but public agencies are free to devise their own format (CEQA Guidelines Section 15063). This document follows the checklist format set forth in CEQA Guidelines Appendix G.

If the IS were to conclude that the proposed Project could have a significant unmitigable effect on the environment, then an Environmental Impact Report (EIR) would be prepared; otherwise, the lead agency may prepare a Negative Declaration (ND) or Mitigated Negative Declaration (MND). An ND or MND is a written statement explaining why the Proposed Project would not have a significant environmental effect. For MNDs, the document must describe the mitigation measures included in the Proposed Project to avoid potentially significant effects. An ND does not include mitigation measures (CEQA Guidelines Sections 15063, 15371; PRC Section 21092.6[a]).

CEQA requires the lead agency to provide the public and relevant agencies an opportunity to comment by filing and distributing a Notice of Intent to adopt an ND or MND on a project. Following the 30-day public review period, the lead agency considers the ND or MND, together with any comments received, before approving the Proposed Project. Although there is no requirement to prepare formal responses to comments, the lead agency should have adequate information in the record explaining why the comment does not affect the conclusion that there would be no significant effects (CEQA Guidelines Sections 15072, 15073).

When adopting an MND, the lead agency must also adopt a monitoring and reporting program for mitigation measures included in an MND (CEQA Guidelines Section 15097). Should it approve the project, the lead agency may file a Notice of Determination with the State Clearinghouse within 5 working days after project approval (CEQA Guidelines Sections 15074[d], 15075; PRC Sections 21081.6, 21092.3). If the lead agency is a local public agency, as in this case, then the Notice of

Determination must also be filed with the County Recorder’s Office (CEQA Guidelines Section 15075[d]).

The State Water Resources Control Board (Water Board) and California Department of Fish and Wildlife (CDFW) are Responsible and/or Trustee Agencies under CEQA based on their discretionary approval over aspects of the proposed Project and their utilization of this IS for their CEQA compliance. Specifically:

- The Water Board may rely on this CEQA analysis, as a supplement to the NEPA FEIS, to make its decision regarding whether to issue a Clean Water Act (CWA) Section 401 water quality certification (WQC) for the FERC Merced River and Merced Falls Hydroelectric Projects’ relicensings.
- CDFW may rely on this CEQA analysis, as a supplement to the NEPA FEIS, to make its decision regarding whether to issue Fish and Game Code Section 1602 Lake and Streambed Alteration Agreements for individual projects at the Merced River Hydropower Project. Further, if an incidental take permit (Fish and Game Code Section 2081) is required for potential take of California Endangered Species Act (CESA) listed species, this CEQA process would also support that decision process.

1.3 Existing Project Facilities

The existing FERC Project Boundary, consisting of lands necessary for the safe operations and maintenance of the hydroelectric projects and other purposes, such as recreation, shoreline control, and protection of environmental resources, encompasses 11,147 ac of land in Merced and Mariposa counties, in California.

In general, the FERC Project Boundary is placed as a buffer to ensure that all Project facilities, features, and primary access roads have been encompassed. While there is no set distance that is used for all types of facilities, the following ranges have been used for defining the FERC Project Boundary:

- The FERC Project Boundary around reservoirs is often placed at a contour line a set number of feet above the reservoir normal maximum water surface elevation. In several instances, the FERC Project Boundary around reservoirs is defined by surveyed metes and bounds that were meant to follow a contour line above the high-water line and/or parcel boundary.
- The FERC Project Boundary is always placed to encompass all recreation sites, facilities, and roads that are part of the proposed Project.

1.3.1 Merced River Project

The Merced River Project was constructed from 1964 to 1966 and placed in service in 1966. Merced ID owns and operates the project, consisting of two developments located in Mariposa County, California, within the Merced River drainage. The project’s reservoirs—Lake McClure and McSwain reservoir—are capable of impounding 1,029,497 acre-feet of usable storage. The two powerhouses have an authorized installed capacity of 101.25 MW of power. The project includes no transmission lines. The New Exchequer Development and McSwain Development Reservoir and powerhouse characteristics are shown in Table 1-3 and Table 1-4, respectively.



Table 1-3. Water Storage Characteristics of Merced River Project Reservoirs

| Characteristics | Lake McClure | McSwain Reservoir |
|---|--------------|-------------------|
| Drainage area (square miles) | 1,035 | 1,055 |
| Normal maximum/minimum water surface elevation (feet) | 867.0/630.0 | 399.0/391.5 |
| Gross storage at NMWSE (acre-feet) | 1,024,600 | 9,730 |
| Usable storage at NMWSE(acre-feet) | 1,021,600 | 7,897 |
| Surface area at NMWSE (ac) | 7,110 | 310 |
| Length (miles) | 19.0 | 6.3 |
| Maximum width (miles) | 1.8 | 0.2 |
| Maximum depth (feet) | 427 | 66 |
| Shoreline length (miles) | 82.0 | 12.5 |

Source: Merced ID 2012a.

Note: NMWSE – normal maximum water surface elevation

Table 1-4. Powerhouse and Discharge Characteristics of Merced River Project Reservoirs

| Reservoir Name | Powerhouse Capacity (MW) | Number of Units | Type of Units | Minimum/ Maximum Discharge (cfs) |
|-------------------|--------------------------|-----------------|------------------|----------------------------------|
| Lake McClure | 94.5 | 1 | Vertical Francis | 200/3,200 |
| McSwain Reservoir | 9.0 | 1 | Vertical Kaplan | 600/2,700 |

Source: Merced ID 2012a.

Note: cfs – cubic feet per second, MW – megawatt

New Exchequer Development

The New Exchequer Dam project was completed in 1967; it replaced the smaller Exchequer Dam concrete gravity-arch structure that was constructed for irrigation and hydropower in 1926 and was one of the largest rock fill dams in the world at that time with a crest elevation of 879 feet and 82 miles of shoreline. The old Exchequer Dam was incorporated as an upstream toe to help support the rock-fill embankment.

Lake McClure, (formed by New Exchequer Dam) has a storage capacity of approximately 1,025,000 acre-feet and is Merced ID’s primary water storage facility. McSwain Reservoir (formed by McSwain Dam, also constructed in the 1960s) has a storage capacity of 9,730 acre-feet. The New Exchequer Dam serves multiple purposes: Lake McClure provides irrigation and domestic water supply, flood control, hydroelectric power generation, recreation, and support for environmental stewardship.

These two dams and reservoirs are integral parts of the 1964 Merced River Development Project and are licensed by FERC. MID is authorized to function as an electric utility under the California Water Code and in 1996, MID exercised its authority to begin selling power to retail electric customers.

These multi-purpose projects provide flood control in the lower Merced River, help to meet Merced ID 's irrigation water demands, create recreational opportunities, enhance environmental resources in the lower Merced River, and supply clean, renewable energy to California.

The New Exchequer development is located on Merced ID (7,577.5 ac), BLM (3,134.7 ac), and private (13.2 ac) lands (Merced ID 2012b). It is the upstream facility that impounds Lake McClure and consists of:

- New Exchequer Dam—a rock structure with a reinforced concrete upstream face, 490 feet high and 1,220 feet long that impounds Lake McClure;
- an ogee-type, concrete spillway with a 1,080-foot-long, ungated section and a 240-foot-long, gated section with six radial gates that are 40 feet wide and 30 feet high;
- an earth-and-rock dike that is 62 feet high and 1,500 feet long;
- an intake structure located upstream of the dam in Lake McClure;
- a concrete-lined power tunnel that is 383 feet long and 18 feet in diameter;
- a concrete-encased, steel penstock that is 982 feet long and 16 feet in diameter;
- an above-ground concrete powerhouse that is 75 feet by 91 feet and discharges directly to the Merced River;
- a low-level outlet, consisting of a 945.5-foot long, 108-inch-diameter powerhouse bypass (a steel pipe) that runs from the New Exchequer power tunnel to McSwain reservoir north of the New Exchequer powerhouse with a 108-inch-diameter Howell-Bunger valve; and
- an interconnection to the grid at the step-up transformer in the powerhouse switchyard. The development
- Merced ID maintains four existing recreation areas at Lake McClure:
 - McClure Point, which includes a campground, day use area, swim beach, marina, and boat ramp;
 - Barrett Cove, which includes a campground, swim beach, marina with two boat ramps, and overflow parking;
 - Horseshoe Bend, which includes a campground, swim beach, and boat ramp; and
 - Bagby, which includes a campground, boat ramp, and Shepherd’s Point primitive area.

Proposed improvements and upgrades to these four recreation facilities and construction of a new recreation area at Mack Island on Lake McClure, all of which are proposed as part of Merced ID’s FLA, are covered under a separate Recreation PEIR that is available for public review concurrent to this document. The findings identified in the Recreation PEIR are incorporated by reference into this Initial Study; as such, no additional resource assessments for potential effects of implementing recreation upgrades and improvements are included in this Initial Study. The scope of the Recreation PEIR includes the four existing facilities listed above, the new proposed recreation facility at Mack Island, and other non-FERC-related recreation facilities’ upgrades and additions.

More discussion on the Merced River FERC Hydropower Project and more details on the four Merced River recreation areas can be found in the Recreation PEIR.

Figure 1-1. New Exchequer Dam and Hydropower Facilities



Figure 1-2. New Exchequer Powerhouse



McSwain Development

The existing McSwain development is located on Merced ID (907.5 ac) and BLM (20.2 ac) land (Merced ID 2012b). It is the downstream facility, consisting of:

- McSwain Dam—an embankment structure with a central impervious core of rolled fill between shoulders of cobbles or crushed rock—that is 80 feet high and 1,620 feet long and impounds McSwain reservoir;
- an ungated concrete overflow spillway that is 802 feet long;
- an intake structure that is integral with the dam;
- a concrete-lined power tunnel that is 160 feet long and 15 feet in diameter that leads to;
- a steel penstock that is 160 feet long and 15 feet in diameter;
- an above-ground, concrete powerhouse that is 72 feet by 72 feet and discharges directly into the Merced River; and
- a low-level outlet, consisting of a 360-foot-long, 9-foot diameter powerhouse bypass pipe that runs from the McSwain power tunnel to Merced Falls Reservoir with a fixed wheel gate at the upstream end of the bypass and an 8-foot-diameter Howell-Bunger valve on its downstream end.

There is no transmission line associated with the project. The project connects to the interconnected system of the Pacific Gas and Electric Company (PG&E) at the step-up transformer in the powerhouse switchyard.

Merced ID maintains a single recreation area – the McSwain Recreation Area – at this development that includes a campground, picnic area, group picnic area, informal day use area, swim beach, marina, and boat ramp. As noted above, resource assessments of the potential for effects from recreational improvements at McSwain Recreation Area are incorporated by reference into this Initial Study from the Recreation PEIR that is concurrently available for public review.

Existing Project Boundary

The project boundary for the Merced River Project encompasses the two project reservoirs and project roads, infrastructure, and recreation areas. The recreational facilities located within the project boundary include McClure Point, Barrett Cove, Horseshoe Bend, and Bagby recreation areas on Lake McClure and the McSwain Recreation Area on McSwain reservoir. Along the reservoir shorelines, most of the project boundary consists of a “metes and bounds” survey line that generally follows an elevation contour above the maximum water surface elevation.

The project boundary location around the reservoirs provides a buffer of at least 50 horizontal feet from the maximum water surface elevation at all but about 0.75 mile of the 114-mile project boundary (letter from B. Kelly, Deputy General Manager, Water Resources, Merced ID, to the 2-5 Commission, filed September 13, 2013). The project boundary encompasses a 100-foot corridor of land along portions of project roads that extend beyond the larger contiguous project footprint (e.g., Lake McClure Road near its intersection with County Road J16). The New Exchequer development boundary encompasses 7,577.5 ac of Merced ID land, 3,134.8 ac of public land managed by BLM, and 13.2 ac of private land. The McSwain development boundary encompasses 927.5 ac of Merced ID land.

Existing Operations and Maintenance

Historically, Merced ID has operated Lake McClure to retain snowmelt from springtime runoff for flood control, water supply, recreation, hydropower, and environmental purposes. During winter storms, the project attenuates high flows that would otherwise pass downstream of the project, and it stores this water in Lake McClure. During the drier months of July through November, the project augments flows in the lower Merced River compared to those that would occur without the project. In spring and summer, relatively high water levels are maintained for recreation at Lake McClure. From March through October, Merced ID releases water primarily for downstream water supply. These releases are also used for hydropower generation at the New Exchequer and McSwain powerhouses. The normal maximum and minimum reservoir elevations for Lake McClure are 867 feet and 630 feet, but the reservoir is typically operated within a range of 842 feet to 780 feet.

In September and October, Merced ID releases water when necessary to achieve a level of storage that allows for the required flood space, and storage is maintained at or below this level through March. In the spring, depending on the snowpack and runoff forecasts, Merced ID begins to refill Lake McClure with the snowmelt runoff. During drier years and drier periods, water levels may consistently stay below the required flood-space level because water supply and recreation needs drive reservoir storage more than flood control requirements. McSwain reservoir is typically operated as a re-regulating afterbay for flows released from Lake McClure. This operation allows the New Exchequer powerhouse to be used to meet peak power demands or to perform load-following functions while maintaining a steady flow release to the lower Merced River. The normal maximum and minimum reservoir elevations for McSwain reservoir are 399.0 feet and 391.5 feet. Water surface elevation excursions below the normal minimum reservoir elevation do occur, but they are generally due to atypical operating conditions, such as unplanned outages, inspections, or work on the dam.

Merced ID has generally operated New Exchequer and McSwain powerhouses as base-load plants with seasonal peaking capabilities; these peaking capabilities were primarily exercised at New Exchequer powerhouse. McSwain powerhouse is operated to re-regulate flows released by New Exchequer powerhouse by providing flows that are more indicative of inflows to Lake McClure with releases dependent on the requirements for downstream water supply at, and downstream of, Crocker-Huffman diversion dam. Both project powerhouses are operated on-site by Merced ID from a centralized control center at New Exchequer Dam and powerhouse and have automatic generation control capability.

The New Exchequer development diverts all flows from Lake McClure through the intake, power tunnel, penstock, and powerhouse and then directly releases the flows to McSwain Reservoir. The McSwain development diverts all flows from McSwain Reservoir through the intake, power tunnel, penstock, and powerhouse and then directly to the Merced River and to Merced Falls Reservoir.

Benedict Lateral Canal Water System

Article 45 of the existing FERC license requires that Merced ID provide up to 15,000 acre-feet of project water and return flow to the USFWS' Merced National Wildlife Refuge (NWR). The refuge, located about 30 miles southeast of McSwain Dam, is part of the San Luis NWR Complex. It encompasses 10,262 ac of wetlands, native grasslands, vernal pools, and riparian areas. To provide this water, in the early 1990s, Merced ID made eight modifications, each of which was incorporated within the project license but not included in the project boundary, to Merced ID's Benedict lateral

canal water system, which is part of Merced ID’s water supply delivery system and composed of non-FERC project facilities. Since these modifications, Merced ID has added various other combinations of channels in its irrigation system to deliver water to Merced NWR, as well as to other Merced ID water customers.

1.3.2 Merced Falls Project

The existing Merced Falls Project consists of:

- a concrete gravity dam with a structural height of 34 feet and a crest length of 575 feet;
- three radial gates, each 20 feet long and 13.5 feet high;
- a 1-mile-long project impoundment with approximately 900 acre-feet of storage capacity, a useable storage capacity of approximately 579 acre-feet, a total surface area of approximately 65 ac, and a normal impoundment elevation of 344 feet above mean sea level (msl);
- (4) powerhouse facilities consisting of a steel building housing a 3.4- MW turbine/generator unit and a vertical Kaplan-type four-blade turbine;
- (5) a 1,000-foot-long earthen levee with a crest width of 8 feet;
- (6) an adjacent intake structure with a debris rack; and
- (7) a non-operable fish ladder.

The project has a dependable capacity of 1.7 MW and an annual average generation of approximately 14.4 GWh.

There is one existing recreation area at the Merced Falls Project (Merced Falls Recreation Area) that includes two fishing areas, River’s Edge and Merced Falls Fishing Access areas, as well as informal non-motorized boat put-in/take-out locations, informal parking areas and the Angler hiking trail that follows the water impoundment from Hornitos Bridge to the Merced Falls Fishing Access Recreation Area. More discussion on the Merced Falls FERC Hydropower Project and more details on the Merced Falls Recreation Area can be found in the Recreation PEIR.

1.2.2.1 Existing Project Boundary

The project boundary for the Merced Falls Project encompasses about 75.6 ac. The project boundary generally follows the shoreline of the impoundment at the 344-foot msl elevation contour line and encloses lands on which the powerhouse and switchyard are located. On the northeast edge of the Merced Falls impoundment, the project boundary rises above the 344-foot msl elevation contour to include a small strip (approximately 4.8 ac) of reservoir shoreline that encompasses a fishing access site owned and operated by Merced ID. PG&E owns 20.5 ac of land within the project boundary that includes lands around the project dam, powerhouse, and the Merced Falls fishing access site. Merced ID owns a majority of the remaining acreage on which PG&E possesses flowage rights. Approximately one ac of federal lands administered by BLM is within the project boundary.

1.2.2.2 Existing Operations and Maintenance

The Merced Falls Project is operated in a run-of-river mode dependent on water outflow from Merced ID's upstream Merced River Project. The Merced River Project's New Exchequer Dam discharges directly into the Merced River Project's McSwain Reservoir, which is created by McSwain Dam. Similarly, McSwain Dam discharges directly into the Merced Falls Project's Merced Falls Reservoir, formed by Merced Falls Dam.

Inflow to the Merced Falls Project passes through the impoundment, which is kept at a constant water elevation and then flows either through the powerhouse or the dam's radial gates. Flows of up to approximately 1,750 cubic feet per second (cfs) are diverted through the powerhouse and subsequently discharged into the Merced River via the tailrace. When water inflows exceed 2,200 cfs, the project spills water through the radial gates. The main section of the dam, approximately 535.5 feet long, is topped with needle beams. During flood events with flows greater than 12,250 cfs, the needle beams can be dropped, allowing the 575-foot-long concrete section of the dam to act as a spillway. Merced ID withdraws up to 100 cfs of water from Merced Falls Reservoir into its North Side Canal.

From Merced Falls Dam, the water leaves Merced ID FERC boundaries and flows approximately one mile downstream to an impoundment formed by Crocker-Huffman Diversion Dam at RM 52.0. This diversion dam is not part of either project, nor does it support hydroelectric generation. Merced ID diverts up to 2,000 cfs of water from this impoundment into its Main Canal, located on the left bank just upstream of Crocker-Huffman Diversion Dam. Water is also drawn for the Merced River Fish Hatchery, managed by the California Department of Fish and Wildlife (CDFW).

From the Crocker-Huffman Diversion Dam, the Merced River meanders another 52 miles on the valley floor, winding its way through the agricultural area of the eastern San Joaquin Valley, until it discharges into the San Joaquin River. This portion of the river has numerous water diversions that use gravity-fed ditches, pumps, and diversion dams.

1.4 Summary of Findings

Proposed Project activities could result in significant impact to several resources including cultural, tribal cultural, biological, water quality, paleontological, and recreation resources. Any potentially significant impacts were analyzed in the 2015 FEIS and the 2025 Draft PEIR for Recreation Facilities. These analyses resulted in preparation of a variety of management plans and mitigation measures, which range from biological habitat management plans and a historical property management plan in the FEIS to an erosion control plan adopted as a mitigation measure for the 2025 PEIR. Please see the 2025 PEIR, incorporated by reference, for a full list of measures intended to mitigate significant environmental effects. Many resources would not be impacted by the Proposed Project, and those that would have been were addressed by planning efforts on related projects. Those planning efforts created various management plans and mitigation measures that would reduce potential impacts associated with implementation of the Proposed Project to a less than significant level.

2.0 Project Description

This section describes the proposed Project objectives, and proposed changes at each of the project components. This section also discusses construction sequencing of the proposed Project, along with its proposed operations and maintenance. Discretionary actions and approvals that may be required are summarized.

2.1 Project Location

The Merced River Project and Merced Falls Project are located in the Merced River watershed, in Merced and Mariposa counties. Both projects currently total 8,560.1 acres of Merced ID land, 3,134.8 ac of public land managed by BLM, and 33.7 ac of private land.

Figure 2-1 shows the existing project locations in relation to the overall San Joaquin River, into which the Merced River drains, and the Delta, into which the San Joaquin River drains. Figure 2-2 shows more details of the existing Merced River Project, Merced Falls Project, and vicinity.

