

Executive Summary

This supplemental environmental impact report (SEIR) has been prepared by the California Department of Water Resources (DWR) pursuant to the California Environmental Quality Act (CEQA) Statute and State of California CEQA Guidelines (CEQA Guidelines) (California Public Resources Code, Section 21000 et seq.; 14 CCR 15000 et seq.) to analyze and disclose environmental impacts associated with implementation of the B.F. Sisk Dam Safety of Dams Modification Project.

DWR prepared and certified an environmental impact report (EIR) for the B.F. Sisk Dam Safety of Dams Modification Project in 2019, logged as State Clearinghouse No. 2009091004. That document was a joint federal and state environmental review and included an environmental impact statement (EIS) prepared in conformance with the federal National Environmental Policy Act (NEPA) and an EIR prepared pursuant to CEQA requirements. The Bureau of Reclamation (Reclamation) served as the federal lead agency for NEPA review and DWR served as the state lead agency with responsibility for carrying out review in accordance with CEQA. The document, B.F. Sisk Dam Safety of Dams Modification Project Environmental Impact Statement/Environmental Impact Report (Reclamation and DWR 2019), is referred to herein as the 2019 EIS/EIR. The 2019 EIS/EIR analyzed and disclosed the environmental impacts of a multiyear construction project aimed at alleviating existing seismic stability concerns at B.F. Sisk Dam, which impounds San Luis Reservoir, located on land controlled by Reclamation in western unincorporated Merced County, California. The project addressed in the 2019 EIS/EIR is referred to herein as the Approved Project; the Approved Project plus proposed modifications identified since certification of the 2019 EIS/EIR—the subject of this SEIR—is referred to as the Modified Project.

This SEIR is an informational document intended for use by DWR, other public agencies, and members of the general public in evaluating the potential environmental effects of the Modified Project. This SEIR is a supplement to the CEQA component of the 2019 EIS/EIR, addressing changes to the Approved Project identified by the joint DWR and Reclamation design team subsequent to DWR's certification of the EIR. In summary, the changes consist of minor additions to the impact area and potential addition of materials excavation sites within the previous study area. The changes associated with the Modified Project are summarized in greater detail in Section 1.3, Proposed Modifications to the Project, in Chapter 1, Introduction, and detailed in Chapter 2, Project Description, of this SEIR.

ES.1 Project Background

B.F. Sisk Dam is located in western Merced County, on the west side of California's Central Valley, approximately 9 miles west of the City of Los Banos on State Route 152 (Figure 1-1, Project Location, in Chapter 1). The dam was constructed between 1963 and 1967 to impound San Luis Reservoir, which provides supplemental storage capacity for the Central Valley Project (CVP) and California State Water Project (SWP). It is part of the San Luis Joint-Use Complex, or San Luis Unit of the CVP and SWP, which was authorized by the United States Congress in 1960 under the San Luis Act (Public Law 86-488) and is a joint effort of the federal and State of California governments. The San Luis Unit, including San Luis Reservoir, is owned by Reclamation and operated by DWR. Recreation uses at San Luis Reservoir, including boating, overnight camping, and hiking, are managed by the California Department of Parks and Recreation as part of the larger San Luis Reservoir State Recreation Area.

The dam is in an area with potential for severe seismic activity from known faults, primarily the Ortigalita Fault, which crosses the reservoir. Studies of the seismic safety of B.F. Sisk Dam completed by Reclamation and DWR beginning in the 1980s determined that less-dense soils under the dam and in the dam abutments could undergo liquefaction during a seismic event and result in significant deformation (i.e., crest settlement) of the dam. Seismic analysis and modeling carried out on the dam determined that the predicted settlement of the dam crest as a result

of a severe seismic event could result in the dam crest height settling below the surface level of the reservoir, which would allow water to overtop and erode the dam embankment. Settling of the dam embankment also has the potential to result in cracks in the dam embankment that could result in leaks and erosion of the embankment material. Reclamation and DWR completed a probabilistic risk analysis to determine the likelihood of events that could lead to dam failure. The probabilistic risk analysis determined that failure of the dam is very unlikely, but that consequences of a dam failure would be severe and therefore do not meet Reclamation’s Public Protection Guidelines (Reclamation 2011) and warrant corrective action. Corrective actions studies were carried out by Reclamation with participation by DWR (Reclamation 2019).