Figure 2-1. San Joaquin Watershed

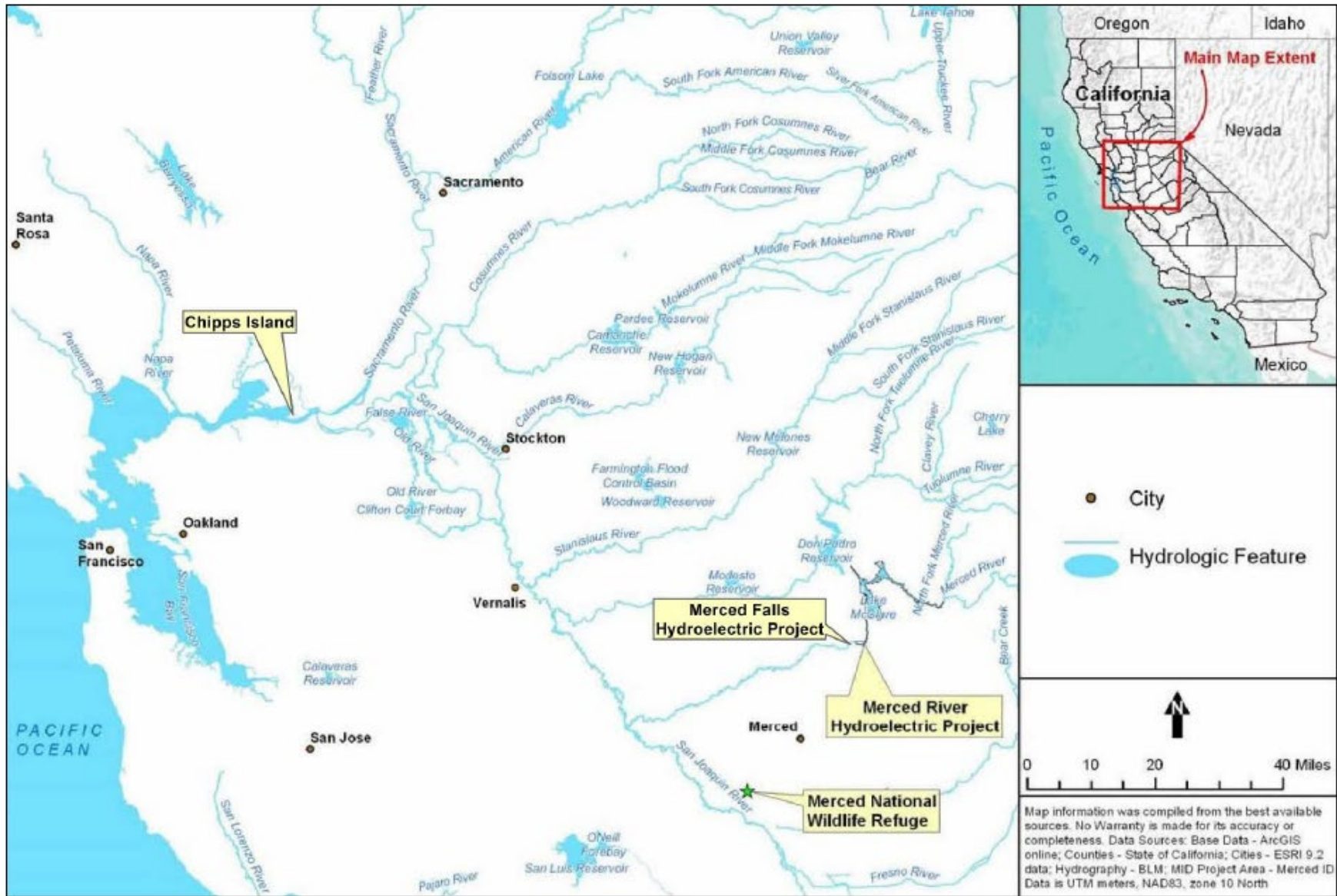
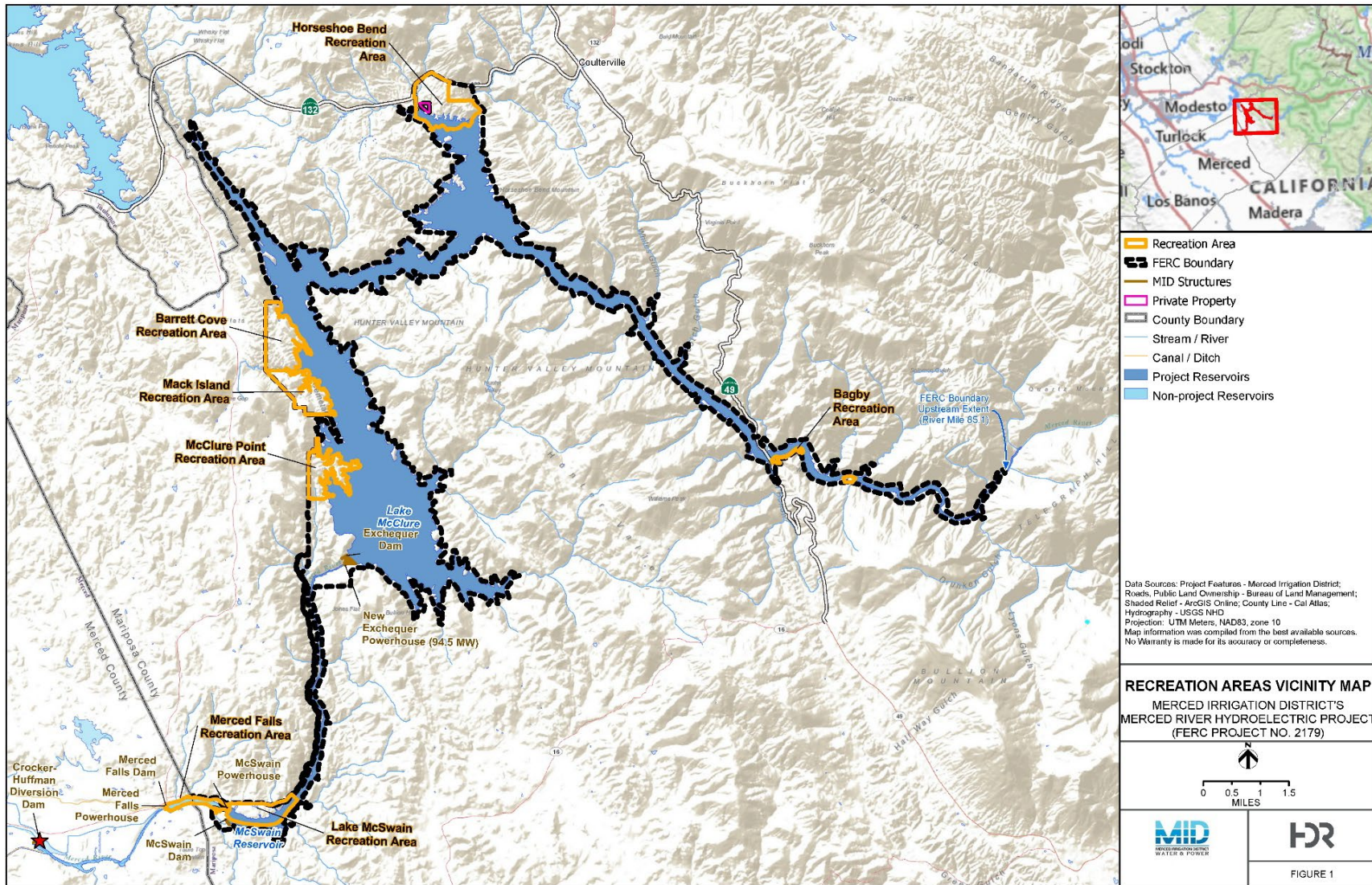


Figure 2-2. Merced ID FERC Projects Vicinity





2.1.1 Project Goal and Objectives

Relicensing of the Merced River and Merced Falls Projects (proposed Project) is proposed by Merced ID to continue to provide hydroelectric generation to meet part of California’s power requirements, resource diversity, and capacity needs. The Merced River Project has an authorized installed capacity of 101.25 megawatts (MW) and would generate approximately 387 gigawatt-hours (GWh) of electricity per year. The Merced Falls Project has an authorized installed capacity of 3.4 MW and would generate approximately 14.4 GWh per year.

The North American Electric Reliability Corporation (NERC) annually forecasts electrical supply and demand nationally and regionally for a 10-year period. The Merced River and Merced Falls Projects are located in the Western Electricity Coordinating Council region, California/Mexico subregion, of the NERC. According to NERC’s 2023 forecast, net internal demand requirements for the California/Mexico subregion are projected to grow at a rate of 0.25 percent from 2024 through 2033. NERC projects that subregion demand for electricity would grow from approximately 55.5 gigawatts in 2023 to approximately 64.6 gigawatts in 2033 (NERC 2023). Power from the Merced River and Merced Falls Projects would help meet the need for power in the California\Mexico subregion in both the short and long term.

The projects would provide low-cost power that displaces generation from non-renewable sources such as coal, oil, and natural gas. Displacing the operation of non-renewable facilities would likely avoid some power plant emissions of air pollutants and greenhouse gases (GHGs), thus creating an environmental benefit. This also would be consistent with California statutes and regulations that seek to reduce GHGs, as discussed in Section 3.3.8. In addition, the Proposed Project allows Merced ID to accrue additional revenues, part of which would be used to enhance its recreation facilities (until self-sustaining) that are provided as part of the current FERC license requirements.

Merced ID’s fundamental objective in proposing the Project is to obtain new FERC licenses of maximum term for the Merced River Project and the Merced Falls Project at minimum cost, both initially and ongoing, that protects and enhances the projects’ water supply and flood control benefits, while maximizing economic benefits from the production of electrical power and protecting and enhancing environmental, recreational, and other non-power interests and needs.

2.1.2 Supplemental Analysis

Because NEPA does not require a discussion of some issues required by CEQA, such as growth-inducing impacts, those points of analysis, if missing from the EIS, must be added or supplemented before the EIS can be used to satisfy CEQA. Therefore, CEQA Guidelines Section 15221(b) authorizes a California local government agency to prepare a CEQA supplement to add and supplement points of analysis before the EIS is used for CEQA compliance.

Merced ID staff and environmental consultants have reviewed the FERC FEIS to determine whether it meets the requirements of CEQA for use as Merced ID’s CEQA document for relicensing. Following that review, Merced ID determined that the FEIS complies with the CEQA requirements, except for the information to be included in the CEQA Supplemental Analysis, which will follow an Initial Study format for ease of review.

Merced ID intends to use and primarily rely on the FEIS and the Recreation PEIR to satisfy CEQA review requirements for the relicensing of the Merced River Project and Merced Falls Project. The FERC FEIS is used for background information and general findings discussion, and is available on

FERC's ELibrary (<https://elibrary.ferc.gov/eLibrary/search>) under Merced River Project and Merced Falls Project Docket No. P-2246 at accession no. 20190102-3000. The Recreation PEIR is being used, as incorporated, for all recreation construction and operations impacts analysis and is available in CEQAnet under SCH# 2024051222 (<https://ceqanet.opr.ca.gov/2024051222>).

Consequently, Merced ID intends to prepare this CEQA Supplemental Analysis pursuant to Section 15221(b) to add and supplement, among other things, the following CEQA considerations that were not addressed or fully covered in the FEIS:

- 1) air quality effects;
- 2) noise effects;
- 3) greenhouse gas emissions;
- 4) separate discussion on CEQA mitigation measures, including a program for monitoring or reporting on mitigation measures;
- 5) Native American tribe consultation, including outreach requirements required by Public Resources Code Section 21080.3.1 (adopted by Assembly Bill 52);
- 6) the potential for growth-inducing impacts of the Proposed Projects; and
- 7) assessing and incorporating into the Proposed Project any revisions to the United States Fish and Wildlife Service (USFWS) conservation measures that have occurred post-FEIS, as well as BLM plan development measures that were defined post-FEIS.

During the course of preparing the Supplemental Analysis, Merced ID may identify other CEQA considerations that will be included.

2.2 Proposed Project

The Proposed Project is the acceptance of the expected new FERC license, continuance of Merced River Project and Merced Falls Project operations and maintenance under the terms of the new license, and implementation of the license conditions. Existing Merced River Project facilities are described in Section 1.2, and proposed modifications to these facilities, based on the FEIS and anticipated FERC license terms and conditions, and Merced ID's FLA, are described in Section 2.2. The principal existing Merced Falls Project facilities are described in Section 1.2; Merced ID does not propose any new or upgraded facilities or structural changes to the Merced Falls Project. Terms and conditions for operations and maintenance that are expected to be included in the new Merced River Project and Merced Falls Project licenses are described in the FEIS and are discussed in Section 2.4.

As previously discussed, when FERC issues the new license, Merced ID will choose to do one of the following:

- Accept the new licenses, which would require Merced ID to operate and maintain the projects in accordance with the new license and comply with and implement all terms and conditions included in the new license (that is, Merced ID may not accept only some of the terms and conditions);
- Reject the new licenses, in which case FERC would require Merced ID to surrender the licensed facilities, under conditions which are uncertain, or continue to issue annual temporary licenses until there is concurrence on measures; or



- Contest the new licenses by seeking rehearing before FERC and requesting FERC to incorporate different terms into the license. If Merced ID does not contest the new license within the 30-day statutory rehearing period under the Federal Power Act, then FERC will deem Merced ID to have accepted the license.

A fourth option could be the acceptance of only one of the licenses, with rejection of the other. This would be unlikely to occur since the hydropower projects are complementary. There is the possibility of the Merced River Project license being accepted without the Merced Falls license, but as this would not change the proposed Project’s potential for impacts and would result in requiring the same resource commitments and measures, this option is not discussed further. A minor loss in power generation could occur.

The analysis within the CEQA Supplemental IS assumes the first bullet item, in which Merced ID accepts the new license issued by FERC. If Merced ID chooses to reject the new license issued by FERC or to contest the license, Merced ID would likely retain the existing Merced River Dam and Merced Falls Dam and reservoirs, but it would surrender the hydropower facilities. Should this scenario be pursued, it would be subject to a separate CEQA analysis.

2.2.1 Proposed Project Facilities

The expected FERC license would require or authorize the modification of certain Merced River Project facilities, which are summarized in this section. Merced ID does not propose any new or upgraded facilities or structural changes to the Merced Falls Project.

Merced River Project

Generating Facilities

Merced ID does not propose to add any new generating facilities or to modify existing facilities.

Water Delivery Facilities

As described in the FEIS, the new license would not include the Benedict lateral water delivery modifications noted in Section 1.3.1 above. Merced ID proposes to continue to provide water to Merced NWR under the new license but believes the minor facilities that were constructed in the early 1990s are not needed as part of the license. Merced ID states that providing water to the refuge is no longer the sole purpose of the facilities and that the original facilities added for this purpose are no longer the primary method of delivering water to the Merced NWR. No other changes in water delivery are proposed.

Proposed Project Boundary

Merced ID proposes the following changes to lands within the project boundary for the Merced River Project:

- Add 215.59 ac of land that would encompass the proposed Mack Island non-motorized recreation area at Lake McClure (New Exchequer development). Merced ID owns the land to be added to the project boundary.
- Add 1.06 ac of land that would encompass the main access road for the McSwain powerhouse (McSwain development). Merced ID owns the land to be added to the project boundary.

- Remove 22.60 ac of McSwain development land that overlaps with the Merced Falls Project boundary because this land is not necessary for the continued operation and maintenance of the Merced River Project and is already under FERC jurisdiction of the Merced Falls Project. Merced ID owns the land to be removed from the Merced River Project boundary.
- Remove 8.04 ac of McSwain development land that is not necessary for encompassing the extent of the McSwain reservoir spillway channel because this land is not necessary for the continued operation and maintenance of the McSwain reservoir spillway and spillway channel. Merced ID owns the land to be removed from the project boundary.

After these modifications to the project area, the New Exchequer development boundary would include 7,793.09 ac of Merced ID land (a net increase of 215.59 ac) and the McSwain development boundary would include 877.92 ac of Merced ID land (a net reduction of 29.58 ac). The Proposed Project would include a total of 8,671.01 ac of Merced ID land, 3,154.9 ac of land managed by BLM (no change), and 13.2 ac of private land (no change) within the proposed Merced River Project boundary.

Proposed Operations and Maintenance

Merced ID would operate and maintain the Merced River Project under current conditions. No changes to existing minimum flow release conditions are proposed. Proposed measures and conditions intended to protect and/or mitigate impacts that could otherwise result from Merced ID's proposed Project, as described in the FLA (<https://mercedid.org/ferc-relicensing/>), or for the purpose of enhancing resources that would be affected by the proposed Project are listed below and described more completely in the FLA and 2015 FERC EIS.

Proposed Recreation Improvements

As described in the 2015 FERC FEIS, Merced ID would continue operating and maintaining the existing recreation facilities at the Merced River and Merced Falls projects. The FEIS also proposed that Merced ID would make modifications to existing recreational facilities, construct one new recreation area, and construct one new access point to the lower Merced River (all within the Merced River hydropower project footprint). Recreation modifications proposed for the Merced River hydropower project area in the FEIS include:

- Reconstructing existing recreation development components,
- Providing recreation enhancements at McClure Point, Horseshoe Bend, Barrett Cove, Bagby, and McSwain recreation areas,
- Providing recreation enhancements, including construction of a whitewater boating takeout at Shepherd's Point primitive area,
- Constructing the new Mack Island non-motorized recreation area, and
- Maintaining existing Merced River Trail from the project boundary to the Bagby trailhead.

As noted in Chapter 1.0, Introduction, proposed improvements and upgrades to the five existing recreation facilities and construction of a new recreation area at Mack Island are covered under a separate CEQA PEIR that is concurrently available for public review (SCH# 2024051222; <https://ceqanet.opr.ca.gov/2024051222>). The findings, BMPs, and mitigation included in the Recreation PEIR are incorporated by reference into this Relicensing Supplemental IS; therefore, no additional resource analyses for recreation upgrades and improvements are included in this

document. More detail on both existing conditions and the specific upgrades and improvements at each of the recreation facilities is provided in the Recreation PEIR.

Merced Falls Project

As noted, Merced ID does not propose any new or upgraded facilities or structural changes to the Merced Falls Project, including no new or upgraded hydroelectric or water delivery facilities.

Proposed Project Boundaries

Merced ID proposes to modify the project boundary for the Merced Falls Project by removing approximately 4.8 ac of PG&E-owned land, which the utility indicates is not needed for project purposes. This proposed reduction in land encompassed by the project boundary is the result of PG&E redrawing the boundary along the north side of the project impoundment, east of the Hornitos Road bridge, to match the impoundment's high water mark; this results in the removal from the project of a strip of PG&E-owned land adjacent to the impoundment and facilities owned, operated, and maintained by Merced ID (parking lot, restrooms) within the Merced Falls Fishing Access area.

After this modification, PG&E lands within the Merced Falls Project would be reduced to 15.7 ac. No boundary changes are proposed that would affect existing Merced ID-owned and BLM-managed lands.

Proposed Operations and Maintenance

The Merced Falls Project would continue to operate in run-of-river mode dependent on water outflow from Merced ID's upstream Merced River Project.

2.2.2 Proposed Conditions in New FERC License

In the FEIS, FERC's staff recommended licenses based on the current Merced River Hydropower and Merced Falls Hydropower projects, with modifications and additions recommended by FERC; these are described in detail in the 2015 FERC Hydropower FEIS ([FERC 2015 Merced ID FEIS](#)) Sections 5.1.1.2 and 5.1.2.1. In addition to FERC staff's modifications and additions, the final FERC license also would be subject to mandatory conditions submitted by BLM under Federal Power Act Section 4(e). The FEIS discusses mandatory 4(e) conditions in Section 5.3.2. For purposes of the Proposed Project and this Supplemental CEQA Analysis (IS), Merced ID assumes that the Proposed Project would include the modifications and additions to the existing license recommended by FERC staff, as well as BLM's Federal Power Act section 4(e) conditions. These measures would be consistent with Appendix E2 of Merced ID's FLA, Merced ID's Proposed Measures and Anticipated Conditions in New License from BLM.

Merced River Project – Staff Alternative with Mandatory Conditions

The FEIS *Staff Alternative with Mandatory Conditions* included staff-recommended measures, along with the mandatory 4(e) and SWRCB conditions that were not included in the staff alternative but were analyzed in the FEIS. The mandatory conditions, which are included as components of the project description under CEQA, include:

- Provide annual funding in a contributed funds account to offset operation, maintenance, management, and administration costs incurred by BLM (BLM 4[e] Condition no. 18);

- Consult annually to review the project status and plans, results of studies, necessary modifications to plans, and protection measures for newly listed species (BLM 4[e] Conditions nos. 1 and 9);
- Consult with the agencies regarding the need for supplemental NEPA or CEQA documents for activities not addressed in the NEPA or CEQA relicensing documents (BLM 4[e] Condition no. 41);
- A fish passage or habitat restoration plan that would result in fish passage over Crocker-Huffman, McSwain, and New Exchequer dams or decrease water temperature in and downstream of the project (preliminary WQC Condition no. 8);
- Conduct surveys for limestone salamanders (BLM 4[e] Condition no. 12, in part);
- Develop a protection plan for Conservancy fairy shrimp (preliminary WQC Condition no. 6, in part); and
- Develop a protection plan for western spadefoot (preliminary WQC Condition no. 10, in part).

Post-FEIS Updated Conditions

In one of two letters submitted to FERC on December 17, 2021 (2021a; Appendix A), Merced ID requested an amendment to their application for the Merced River Project. Requested changes include:

- Revisions to the BLM's Federal Power Act Section 4(e) Condition 2, Annual Employee Training and Condition 9, Annual Review of Special-Status Species Lists and Assessment of New Species. Attachment 1 provides a redline markup of the changes agreed to by USFWS, BLM, CDFW, and State Water Board, and Attachment 2 provides a clean version of the revised conditions. As stated above, Merced ID understands BLM is supportive of these changes to its Federal Power Act Section 4(e) conditions.
- Revisions to draft license articles that were included in FERC's 2015 FEIS, including Article 4XX, Revised Vegetation Management Plan; Article 4XX, San Joaquin Kit Fox Protection Plan; and Article 4XX, Plan to Protect Special-status Frogs. Attachment 1 provides a redline markup of the changes agreed to by USFWS, BLM, CDFW, and the State Water Board, and Attachment 2 provides a clean version of the revised draft license articles.
- Replace the Vegetation Management Plan filed by Merced ID on July 29, 2015, with the updated version. Attachment 3 includes a redline markup of the changes to the current plan agreed to by USFWS, BLM, CDFW, and the State Water Board, and Attachment 4 is a clean version of the updated plan.
- New conservation measures agreed to by USFWS, BLM, CDFW, and the State Water Board, that include:
 - California Tiger Salamander Protection, and
 - Vernal Pool Fairy Shrimp Protection (both provided in Attachment 2).

Merced Falls Project

The FEIS *Staff Alternative with Mandatory Conditions* includes staff-recommended measures, along with other mandatory conditions that were not included in the *Staff Alternative* that was also



analyzed in the FEIS. The mandatory conditions include: (1) gravel augmentation in the Merced Falls reach; (2) a fish passage plan; and (3) annual consultation to review the project status and plans, results of studies, necessary modifications to plans, and protection measures for newly listed species.

Post-FEIS Updated Conditions

In one of two letters submitted to FERC on December 17, 2021 (2021b; aB), Merced ID requested an amendment to their application for the Merced Falls Project. Requested changes to the Merced Falls Project include:

- The revisions to draft license articles provided in FERC’s FEIS including Article 4XX, Noxious Weeds and Invasive Plants and Pesticide Use and Notification Plan; Article 4XX, Valley Elderberry Longhorn Beetle Protection Plan; and Article 4XX, San Joaquin Kit Fox Protection Plan. Attachment 1 includes a redline markup of the changes to the draft license article agreed to by USFWS, BLM, CDFW, and State Water Board, and Attachment 2 is a clean version of the updated draft license articles.
- The new conservation measures agreed to by USFWS, BLM, CDFW, and State Water Board that include: 1) Consultation, 2) Annual Employee Training, 3) Annual Review of Special-Status Species Lists and Assessment of New Species within the FERC Project Boundary, 4) California Red-legged Frog Protection Plan, and 5) California Tiger Salamander Protection provided in Attachment 3.

2.3 Construction Schedule and Information

Construction is anticipated to occur in phases upon acceptance of the new licenses and following the conclusion of required permitting. The removal of the Refuge Water Delivery Facilities is the only proposed permanent improvement to the outlet works and pipelines that is not part of the phased implementation approach discussed in following paragraph.

A continuation of current operations and maintenance (O&M) for both hydropower facilities is not anticipated to result in the need for construction activities beyond those associated with recreation facilities. Proposed construction and O&M conditions for each of the Project recreation areas are described and analyzed in the Recreation PEIR that is under concurrent public review and is incorporated here by reference (SCH# 2024051222; <https://ceqanet.opr.ca.gov/2024051222>; see Chapter 2 Project Description). A phased schedule for upgrades and improvements at the Merced River Project recreation facilities (there are no upgrades proposed at the Merced Falls Recreation Area) was included in the 2015 Merced River Recreation Plan (detailed in Attachment E of the Recreation Plan); the 2015 FLA Recreation Plan is attached to the Recreation PEIR as Appendix C. Descriptions of work crews, access, and anticipated equipment and materials that would be used during construction at each of the recreation facilities is also detailed in the Recreation PEIR and incorporated by reference here.

2.3.1 Environmental Management Plans or Protection Measures

The FERC relicensing process, as articulated in the FEIS, resulted in the following management plans required of the applicant, as either agreed-upon voluntary plans that would become a part of the final license agreement or as mandatory conditions placed upon the license by a federal agency with conditioning authority. Most of these plans are required to be prepared by the applicant

following acceptance of the new FERC license. As indicated below, some of these plans have been subsequently submitted to the FERC by Merced ID:

- Erosion Control and Restoration Plan¹
- Large Woody Debris Material Management
- Aquatic Invasive Species Management and Monitoring Plan
- Bald Eagle Management Plan (updated plan filed with FERC May 2022)
- Bat Management Plan
- Foothill Yellow-legged Frog Management Plan (updated plan filed with FERC March 2022)
- Limestone Salamander Sensitive Management Areas Plan (updated plan filed with FERC March 2022)
- Riparian Vegetation Monitoring Plan (updated plan filed with FERC March 2022)
- Merced River Trail Conceptual Plan and Implementation
- Recreation Facilities Plan (updated plan filed with FERC 2015)
- Historic Properties Management Plan
- Transportation Management Plan (updated plan filed with FERC March 2022)
- Fire Prevention and Response Plan
- Visual Resource Plan
- Hazardous Substance Plan (updated plan filed with FERC March 2022)

2.3.2 Monitoring

For the plans noted in Section 2.3.1, monitoring would be undertaken as outlined in the plans and agreed upon by the requisite oversight agency. No additional monitoring requirements are anticipated beyond the suite of plans listed in Section 2.3.1 above.

¹ This is not a single plan, but specific plans for each construction site that will be developed at least 90-days in advance of initiating construction of recreation or other project facilities with contents to be determined at that time.

3.0 Environmental Checklist Form

Sections 3.0, 3.1, and 3.2 display the format that the final decision will be conveyed in and are included here for illustrative purposes only. Please see attached document for final decision maker authority.

Project Title: Merced River/Merced Falls Hydroelectric Projects

Lead Agency Name and Address: Merced Irrigation District, 744 W. 20th Street, Merced, CA 95340

Contact Person and Phone Number: Juan Sandoval, Deputy General Manager - Energy Resources, 209-722-3041

Project Location: Eastern Merced County and southwestern Mariposa County

Project Sponsor's Name and Address: Merced Irrigation District, 744 W. 20th Street, Merced, CA 95340

General Plan Designation: Not applicable

Zoning: Not applicable

Description of Project: Merced ID is proposing to relicense the Merced River Hydroelectric Project (P- 2179-043) and Merced Falls Hydroelectric Project (P-2467-020) in Merced and Mariposa Counties, California under the auspices of the FERC relicensing process. Merced ID has applied to FERC for licenses with 50-year terms for both projects, For both projects, alterations to existing project boundaries are proposed. In addition, Merced ID proposes improvements to its existing recreational facilities and construction of a new recreational facility, which are analyzed in a separate C+EQA document (Merced Recreation PEIR; SCH# 2024051222 (<https://ceganet.opr.ca.gov/2024051222>)). Outside of recreation area upgrades, no changes to existing hydroelectric facilities or operations and maintenance of both projects are proposed.

Surrounding Land Uses and Setting: See Recreation PEIR (incorporated by reference).

Other Public Agencies whose Approval is Required (e.g., permits, financing approval, or participation agreement.): Federal Energy Regulatory Commission is required to approve relicensing. Other agencies from whom permits and approvals are required are listed in Table 2-1.

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, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? California Native American tribes traditional and cultural affiliated with the project area were notified via certified mail on August 1, 2024. No California Native American tribes have requested consultation pursuant to Public Resources Code section 21080.3.1. As described in the FEIS, Condition 21 of the Section 4(e) Land Management Conditions requires Merced ID, upon Commission approval, to implement the Historic Properties Management Plan (HPMP). Section 5.4 of the HPMP describes Merced ID's responsibilities for ongoing consultation with the Native American community throughout the term of the new license both as a general management measure as well as in support of any new undertaking (for the purposes of Section 106) or project (for the purposes of CEQA).



3.1 Environmental Factors Potentially Affected

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

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

3.2 Determination (To be Completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the project would 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.

 Signature

 Date:

3.3 Evaluation of Environmental Impacts

- a) 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).
- b) 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.
- c) 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.
- d) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- e) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - i. Earlier Analysis Used. Identify and state where they are available for review.
 - ii. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - iii. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- f) 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.
- g) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.



- h) 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.
- i) The explanation of each issue should identify:
 - i. The significance criteria or threshold, if any, used to evaluate each question; and
 - ii. The mitigation measure identified, if any, to reduce the impact to less than significance.

3.3.1 Aesthetics

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

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The Mariposa County General Plan identifies scenic vistas in the Project vicinity as views along State Route 49, which is also eligible for designation as a State Scenic Highway. Merced County’s General Plan identifies scenic vistas within the county as views of the Coastal ranges and Sierra Nevada foothills from the central valley floors.

The main visual resources in the area are Lake McClure and McSwain Reservoir, two waterbodies created by dams. The land surrounding the reservoirs contains substantial acreage of blue oak woodland, along with fewer acres of foothill pine woodland and interior live oak woodland (see Biological Resources section).

The Proposed Project focuses on the relicensing of hydroelectric facilities. No new facilities would be constructed, and no existing facilities would be altered. The only significant alterations to existing facilities would occur in the recreation areas, and the environmental impacts of these alterations have been analyzed in the Recreation PEIR located on CEQAnet under SCH# 2024051222 (<https://ceqanet.opr.ca.gov/2024051222>).

Merced ID proposes to implement a Visual Resource Management Plan, as amended on August 12, 2015, consistent with BLM final 4(e) condition 24, to provide guidance for the management of visual resources on lands administered by BLM within the project boundary. The plan includes identifying project facilities in need of visual resource mitigation, addressing project facility building materials (e.g., paint colors, landscaping, spoil piles), and implementing visual resource measures to bring

existing and new project facilities into compliance with visual resource objectives in BLM's Sierra Resource Management Plan. Merced ID included the following specific measures for Barrett Cove and Horseshoe Bend recreation areas:

- Painting the Barrett Cove recreation area maintenance yard warehouse/storage building a gray-green color to blend the facilities with the surrounding landscape;
- Planting vegetation to screen the warehouse area from the parking lot;
- Painting the Horseshoe Bend recreation area maintenance yard warehouse and water tank a gray-green color to blend the facilities with the surrounding landscape;
- Removing the existing ranger station house located below the water tank and constructing a new house near the maintenance yard; and
- Planting shrubs to screen the maintenance yard warehouse from the main entry road.

Merced ID would secure BLM approval of the color used to paint any facilities located on BLM-managed land. Merced ID would also implement a Recreation Facilities Plan, an Erosion and Sediment Control Plan, and an Integrated Vegetation Management Plan (see Section 2.3.1). Related to potential construction effects, these plans describe actions to ensure construction activities are developed in coordination with applicable agencies to properly control erosion, protect vegetation, and eliminate or minimize the appearance of disturbed landscapes and construction activities. Additionally, Merced ID would also obtain all necessary permits and approvals for the work, which would provide the proper authorization for construction and contain specific requirements. With implementation of these plans, the Proposed Project would have impacts on the visual character of public views that would be less than significant.

Impact Analysis

- a) **Less Than Significant Impact.** The Proposed Project would be consistent with existing characteristics of the project area and would not substantially alter the visual character of the site. Therefore, it would not directly diminish the scenic quality any vista or view corridor. Therefore, the Proposed Project would not affect the eligibility of State Route 49 as a scenic highway and would have an impact on scenic vistas that is less than significant.
- b) **Less Than Significant Impact.** The Proposed Project is not located on, adjacent to, or visible from any scenic state highway and there are no known designated scenic resources in the project area. However, State Route 49 (known as the Golden Chain Highway) is a 317-mile state highway that is eligible for state scenic highway designation. Within the FERC Project Boundary, State Route 49 crosses the Merced River at the upstream end of Lake McClure, near the Bagby Recreation Area. As noted, the Proposed Project would be consistent with existing characteristics of the project area and would not substantially alter the visual character of the site. Therefore, the Proposed Project would not affect the eligibility of State Route 49 as a scenic highway and would have an impact on scenic resources or a state scenic highway that is less than significant.
- c) **Less Than Significant Impact.** The Proposed Project is located in a rural area. Therefore, Public Resources Code Section 21099, which addresses transit priority areas, would not apply.
- d) **No impact.** Lighting in the Proposed Project area is limited to the recreation areas. The Recreation PEIR analyzes the potential lighting impacts. As the Proposed Project would not



construct new facilities or improve existing facilities, it would not introduce any lighting that could potentially illuminate adjacent light-sensitive properties. It also would not introduce any materials or structures that could generate glare. The Proposed Project would have no impact related to light and glare.



3.3.2 Agriculture and Forestry Resources

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

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

In review of the data available on the Farmland Mapping and Monitoring Program of the California Resources Agency, there are none no lands defined as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance of these kinds of lands present within the current or proposed FERC Project Boundary.

Within the FEIS, it is stated that agricultural zoning/designed lands by Merced County for agricultural land within the FERC Boundary of the Merced River Project is present to the southwest of Lake

McClure and around McSwain Reservoir and surrounding the FERC boundary of the Merced Falls Project. Where the FERC boundaries are proposed to change, these changes would not conflict with existing agricultural zoning. Changes include removing some of its land along the Merced Falls reservoir shoreline from the project boundary, and that land is already leased for grazing. They also include the addition of land for the proposed Mack Island non-motorized recreation area. The FEIS does not state if that area is zoned and what that zoning may be. Based on a review of Mariposa County zoning, the area is zoned as Public Sites (PS) and therefore not for agricultural use. There are no Williamson Act lands within the current or Proposed Project FERC boundary.

Per the FEIS, there are conifer forests upstream of Lake McClure and within the Merced River Basin (also see Recreation PEIR discussion of vegetation communities for more detail (on CEQAnet under SCH# 2024051222 (<https://ceqanet.opr.ca.gov/2024051222>)). Additionally, one of the dominant botanical communities within the upland areas includes blue oak vegetation. A review of current zoning and General Plan designations indicates that no lands with forest or timber zoning or designations are located within the proposed Project boundary.

Impact Analysis

- a) **No impact.** Per the FEIS, there are no defined agricultural lands, and prime farmlands are not addressed. As such, the Proposed Project would have no impact on potential conversion of these farmlands.
- b) **Less than significant impact.** No changes to Merced or Mariposa County's zoning are anticipated as a consequence of the Proposed Project. Therefore, the Proposed Project would have no impact related to agricultural zoning or Williamson Act lands.
- c) **No impact.** No changes to Merced or Mariposa County's zoning are anticipated as a consequence of the Proposed Project. Therefore, the Proposed Project would have no impact on land zoned for forest or timber.
- d) **No impact.** There would be no loss of forest land or conversion of forest land to non-forest use. Therefore, the Proposed Project would have no impact on conversion of forest land.
- e) **No impact.** The Project does not propose any changes to facility operations, including no changes to flow regime. Therefore, the Proposed Project is consistent with the existing conditions and is not expected to lead to additional changes in irrigation that could lead to conversion of Farmland. No designated forest lands are anticipated to be directly or indirectly impacted. Therefore, the Proposed Project would have no impact on indirect conversion of Farmland or forest land.



3.3.3 Air Quality

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

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

The Proposed Project is located in Merced County and Mariposa County. All of Merced County, within which the Merced Falls Project is located, is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD), which covers all or part of eight counties in the San Joaquin Valley. Mariposa County, within which the Merced River Project is located, is under the jurisdiction of the Mariposa County Air Pollution Control District (MCAPCD). The proposed Project would continue to operate under current flow and other hydrological conditions.

The Clean Air Act (CAA) is the primary federal law governing air quality. The CAA is regulated by the USEPA, which sets standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). The California Clean Air Act requires all areas of California to achieve and maintain the California Ambient Air Quality Standards (CAAQS), which generally are more stringent than the NAAQS. The California Air Resources Board (CARB), a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. The regional and local air districts implement federal and State regulations through their rules and permitting processes.

As shown in Table 3-1, the San Joaquin Valley is currently classified as nonattainment for the federal 8-hour ozone National Ambient Air Quality Standard (NAAQS) and maintenance for the particulate matter with a diameter of less than 2.5 micrometers (PM2.5). SJVAPCD has created various Air Quality Attainment Plans (AQMP), which represent a regional blueprint for achieving healthy air in the Valley. The 2022 Plan for 8-hour Ozone Standard (2022 Ozone Plan) is the most recent ozone attainment plan and was adopted on December 15, 2022. The 2022 Ozone Plan provides strategies to attain the federal 2015 NAAQS for ozone of 70 ppb. The Valley is on track to



meet the federal 1997 8-hour ozone standard of 84 ppb ahead of the projected 2023 attainment day included in the 2007 Ozone Plan and the Valley is on track for meeting the 2008 standard of 75 ppb by 2031 (SJVAPCQMD 20223).

Table 3-1. San Joaquin Valley Attainment Status

| Pollutant | Federal Standards | State Standards |
|-------------------------------|-------------------------------|-------------------------|
| Ozone – 1-hr | Revoked | Nonattainment/Severe |
| Ozone – 8-hr | Nonattainment/Extreme | Nonattainment |
| PM ₁₀ | Attainment | Nonattainment |
| PM _{2.5} | Nonattainment | Nonattainment |
| Carbon Monoxide | Unclassified/Attainment | Unclassified/Attainment |
| Nitrogen Dioxide | Unclassified/Attainment | Attainment |
| Sulfur Dioxide | Unclassified/Attainment | Attainment |
| Lead (particulate) | No Designation/Classification | Attainment |
| Hydrogen Sulfide | No Federal Standard | Unclassified |
| Sulfates | No Federal Standard | Attainment |
| Visibility Reducing Particles | No Federal Standard | Unclassified |
| Vinyl Chloride | No Federal Standard | Attainment |

Source: San Joaquin Valley Air Pollution Control District. 2024.

The attainment status for Mariposa County is provided in Table 3-2. Mariposa County is in attainment or has an unclassified status for all state and federal ambient air quality standards, with the exception of the ozone standard. On November 21, 2023, the MCAPCD adopted the 2023 Plan for Attaining the NAAQS for Ozone in Mariposa County (2023 Ozone Attainment Plan). The 2023 Ozone Attainment Plan *intends to aid the County in achieving attainment status by 2026*.

Table 3-2. Mariposa County Attainment Status

| Pollutant | Federal Standards | State Standards |
|-------------------------------|-------------------------|-----------------|
| Ozone – 1-hr | No Federal Standard | Nonattainment |
| Ozone – 8-hr | Nonattainment | Nonattainment |
| PM ₁₀ | Unclassified | Unclassified |
| PM _{2.5} | Unclassified/Attainment | Unclassified |
| Carbon Monoxide | Unclassified/Attainment | Unclassified |
| Nitrogen Dioxide | Unclassified/Attainment | Attainment |
| Sulfur Dioxide | Unclassified/Attainment | Attainment |
| Lead (particulate) | Unclassified/Attainment | Attainment |
| Hydrogen Sulfide | No Federal Standard | Unclassified |
| Sulfates | No Federal Standard | Attainment |
| Visibility Reducing Particles | No Federal Standard | Unclassified |
| Vinyl Chloride | No Federal Standard | Unclassified |

Source: California Air Resources Board. 2024. Maps of State and Federal Area Designations. [Maps of State and Federal Area Designations | California Air Resources Board](#).

Other emissions of concern are toxic air contaminants (TACs). TACs are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or cause adverse environmental effects. Diesel engines emit a complex mixture of pollutants, including very small carbon particles, or "soot" coated with numerous organic compounds, known as diesel particulate matter (DPM), which is the most common TAC encountered. In addition to its health effects, DPM can contribute to haze that reduces visibility. Diesel engines are generally associated with freight trucks and with construction equipment.

The construction and operational activities for the proposed recreational facilities have the potential to obstruct implementation of the applicable air quality plans and emit other odors and TACs. Detailed information on proposed recreation upgrades can be found in the Recreation PEIR (on CEQAnet under SCH# 2024051222; (<https://ceqanet.opr.ca.gov/2024051222>)). Consideration of the



potential for impacts resulting from recreation construction and operations is detailed in the Recreation PEIR, Section 3.2; tables that show National and California Air Quality Standards and Criteria Pollutant Effects and Sources are also found in the Recreation PEIR. Findings demonstrate that there are no anticipated impacts on Air Quality related to the proposed recreation construction.

To further reduce the potential for effects, a list of construction best management practices (BMPs) for Air Quality management is presented in Section 2.3.3. These BMPs would be required during construction activities. However, the proposed Project's primary objective is to obtain a new FERC license, and outside of upgrades and improvements to recreation area facilities, no other new construction would occur. Therefore, no air quality impacts from non-recreation construction activities are expected.

Finally, under the FERC relicensing processes, a number of environmental management plans were developed which would benefit biological and other resources but could also introduce vehicles trips for inspections and/or maintenance activities. These trips would be minimal, infrequent, and would not generate a substantial amount of emissions.

Impact Analysis

- a) **Less than significant impact.** No new non-recreation construction would occur, and the project would not increase operational activities. Thus, no increase of any criterial pollutants is anticipated, other than during short term upgrades and improvements at recreation sites; however, these impacts were found to be less than significant in the Recreation PEIR.
- b) **Less than significant impact.** Cumulatively considerable impacts could result if the construction of other projects within Merced and Mariposa counties also occur at the same time as the project and in the same geographic scope. However, Mariposa County has no applications for projects in the vicinity and operations of the proposed Project itself would not generate any additional criteria pollutants. Therefore, effects associated with the non-recreation features' operations would have no cumulative air quality impacts.

The construction and operational activities for the proposed recreational facilities have the potential to result in a cumulatively considerable net increase in criteria pollutants for which the project region is in non-attainment. These activities have been fully evaluated in the Recreation PEIR (<https://ceqanet.opr.ca.gov/2024051222>) and were found to be Less than Significant.

- c) **No impact.** Land uses, such as schools, hospitals, and convalescent homes are considered to be sensitive to poor air quality conditions because infants, children, the elderly, and people with health afflictions (especially respiratory ailments), are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present (CARB 2005). Of particular concern is ozone, for which both Merced and Mariposa Counties are in nonattainment status.

There are no sensitive receptors, defined by the California Resources Air Board as 'children, elderly, asthmatics and others whose are at a heightened risk of negative health outcomes due to exposure to air pollution,' in close proximity to the project, nor are there changes to the existing Project that would result in an increase of air emissions. Therefore, the Proposed Project would have no impact on sensitive receptors (details on assessment regarding short

term recreation effects can be found in the Recreation PEIR (<https://ceqanet.opr.ca.gov/2024051222>), in Section 3.3.3 Air Quality.

- d) **Less than significant impact.** The proposed Project would not introduce any new operations or have any components that would typically emit odors, such as agricultural uses, wastewater treatment plants, chemical plants, refineries, and landfills.

The construction and operational activities for the proposed recreational facilities have the potential to result in other emissions (such as those leading to odors). However, these activities have been evaluated in the Recreation PEIR (Section 3.3.3 Air Quality) and were found to be Less than Significant (<https://ceqanet.opr.ca.gov/2024051222>).

3.3.4 Biological Resources

Would the project:

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

There were no impacts identified in the Recreation PEIR on sensitive biological resources, other than temporary impacts during construction that would be covered by required agency permits and/or were reduced to less-than-significant via mitigation measures that would be in effect prior to relicensing (<https://ceqanet.opr.ca.gov/2024051222>).

The Recreation PEIR did not analyze other potential effects on biological resources not identified to occur or have the potential to occur in the identified area described in the Recreation PEIR or from the implementation of the new licenses outside of construction and operations at recreation areas.

Therefore, separate summaries of existing conditions and impact analysis for specified biological resources is included herein.

Environmental Setting

A portion of the Proposed Project boundary is covered in the existing conditions for terrestrial and semi-aquatic species were described in the Recreation PEIR and are incorporated by reference here (<https://ceqanet.opr.ca.gov/2024051222>), This section includes information only for those areas of the Proposed Project boundary not included in the PEIR.

Vegetation Communities

Habitat within the Proposed Project was mapped using CDFW’s Vegetation Classification and Mapping Program (VegCAMP) (Appendix E, Veg Communities Maps). All except 488 acres of the easternmost Merced River Project were covered by an existing VegCAMP model. This unmodeled area was surveyed on June 5, 2024, and the data digitized. All surveyed areas had a similar herb dominated understory consisting of Italian thistle (*Carduus pycnocephalus*), short pod mustard (*Hirschfeldia incana*), wild oat (*Avena* sp.), bristly dogtail grass (*Cynosurus echinatus*), and ripgut brome (*Bromus diandrus*), with wild oat being the dominant species with a lesser codominance of ripgut brome.

The vegetation alliances were assessed per the NatureServe Heritage Program Status Ranking system rankings². The alliances were then assessed for criteria meeting the definition of a sensitive natural community based on rarity and threats (CDFW, California Sensitive Natural Communities, 2023) (S1³, S2⁴, S3⁵, S4⁶, or S5⁷).

There were 18 total alliances identified within the Proposed Project boundaries, including 5 tree-dominated, 6 shrub-dominated, 1 herbaceous and 4 other habitats, as summarized in Table 3-3. Map books showing National Wetlands Inventory (NWI), sensitive communities, and vegetation communities maps are shown in Appendix C.

² Faber-Langendoen D, Nichols J, Master L, Snow K, Tomaino A, Bittman R, Hammerson G, Heidel B, Ramsay L, Teucher A, and Young B. 2012. NatureServe Conservation Status Assessments: Methodology for Assigning Ranks. NatureServe, Arlington, VA

³ CDFW defines a S1 special-status vegetation community as “Critically imperiled and at a very high risk of extinction or elimination due to extreme rarity, very steep declines, or other factors.”

⁴ CDFW defines a S2 special-status vegetation community as “Imperiled and at high risk of extinction or elimination due to a very restricted range, very few populations or occurrences, steep declines, or other factors.”

⁵ CDFW defines a S3 special-status vegetation community as “Vulnerable and at moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors.”

⁶ CDFW defines a S4 special-status vegetation community as “At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.”

⁷ CDFW defines a S5 special-status vegetation community as “Secure and at very low or no risk of extirpation due to very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.”



Table 3-3. VegCAMP Alliances in the Proposed Project.

| Alliance | CDFW Ranking | Total Acreage |
|--|--------------|---------------|
| Annual Grassland | N/A | 989.41 |
| Arroyo Willow Thicket | S4 | 0.48 |
| Blue Oak Woodland and Forest | S5 | 1801.09 |
| Buck Brush Chaparral | S4 | 42.85 |
| California Buckeye Grove | S3 | 9.21 |
| California Yerba Santa Scrub | S5 | 67.46 |
| Chamise Chaparral | S5 | 687.46 |
| Foothill Pine Woodland | S4 | 196.28 |
| Foothill Pine Woodland/Wild Oat Grassland | S4 | 9.97 |
| Interior Live Oak Woodland | S4 | 395.66 |
| Interior Live Oak Woodland/Toyon Scrubland | S4 | 76.00 |
| Poison Oak Scrub | S4 | 6.10 |
| Red Willow Riparian Forest and Woodland | S3 | 32.52 |
| Toyon Chaparral | S4 | 1.08 |
| Urban/Developed | N/A | 191.77 |
| Valley Oak Riparian Forest and Wetland | S3 | 2.73 |
| White Alder Grove | S4 | 0.58 |
| Whiteleaf Manzanita Chaparral | S4 | 33.06 |

Sensitive Natural Areas

There are multiple types of defined sensitive natural areas within the Proposed Project boundary, including sensitive vegetation alliances, critical habitat and Areas of Critical Environmental Concern, discussed below. Map books showing NWI, sensitive communities, and vegetation communities maps are shown in Appendix C.