The corrective actions studies indicated that deformation potential would be addressed by removing the alluvium and clayey slopewash, constructing downstream stability berms keyed into the underlying bedrock, and raising the dam crest 12 feet to increase the reservoir’s freeboard, or the distance between the water surface and the dam crest (Reclamation 2013). Raising the dam would be accomplished by placing additional material on the downstream face of the embankment, which would also serve to strengthen the embankment; no additional water storage would be provided by the increase in dam height as part of the increase in dam crest height. These measures to alleviate risk associated with a seismic event would be implemented as part of the Approved Project evaluated in the 2019 EIS/EIR.

ES.1.1 Description of the Approved Project

In summary, the Approved Project, referred to as the Crest Raise Alternative in the 2019 EIS/EIR, involves making improvements to the downstream side of the existing dam to enhance its stability, and increasing the dam crest height to reduce the potential that water would overtop the dam if seismic-induced slumping were to occur. These improvements would be accomplished by (1) constructing stability berms and downstream crack filters in select areas, (2) adding additional material over the entire area of the existing embankment, (3) installing a new filter around the existing spillway conduit, and (4) extending the spillway conduit to meet the resultant downstream edge of the extended embankment. Construction of three foundation shear keys to anchor the proposed stability berms to underlying bedrock is also part of the Crest Raise Alternative. One of the three locations for the proposed shear keys is described as optional but was analyzed by the 2019 EIS/EIR as part of the Approved Project to provide design flexibility. Features of the Approved Project are further described in Chapter 2 of this SEIR. It should be noted that the 2019 EIS/EIR described the Approved Project to the level of design available at the time the 2019 EIS/EIR was prepared and minor changes could occur as project plans approach final design.

ES.2 Modified Project Description

ES.2.1 Project Purpose and Objectives

The project objectives have not changed since certification of the 2019 EIS/EIR. As noted in Section 1.3, Purpose and Need/Project Objectives, of the 2019 EIS/EIR, San Luis Reservoir is an important CVP and SWP facility and a key component of California’s water supply system. Therefore, proper functioning of the reservoir is critical to maintaining water distribution for federal, state, and local uses. Reclamation and DWR have determined that actions to reduce risks from earthquakes to the public downstream of the dam are needed. The Modified Project objectives are as follows:

1. Implement cost-effective measures to prevent destabilization of the dam embankment and to ensure dam stability, in the event of an earthquake
2. Reduce safety concerns of the public downstream of the dam
3. Maintain water supply deliveries to federal and state contractors through the CVP and SWP

ES.2.2 Proposed Modification to the Project

Chapter 2 of this SEIR presents a detailed description of the proposed changes to the Approved Project since DWR's certification of the 2019 EIS/EIR, which are summarized in this section. Please refer to Chapter 2 for a detailed description of the Modified Project.

The new impact areas are associated with development of a new permanent public campground on the northwestern shore of O'Neill Forebay, located downstream and east of San Luis Reservoir, and with implementing minor upgrades to the existing San Luis Creek Day Use Area on the western shore of O'Neill Forebay.¹ These Modified Project components are intended to compensate for the construction-related temporary closure of Basalt Campground and potential temporary closure of Medeiros Campground, both public campgrounds within the San Luis Reservoir State Recreation Area. The proposed campground work was identified as Mitigation Measure REC-1 in the 2019 EIS/EIR, but impacts from implementing the mitigation measure were not evaluated in the 2019 EIS/EIR. As such, impacts associated with implementing Mitigation Measure REC-1² from the 2019 EIS/EIR are included within the scope of this SEIR and described as part of the Modified Project.