Sensitive Vegetation Alliances

Sensitive Vegetation Alliances, as defined by CDFW, that occur in the Proposed Project boundary include California Buckeye Grove, Valley Oak Riparian Forest and Woodland, and Red Willow Riparian Forest and Woodland (3-3). These three communities are ranked S3 which means they are considered, “Vulnerable and at moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors.”

There are 9.21 acres of California Buckeye Groves, 32.52 acres of Red Willow Riparian Forest and Woodland and 2.73 acres of Valley Oak Riparian Forest and Woodland in the Proposed Project boundary.

Critical Habitat

The USFWS defines critical habitat as area inhabited by listed species that contain physical and/or biological features essential to that species survival that may need management and/or protection.

Approximately 4.10 acres of critical habitat for fleshy owl’s-clover (*Castilleja campestris* ssp. *succulenta*), hairy Orcutt grass (*Orcuttia pilosa*), and vernal pool fairy shrimp (*Branchinecta lynchi*) occurs in the Proposed Project boundary. However, the area within the critical habitat does not provide subtle habitat for vernal pool species.

Areas of Critical Environmental Concern

There are three Areas of Critical Environmental Concern (ACEC) occurring in the Proposed Project boundary, including Limestone Salamander, Bagby Serpentine and Merced River. The Limestone Salamander ACEC, which is designated for the protection of the limestone salamander (*Hydromantes brunus*), has 48.25 acres in the Proposed Project boundary. Bagby Serpentine ACEC was designated to protect the Henneke soil series on serpentine substrate, which is home to rare, endemic plant species and has 272.44 acres within the Proposed Project boundary (SWRCB 2016). Finally, the Merced River ACEC has 30.45 acres in the Proposed Project boundary and covers a portion of the river under consideration for, or designated as, a National Wild and Scenic River (BLM 1991). Any lands that are adjacent to or otherwise near an already designated ACEC that are acquired to conserve any of the special attributes identified for the previously established ACEC are managed under those same guidelines until the newly acquired lands are formally designated as part of the established ACEC. As part of the management actions for special-status species, the already existing Limestone Salamander ACEC was expanded to include lands with any known limestone salamander occurrences or suitable habitat.

Merced Wild and Scenic River

There are 30.45 acres of the Merced Wild and Scenic River within the Proposed Project boundary. The Merced Wild and Scenic River was added to the system in 1987 for its free-flowing condition, water quality, geology, cultural and historic resources, special-status wildlife, riparian vegetation and recreational use (NPS 2024).⁸

National Wetland Inventory

Aquatic features within the Proposed Project, as modeled by the USFWS, is described in Table 3-4 and depicted in Appendix C. The wetland types are defined by the NWI.⁹

Table 3-4. National Wetland Inventory Modeled Wetlands in the Proposed Project Boundary.

| Wetland Type | Acreage | Definition ¹⁰ |
|---------------------|---------|---|
| Palustrine Emergent | 3.97 | Includes wetlands dominated by vegetation and are generally less than 20 acres in size and are no deeper than 8.2 feet. Vegetation is comprised of herb species that are generally perennial. |
| Palustrine Forested | <1 | Includes wetlands dominated by vegetation and are generally less than 20 acres in size and are no deeper than 8.2 feet. Vegetation is comprised of woody plants that are at least 20 feet tall. |
| Palustrine Shrub | 8.29 | Includes all wetlands dominated by vegetation and are generally less than 20 acres in size and are no deeper than 8.2 feet. |

⁸ NPS. 2024. Restoration of the Merced River in Yosemite Valley. Available online: < [Merced River Restoration - Yosemite National Park \(U.S. National Park Service\)](#)>. Accessed February 9, 2025. Last updated July 2, 2024. NPS, Merced, CA.

⁹ FWS. 2024. National Wetland Inventory. U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C. <https://www.fws.gov/wetlands/data/Mapper.html>

¹⁰ Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, U.S. Geologic Survey, Reston Virginia.



| Wetland Type | Acreage | Definition ¹⁰ |
|-----------------------|-----------------|--|
| | | Vegetation is comprised of woody plants that are less than 20 feet tall. |
| Palustrine | 5.22 | Includes wetlands dominated by vegetation and are generally less than 20 acres in size and are no deeper than 8.2 feet. This form of palustrine is used for areas that are less homogenously vegetated as those above. |
| Lacustrine Limnetic | 6,141.98 | Includes wetlands and habitats in a topographic depression or dammed river channel that generally lacks persistent vegetation and is greater than 20 acres in size. Limnetic refers to areas that have depths below 8.2 feet deep. |
| Lacustrine Littoral | 667.59 | Includes wetlands and habitats in a topographic depression or dammed river channel that generally lacks persistent vegetation and is greater than 20 acres in size. Littoral refers to areas that have depths no less than 8.2 feet. |
| Intermittent Riverine | 29.77 | Includes wetlands and habitats contained within a channel that is typically flowing part of the year. If water is not flowing it may remain in isolated pools or surface water may be absent. |
| Perennial Riverine | <1 | Includes wetlands and habitats contained within a channel that is typically flowing the entire year |
| Total | 6,857.10 | |

VegCAMP Alliances

Additionally, as described above, four riparian and/or wetland alliances were identified within the Proposed Project boundary. These included 32.52 acres of Red Willow Riparian Forest and Woodland, 2.73 acres of Valley Oak Riparian Forest and Woodland, 0.48 acre of Arroyo Willow Thicket and 0.58 acre of White Alder. These are all shown on Appendix C.

Special-Status Species

The majority of special-status species (species listed on the federal Endangered Species Act (ESA) and California Endangered Species Act (CESA) are included in this definition, as well as species identified and assigned a status ranking by governmental agencies such as CDFW, USFWS, BLM, and non-profit organizations such as California Native Plant Society) were described in the Recreation PEIR and are incorporated by reference here (<https://ceqanet.opr.ca.gov/2024051222>). However, there are multiple special-status plant species that were evaluated as having the potential to occur in the Proposed Project boundary, which were not discussed in the PEIR.

SPECIAL-STATUS PLANT SPECIES

There were 11 additional special-status plant species identified as occurring or having the potential to occur in the Proposed Project boundary, beyond those discussed in the PEIR. Of these, five species were located during relicensing surveys of the Proposed Project boundary at a total of 29 occurrences. Table 3-5 below summarizes the designation, habitat and occurrence of the special-status plant species known or with the potential to occur on the Proposed Project.

Table 3-5. Special-status Plant Species

| Species | Special-status Designation | Species Habitat Description | Discussed in FEIS (Yes/No) | Occurrence within the Proposed Project Boundary ^{1J} |
|---|----------------------------|---|----------------------------|---|
| Henderson's bent grass <i>Agrostis hendersonii</i> | CRPR 3.2 | Vernal pools and mesic grassland. Elevation: 225–1,000 feet. Blooming period: April–June. | No | May occur, there are vernal pools and grasslands present in the Proposed Project. |



| Species | Special-status Designation | Species Habitat Description | Discussed in FEIS (Yes/No) | Occurrence within the Proposed Project Boundary ^{1J} |
|---|----------------------------|---|----------------------------|--|
| Congdon's onion <i>Allium sanbornii</i> var. <i>congdonii</i> | CRPR 4.3 | Foothill woodland, and chaparral. Ultramafic affinity to serpentine outcrops. Elevation: 980–2,300 feet. Blooming period: Apr–Jul. | No | May occur, there are foothill woodland and chaparral habitats as well as serpentine outcrops present in the Proposed Project |
| Brewer's calandrinia <i>Calandrinia breweri</i> | CRPR 4.2 | Chaparral and coastal scrub. Sandy to loamy soil, disturbed sites, and burns. Elevation: 0–4,000 feet. Blooming period: Feb–Jun. | No | May occur, there are chaparral habitats and disturbed sites in the Proposed Project. |
| Small-flowered gypsum-loving larkspur <i>Delphinium gypsophilum</i> ssp. <i>parviflorum</i> | CRPR 3.2 | Clay, rocky, and sometimes serpentinite soils in cismontane woodland and grasslands. Elevation: 625–1,150 feet. Blooming period: March–June | No | CONFIRMED PRESENT in the Proposed Project. There was 1 occurrence located on the Proposed Project, on private land. |
| Ewan's larkspur <i>Delphinium hansenii</i> ssp. <i>ewanianum</i> | CRPR 4.2 | Rocky soils in cismontane woodland and grassland. Elevation: 196–1,968 feet. Blooming period: March–May. | No | May occur, there are cismontane woodland and grassland habitats present in the Proposed Project. |
| tripod buckwheat <i>Eriogonum tripodum</i> | CRPR 4.2 | Strict serpentine endemic. Foothill woodland and chaparral. Elevation: 325–2,625 feet. Blooming period: May–July. | No | May occur, there are chaparral and foothill woodland habitats as well as serpentine outcrops present in the Proposed Project. |
| tansy-flowered woolly sunflower <i>Eriophyllum confertiflorum</i> var. <i>tanacetiflorum</i> | CRPR 4.3 | Oak woodlands (sometimes in serpentine). Elevation: 1,970–2,625 feet. Blooming period: May–July. | Yes | CONFIRMED PRESENT in the Proposed Project. There were 7 occurrences located on the Proposed Project, on the following lands: 6 BLM; 1 Merced. |
| stinkbells <i>Fritillaria agrestis</i> | CRPR 4.2 | Chaparral, cismontane woodland, and valley and foothill grassland (sometimes in serpentine). Elevation: 35–5,100 feet. Blooming period: March–June. | Yes | CONFIRMED PRESENT in the Proposed Project. There was 1 occurrence located on the Proposed Project, on BLM land. There are chaparral, cismontane woodland, and grassland habitats as well as serpentine outcrops present in the Proposed Project. |
| serpentine bluecup <i>Githopsis pulchella</i> ssp. <i>serpentinicola</i> | CRPR 4.3 | Yellow pine forest, foothill woodland (often in serpentine). Elevation: 490–4,755 feet. Blooming period: May–June. | Yes | CONFIRMED PRESENT in the Proposed Project. There were 4 occurrences located on the Proposed Project, on the following lands: 2 BLM; 1 Merced; 1 Private <i>There are foothill woodland habitats as well as serpentine outcrops present in the Proposed Project.</i> |
| Hogwallow starfish <i>Hesperevax caulescens</i> | CRPR 4.2 | Mesic grassland in clay soils and shallow vernal pools. Elevation: 0–1,656 feet. Blooming period: March–June. | No | May occur, there are vernal pool habitats present in the Proposed Project. |



| Species | Special-status Designation | Species Habitat Description | Discussed in FEIS (Yes/No) | Occurrence within the Proposed Project Boundary ¹¹ |
|---|----------------------------|---|----------------------------|---|
| foothill jepsonia <i>Jepsonia heterandra</i> | CRPR 4.3 | Yellow pine forest, foothill woodland. Crevices, especially in slate-like rock; dry, rocky slopes. Elevation: 0-2,300 feet. Blooming period: Aug-Jan. | Yes | CONFIRMED PRESENT in the Proposed Project. There were 17 occurrences located on the Proposed Project, on the following lands: 5 BLM; 8 Merced; 4 Private There are foothill woodland habitats present in the Proposed Project. |

SPECIAL-STATUS FISH SPECIES

Federal Threatened and Endangered Fish Species

Three species are listed, proposed or candidate as threatened or endangered under the federal ESA and have the potential to occur in the Proposed Project boundary or have potential to be affected by downstream conditions from Proposed Project operations:

- Green Sturgeon (*Acipenser medirostris*), southern DPS, FT;
- California Central Valley (CCV) steelhead (*Oncorhynchus mykiss*), FT.
- Central Valley spring-run Chinook Salmon ESU (*Oncorhynchus tshawytscha*), San Joaquin River XN, FT and California listed as threatened.

State and Other Protected Fish Species

Six species are protected under CESA or other federal or State protection and have the potential to occur in the Proposed Project boundary based on habitat availability or have potential to be affected by downstream conditions from Proposed Project operations:

- White Sturgeon (*Acipenser transmontanus*), California species of special concern
- Pacific Lamprey (*Entosphenus tridentatus*), California species of special concern (SSC);
- Kern Brook Lamprey (*Lampetra hubbsi*), California SSC;
- Hardhead (*Mylopharodon conocephalus*), California SSC;
- Sacramento Splittail (*Pogonichthys macrolepidotus*), California SSC
- Central Valley fall-run Chinook Salmon Evolutionarily significant Unit (ESU) (*Oncorhynchus tshawytscha*), federal species of concern (SC), California SSC;

FISH MOVEMENT CORRIDORS

Anadromous fishes have access to the Merced River from the confluence with the San Joaquin River upstream to the Crocker-Huffman Diversion Dam, which does not provide fish passage to further upstream. The reach downstream of Crocker-Huffman Diversion Dam to Shaffer Bridge is identified as the primary spawning reach for salmonids (FERC 2015; [FERC 2015 Merced ID FEIS](#))¹¹.

¹¹ Federal Energy Regulatory Committee. (2015). *Final Environmental Impact Statement for Hydropower Licenses: Merced River and Merced Falls Hydroelectric Projects No. 2179-043 and 2467-020*. (FEIS No. 0259)

FISH HABITAT AND ESSENTIAL FISH HABITAT

The Proposed Project area is comprised of impounded sections of the Merced River and supports a recreational fishery for both warmwater and cold water fisheries (FERC 2015). Recreational opportunities for fish include resident Rainbow Trout (*Oncorhynchus mykiss*), landlocked Chinook Salmon (*Oncorhynchus tshawytscha*), Kokanee Salmon (*Oncorhynchus nerka*), Largemouth Bass (*Micropterus salmoides*), Spotted Bass (*Micropterus punctulatus*), and Channel Catfish (*Ictalurus punctatus*). Additional fish species can be referenced in the FEIS (FERC 2015; [FERC 2015 Merced ID FEIS](#)).

Essential Fish Habitat and critical habitat were determined using the NOAA Fisheries Species and Habitat App for the West Coast Region, NOAA Essential Fish Habitat Mapper, or USFWS IPaC. These online query tools provide information on essential and critical habitat for various species. The NOAA online tools provide information on EFH for anadromous species including Chinook salmon and steelhead, while the IPaC provides information on non-anadromous fish species.

Fisheries habitat present in the Proposed Project area includes McClure Reservoir and McSwain Reservoir, which are both impounded by New Exchequer Dam (RM 62.4) and Merced Falls Dam (RM 55.0) respectively. Crocker-Huffman Dam (RM 52.0) is 3.0 RM downstream of the Proposed Project Area. All three dams do not currently provide fish passage for anadromous fishes, and Crocker-Huffman diversion dam is considered the farthest upstream extent to anadromy (FERC 2015; [FERC 2015 Merced ID FEIS](#)). No EFH occurs within the Proposed Project area; however, EFH for Chinook salmon occurs in the reach of the Merced River from its confluence with the San Joaquin to Crocker-Huffman diversion dam. For more information on the Proposed Project Area, refer to the FEIS (FERC 2015).

As the upstream limit to anadromy is downstream and outside of the Proposed Project Area, Chinook Salmon, Central Valley DPS steelhead, and Green Sturgeon are not expected to occur in the project area. However, based on the analysis within the FEIS (FERC 2015), FERC determined that EFH would not be adversely affected. Furthermore, FERC concluded that the Staff Alternative would be beneficial for spawning, rearing and smoltification, and creating off-channel habitat for rearing through the increase in flows (FERC 2015).

FISH CRITICAL HABITAT

Designated critical habitat for Central Valley steelhead DPS (70 FR 52487) does not occur within the Project area. Designated critical habitat includes the Merced River from the confluence with the San Joaquin to approximately 0.9 river miles upstream of Crocker-Huffman Diversion Dam.

Impact Analysis

- a) **Less Than Significant Impact.** Based on the results of the literature review, past surveys, relicensing studies, and other available data, as summarized in the FEIS (FERC 2015; [FERC 2015 Merced ID FEIS](#)), and Recreation PEIR the following conclusions have been made for special-status species.

Special-status Botanical Species

Eight special-status botanical species, including five not discussed in the Recreation PEIR, are known to occur on the Proposed Project. In addition, five ESA-listed plant species, one CESA-listed plant species, and 14 other special-status plant species have potential habitat but have not been observed on the Proposed Project.



Ongoing Proposed Project operations activities that may affect special-status plants, or their habitat, should they be present, include grading of dirt roads, vegetation management, or ground-disturbing activities that can lead to minor disturbances of habitat. Occurrences of special-status plant species growing in areas subject to ongoing activities are generally adapted to disturbances from Proposed Project operations. The 2015 FEIS assumed Merced ID accepts the new license and analyzed the potential effects of the Proposed Project's O&M, and proposed FERC License Articles, BLM 4(e) Conditions and Merced ID Proposed Measures for sensitive plants (page 3-213 to 3-215). Per the FEIS, the 'Implementation of...proposed Vegetation Management Plan, Invasive Weed Management Plan, and Recreation Facilities Plan would reduce potential for adverse effects on sensitive plants...' and '...BMP[s]...referenced in the...plans would provide protection for sensitive species.

Inclusion of the license measures and mandatory conditions following acceptance of a new license, would result in a Less Than Significant impact on special-status plant species during operations.

Special-status Invertebrates

Four ESA-listed invertebrates- Conservancy fairy shrimp (*Branchinecta conservation*), vernal pool fairy shrimp (*Branchinecta lynchi*), monarch butterfly (*Danaus plexippus*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and one Candidate for the CESA- Crotch's bumblebee (*Bombus crotchii*) have the potential to occur on the Proposed Project and were described and analyzed in the Recreation PEIR.

If special-status invertebrates or their habitats are present in areas of Proposed Project operations, they may be impacted by compaction, trampling (by foot or vehicle), removal, or degradation. Project activities may impact individuals but are not expected to have an overall impact on the species or its habitat, especially since occurrences in areas of ongoing Proposed Project operations would be anticipated to be habituated to those activities.

The 2015 FEIS does not specifically analyze Crotch's bumblebee or Monarch butterfly. However, per the FEIS (page 3-215), 'BMP manuals referenced in the final versions of the [Vegetation Management and Invasive Species Management Plans] would provide protection for sensitive species,' assuming acceptance of a new license. Inclusion of the license measures and mandatory conditions following acceptance of a new license, would result in a Less than Significant impact on Monarch butterfly during operations.

The 2015 FEIS (page 3-256 to 3-258) analyzed the potential effects of the Proposed Project's operations activities on Conservancy fairy shrimp and vernal pool fairy shrimp, assuming acceptance of a new license. The FEIS determined that the Proposed Project was not likely to adversely affect the species with the development and implementation of a protection plan. Additionally, the FEIS determined that the Proposed Project would not 'destroy or adversely modify critical habitat' for vernal pool fairy shrimp that is within the Proposed Project boundary. Given the lack of suitable vernal pool habitat, the Proposed Project operations would have **No Impact** on Conservancy fairy shrimp and vernal pool fairy shrimp.

The 2015 FEIS (page 3-259 to 3-261 and page 3-268 to 269) analyzed the potential effects of the Proposed Project's O&M activities on VELB, assuming acceptance of a new license. The FEIS determined that the Proposed Project was not likely to adversely affect the species. Inclusion of the license measures and mandatory conditions following acceptance of a new license, would result in a **Less than Significant** impact on valley elderberry longhorn beetle during operations.



Special-status Amphibians

There were four ESA-listed or Proposed amphibians- California tiger salamander – central California Distinct Population Segment (DPS) (*Ambystoma californiense* pop. 1), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog– South Sierra DPS (*Rana boylei* pop. 5), and western spadefoot (*Spea hammondi*) and one CESA-listed amphibian, limestone salamander (*Hydromantes brunus*), identified as having the potential to occur on the Proposed Project and described and analyzed in the Recreation PEIR.

If special-status amphibians or their habitats are present in areas of Proposed Project operations, they may be impacted by compaction, trampling (by foot or vehicle), removal, or degradation. Project activities may impact individuals but are not expected to have an overall impact on the species or its habitat, especially since occurrences in areas of ongoing Proposed Project operations would be anticipated to be habituated to those activities

The 2015 FEIS (page 3-263 to 3-264) analyzed the potential effects of the Proposed Project’s O&M, construction, and recreation activities and proposed FERC License Articles, BLM 4(e) Conditions and Merced ID Proposed Measures on California tiger salamander, assuming acceptance of a new license. Proposed Project activities that could affect the species include vegetation removal or trampling (by foot or vehicle) that could disturb existing burrows, the application of rodenticides affect[ing] small mammals that create the burrows used by California tiger salamanders, maintenance of recreation areas, road maintenance, and project-related traffic injury or kill of salamanders crossing roads or migrating across project lands. The FEIS determined that the Proposed Project was not likely to adversely affect the species with the development and implementation of a protection plan that includes protocol level surveys, habitat and migratory route identification and the avoidance of burrow fumigants and rodenticides in California tiger salamander habitat.

The 2015 FEIS (page 3-261 to 3-263 and 3-266 to 3-268) analyzed the potential effects of the Proposed Project’s O&M, construction, and recreation activities and proposed FERC License Articles, BLM 4(e) Conditions and Merced ID Proposed Measures on California red-legged frog, assuming acceptance of a new license. The FEIS determined that the Proposed Project was not likely to adversely affect the species with the implementation of proposed protective measures

The 2015 FEIS (page 3-221 to 3-222) analyzed the potential effects of the Proposed Project’s O&M activities and proposed FERC License Articles, BLM 4(e) Conditions and Merced ID Proposed Measures on special-status amphibians, including foothill yellow-legged frog and western spadefoot, assuming acceptance of a new license. The FEIS determined that the Proposed Project only had the potential to affect the species was the development of recreation facilities at Sherlock Creek, which were evaluated in the Recreation PEIR. Potential Project activities that might affect Western spadefoot included ‘... vegetation maintenance, pest control and road maintenance that occur in proximity to vernal pool habitat...’. The FEIS determined that the Proposed Project had ‘limited potential for project effects on [the] species.’

Inclusion of the license measures and mandatory conditions following acceptance of a new license, would result in a **Less than Significant** impact on special-status amphibians during construction.

Special-status Reptiles

Two special-status reptiles are known or have the potential to occur on the Proposed Project, including Northwestern pond turtle (*Actinemys marmorata*) and coast horned lizard (*Phrynosoma blainvillii*).

If Northwestern pond turtle or its habitat are present at recreation areas during operations, the habitat and individuals may be impacted during Proposed Project operations by compaction, trampling (by foot or vehicle), nest destruction, removal, or loss/degradation. However, the majority of the O&M activities will be confined to developed areas, most of which have been in operation for years, and individuals frequenting these areas would be adapted to Proposed Project operations. The 2015 FEIS (page 3-222 to 3-223) analyzed the potential effects of the Proposed Project's O&M, construction, and recreation activities and proposed FERC License Articles, BLM 4(e) Conditions and Merced ID Proposed Measures on Northwestern pond turtle, assuming acceptance of a new license.²³ The FEIS determined that the Proposed Project might affect the species but '...proposed measures...would minimize project effects on [north]western pond turtles...'

If coast horned lizard or its habitat is present at the Proposed Project recreation sites, the habitat and individuals may be impacted during construction activities by compaction, flushing from habitat permanently or temporarily by noise/vibrations, trampling (by foot or vehicle), removal, or degradation. The FEIS assumes Merced ID accepts the new license and states that 'BMP manuals referenced in the final versions of the [Vegetation Management and Invasive Species Management Plans] would provide protection for sensitive species' (page 3-215).

Inclusion of the license measures and mandatory conditions following acceptance of a new license, would result in a Less than Significant impact on Western pond turtle and its habitat during construction.

Special-status Fish

FEDERAL LISTED SPECIES

Green Sturgeon

Federally listed as Threatened, Green Sturgeon are not likely to occur in the Proposed Project area but may be indirectly affected by the Proposed Project because water released into the lower Merced River and San Joaquin Rivers may influence downstream habitat for this species. In 2019, the CDFW captured and documented one Green Sturgeon adult in the San Joaquin River Restoration Program (SJRRP) Restoration Area near Hills Ferry as part of their San Joaquin River telemetry study (CDFW 2023). There are no documented observations of Green Sturgeon in the Merced River upstream of the confluence with the San Joaquin River.

In the 2015 FEIS (FERC 2015; [FERC 2015 Merced ID FEIS](#)) Merced ID proposed minimum increases in instream flows by water year type to meet irrigation requirements and maintain biologically appropriate flows along with seasonal pulse flows for anadromous fish benefit downstream of the Crocker-Huffman diversion dam. The Staff Alternative in the 2015 FEIS (FERC 2015) would result in marginal flow increases downstream of the Proposed Project Area, and the analysis within the FEIS indicated that this flow would result in minor habitat enhancement or no habitat changes.

Water temperatures in excess of 20 °C result in reduced growth rates and developmental problems in early life stages of Green Sturgeon (Poletto et al. 2018; Van Eenennamm et al. 2005; Mayfield and Cech 2004). Analysis in the FEIS (FERC 2015; [FERC 2015 Merced ID FEIS](#)) indicated temperature exceedances for salmonids under existing conditions, based on a 20 °C threshold, were a major limitation for salmonids downstream of Crocker-Huffman Diversion Dam. While based on the absence of observations in the Merced River and the marginal increase in flows downstream of



Crocker-Huffman Diversion Dam, the Proposed Project would have a **Less Than Significant** impact on Green Sturgeon and their habitat.

California Central Valley Steelhead

CCV steelhead are federally listed as threatened. Critical habitat for CCV steelhead exists within the Proposed Project area. The resident form of steelhead, rainbow trout, is known to occur in the Proposed Project area, however, the anadromous steelhead would only have access to the river below the Crocker-Huffman diversion dam due to fish passage constraints. There is not any recent documentation (last 20 years) of Steelhead in the Merced River and the anadromous protected life history of the species is believed to be extirpated. Pearse and Campbell (2017) concluded that the hatchery-dominated population of CCV steelhead in the lower Merced River limits the expression of anadromy and that few, if any, anadromous salmonids exist in the river's upper reaches. In the 2015 FEIS, Merced ID proposed to annually monitor for CCV steelhead in the Merced River downstream of the Crocker-Huffman diversion dam using one rotary screw trap and one weir site. In addition, minimum instream flow regime downstream of Crocker-Huffman diversion dam would be implemented to enhance physical habitat and temperatures for CCV steelhead.

As described in Section 2.2, Proposed Project, the *Staff Alternative With Mandatory Conditions* is the basis of the Proposed Project; post-2015 updates to plans and BLM 4(e) conditions are also incorporated but do not change the potential for effects on fish species. Implementation of the *Staff Alternative With Mandatory Conditions* as analyzed in the 2015 FEIS (FERC 2015; [FERC 2015 Merced ID FEIS](#)) was found to result in marginal flow increases downstream of the Proposed Project area, and the analysis within the FEIS indicated that this flow would result in minor habitat enhancement or no habitat changes. Analysis of impacts for the *Staff Alternative With Mandatory Conditions* in the 2015 FEIS estimated a 2% reduction in spawning habitat for CCV steelhead but a 3% increase in rearing habitat for fry and 2% increase for rearing habitat for juveniles (FERC 2015). Temperature exceedances by percentage were exceeded 44% of the time for smoltification (FERC 2015), which was a slight decrease from the existing operations of Merced ID compared to the *Staff Alternative With Mandatory Conditions*. Therefore, the Proposed Project would have a **Less Than Significant** impact on CCV steelhead habitat and likely no impact on individuals due to their absence.

California Central Valley Spring-run Chinook Salmon

Spring-run Chinook Salmon are a federally listed threatened species and State listed threatened species. However, spring-run Chinook Salmon found in the San Joaquin River from Friant dam downstream to its confluence with the Merced River are part of a Section 10(j) nonessential experimental population related to NMFS San Joaquin River Spring-run Chinook Salmon Reintroduction Program. This ESU historically occupied the lower and upper reaches of the Merced River. However, they are more recently considered extirpated from the Merced River (Yoshiyama et al. 2001). Experimental populations do not occur in the Merced River and are currently limited to the San Joaquin upstream of the confluence with the Merced River to Friant Dam (50 CFR Part 223). As no spring-run Chinook Salmon are expected to occur in the Merced River and those individuals that potentially occur would be strays opportunistically occurring from the San Joaquin River and part of the nonessential experimental population (with experimental area designated upstream of the confluence with the Merced), the Proposed Project would have a **Less Than Significant** impact on spring-run Chinook Salmon.

STATE AND OTHER PROTECTED FISH SPECIES

California Central Valley fall-run Chinook Salmon

Fall-run Chinook Salmon are a federal species of concern, and California SSC. Suitable habitat for Chinook salmon exists within the Project area and California Central Valley Fall-run Chinook were historically present in the lower and upper reaches of the Merced River. However, fall-run are currently restricted to below the Crocker-Huffman diversion dam and spring-run were extirpated in the 1940's (Yoshiyama et al, 2001). Both fall-run Chinook utilize loose gravel for spawning and are highly sensitive to high water temperatures. The Proposed Project could affect Chinook salmon by not providing sufficient flows during juvenile migration, insufficient cold-water releases to maintain temperatures at the EPA guideline of 16°C, and due to the dams blocking natural downstream distribution of spawning gravels. In the 2015 FEIS ([FERC 2015 Merced ID FEIS](#)), Merced ID proposed minimum flow increases, spring pulse flows (to stimulate anadromous juvenile outmigration, inundate floodplains, and improve quality of spawning substrate), and fall pulse flows (to attract anadromous species to the river during adult migration). In addition, Merced ID would implement an annual monitoring plan for Chinook Salmon, a water temperature monitoring plan between Crocker-Huffman diversion dam and Shaffer Bridge, and a gravel augmentation plan to enhance spawning habitat downstream of the Crocker-Huffman diversion dam.

The *Staff Alternative With Mandatory Conditions* in the 2015 FEIS (FERC 2015) would result in marginal flow increases downstream of the Proposed Project area, and the analysis within the FEIS indicated that this flow would result in minor habitat enhancement or no habitat changes. Analysis of impacts for the *Staff Alternative With Mandatory Conditions* in the 2015 FEIS estimated a 2% reduction in spawning habitat for Chinook Salmon but a 3% increase in rearing habitat for fry and 2% increase for rearing habitat for juveniles (FERC 2015). Temperature exceedances by percentage were unchanged for juvenile rearing (FERC 2015) between the current operations and the Staff Alternative. Therefore, the Proposed Project would have a **Less Than Significant** impact on California Central Valley Fall-run Chinook Salmon.

Hardhead

Hardhead is a California SSC. Hardhead have been documented in the Project area; however, they are susceptible to predation by non-native predatory fish, such as black bass, which may reduce or eliminate hardhead from otherwise suitable habitat (Moyle 2002). In addition, populations have been fragmented by project and non-project dams, effectively isolating historical populations into sub-populations upstream and downstream of the dams. Fish surveys in 2006 and 2008 found hardhead to be relatively abundant both up- and down-stream of the Proposed Project.

The *Staff Alternative With Mandatory Conditions* in the 2015 FEIS (FERC 2015) would result in marginal flow increases downstream of the Project Area, and the analysis within the FEIS indicated that this flow would result in minor habitat enhancement or no habitat changes. Habitat suitability curves were similar between fry and juvenile salmonids and hardhead downstream of Crocker-Huffman Diversion Dam with weighted usable area (WUA) increasing around 1,000-1,500 cfs. Given the similarity of response to WUA from discharge changes, it is likely that responses will be similar to juvenile salmonids. Therefore, the Proposed Project would have a **Less Than Significant** impact on hardhead.

Sacramento splittail

Sacramento Splittail are a California SSC. Sacramento Splittail have been observed in the Merced River but not above the Crocker-Huffman diversion dam. This species spawns in areas of flooded vegetation and could be impacted by reduced flows due to irrigation diversions or low flow releases from the dams. The minimum instream flows outlined in the 2015 FEIS ([FERC 2015 Merced ID FEIS](#)), along with the gravel augmentation plan, would help increase floodplain connectivity and off-channel habitat suitable for spawning.

The *Staff Alternative With Mandatory Conditions* in the 2015 FEIS (FERC 2015) would result in marginal flow increases downstream of the Proposed Project Area, and the analysis within the FEIS indicated that this flow would result in minor habitat enhancement or no habitat changes. Habitat suitability curves were similar between fry and juvenile salmonids and Sacramento Splittail downstream of Crocker-Huffman Diversion Dam with WUA increasing around 1,000-1,500 cfs. Given the similarity of response to WUA from discharge changes, it is likely that responses will be similar to juvenile salmonids. Therefore, the Proposed Project would have a **Less Than Significant** impact on Sacramento Splittail.

White Sturgeon

White Sturgeon is a state threatened candidate species. This species is not likely to occur in the Proposed Project area but may be indirectly affected by the Proposed Project because water released into the lower Merced River and San Joaquin Rivers may influence downstream habitat. In 2022, the CDFW captured and documented 16 White Sturgeon adults in the San Joaquin River (CDFW 2023). Additionally, adults were captured in the Tuolumne River in June 2021 (Diviney and Dahl 2024). There are no observations of White Sturgeon in the Merced River upstream of the confluence with the San Joaquin.

In the 2015 FEIS ([FERC 2015 Merced ID FEIS](#)) *Staff Alternative With Mandatory Conditions*, Merced ID proposed minimum instream flow increases by water year type to meet irrigation requirements and maintain biologically appropriate flows along with seasonal pulse flows for anadromous fish benefit downstream of the Crocker-Huffman diversion dam. The *Staff Alternative With Mandatory Conditions* in the 2015 FEIS (FERC 2015) would result in marginal increases downstream of the Project Area, and the analysis within the FEIS indicated that this flow would result in minor habitat enhancement or no habitat changes. Based on the absence of observations in the Merced River and the marginal increase in flows downstream of Crocker-Huffman Diversion Dam, the Proposed Project would have a **Less Than Significant** impact on Green Sturgeon and their habitat.

Lamprey

Pacific Lamprey and Kern Brook Lamprey are California SSC. Suitable habitat for lamprey is present in the Proposed Project area. A large number of assumed Pacific Lamprey ammocoetes (Lamprey larvae) were found in the Merced River, the majority of which were below the Crocker-Huffman diversion dam; however, no adults were identified making positive identification difficult. The majority of identified Kern Brook Lamprey adults and juveniles found in the Merced River were found in the lower reaches below Crocker-Huffman diversion dam. Both species rely on gravel riffles for spawning and would be impacted by loss of gravel substrate entrapped behind the dams. Kern Brook Lamprey also require temperatures less than 77°C in summer for spawning. Impacts to lamprey species would be mitigated by the water temperature monitoring plan and gravel augmentation plan as outlined in the 2015 FEIS ([FERC 2015 Merced ID FEIS](#)).

Therefore, the Proposed Project would have a **Less Than Significant** impact on Pacific Lamprey and Kern Brook Lamprey.

Special-status and Migratory Birds

There were three CESA-listed and ten special-status birds, along with many migratory bird species, that were identified as occurring or having the potential to occur on the Proposed Project and are described and analyzed in the Recreation PEIR.

Raptors and other bird species may be affected by Proposed Project operations through direct impacts, such as mortality or injury, during vegetation management and operations traffic. Ground disturbance, as well as vegetation and tree clearing during the nesting season, could result in direct effects on raptors and nesting birds should they be present in O&M disturbance areas. Furthermore, noise and other human activity may result in nest abandonment if nesting birds are present near an area of Proposed Project operations. The majority of these areas are already developed, and individuals frequenting them, including nesting birds, would be anticipated to be habituated to Proposed Project operations.

The 2015 FEIS analyzed the potential effects of the Proposed Project's O&M, construction, recreation activities and proposed FERC License Article, BLM 4(e) Conditions and Merced ID Proposed Measures on bald eagles, assuming acceptance of a new license. Per the FEIS (page 3-216 to 3-218), 'Merced ID's proposed buffer distances and timing restrictions are consistent with the National Bald Eagle Management Guidelines (USFWS 2007). These measures would provide protection for nesting bald eagles and would reduce potential effects related to project operation and maintenance activities...overall, implementing the [Bald Eagle Management Plan] with the specific measures required by FWS would result in an eagle protection plan that affords more protection to bald eagles, thereby minimizing project effects on bald eagles nesting, wintering, and roosting in the project area.'

The FEIS does not analyze in much detail the Proposed Project effects on special-status birds, including CESA-listed and FP birds during operations. With the new license in place, the FEIS (page 3-215) states that 'BMP manuals referenced in the final versions of the [Vegetation Management and Invasive Species Management Plans] would provide protection for sensitive species.'

Inclusion of the license measures and mandatory conditions following acceptance of a new license, would result in a Less than Significant impact on protected species during construction.

Special-status Mammals

There was one ESA-listed mammal- San Joaquin kit fox, one fully protected mammal- ringtail () and 14 additional mammals, mostly bats, that were identified as occurring or having the potential to occur on the Proposed Project and are described and analyzed in the Recreation PEIR.

Special-status terrestrial mammals may be affected by Proposed Project-related operation activities through direct impacts, such as mortality or injury, during vegetation management and operations traffic, as well as habitat loss and fragmentation. Ground disturbance, as well as vegetation and tree clearing, could result in direct effects on special-status mammals, should they be present. Furthermore, noise and other human activity may result in temporary or permanent flushing if special-status mammals are present. Special-status mammals may also be impacted by the Proposed Project by way of injury or death due to interaction with facility equipment and entrapment in Proposed Project facilities. However, most of the areas which will be subject to more frequent operations are already developed, and species them are anticipated to be habituated to Proposed

Project operations. The 2015 FEIS assumes Merced ID accepts the new license and states (page 3-215) states that ‘BMP manuals referenced in the final versions of the [Vegetation Management and Invasive Species Management Plans] would provide protection for sensitive species.’

Special-status bats could be impacted by Proposed Project operations through direct impacts, such as mortality or injury, during vegetation management and recreation traffic, as well as habitat loss and fragmentation. Ground disturbance, as well as vegetation and tree management, could result in direct effects on roosting bats, should they be present in operations disturbance areas. Furthermore, noise and other human activity may result in roost abandonment if roosts are present near an area of operations or recreation use. However, most of these areas are already developed, and individuals frequenting them, including migratory bat species, would be anticipated to be habituated to Proposed Project operations. Project activities may impact individuals but are not expected to have an overall impact on special- status bats or their habitat. The 2015 FEIS assumed Merced ID accepts the new license and analyzed the potential effects of the Proposed Project’s O&M, construction, and recreation activities and proposed FERC License Articles, BLM 4(e) Conditions and Merced ID Proposed Measures on special-status bats (page 3-223 to 3-224). Per the FEIS, the main potential effect on bats is from ‘...human presence and noise caused by human activity around Project facilities.’ The FEIS determined that the Proposed Project, with implementation of the proposed measures to protect bats, ‘...would protect bats, including those with special status, by excluding them from project facilities, and, as a result, roosting bats would not be disturbed by Project staff entering the facility or visiting other project structures on a regular basis.’

Inclusion of the license measures and mandatory conditions following acceptance of a new license, would result in a Less than Significant impact on special-status mammals.

- b) **Less Than Significant Impact.** As partially described in the Recreation PEIR (<https://ceqanet.opr.ca.gov/2024051222>) and above, sensitive natural communities and areas in the Proposed Project include riparian areas, VegCAMP sensitive natural communities, Critical Habitats,¹² ACECs, and the Merced Wild and Scenic River. These riparian habitat and/or sensitive natural communities have been documented in areas that may be affected by routine Project O&M activities and fluctuations in reservoir levels, within the Proposed Project boundary. These are discussed in the Recreation PEIR for recreation areas, but would be similar for the additional areas of the Proposed Project and are incorporated here by reference. an already designated ACEC that are acquired to conserve any of the special attributes identified for the previously established ACEC are managed under those same guidelines until the newly acquired lands are formally designated as part of the established ACEC. As part of the management actions for special-status species, the already existing Limestone Salamander ACEC was expanded to include lands with any known limestone salamander occurrences or suitable habitat
- c) **Less Than Significant Impact.** There are approximately 18 acres of Palustrine Wetlands mapped by the NWI in the Proposed Project boundary. Project O&M for the Proposed Project will avoid any impacts on wetlands without the appropriate permits. The Proposed Project does not plan any new activities or construction that will affect wetlands.
- d) **Less Than Significant Impact.** None of the Proposed Project changes to baseline conditions alter the facilities or O&M in such a way as to increase or decrease terrestrial wildlife movement (which is described in the Recreation PEIR

¹² Impacts of the Proposed Project on Critical Habitat is discussed in question a) of this section.

(<https://ceqanet.opr.ca.gov/2024051222>) and incorporated here for reference). Additionally, following licenses acceptance, existing operations would not be changed aside from minor administrative updates; the addition of non-native invasive plant management, restoration/revegetation of disturbed areas; and additional plant and wildlife protections. The removal of non-native invasive plants and revegetation of disturbed areas may slightly improve natural habitats, but not enough to increase the permeability of wildlife movement corridors.

The *Staff Alternative With Mandatory Conditions* in the FEIS (FERC 2015) does not result in additional impediments to migratory fishes compared to the current condition. Currently there is no functional fish passage at Crocker-Huffman Diversion Dam. Crocker-Huffman Diversion Dam is considered the most upstream limit to anadromy, and this dam is downstream and outside of the Proposed Project Area. Additionally, the Proposed Project is not expected to interfere with movement of native resident fishes from any activities associated with the Project.

- e) **No Impact.** All changes to facilities, as well as Mariposa County ordinances and other policies are described in the Recreation PEIR (<https://ceqanet.opr.ca.gov/2024051222>). None of the Proposed Project changes to baseline conditions alter O&M in such a way as to be in conflict with the Mariposa County ordinance or other policies that may exist. Please refer to discussion in Recreation PEIR which is incorporated by reference herein.
- f) **No Impact.** There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans within the Proposed Project boundary (CDFW 2023); therefore, there would be no impact.

3.3.5 Cultural Resources

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

Much of the existing conditions for Cultural and Tribal Cultural Resources are described in the Recreation PEIR and are incorporated by reference herein (<https://ceqanet.opr.ca.gov/2024051222>).

As described in the Recreation PEIR, cultural resources include historic period and precontact archaeological sites; historical buildings, objects, structures, records, manuscripts, or places; and places of traditional cultural or religious importance, regardless of their eligibility for listing on national, state, or local registers. Under CEQA Sections 21084.1 and 21083.2(l), potential adverse impacts on cultural resources that are listed on or eligible for listing on the CRHR, or that are considered unique or significant regardless of their CRHR status, must be taken into account.

To help inform identification of cultural and tribal cultural resources within the Merced River Project and Merced falls Project Boundaries, Merced ID conducted archaeological and historical built environment resources investigations between 2009 and 2013 as part of the FERC relicensing. The studies were documented in two cultural and tribal resources inventory reports (McCarthy 2014 and Flint et al. 2015). These studies included background and archival research, field surveys, NRHP evaluations and summaries of certain resources, and reporting.

The relicensing investigations resulted in the identification of 191 archaeological sites within the Cultural Resources Area of Potential Effects (APE). Twenty-nine are precontact sites (see Table 3-3), 134 are historic sites (see Table 3-4), and 28 represent multicomponent sites (i.e., sites containing both prehistoric and historic artifacts and features) (see Table 3-5). The number and types of sites identified during the relicensing suggest a rich and diverse history inclusive of Native American occupation and Euro-American, Chinese and Cornish immigration. Three sites in the APE have been evaluated for potential listing on the NRHP. According to the results of the 2008 records search, prehistoric site P-22-0739 (CA-MRP-0436) was determined to be eligible for listing on the NRHP and is, therefore, also listed on the CRHR. The historic Yosemite Valley Railroad grade (P-22-1019; CA-MRP-0720H) and remnants of an unnamed dirt road and ditch (P-22-3380; CA-MRP-2147H) were both evaluated as ineligible for listing on the NRHP. The SHPO concurred with both of these determinations during Federal Section 106 and State AB52 consultations. These tables include a much larger suite of archaeological sites than did the Merced ID Recreation PEIR.



Table 3-6. Precontact Sites

| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|-------------|--------------|-------------|--|-------------------------------|
| 1. | P-22-0733 | CA-MRP-0430 | N/A | MID | One BRM. | Unevaluated |
| 2. | P-22-0734 | CA-MRP-0431 | N/A | BLM | Prehistoric BRM | Unevaluated |
| 3. | P-22-0739 | CA-MRP-0436 | CA-18-TM-62 | MID | Possible aboriginal village of Alaula-Chi: midden, lithics | NRHP-eligible; listed on CRHR |
| 4. | P-22-0848 | CA-MRP-0546 | N/A | MID | Rock art, BRMs, cupules | Unevaluated |
| 5. | P-22-3226 | CA-MRP-2048 | N/A | MID | Two BRMs | Unevaluated |
| 6. | P-22-3228 | CA-MRP-2050 | N/A | MID | Four BRMs and five pestles. | Unevaluated |
| 7. | P-22-3253 | CA-MRP-2075 | N/A | MID | One BRM. | Unevaluated |
| 8. | P-22-3301 | CA-MRP-2119 | N/A | MID | One BRM. | Unevaluated |
| 9. | P-22-3303 | CA-MRP-2121 | N/A | MID | One BRM. | Unevaluated |
| 10. | P-22-3379 | CA-MRP-2146 | N/A | MID | One BRM. | Unevaluated |
| 11. | P-22-3386 | CA-MRP-2153 | N/A | MID | Seven BRMs and two lithic scatters. | Unevaluated |
| 12. | P-22-3400 | CA-MRP-2166 | N/A | MID | One BRM. | Unevaluated |
| 13. | P-22-3402 | N/A | N/A | MID | One BRM and stone tool scatter. | Unevaluated |
| 14. | P-22-3423 | CA-MRP-2189 | N/A | MID | One BRM. | Unevaluated |
| 15. | P-22-3424 | CA-MRP-2190 | N/A | MID | One BRM. | Unevaluated |
| 16. | P-22-3425 | CA-MRP-2191 | N/A | MID | One BRM. | Unevaluated |
| 17. | P-22-3426 | CA-MRP-2192 | N/A | MID | One BRM. | Unevaluated |
| 18. | P-22-3531 | CA-MRP-2265 | N/A | MID | Lithic scatter. | Unevaluated |
| 19. | P-22-3560 | N/A | N/A | MID | Two BRMs. | Unevaluated |
| 20. | P-22-3568 | CA-MRP-2287 | N/A | BLM/ MID | Lithic scatter | Unevaluated |
| 21. | P-22-3584 | CA-MRP-2301 | N/A | BLM | Lithic scatter and potential midden. | Unevaluated |
| 22. | P-22-3586 | CA-MRP-2302 | N/A | MID | One BRM. | Unevaluated |
| 23. | P-22-3613 | CA-MRP-2307 | N/A | BLM | One BRM | Unevaluated |
| 24. | P-22-3614 | N/A | N/A | PVT | Two BRMs. | Unevaluated |
| 25. | P-22-3616 | CA-MRP-2309 | N/A | BLM | One BRM | Unevaluated |
| 26. | P-22-3618 | CA-MRP-2311 | N/A | BLM | One BRM | Unevaluated |
| 27. | P-22-3619 | CA-MRP-2312 | N/A | BLM | One BRM | Unevaluated |
| 28. | P-22-3628 | CA-MRP-2320 | N/A | MID | One BRM. | Unevaluated |
| 29. | P-22-3635 | N/A | N/A | PVT | Six BRMs. | Unevaluated |

Table 3-7. Historic Sites

| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|--------------|---------------|-------------|--|------------------|
| 1. | P-22-0002 | CA-MRP-1266H | N/A | BLM/ MID | Segments of State Route 132 and three associated culverts. | Unevaluated |
| 2. | P-22-0319 | CA-MRP-1389H | CA-018-TM-166 | MID | Habitation and mining site with cabin foundations, tailings and other mining related features. | Unevaluated |
| 3. | P-22-1019 | CA-MRP-720H | N/A | BLM/ MID | Yosemite Valley Railroad Grade | Ineligible |
| 4. | P-22-2667 | N/A | N/A | MID | Segment of Highway 49 and associated features. | Unevaluated |
| 5. | P-22-2937 | N/A | CA-018-TM-318 | BLM | Bruschi Mine. | Unevaluated |
| 6. | P-22-3216 | CA-MRP-2039H | N/A | MID | A concrete structure foundation and two refuse scatters. | Unevaluated |
| 7. | P-22-3217 | CA-MRP-2040H | N/A | MID | Nine concrete structure pads. | Unevaluated |
| 8. | P-22-3218 | CA-MRP-2041H | N/A | MID | Refuse scatter, cut-off utility pole, and piles of concrete. | Unevaluated |
| 9. | P-22-3219 | CA-MRP-2042H | N/A | MID | Refuse scatter. | Unevaluated |
| 10. | P-22-3223 | CA-MRP-2045H | N/A | MID | Small mining site | Unevaluated |
| 11. | P-22-3224 | CA-MRP-2046H | N/A | MID | Concrete refuse piles | Unevaluated |
| 12. | P-22-3225 | CA-MRP-2047H | N/A | MID | Habitation site with refuse deposit. | Unevaluated |
| 13. | P-22-3229 | CA-MRP-2051H | N/A | MID | Habitation site with slate rock structure and depressions. | Unevaluated |
| 14. | P-22-3230 | CA-MRP-2052H | N/A | MID | Mining site, tailings, and other mining features. | Unevaluated |



| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|--------------|--------------|------------|--|------------------|
| 15. | P-22-3231 | CA-MRP-2053H | N/A | MID | Habitation site with chimney and hearth, metal beam. | Unevaluated |
| 16. | P-22-3233 | CA-MRP-2055H | N/A | MID | Rock wall and prospect pit. | Unevaluated |
| 17. | P-22-3234 | CA-MRP-2056H | N/A | MID | Tramway or boat ramp/ladder. | Unevaluated |
| 18. | P-22-3236 | CA-MRP-2058H | N/A | MID | Habitation site with rock structure foundation, rock walls, road. | Unevaluated |
| 19. | P-22-3237 | CA-MRP-2059H | N/A | MID | Can dump. | Unevaluated |
| 20. | P-22-3239 | CA-MRP-2061H | N/A | MID | Abandoned transmission line segment. | Unevaluated |
| 21. | P-22-3240 | CA-MRP-2062H | N/A | MID | Thirteen concrete bridge piers and a segment of asphalt road. | Unevaluated |
| 22. | P-22-3241 | CA-MRP-2063H | N/A | MID | Habitation site with two refuse deposits and a rock structure. | Unevaluated |
| 23. | P-22-3242 | CA-MRP-2064H | N/A | MID | Heavy, coarse aggregate concrete flume. | Unevaluated |
| 24. | P-22-3243 | CA-MRP-2065H | N/A | MID | Sparse refuse scatter (car parts). | Unevaluated |
| 25. | P-22-3244 | CA-MRP-2066H | N/A | MID | A ditch and earthen dam. | Unevaluated |
| 26. | P-22-3245 | CA-MRP-2067H | N/A | MID | Sparse refuse scatter, rebar, and barbed wire fencing. | Unevaluated |
| 27. | P-22-3246 | CA-MRP-2068H | N/A | MID | Industrial structural foundation and associated features. | Unevaluated |
| 28. | P-22-3247 | CA-MRP-2069H | N/A | MID | Habitation site with two cabin foundations, collapsed chimney, hearth, and rock walls. | Unevaluated |
| 29. | P-22-3248 | CA-MRP-2070H | N/A | MID | Habitation site with rock walls, possible rock foundation, and rock piles. | Unevaluated |
| 30. | P-22-3249 | CA-MRP-2071H | N/A | MID | Two ditches, and earthen dam, and a rock wall. | Unevaluated |
| 31. | P-22-3251 | CA-MRP-2073H | N/A | MID | One crushed 50-gallon drum and steel pipe. | Unevaluated |
| 32. | P-22-3252 | CA-MRP-2074H | N/A | BLM/MID | Historic road and abandoned boat ramp likely associated with boating prior to construction of the new Exchequer Dam in 1967. | Unevaluated |
| 33. | P-22-3275 | CA-MRP-2100H | N/A | MID | Fence line with wood posts and can scatter. | Unevaluated |
| 34. | P-22-3276 | CA-MRP-2101H | N/A | MID | Circular rock structural foundation. | Unevaluated |
| 35. | P-22-3277 | CA-MRP-2102H | N/A | MID | Small, poured concrete pad of unknown function. | Unevaluated |
| 36. | P-22-3293 | CA-MRP-2115H | N/A | MID | Mining site with rock walls and structural foundation, rock piles, and two dams. | Unevaluated |
| 37. | P-22-3294 | CA-MRP-2116H | N/A | MID | Segment of road with rock retaining wall and brown, glass coffee jar. | Unevaluated |
| 38. | P-22-3295 | CA-MRP-2117H | N/A | MID | Small, industrial concrete structural pad. | Unevaluated |
| 39. | P-22-3296 | CA-MRP-2118H | N/A | MID | Habitation site with two rock structural foundations, refuse scatters, and two concrete structural foundations. | Unevaluated |
| 40. | P-22-3302 | CA-MRP-2120H | N/A | MID | Habitation site with rock cabin foundation remains and a shard of blue-on-white Chinese porcelain. | Unevaluated |
| 41. | P-22-3304 | CA-MRP-2122H | N/A | MID | Refuse deposit. | Unevaluated |
| 42. | P-22-3356 | CA-MRP-2322H | N/A | BLM/MID | Mining and habitation complex on alluvial bar with several features. | Unevaluated |
| 43. | P-22-3369 | CA-MRP-2136H | N/A | MID | Quarry, rock walls, and waste rock. | Unevaluated |



| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|--------------|--------------|------------|--|------------------|
| 44. | P-22-3370 | CA-MRP-2137H | N/A | MID | Rock retaining wall. | Unevaluated |
| 45. | P-22-3371 | CA-MRP-2138H | N/A | MID | Rock wall. | Unevaluated |
| 46. | P-22-3372 | CA-MRP-2139H | N/A | MID | Water conveyance feature, prospect pits, and unnamed dirt road. | Unevaluated |
| 47. | P-22-3373 | CA-MRP-2140H | N/A | MID | Rock fence. | Unevaluated |
| 48. | P-22-3374 | CA-MRP-2141H | N/A | MID | A segment of an unnamed dirt road and two ditches. | Unevaluated |
| 49. | P-22-3376 | CA-MRP-2143H | N/A | BLM/MID | Moderate can scatter. | Unevaluated |
| 50. | P-22-3377 | CA-MRP-2144H | N/A | MID | A quarry/borrow pit, one concrete foundation, and a rock wall. | Unevaluated |
| 51. | P-22-3378 | CA-MRP-2145H | N/A | MID | Habitation site with cross-river cable anchor. | Unevaluated |
| 52. | P-22-3380 | CA-MRP-2147H | N/A | BLM/MID | Two dirt road segments and a ditch. | Ineligible |
| 53. | P-22-3382 | CA-MRP-2149H | N/A | MID | One earthen dam. | Unevaluated |
| 54. | P-22-3383 | CA-MRP-2150H | N/A | MID | Two rock walls. | Unevaluated |
| 55. | P-22-3384 | CA-MRP-2151H | N/A | MID | One rock wall. | Unevaluated |
| 56. | P-22-3385 | CA-MRP-2152H | N/A | MID | A segment of unnamed dirt road. | Unevaluated |
| 57. | P-22-3387 | CA-MRP-2154H | N/A | MID | Habitation site with four rock structural foundations. | Unevaluated |
| 58. | P-22-3389 | CA-MRP-2156H | N/A | MID | Segment of unnamed dirt road. | Unevaluated |
| 59. | P-22-3390 | CA-MRP-2157H | N/A | MID | Habitation site with a rock cabin foundation. | Unevaluated |
| 60. | P-22-3391 | CA-MRP-2158H | N/A | MID | Habitation and mining site with a rock structural foundation, waste rock, segment of unnamed dirt road, and deteriorated black powder can. | Unevaluated |
| 61. | P-22-3392 | CA-MRP-2159H | N/A | MID | Habitation site with possible segment of wagon road, rock cribbing, and rock structural foundation. | Unevaluated |
| 62. | P-22-3393 | CA-MRP-2160H | N/A | MID | A segment of an unnamed dirt road and rock wall. | Unevaluated |
| 63. | P-22-3394 | CA-MRP-2161H | N/A | MID | Ditch with segments of rock cribbing. | Unevaluated |
| 64. | P-22-3401 | CA-MRP-2167H | N/A | MID | Rock structure of unknown function. | Unevaluated |
| 65. | P-22-3403 | CA-MRP-2169H | N/A | MID | Hell Hollow mining site. | Unevaluated |
| 66. | P-22-3405 | CA-MRP-2171H | N/A | MID | A segment of an unnamed dirt road with rock cribbing. | Unevaluated |
| 67. | P-22-3406 | CA-MRP-2172H | N/A | MID | Refuse deposit. | Unevaluated |
| 68. | P-22-3407 | CA-MRP-2173H | N/A | MID | Mining waste rock. | Unevaluated |
| 69. | P-22-3408 | CA-MRP-2174H | N/A | MID | Rock wall and concrete spring box. | Unevaluated |
| 70. | P-22-3409 | CA-MRP-2175H | N/A | MID | Mined drainages, rock walls, and waste rock piles. | Unevaluated |
| 71. | P-22-3410 | CA-MRP-2176H | N/A | BLM/MID | Segment of Red Banks wagon road. | Unevaluated |
| 72. | P-22-3412 | CA-MRP-2178H | N/A | MID | Mining site with waste rock and refuse deposit. | Unevaluated |
| 73. | P-22-3413 | CA-MRP-2179H | N/A | MID | Mining site with tailings, a circular depression, and possible collapsed adit. | Unevaluated |

| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|--------------|--------------|------------|---|------------------|
| 74. | P-22-3414 | CA-MRP-2180H | N/A | MID | Home site with extensive olive orchard, house foundation, chimney and other related features. | Unevaluated |
| 75. | P-22-3415 | CA-MRP-2181H | N/A | BLM/MID | Kittridge railroad stop. | Unevaluated |
| 76. | P-22-3416 | CA-MRP-2182H | N/A | MID | Small mining site with waste rock piles. | Unevaluated |
| 77. | P-22-3417 | CA-MRP-2183H | N/A | MID | Scattered mining site with waste rock. | Unevaluated |
| 78. | P-22-3418 | CA-MRP-2184H | N/A | MID | Mining site with a ditch and waste rock piles. | Unevaluated |
| 79. | P-22-3419 | CA-MRP-2185H | N/A | MID | Concrete building foundation of unknown function. | Unevaluated |
| 80. | P-22-3420 | CA-MRP-2186H | N/A | MID | Dry-laid rock berm and possible segment of an unnamed dirt road. | Unevaluated |
| 81. | P-22-3421 | CA-MRP-2187H | N/A | MID | Refuse deposit with ceramic dishware, champagne bottle bases (olive green), olive green wine bottle fragments, and black glass ale bottle bases. | Unevaluated |
| 82. | P-22-3428 | CA-MRP-2194H | N/A | MID | Slate rock foundation. | Unevaluated |
| 83. | P-22-3429 | CA-MRP-2195H | N/A | MID | Large scale mining operation, with the remains of an adobe and stone cabin, waste rock, and refuse scatter. | Unevaluated |
| 84. | P-22-3430 | CA-MRP-2196H | N/A | MID | Rock cairn | Unevaluated |
| 85. | P-22-3431 | CA-MRP-2197H | N/A | MID | A segment of a rock retaining wall. | Unevaluated |
| 86. | P-22-3432 | N/A | N/A | MID | A ditch with rock cribbing. | Unevaluated |
| 87. | P-22-3438 | N/A | N/A | MID | Three prospect pits | Unevaluated |
| 88. | P-22-3442 | CA-MRP-2199H | N/A | MID | A segment of an unnamed dirt road, 2-in iron pipe, and olive green glass (wine bottle and "Lady's Leg" liquor bottle). | Unevaluated |
| 89. | P-22-3443 | CA-MRP-2200H | N/A | MID | A segment of an unnamed dirt road. | Unevaluated |
| 90. | P-22-3528 | N/A | N/A | MID | Rock wall. | Unevaluated |
| 91. | P-22-3529 | N/A | N/A | MID | Small rock quarry. | Unevaluated |
| 92. | P-22-3530 | CA-MRP-2264H | N/A | BLM | Waste rock. | Unevaluated |
| 93. | P-22-3532 | CA-MRP-2266H | N/A | BLM/MID | Segment of Piney Creek Road and associated culvert. | Unevaluated |
| 94. | P-22-3533 | CA-MRP-2267H | N/A | BLM/MID | Cross-bar power poles. | Unevaluated |
| 95. | P-22-3538 | N/A | N/A | MID | Road | Unevaluated |
| 96. | P-22-3539 | N/A | N/A | MID | Road and spoil pile | Unevaluated |
| 97. | P-22-3540 | CA-MRP-2272H | N/A | BLM | Likely the trail to Split Rock Ferry crossing on the Merced River, as shown on historic maps. Rock cribbing and metal pipe adjacent to a spring/seep in the unnamed drainage below Morning Star Spring. | Unevaluated |
| 98. | P-22-3541 | CA-MRP-2273H | N/A | BLM | Earthen ponding basin/ reservoir with stacked rock dam/wall; earthen foundation with reinforced rock walls. | Unevaluated |
| 99. | P-22-3542 | CA-MRP-2274H | N/A | BLM | Rock lined earthen foundation, stone hearth, and refuse. | Unevaluated |
| 100. | P-22-3544 | CA-MRP-2276H | N/A | MID | Trail with rock-lined depression. | Unevaluated |
| 101. | P-22-3545 | CA-MRP-2277H | N/A | MID | Two lane, unnamed asphalt highway with a series of sawed-off wooden poles, culvert with | Unevaluated |



| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|--------------|--------------|------------|--|------------------|
| | | | | | cribbing, and a poured, concrete bridge. | |
| 102. | P-22-3546 | CA-MRP-2278H | N/A | BLM/MID | Mining site with refuse deposit | Unevaluated |
| 103. | P-22-3548 | CA-MRP-2280H | N/A | MID | Sparse refuse scatter. | Unevaluated |
| 104. | P-22-3561 | N/A | N/A | MID | Two structural foundation pads and a home-made float. | Unevaluated |
| 105. | P-22-3562 | N/A | N/A | MID | Mining site with stacked rock walls | Unevaluated |
| 106. | P-22-3563 | CA-MRP-2282H | N/A | BLM/MID | Complex mining and habitation site with orchard, and pieces of automobiles and other metal debris. | Unevaluated |
| 107. | P-22-3565 | CA-MRP-2285H | N/A | BLM/MID | Mining complex with features and refuse deposit and possible steel ball mill. | Unevaluated |
| 108. | P-22-3566 | N/A | N/A | BLM | Waste rock piles | Unevaluated |
| 109. | P-22-3571 | CA-MRP-2290H | N/A | BLM | Post-1950s cabin and habitation site with refuse scatter. | Unevaluated |
| 110. | P-22-3573 | CA-MRP-2292H | N/A | BLM | Mining complex | Unevaluated |
| 111. | P-22-3574 | CA-MRP-2293H | N/A | BLM | Mining waste rock and dry-laid rock cribbing. | Unevaluated |
| 112. | P-22-3577 | N/A | N/A | BLM | Refuse scatter | Unevaluated |
| 113. | P-22-3578 | CA-MRP-2296H | N/A | BLM/MID | Two segments of an unnamed dirt road. | Unevaluated |
| 114. | P-22-3579 | N/A | N/A | BLM | Refuse scatter | Unevaluated |
| 115. | P-22-3580 | CA-MRP-2297H | N/A | BLM | Ditch | Unevaluated |
| 116. | P-22-3582 | CA-MRP-2299H | N/A | BLM | Possible homestead | Unevaluated |
| 117. | P-22-3583 | CA-MRP-2300H | N/A | BLM | Refuse scatter and possible water control | Unevaluated |
| 118. | P-22-3585 | CA-MRP-2302H | N/A | BLM | Unnamed dirt road segment. | Unevaluated |
| 119. | P-22-3587 | CA-MRP-2304H | N/A | BLM/MID | Mining tailings. | Unevaluated |
| 120. | P-22-3588 | CA-MRP-2305H | N/A | BLM | Segment of an unnamed dirt road. | Unevaluated |
| 121. | P-22-3589 | N/A | N/A | MID | Mining site with rock cairns and waste rock piles. | Unevaluated |
| 122. | P-22-3591 | CA-MRP-2306H | N/A | MID | Segment of unnamed dirt road. | Unevaluated |
| 123. | P-22-3612 | N/A | N/A | MID | Rock wall, metal valve box, and metal pipe. | Unevaluated |
| 124. | P-22-3617 | CA-MRP-2310H | N/A | BLM | Utility line corridor with poles, rock walls, grounding rods, and ceramic insulators. | Unevaluated |
| 125. | P-22-3620 | N/A | N/A | BLM | Two mining prospect pits and waste rock. | Unevaluated |
| 126. | P-22-3622 | CA-MRP-2314H | N/A | BLM | Ditch and dry-laid rock walls. | Unevaluated |
| 127. | P-22-3623 | CA-MRP-2315H | N/A | BLM | Unnamed dirt road. | Unevaluated |
| 128. | P-22-3624 | CA-MRP-2316H | N/A | BLM | Rock wall and prospect trench. | Unevaluated |
| 129. | P-22-3625 | CA-MRP-2317H | N/A | BLM | Two rock wall segments and metal refuse. | Unevaluated |
| 130. | P-22-3626 | CA-MRP-2318H | N/A | BLM/MID | Habitation and mining complex with multiple features. | Unevaluated |
| 131. | P-22-3627 | CA-MRP-2319H | N/A | BLM/MID | Large mining complex with multiple features. | Unevaluated |
| 132. | P-22-3629 | CA-MRP-2321H | N/A | BLM | Ditch. | Unevaluated |
| 133. | P-22-3636 | N/A | N/A | PVT | Mining site with ditches | Unevaluated |
| 134. | P-22-3638 | N/A | N/A | BLM/MID | Linear corridor of power poles. | Unevaluated |

Table 3-8. Multicomponent Sites

| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|---------------|---------------|------------|---|---|
| 1. | P-22-0583 | CA-MRP-0267/H | CA-108-TM-167 | BLM/MID | Historic mining complex, habitation site, and prehistoric BRMs | Unevaluated |
| 2. | P-22-0593 | CA-MRP-0278/H | N/A | BLM/MID | Historic Bagby/Benton Mills mining town, prehistoric BRMs, and lithic scatters. | Unevaluated |
| 3. | P-22-0735 | CA-MRP-0432/H | N/A | MID | Nine BRMs and the remains of the historic Bondville mining camp. | Unevaluated |
| 4. | P-22-2179 | N/A | N/A | MID | Catchment basin and two reservoirs likely associated with the historic Horseshoe Bend mining town. Also re-deposited lithic artifacts, an island of milling stones. | Unevaluated |
| 5. | P-22-2263 | CA-MRP-2268/H | CA-TM-239 | BLM/MID | Prehistoric BRMs, lithic scatter, and large mining complex. Two prehistoric components; dated to 600-150 cal B.P. and 3000-1100 cal B.P. | Prehistoric component excavated, pending NRHP evaluation; historic component Unevaluated. |
| 6. | P-22-3227 | CA-MRP-2049/H | N/A | MID | Three BRMs and one rock wall. | Unevaluated |
| 7. | P-22-3232 | CA-MRP-2054/H | N/A | MID | Two BRMs, possible buried prehistoric materials and habitation site with historic rock foundation and partial chimney. | Unevaluated |
| 8. | P-22-3235 | CA-MRP-2057/H | N/A | MID | One BRM and mining materials and features (rock walls, waste rock, etc.). | Unevaluated |
| 9. | P-22-3238 | CA-MRP-2060/H | N/A | MID | One BRM and lithic scatter, and habitation site with chimney and concrete slab structure foundation. | Unevaluated |
| 10. | P-22-3250 | CA-MRP-2072/H | N/A | MID | Eight BRMs, lithic scatter, and historic rock wall. | Unevaluated |
| 11. | P-22-3345 | CA-MRP-2284/H | N/A | BLM/MID | Several BRMs, lithic scatter, and multiple features and refuse from a historic community. | Unevaluated |
| 12. | P-22-3355 | CA-MRP-2271/H | N/A | BLM | Sparse, prehistoric lithic scatter, historic homestead, refuse deposit, and mining debris (waste rock and tailings). | Unevaluated |
| 13. | P-22-3381 | CA-MRP-2148/H | N/A | MID | Fifteen BRMs, lithic scatter, midden, house pits, roundhouse depression and historic wall, concrete dam, waste rock, and sparse refuse scatter. | Unevaluated |
| 14. | P-22-3388 | CA-MRP-2155/H | N/A | MID | Two BRMs and a historic rock wall. | Unevaluated |
| 15. | P-22-3411 | CA-MRP-2177 | N/A | MID | Lithic scatter and tail hook stump spiked with two nails. | Unevaluated |
| 16. | P-22-3543 | CA-MRP-2275/H | N/A | BLM/MID | Rock art, six BRMs and multiple historic mining features. | Unevaluated |
| 17. | P-22-3547 | CA-MRP-2279/H | N/A | BLM/MID | Prehistoric lithic scatter, dry-laid, stacked rock walls; rock-lined foundation, historic refuse. | Unevaluated |
| 18. | P-22-3549 | CA-MRP-2281/H | N/A | BLM | Lithic scatter and historic refuse deposit. | Unevaluated |
| 19. | P-22-3564 | CA-MRP-2283/H | N/A | BLM/MID | Two BRMs and large mining and habitation complex. | Unevaluated |
| 20. | P-22-3567 | CA-MRP-2286/H | N/A | BLM | Seven BRMs, pestle, historic mining and habitation site features with refuse deposit. | Unevaluated |
| 21. | P-22-3569 | CA-MRP-2288/H | N/A | BLM/MID | Multiple BRMs and historic mining complex comprised of multiple features. | Unevaluated |



| Count | Primary No. | Trinomial | BLM Site No. | Land Owner | Site Description | NRHP/CRHR Status |
|-------|-------------|---------------|--------------|------------|---|------------------|
| 22. | P-22-3570 | CA-MRP-2289/H | N/A | BLM | BRMs and lithic scatter, and rock wall segments with refuse deposit. | Unevaluated |
| 23. | P-22-3572 | CA-MRP-2291/H | N/A | BLM | Two BRMs and sparse lithic scatter, modern and historic mining and habitation site. | Unevaluated |
| 24. | P-22-3575 | CA-MRP-2294/H | N/A | BLM/MID | Habitation, corral, trail, developed spring, and refuse scatter. | Unevaluated |
| 25. | P-22-3576 | CA-MRP-2295/H | N/A | BLM | BRM and historic scatter of metal and pipe. | Unevaluated |
| 26. | P-22-3581 | CA-MRP-2298/H | N/A | BLM | Lithic scatter and historic road segment, rock piles, and sparse refuse scatter. | Unevaluated |
| 27. | P-22-3615 | CA-MRP-2308/H | N/A | BLM | One BRM; Large ditch with dry-laid flagstone | Unevaluated |
| 28. | P-22-3621 | CA-MRP-2313/H | N/A | BLM/MID | Six BRMs and a handstone within a large mining complex with numerous features and refuse deposit. | Unevaluated |

Three previously unrecorded historic built resources were recorded as P-22-3637 (residential buildings and structures in the Exchequer residence and maintenance camp), P-22-3308 (Old Exchequer Dam), and P-22-3375 (USGS gaging station), as shown below in. A previously recorded stone building (P-22-1014) was subsumed and recorded under P-22-0593 (Bagby/Benton Mills site). The study also revealed that the hydro system and most Project features, including the New Exchequer and McSwain dams and powerhouses, were less than 50 years of age at the time of the study. The system was constructed in 1964 and was therefore not considered for listing in the NRHP during the relicensing study, and also because it did not meet the requirements for inclusion under Criterion G, which takes into account exceptional resources that have not reached 50 years of age. These resources have become, or will soon become, 50 years old and will therefore be evaluated as a requirement of Historic Properties Management Plan which will be implemented upon issuance of the new license. Additionally, the Highway 49 Bridge over the Merced River was built in 1966 and also did not meet the 50-year age criterion at the time of the relicensing. Although the concrete footings that support the bridge are in the river, no effects were noted on the footings and no effects are occurring to the bridge itself from any Proposed Project-related activities. Finally, more recent work (*Gratreak in prep.*) on the Project’s recreation areas concluded that the five recreation facilities do not meet the eligibility criteria for listing in either the CRHR or NRHP (Table 3-9).

Table 3-9. Historic Built Environment Resources

| Primary No. | Trinomial | Land Owner | Site Description | NRHP/CRHR Status |
|-------------|--------------|------------|---|------------------|
| P-22-3308 | CA-MRP-2133H | MID | Original (Old) Exchequer Dam, built in 1926 | Unevaluated |
| P-22-3375 | CA-MRP-2142H | MID | Gauging station and concrete pad | Unevaluated |
| P-22-3637 | N/A | MID | Residential/maintenance complex | Unevaluated |
| N/A | N/A | MID | Lake McSwain Recreation Area, built in 1969 | Not Eligible |
| N/A | N/A | MID | McClure Point Recreation Area, built in 1969 | Not Eligible |
| N/A | N/A | MID | Barrett Cove Recreation Area, built in 1970 | Not Eligible |
| N/A | N/A | MID | Horseshoe Bend Recreation Area, built in 1970 | Not Eligible |
| N/A | N/A | MID | Bagby Recreation Area, built in 1971 | Not Eligible |

Additionally, 90 isolated artifacts were also documented in the APE. The majority (75) of these are historic and are represented by tin cans, various metal items (e.g., tool parts, pipe), fence wire, ceramic artifacts (e.g., Chinese ware, insulator), bottle glass, prospect pits, rock cribbing and miscellaneous other items. The remaining 15 isolates are representative of the precontact period and include flaked stone tools, debitage and milling equipment. By standard convention, isolated artifacts are not considered eligible for either NRHP or CRHR listing.



Historic Properties Management Plan

Activities associated with ongoing operations and maintenance of the Merced River and Merced Falls Hydroelectric Projects have the potential to affect known and unknown cultural resources that are potentially eligible for inclusion on the CRHR. As part of the relicensing effort, Merced ID developed a Historic Properties Management Plan (HPMP) (Merced Irrigation District 2015) to guide the management of precontact and historic-period properties that are listed in, eligible for listing in, or that are unevaluated for listing in the NRHP, during the term of the proposed new license. The HPMP provides the procedures required to comply with federal and state laws and regulations and to conduct consultation with tribes, agencies, and SHPO for the continued management of historic properties under the proposed new license. These measures include avoidance, protection, monitoring, and mitigation measures. Properties that have not been evaluated for listing on the NRHP or CRHR are to be managed as if they are eligible in the same manner as listed or eligible properties that have been formally evaluated. The HPMP was developed in consultation with Native American tribes, BLM, and SHPO.

As described in the 2015 FEIS, Condition 21 of the Section 4(e) Land Management Conditions requires Merced ID, upon Commission approval, to implement the final amended HPMP that was included in Attachment 1 to the letter Merced ID file with FERC on March 2, 2015. Section 5.4 of the HPMP describes Merced ID's responsibilities for ongoing consultation with SHPO, BLM, and Native American community throughout the term of the new license both as a general management measure as well as in support of any new undertaking (for the purposes of Section 106) or project (for the purposes of CEQA):

Impacts Analysis

- a) **Less Than Significant Impact.** A substantial adverse change in the significance of a historical resource is defined in Section 15064.5(b)(1) of the CEQA Guidelines as the “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.”

Of the 191 archaeological and 8 built environment resources identified by the relicensing studies, 1 resource is listed on or eligible for listing on the NRHP and is, therefore, eligible for listing on the CRHR for the purposes of CEQA. Two (2) archaeological resources and 5 built environment resources are not eligible for the CRHR or NRHP. The remaining 191 cultural resources are unevaluated

Additionally, architectural and engineered facilities and historic-era archaeological sites (for example, a trash dump dating to the 1970s) that were not 45 to 50 years of age at the time of the studies either have already reached the 50-year age criterion for consideration of effects and potential listing on the CRHR and NRHP, or will reach the 50-year age criterion after the new FERC licenses are issued. These resources will require formal recordation using the State Department of Resources (DPR) 523 forms and an assessment of each site's integrity to determine whether these resources are affected by, or will potentially be affected, by operations and maintenance associated with the Proposed Projects. In accordance with the terms of the HPMP, unevaluated historical resources will be managed as if they are NRHP eligible through avoidance. Avoidance means that no activities associated with activities associated with the Proposed Projects may occur at or to these resources not evaluated for the NRHP and/or the CRHR. This applies to activities within the boundaries of known or

potential historical resources, including any defined buffer zones. Avoidance further means that the boundaries for potentially disturbing or destructive activities may need to be modified, redesigned, or eliminated to properly avoid historical resources. Avoidance of historical buildings or structures may include not replacing or modifying characteristics that potentially make them eligible for the NRHP or CRHR. Implementing these avoidance measures ensures the archaeological sites will not be impacted by activities or public use and access associated with the proposed Project, and that the proposed Project will therefore not cause a substantial adverse change in the significance of a historical resource or require further mitigation measures.

When impacts to historical resources are unavoidable, unevaluated resources will be evaluated for the NRHP and/or the CRHR through a testing or evaluation program (e.g., subsurface testing, archival research, etc.). Any resources determined eligible for the NRHP or CRHR that cannot be avoided by activities associated with the Proposed Projects will be mitigated to address significant impacts. The evaluations, assessment of effects, and treatments to mitigate adverse effects will follow the methods and procedures detailed in Section 4.3 of the HPMP. Section 4.3.8 (*Preparation and Implementation of a Historic Properties Treatment Plan* [HPTP]) specifies the research themes and questions to be addressed through the recovery of archaeological, built environment, and traditional cultural property data; specifies the methods to be used in fieldwork and analysis, and explains how these methods are relevant to the research design included in the HPTP; specifies the methods to be used in data management and data dissemination; indicates how recovered materials and records will be curated; and provides for final reporting of the work and curation of all materials and records. The HPTP also details the site-specific measures to be conducted that are unique to each site that may undergo evaluation or mitigation as well as providing the steps necessary to implement mitigation based on the NRHP and CRHR criteria under which a site is found eligible. The processes may include test excavation for NRHP/CRHR evaluations, data recovery excavations for historic-era archaeological sites, archival research of historical buildings and structures, signage, and other measures deemed appropriate based on the type of resources being addressed. The HPTP methods and protocols have been compiled in accordance with the principles, standards, and guidance contained in *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (USDOI 1983), the *Advisory Council on Historic Preservation's (ACHP's) Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites* (ACHP 1999), guidance offered by SHPO, and as appropriate, recommendations on a site by site basis from the BLM and interested Native Americans. Evaluating historical resources, consulting with Tribes, land-managing agencies, and SHPO, and implementing agreed-to mitigation measures will ensure that planned, unavoidable impacts from the Proposed Projects to historical resources are mitigated prior to conducting impact-causing activities such that those impacts will not result in a substantial adverse change to the significance of a historical resource or require further mitigation measures.

Project operation or maintenance, erosion, and recreation could expose and damage previously unidentified historic-era archaeological sites. In addition, known sites may reveal characteristics that were previously unknown if new portions of these sites are exposed. Section 4.3.10 (*Unanticipated Discoveries*) of the HPMP provides the measures to address inadvertent discoveries (i.e., the unexpected exposure of previously unknown and unrecorded archaeological sites) during the terms of the new licenses. These measures require that all work in the immediate area of the discovery cease immediately and that all

artifacts remain in place until the discovery can be examined by a qualified archaeologist to determine whether the find is an isolated artifact, an archaeological site, or a finding of no concern (i.e., not 45-50 years of age).

Minor ground disturbances within the proposed Project area related to modifications, vegetation management, road maintenance, construction, and use, recreation, or emergency repairs to flow releases, and that may be required for routine maintenance activities have the potential to cause substantial adverse changes to currently unidentified, buried historic-era archaeological sites and known archaeological sites in close proximity to these activity areas. Archaeological and/or tribal monitoring will be implemented in accordance with the measures provided in Section 4.3.6 (*Monitoring Protocols*) of the HPMP. Regular monitoring will provide feedback concerning the condition of historical resources, confirming that the resources have been avoided as planned, or signaling when additional management measures may be called for. All potential historical resources located within the boundary of the proposed Project for which eligibility has not yet been determined will be monitored by a qualified, professional archaeologist. The frequency of monitoring shall be based on considerations of accessibility, site type, and proximity to features and recreational use areas associated with the proposed Project and is the product of consultation with Tribes and agencies, as appropriate. If a previously recorded site is determined ineligible it will no longer be monitored or managed through the HPMP. However, if a previously unrecorded site is identified, it will be assumed eligible and, in consultation with Tribes and agencies, avoided and assigned a monitoring schedule.

In addition to regular site-specific monitoring, archaeological and/or tribal monitoring may be appropriate in cases of ground disturbance within 30 feet of NRHP- or CRHR-eligible or unevaluated resources.

An annual report summarizing the results of all monitoring activities during the preceding calendar year will be prepared and distributed to consulting parties each year. The report shall include written descriptions of any disturbances that were observed at each site monitored. An annual cultural resources consultation meeting with Tribes, land-managing agencies, and SHPO will also be held in March of each year, in part to discuss the monitoring report. Based on the results of monitoring presented in the report, the meeting will include a discussion of any proposals to increase or decrease monitoring frequency in response to recent site conditions.

The HPMP further provides for annual cultural resources education and sensitivity training for Merced ID staff and contractors, including all heavy equipment operators and other ground crew members working on the proposed Project. Training personnel in the procedures required to avoid unplanned impacts to archaeological resources will help to avoid inadvertent disturbances, allow for the evaluation and potential mitigation of impacts prior to historical resources being disturbed or destroyed, thereby resulting in the proposed Project having a less than significant impact to historic properties/historical resources or unevaluated archaeological resources with no additional mitigation required.

- b) Less than significant impact.** Management of unevaluated and eligible archaeological resources, pursuant to §15064.5, will be in accordance with the HPMP as described above under Cultural Resource Impact (a).

Implementation of the HPMP, as a stipulation of the new license, will prescribe specific actions and processes to manage archaeological resources within the proposed Project

boundary. It will serve as a guide for Merced ID's operating personnel when performing necessary operation and maintenance activities and prescribes site treatments designed to address ongoing and future effects to historical resources. The HPMP may also provide for a programmatic approach to the identification and evaluation of historic properties and historical resources, or other studies, as may be needed to ensure the protection of historic properties and historical resources, and further provides for the management of unaffected and unevaluated resources as if they are eligible for listing on the NRHP and/or CRHR, unless or until those resources are evaluated, thereby resulting in the proposed Project having a less than significant impact to historic properties/historical resources or unevaluated archaeological resources with no additional mitigation required.

- c) **Less than significant impact.** Section 15064.5(d) of the CEQA Guidelines requires that the proposed Project address the potential for human remains, particularly Native American human remains, to be present within the Merced River and Merced Falls Hydroelectric Project boundaries. Consistent with state law, including Section 7050.5 of the Health and Safety Code and Section 5097.98 of the Public Resources Code, Section 15064.5(d) and (e) of the CEQA Guidelines require the identification of known or likely burials or other locations of human remains and adherence to applicable state laws and regulations for the appropriate disposition of human remains, including in the event of accidental discovery. No human remains were identified or discovered during any of the relicensing studies. However, given the culturally sensitive nature of the lands within the proposed Project, and the presence of precontact occupation sites, it is possible that human remains could be discovered during the term of the proposed new license. Thus, the measures provided in Section 4.3.11 (*Treatment of Human Remains*) of the HPMP to address the discovery and protection of human remains, in accordance with applicable state and federal laws, will be employed if human remains are encountered. Impacts would be less than significant, and no additional mitigation is required.



3.3.6 Energy

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The purpose of the Merced River and Merced Falls Hydroelectric projects is to continue generating electricity. As depicted in the FEIS under the *Staff Alternative with Mandatory Conditions*, the Merced River project has 103.5 MW of authorized and installed capacity while the Merced Falls project has an authorized and installed capacity of 3.4 MW.

Impact Analysis

- a) **No Impact.** There are no facility upgrades, decommissioning, or other infrastructure that would alter the currently approved electricity generating capacity.

As described in the Recreation PEIR (<https://ceqanet.opr.ca.gov/2024051222>), none of the Proposed Project changes to baseline conditions alter the facilities or O&M in such a way as to result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

- b) **No impact.** As noted in Section 1.2.2 of the FEIS ([FERC 2015 Merced ID FEIS](#)), FERC concluded that the Merced River and Merced Falls Hydropower projects would help meet California's short and long-term power needs. This would be consistent with the State's Renewables Portfolio Standard, which sets targets for retail electricity generation by renewable resources. Therefore, the Proposed Project would not lead to anticipated conflicts with state or local renewable energy or energy efficiency plans. The Proposed Project would have no conflicts with these plans.

3.3.7 Geology and Soils

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: | | | | |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii. Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii. Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv. Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The Recreation PEIR section for Geology and Soils Environmental Setting (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.5) provides a detailed description of existing conditions and is incorporated by reference herein.

Impact Analysis

- a) **No Impact.** The Recreation PEIR section for Geology and Soils Impact Analysis (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.5) provides a detailed description of the potential for impacts and is incorporated by reference herein. Note that in the Recreation PEIR, question “a” is broken into multiple discussions identified as Impact GEO-1 through Impact GEO-4.
- b) **Less Than Significant Impact.** The Recreation PEIR section for Geology and Soils Impact Analysis (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.5) provides a detailed description of the potential for impacts and is incorporated by reference herein. Note that in the Recreation PEIR, question “b” is identified as Impact GEO-5. As noted in the Recreation PEIR, implementation of **MM-HYD-1 Stormwater Management and Treatment Plan**, described in Section 3.3.10, Hydrology and Water Quality in this document, would also be required during construction and operations and will reduce erosion and support topsoil management.
- c) **No Impact.** The Proposed Project is not in an area suitable for lateral spreading, subsidence, liquefaction or collapse. The Mariposa County LHMP references the possibility of landslides, but these are all located upstream of Lake McClure and a landslide upstream would not alter the stability of soil or associated geology in the area of the Proposed Project.
- d) **No Impact.** As addressed in Expansive Soils section of the Recreation PEIR under Environmental Setting, clay-loam soils possessing the high shrink-swell potential associated with expansive soils in Mariposa County are the Trabuco-San Andreas-Coarsegold association and the Blasingame-Las Posas association. As shown in Figure 8-4 of Volume III of the Mariposa County General Plan, neither of these soils is represented in the Proposed Project area. Therefore, the Proposed Project would not be located on expansive soils.
- e) **No Impact.** There are few sites suitable for septic systems within Mariposa County and the only septic system within the Proposed Project area is located within the Bagby Recreation Area. This septic system has already been permitted. Further, as no septic systems would be installed as part of the Proposed Project, and the Proposed Project would not require or enable additional construction by parties not answerable to Merced ID, there is no possibility of additional septic systems.
- f) **Less Than Significant Impact With Mitigation Incorporated.** The Recreation PEIR section for Geology and Soils Impact Analysis (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.5) provides a detailed description of the potential for impacts and is incorporated by reference herein. Note that in the Recreation PEIR, question “b” is identified as Impact GEO-9. As discussed, no paleontological resources are known in the area. Further, excavations associated with the Proposed Project are unlikely to reach a sufficient depth to unearth paleontological resources, and most excavation will occur within previously disturbed footprints. However, it is possible that paleontological resources may be encountered in new areas of disturbance.

In this event, **MM-GEO-1 Inadvertent Discovery Protocol** would be implemented and is described in the following section.

Mitigation Measures

Following is a description of the mitigation being proposed as part of the Proposed Project:



- **MM-GEO-1 Inadvertent Discovery Protocol.** If paleontological resources are discovered during earth-moving activities, the construction crew will immediately cease work within a 50-foot radius of the find and notify Merced ID's Project manager. Construction work will be halted until the collection of fossil specimens has been completed. The collection and treatment actions will occur after recovery of specimens and once scientific value can be confirmed and documented. If fossils are found, treatment actions will include sampling for microfossils, conducting paleomagnetic analysis, identifying and preparing fossils, arranging for a repository, and preparing a final report. These actions will comply with guidance from the Society for Vertebrate Paleontology.



3.3.8 Greenhouse Gas Emissions

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The Recreation PEIR section for Greenhouse Gases, Environmental Setting (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.6) provides a detailed description of existing conditions and is incorporated by reference herein.

Impact Analysis

As all potential effects on greenhouse gases would result from construction at recreation areas, the Recreation PEIR section for Greenhouse Gases, Environmental Impacts (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.6) provides detailed responses to both questions for Greenhouse Gases and is incorporated by reference herein.



3.3.9 Hazards and Hazardous Materials

Would the project:

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

Environmental Setting

The Recreation PEIR section for Hazards and Hazardous Materials, Environmental Setting (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.7) provides a detailed description of existing conditions and is incorporated by reference herein.

Impact Analysis

As all potential effects on hazards and potential impacts from new hazardous materials would result from construction at recreation areas, the Recreation PEIR section for Hazards and Hazardous Materials, Environmental Impacts (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.7) provides detailed responses to all questions for Hazards and Hazardous Materials and is incorporated by reference herein.



3.3.10 Hydrology and Water Quality

Would the project:

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

Environmental Setting

The Recreation PEIR section for Hydrology and Water Quality, Environmental Setting (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.8) provides a detailed description of existing conditions and is incorporated by reference herein.

Impact Analysis

- a) **Less Than Significant Impact.** Section 5.2 of the FEIS ([FERC 2015 Merced ID FEIS](#)), Page 5-81) states that “Continued operation of the Merced River and Merced Falls Projects would

result in some minor unavoidable adverse effects on . . . water quality resources” in the form of “warming of water in the Merced River” but that “effects would be reduced by recommended resource enhancement measures, including: . . . the provision of a minimum instream flow, enhanced spring pulse flows, and a fall pulse flow.” The Executive Summary (page xliii) states that proposed minimum flows would “enhance habitat in the lower Merced River for Chinook salmon and *O. mykiss* while balancing Lake McClure water storage for irrigation and water temperature enhancements. Additional discussion of measures to protect water quality are found in Appendices E & F – Preliminary Water Quality Certification Conditions for the project, including Lake McClure minimum pool (E-6), water temperature monitoring plan (E-8), and control measures for erosion (E-10 & F-5), The Proposed Project would not change this condition.

While proposed construction activities in the recreation areas have the potential to negatively impact water quality, proposed measures such as the SWPPP, Hazardous Materials Plan, and other applicable plans would minimize impacts to surface or ground water quality. The Recreation EIR (<https://ceqanet.opr.ca.gov/2024051222>) analyzes potential impacts and is incorporated by reference herein.

- b) **Less Than Significant Impact.** Groundwater supply and quality is not discussed in the water resources section of the FEIS because the Project does not impact groundwater in the Project vicinity. However, groundwater is discussed in Section 3.3.1.2 of the FEIS ([FERC 2015 Merced ID FEIS](#); Pages 3-143 through 3-146) in relation to the water supply to the Merced National Wildlife Refuge (NWR).

The Recreation EIR (<https://ceqanet.opr.ca.gov/2024051222>) analyzes potential impacts and is incorporated by reference herein.

- c) **Less Than Significant Impact.** The Recreation PEIR section for Hydrology and Water Quality, Impact Analysis (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.8) provides a detailed description of the potential for impacts and is incorporated by reference herein.
- d) **No impact.** The Proposed Project contains areas designated as flood hazard zones A and D, however any improvements that would be located in zone A (flood hazard areas that are subject to inundation by the 1% annual chance flood) require water as part of the environment; these would include water intakes, etc. Further, under Proposed Project conditions, no pollutants would be released within flood hazard zones. As addressed previously, seiches are extremely unlikely on Lake McClure and McSwain Reservoir and would most likely be the result of one of the rare earthquakes that Merced and Mariposa County have historically experienced.
- e) **No Impact.** The Proposed Project is integral to the terms of the FERC License renewal relating to recreation of the Merced River and Merced Falls FERC Hydroelectric projects. These projects and their respective reservoirs are foundational to sustainable water management, irrigation, and groundwater recharge in Merced ID. Proposed Project operations would not contribute to water quality issues that applicable water quality control plans are designed to address. There are no sustainable groundwater management plans that would be impacted by the project.



3.3.11 Land Use and Planning

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Impact Analysis

- a) **No impact.** The Proposed Project has existing facilities in a rural area. There are no established communities in the Proposed Project area. As such, there would be no impact to established communities.
- b) **No impact.** Applicable land use plans and policies to the Proposed Project are discussed in the FEIS pages 3-304 through 3-308 ([FERC 2015 Merced ID FEIS](#)). Any construction and maintenance activities associated with the Proposed Project would be completed under applicable permits and would align with local land use plans, policies, and regulations, as well as in coordination with the involved agencies.

3.3.12 Mineral Resources

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The California Geological Survey produces Mineral Land Classification studies pursuant to the Surface Mining and Reclamation Act. Mineral Land Classification studies help identify areas with potentially important mineral resources that should be considered in local and regional planning. Based on a review of the California Department of Conservation’s (DOC) Mineral Land Classification interactive map, the Proposed Project is not located within a Mineral Land Classification study area (DOC 2024).

Mariposa County contains part of the mineralized fault belt known as the “Mother Lode,” the historic source of precious metals that started the 1849 Gold Rush. However, Mariposa County currently has only a single active slate quarry with sand and gravel extraction operations; most mines in the County are closed. Further, the DOC found no past or present mineral resources within the Proposed Project footprint. As there are no known mineral resources within the Proposed Project footprint, the Proposed Project would have no impact on mineral resources.

Impact Analysis

- a) **No Impact.** Since there are no known mineral resources within the Proposed Project footprint, the Proposed Project would have no impact on mineral resources.
- b) **No Impact.** Since there are no known mineral resources within the Proposed Project footprint, the Proposed Project would have no impact on mineral resources.



3.3.13 Noise

Would the project result in:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Impact Analysis

Implementation of the Proposed Project would cause increases in ambient noise and vibration within the Proposed Project area, mainly from temporary construction equipment use. However, vibration increases would primarily be at surface level, and no significant vibration would occur beyond the construction site. Further, there are no permanent residences, or other land uses sensitive to noise or vibration within the area; when disruptive work is being performed at the recreation areas, those areas are closed, and traffic is directed to other recreation areas.

The nearest airports to the Proposed Project area are the Pine Mountain Lake Airport, about 11 miles north of Lake McClure, and the Mariposa-Yosemite Airport about 9 miles southeast of Lake McClure (Google 2023). Neither of these airports is within two miles of the Proposed Project area. Both airports are the subject of comprehensive land use plans; however, the boundaries of neither plan extend to the Proposed Project area. Therefore, noise related to both airports require no further scrutiny under CEQA.

The Noise Element of the Mariposa County General Plan states, “At this time, Mariposa County is not developing a noise exposure inventory....” It notes that the environment is typically below 55 decibels, but that louder sounds, including from chainsaws and tractors, occasionally break that quiet. There is no specific threshold in the Mariposa County General Plan for noise. As noted, recreation areas where disruptive noise levels may occur during construction would be closed during those times. Operational noises associated with Proposed Project facilities would fit within the “rural lifestyle” that the county wishes to preserve, and the Proposed Project area is devoid of sensitive receptors. Therefore, the Proposed Project would have no impact on noise or vibration.

3.3.14 Population and Housing

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Impact Analysis

The Proposed Project includes various improvements intended to update and upgrade recreational facilities at Lake McClure and McSwain Reservoir. Since they are upgrades to existing campgrounds, these improvements would at most draw more seasonal users to the recreation areas. This would not engender any substantial population growth beyond the scope of the local plan. In addition, no residential development is proposed, so no direct population growth would occur, and the Proposed Project would not include any commercial, industrial, or institutional development that could indirectly encourage population growth.

The Proposed Project encompasses several recreation areas that include campsites; however, these would serve visitors only. There are no permanent residences within the Proposed Project area; as such, there are no residents or houses that could be displaced by project implementation. In summary, the Proposed Project would have no impact on population and housing.

3.3.15 Public Services

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| i. Fire Protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii. Police Protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii. Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv. Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| v. Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Impact Analysis

The Proposed Project includes various recreational improvements in a sparsely populated area. Its implementation would improve access to and availability of recreational facilities for residents and visitors. More discussion on this can be found in Section 3.13.16 Recreation.

Demand on schools and other public facilities would remain unchanged. The Proposed Project area is intended for recreational purposes as designed and does not require school services as a residential community would. Traffic to and from schools would be unaffected under the Proposed Project. The same conditions would apply to other public facilities such as libraries.

The emergency response facilities closest to the Proposed Project area are a CAL FIRE station located in Lake Don Pedro, northwest of the Barrett Cove Recreation Area, and a local fire station in Coulterville, north of the Bagby Recreation Area. Law enforcement service for most facilities would be provided by the Mariposa County Sheriff’s Department, with the Merced Falls area being served by the Merced County Sheriff’s Department. The main station for the Mariposa County Sheriff’s Department is in Mariposa, while the Merced County Sheriff’s Department has its main station in Merced.

The Proposed Project is not expected to increase travel times, congestion, or road use. Therefore, access to and from these emergency facilities would not be impaired. It is possible that improving road conditions within the Proposed Project area may make emergency transport more effective and efficient. The likely demand for fire protection and law enforcement agencies with the Proposed Project would not be substantially greater than existing demand. Therefore, the fire and police agencies can accommodate this demand for services without requiring additional personnel or new or expanded facilities. The Proposed Project would have no impact on public services.

3.3.16 Recreation

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|--------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

The Recreation PEIR section for Recreation, Environmental Setting (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.9) provides a detailed description of existing conditions and is incorporated by reference herein.

Impact Analysis

- a) **Less Than Significant Impact.** The construction of one new recreation area (Mack Island) and improvements at five existing recreation areas (Bagby, Barrett Cove, Horseshoe Bend, McClure Point, and McSwain) under the Proposed Project is expected to increase the demand for day use and group day use, particularly for the recreation areas near Merced and surrounding communities. However, Merced ID’s proposal for additional group day use areas and improvements at day use areas responds to this identified recreational need (FEIS page 3-291). These potential increases in recreation use would not cause substantial physical deterioration of any facilities. The Recreation EIR (<https://ceqanet.opr.ca.gov/2024051222>) analyzes potential impacts and is incorporated by reference herein.

- b) **Less Than Significant Impact.** The Proposed Project by itself would generally not increase the use of existing recreational facilities. As noted in the Population and Housing section, the Project is not expected to generate population growth that would require new or expanded public facilities, such as recreational facilities. New recreational facilities are proposed, and existing recreational facilities would be improved. However, as noted in the answer to impact question a), these facility improvements respond to an identified recreational need. The Recreation PEIR analyzes the potential environmental impacts of these proposed facilities. The Recreation EIR (<https://ceqanet.opr.ca.gov/2024051222>) analyzes potential impacts and is incorporated by reference herein. In the Recreation PEIR there is a single mitigation measure that would apply to projects that could be initiated prior to relicensing – that is not carried forward to this IS. This document is to evaluate Merced ID’s acceptance of a new license; as such, the 2015 FERC *Recreation Facilities Plan* and associated *Site Development and Construction Plans* would be triggered by the relicensing conditions, and therefore reduce the potential for impacts to less than significant.

3.3.17 Transportation

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Impact Analysis

The transportation section typically includes an assessment of the potential for the Proposed Project to substantially increase hazards due to a geometric design feature including, but not limited to, sharp curves or dangerous intersections, or incompatible uses, or to result in inadequate emergency access. This also applies to conflicts with plans, ordinances, or policies addressing the circulation system and inconsistency with CEQA Guidelines Section 15064.3(b), which provides criteria for performing transportation impact analysis using Vehicle Miles Traveled (VMT). VMT has become the preferred metric, in part due to its capability of being used to assess project impacts on greenhouse gas emissions, which were a primary concern of the State legislation that encouraged the use of VMT.

The Proposed Project would make no significant changes to road design, and as a result would not increase hazards or diminish emergency access, as discussed in Public Services, previously. The improvements that the Proposed Project would implement could potentially increase traffic to Merced ID’s Recreation Areas seasonally, but any such increase in camping capacity and subsequently traffic would be minor. Concern regarding VMT applies mainly to urban uses such as residential, office, and mixed use, and to a lesser extent commercial and industrial development. The Proposed Project addresses recreational facilities, which due to their seasonal activity and location away from urban areas are not expected to substantially generate traffic, and consequently VMT.

The traffic generated by the Proposed Project improvements would be of the same composition as existing traffic in the area. No vehicles that would be potentially incompatible with the existing traffic would be introduced, other than construction equipment that may be on the local roads during construction but would stop once the proposed improvements are completed. Based on the above information, the Proposed Project would have no impact on transportation.



3.3.18 Tribal Cultural Resources

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

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

The Recreation PEIR section for Tribal Cultural Resources, Environmental Setting (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.10) provides a detailed description of existing conditions and is incorporated by reference herein.

Impact Analysis

The Recreation PEIR section for Tribal Cultural Resources, Impact Assessment section (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.10) provides a detailed analysis of impacts and is incorporated by reference herein.

However, tribal communities’ outreach has a much longer history of consultation related to FERC hydropower licenses and a somewhat broader footprint; therefore, details for the Proposed Project consultation is provided below.

Impact Assessment - Tribal Consultation

Examination of the archival notes identified several main Southern Sierra Miwok settlements in the Project APE, including at Horseshoe Bend, Pleasant Valley, and Bagby in addition to those beyond the Project APE such as Merced Falls, Coulterville, Hornitos, Mariposa and a number of others at greater distance from the APE. The time frame for the existence of these settlements is not specified, and it is possible that documents refer to an earlier (pre-1906) period. There were also 27 named locations identified along the Merced River within the Project vicinity but types of settlement are not indicated (e.g., permanent village, fishing village, temporary camp or place name). Kroeber

(1925:445; Plate 37) and Merriam (nd; 1977:141-159) identified fewer settlements; 11 and 10, respectively. Kroeber and Merriam each identify one additional location, the same one that earlier archival notes do not enumerate. It may be hypothesized from this that those that are in concordance are the more major settlements, possibly permanent villages, along the Merced River while those listed only by Barrett are smaller temporary camps or perhaps just named fishing locations.

There were numerous communications between Merced ID and the Southern Sierra Miwuk Nation (SSMN) regarding the relicensing Project. Initial contact was made in January 2008 by Merced ID in letters about the FERC relicensing Project submitted to potentially interested tribes in the Project vicinity. The SSMN responded positively to this letter of inquiry and sent Merced ID a detailed list of recommended research facilities, references, and other potentially valuable information, including information that the SSMN has developed a GIS data base that documents tribal resources and ethnographic information. Merced ID met with the SSMN Tribal Council in 2008, and SSMN members participated in a day of archaeological fieldwork during August 2008.

Specific efforts for the ethnographic investigations began early in 2010. A number of e-mails between the ethnographer and a tribal representative followed an initial meeting with tribal members with the goal of establishing a research schedule that included interviews with SSMN Elders and knowledgeable members of the tribe, as required in the FERC-approved study plan. During the following period, the tribal representative mailed the ethnographer several papers prepared by the SSMN for projects and a presentation to the annual Society of California Archaeology meetings that they felt would be relevant to the relicensing. These documents mainly address the GIS strategies employed by the tribe to document and record important ethnographic and locational data for tribal purposes and interests. They include relevant information pertaining to the Project vicinity including data on trails leading in and out of the area and the fishing activities on the Merced River.

Between December 2010 and May 2011, a contract and language for a Memorandum of Understanding (MOU) were developed and both documents implemented. The relicensing ethnographer attended a tribal council meeting in May of 2011 to provide an overview of the historic properties and TCP studies and the data needs for the TCP study. The expectations were that the interviews would begin immediately. Although Merced ID and the relicensing ethnographer endeavored to develop the necessary interview schedules to carry the study forward, no interviews were held with the Elders and, thus, no TCPs were documenting as a result of the relicensing studies.

Most recently, Merced ID contacted the Native American Heritage Commission (NAHC) again on February 16, 2022 (see discussion in Recreation PEIR; <https://ceqanet.opr.ca.gov/2024051222>), to request an updated list of California Native American tribes and organizations that may have an interest in the proposed project pursuant to PRC 21080.3.1(c), as well as to request a search of the Sacred Lands File (SLF). The NAHC responded on March 30, 2022, providing a list of tribes that have cultural and traditional affiliation to the Proposed Project area. The NAHC also reported that their search of the SLF yielded negative results.

On August 1, 2024, Merced ID mailed invitations to consult to the following Native American tribes and representatives:

- Lloyd Mathiesen, Chairperson of the Chicken Ranch Rancheria of Me-Wuk Indians
- Cosme Valdez, Chairperson of the Nashville Enterprise Miwok-Maidu-Nishinam Tribe

- Leland Valdez, Cultural Resources Director of the Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- Fred Beihn, Chairperson of the North Fork Rancheria of Mono Indians
- Katherine Perez, President of the North Valley Yokuts Tribe
- Timothy Perez, MLD Contact of the North Valley Yokuts Tribe
- Tracey Hopkins, Chairwoman of the Picayune Rancheria of the Chukchansi Indians
- Caleb Martinez, Tribal Administrator of the Picayune Rancheria of the Chukchansi Indians
- Heather Airey, Tribal Historic Preservation Officer of the Picayune Rancheria of the Chukchansi Indians
- Sandra Chapman, Chairperson of the Southern Sierra Miwuk Nation
- Charmaine McDarment, Chairperson of the Tule River Indian Tribe
- Kevin Day, Chairperson of the Tuolumne Band of Me-Wuk Indians
- Kenneth Woodrow, Chairperson of the Wuksachi Indian Tribe/Eshom Valley Band

Follow up phone-calls were placed and emails sent to each contact approximately two- and four-weeks ***following notification.***

The potential for tribal cultural resource was also assessed by reviewing the location and eligibility status of previously recorded resources using:

- Records searches data of previously conducted cultural resource studies and previously recorded cultural resources on file with the California Historical Resources Information System (CHRIS) housed at the Central California Information Center (CCIC) at California State University, Stanislaus, the BLM Mother Lode Field Office in Eldorado Hills, and the BLM California headquarters – database searches conducted in 2008-2010, and augmented in 2012, 2015, and 2022.
- Maps, site records, and other files in the Final: Amended Cultural Resources Inventory Report for the **Merced River Hydroelectric Project Relicensing (FERC No. 2179), Mariposa County, California (Flint et al. 2015).**
- Maps, site records, and other files in the **Traditional Cultural Properties Study: Native American Presence in the Merced River Hydroelectric Project Relicensing (FERC No. 2179), Mariposa County, California (McCarthy 2014).**
- Significance assessments and management recommendations in the **Amended Historic Properties Management Plan, Merced River Hydroelectric Project, FERC Project No. 2179 (Merced Irrigation District 2015).**
- Listings of the National Register of Historic Places (NRHP).
- Listings of the California Register of Historical Resources (CRHR).

The records search data revealed the entirety of the proposed Project Area was previously subject to intensive cultural and Tribal resource studies in support of Merced ID's environmental compliance work for the Merced River Hydroelectric Project Relicensing Project and the Merced Falls Project.

Identification of Tribal Cultural Resources

No TCRs, TCPs, or TCLs have been identified as a result of the cultural and ***tribal studies conducted under Section 106 for the relicensing effort or during Assembly Bill 52 consultation for the purposes of compliance with CEQA.***

- a) **No Impact.** Acceptance of the expected new FERC license, continuance of Merced River Project and Merced Falls Project operations and maintenance under the terms of the new license, and implementation of the license conditions would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 because no tribal cultural resources located in or near the proposed Project area that qualify as CEQA historical resources would be affected by the proposed Project.
- b) **Less Than Significant.** Acceptance of the expected new FERC license, continuance of Merced River Project and Merced Falls Project operations and maintenance under the terms of the new license, and implementation of the license conditions could cause a substantial adverse change in the significance of a tribal cultural resource. Previously recorded as well as unrecorded cultural resources, TCPs, and/or TCLs may ultimately, through ongoing consultation with Native American Tribes as required by the HPMP, may also be considered TCRs for the purposes of CEQA.

As noted, Merced ID's consultation efforts will be conducted in a manner that is respectful of Tribal sovereignty and that recognizes and respects the government-to-government relationship between Indian Tribes and FERC and between Indian Tribes and Merced ID.

Further consultation with Native American tribes during the term of the new license may identify previously unrecorded tribal cultural resources. As described in the FEIS, Condition 21 of the Section 4(e) Land Management Conditions requires Merced ID, upon Commission approval, to implement the final amended HPMP that was included in Attachment 1 to the letter Merced ID file with FERC on March 2, 2015. Section 5.4 of the HPMP describes Merced ID's responsibilities for ongoing consultation with the Native American community throughout the term of the new license both as a general management measure as well as in support of any new undertaking (for the purposes of Section 106) or project (for the purposes of CEQA).

As prescribed by the HPMP, Merced ID shall ensure that consultation with Indian Tribes is initiated early in the planning process to identify cultural, confidentiality, or other concerns and to allow adequate time for consideration of such concerns. Merced ID, at a minimum, will consult with those individuals and organizations whose names were provided to Merced ID by the NAHC and who expressed interest in participating in the Project.

Merced ID shall ensure that consultation continues with Indian Tribes throughout the Section 106 and CEQA compliance processes prescribed by the HPMP and as required by CEQA, particularly to continue to seek interviews with Elders to identify TCRs, TCPs, TCLs, or other interests, and whenever such tribes express a concern about an undertaking or about historic properties that may be affected by an undertaking implemented under the terms of the new license.



3.3.19 Utilities and Service Systems

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Impact Analysis

The Proposed Project would require the construction, rehabilitation, and relocation of new and existing utilities infrastructure. However, all but two elements of such infrastructure are within existing recreation areas and the FERC boundary operated by Merced ID. The only pieces of infrastructure that span multiple recreation areas are the transmission lines that carry electricity throughout the Proposed Project footprint. As these are owned and operated by PG&E, they fall outside the jurisdiction of Merced ID. There are also existing and proposed vault toilets throughout Lake McClure and along bicycle and pedestrian trails. As this infrastructure is discrete and specific to the Proposed Project footprint, and given the location of the Proposed Project area, there is no possibility that it would impact infrastructure in adjacent or surrounding municipalities.

Work on new or existing infrastructure is included in the description for the Proposed Project. This includes the update and rehabilitation of such infrastructure facilities to maintain functionality and safety as they approach the end of their useful life. All utilities-based construction would occur within previously disturbed footprints and would have no impacts extending beyond these footprints.

Water infrastructure within the Proposed Project footprint is reliant on Lake McClure and McSwain Reservoir for potable water. As these are large reservoirs that are managed by Merced ID, it is highly unlikely that the associated recreation areas could exhaust or even significantly alter the water supply available to local infrastructure. Related to water infrastructure for the Proposed Project, electrical resources are tied to the hydroelectric dams associated with the Proposed Project and the impact of the Proposed Project improvements on electricity infrastructure would be minimal.

Wastewater treatment is handled discreetly by recreation area, or by management of isolated vault toilets. The Proposed Project includes rehabilitation and expansion of these facilities to capacity of expected use. There would be no impact on wastewater treatment facilities.

The Proposed Project includes proposals to track, quantify, and manage solid waste, including fishing line dump stations more effectively. As the Proposed Project is not expected to induce significant additional use, it would not significantly increase the generation of solid waste.

3.3.20 Wildfire

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

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The Recreation PEIR section for Wildfire, Environmental Setting (<https://ceqanet.opr.ca.gov/2024051222>, Section 3.11) provides a detailed description of existing conditions and is incorporated by reference herein.

Impact Analysis

- a) **No Impact.** Under the Staff Alternative with Mandatory Conditions (FEIS page 3-314), the FERC determined that implementation of Merced ID’s Fire Prevention and Response Management Plan would improve planning and management for wildfire and improve the coordination of wildfire protection and prevention in the project vicinity. As has been noted elsewhere in this IS/MND, the Proposed Project would have no impact on emergency vehicle access or evacuations, as roads in the vicinity would remain unchanged except around recreation areas. The Recreation EIR discusses this issue. The Proposed Project would have no impact on emergency response or emergency evacuation plans.
- b) **No Impact.** Continued operations and maintenance of the two hydropower projects would not expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of a wildfire. Therefore, the Proposed Project would have no impact on exposure to pollutant concentrations.

- c) **No Impact.** The Proposed Project is not expected to install or expand existing facilities, other than improvements to recreation areas. The Recreation PEIR analyzes the potential environmental impacts of these improvements. Under the Staff Alternative with Mandatory Conditions (p.3-314), the FERC determined that implementation of MID's Fire Prevention and Response Management Plan would improve planning and management for wildfire and improve the coordination of wildfire protection and prevention in the project vicinity. As such, the Proposed Project would have no impact related to the installation or maintenance of associated infrastructure.
- d) **No Impact.** The Proposed Project is not expected to contribute to an increased wildfire risk, as existing facilities would be maintained, and existing operations would continue to occur. New recreation facilities are not expected to significantly affect fire risk, as discussed in the Recreation PEIR. Under the Staff Alternative with Mandatory Conditions (FEIS page 3-314), the FERC determined that implementation of Merced ID's Fire Prevention and Response Management Plan would improve planning and management for wildfire and improve the coordination of wildfire protection and prevention in the project vicinity. Therefore, the Proposed Project would have no impact related to exposure of people or structures downstream of the Proposed Project area to significant risks.



Mandatory Findings of Significance

Would the project:

| Environmental Issue Area: | Potentially Significant Impact | Potentially Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Impact Analysis

- a) Less Than Significant.** The Proposed Project was analyzed for potential environmental impacts related to 20 environmental resources – with inclusion of all new license plans and programs that would be triggered by the Proposed Project, all impacts were found to be **Less Than Significant** or **No Impact**.
- b) Less Than Significant Impact.** The Proposed Project was analyzed for potential environmental impacts related to 20 environmental resources – with inclusion of all new license plans and programs that would be triggered by the Proposed Project, all impacts were found to be **Less Than Significant** or **No Impact**. Given this, the Proposed Project is not anticipated to make a contribution to environmental impacts that could result in cumulatively considerable effects.
- c) No Impact.** This IS/MND analyzed various environmental issues that could have an adverse impact on human health – air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and transportation. None of these issues were found to have potentially significant impacts that could affect human health.

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Attachment 3 – Riparian Vegetation Monitoring Plan, February 2022.

Attachment 4 - Transportation Management Plan, February 2022.

Attachment 5 – Hazardous Materials Management Plan, February 2022.

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Appendix A. Merced ID Application for Amendment Letter, Merced River Project



Appendix B. Merced ID Application for Amendment Letter, Merced Falls Project

Appendix C. Biological Resources Map Data