Another modification addressed in this SEIR is the consideration by the design team of two alternative on-site borrow areas as sources of earth-fill material for the dam rehabilitation, beyond the borrow areas identified in the 2019 EIS/EIR (referred to in that document as Borrow Area 6 and the Basalt Hill Borrow Area). The new alternative sites, referred to as Borrow Area 12 and Borrow Area 14, are located within areas east of B.F. Sisk Dam anticipated for contractor staging activity in the 2019 EIS/EIR. The borrow areas do not represent further additions to the Modified Project's footprint; however, the potential scale of excavation and grading activity anticipated in these borrow areas represents a change from the Approved Project as disclosed in the 2019 EIS/EIR. As such, DWR deemed additional environmental impact analysis to be appropriate for compliance with CEQA. Geotechnical investigations and materials testing are planned or are underway at all four prospective borrow areas, and depending on the testing results and the presence of suitable materials, it is possible that some combination of all four borrow areas would be used as materials sources during Modified Project construction.

The Modified Project also entails a modification to public campground and day use area closure in the vicinity of San Luis Reservoir and O'Neill Forebay compared to the Approved Project. The 2019 EIS/EIR project description acknowledged closure of Basalt Campground for the duration of Approved Project construction. Analysis presented in the 2019 EIS/EIR also anticipated closure of the Medeiros Use Area for the duration of construction.³ San Luis Creek Day Use Area was anticipated to remain open, but under the Modified Project, portions of the day use area could be temporarily closed while improvements described above are made. Any temporary closures of the day use area, if necessary, would be at the discretion of California Department of Parks and Recreation and would be

¹ The 2019 EIS/EIR considered and addressed the work that would be required in the East Dike area of the dam; however, this area was inadvertently omitted from exhibits and figures within the 2019 EIS/EIR. To correct for this mapping omission, the East Dike area is identified and mapped as part of the Approved Project footprint in this SEIR and is not evaluated as a change in the Approved Project.

² Mitigation Measure REC-1 in the 2019 EIS/EIR included the expansion of the boat launch at Dinosaur Point Use Area. Since that time, the California Department of Parks and Recreation has indicated the previously proposed expansion of this boat launch is no longer required, as the facility currently has excess capacity and would accommodate any increase in use due to the closure of the Basalt Campground boat launch for the duration of Modified Project construction. As such, modifications to the Dinosaur Point Use Area are not addressed in this SEIR.

³ The 2019 EIS/EIR assumed that the Medeiros Use Area (and campground) south of O'Neill Forebay would be closed during the entire construction phase of the Approved Project; the 2019 EIS/EIR addressed the potential impacts of this closure. However, the Medeiros Use Area was inadvertently not included in the Approved Project footprint as shown in the exhibits and figures of the 2019 EIS/EIR. As such, and to correct this mapping omission, the Medeiros Use Area is identified and mapped as part of the Approved Project footprint in this SEIR.

scheduled to coincide with low use periods would not be expected to require closure of the entire facility and portions of the facility not affected by construction would remain open for public use.

These Modified Project components are intended to compensate for the construction-related temporary closure of Basalt Campground and potential temporary closure of Medeiros Campground, as required by Mitigation Measure REC-1¹ from the 2019 EIS/EIR. Both facilities are public campgrounds within the San Luis Reservoir State Recreation Area. The proposed new campground would be developed in consultation with the California Department of Parks and Recreation.

The Modified Project also includes some minor expansions of the contractor work areas that were not part of the original study area. In general, the overall construction schedule and assumptions regarding personnel and equipment remain unchanged from the Approved Project; however, additional construction assumptions are included in the Modified Project and analyzed in this SEIR.

The Modified Project would involve purchasing mitigation credits from mitigation banks approved by regulatory agencies to satisfy compensatory mitigation requirements of the 2019 EIS/EIR, and as required by terms and conditions of permits and approvals required from regulatory agencies (refer to Table ES-1; see Section 3.9, Biological Resources, for details). The purchase of lands in established mitigation banks for the purpose of preservation would not otherwise require additional changes to the physical environment.

ES.2.3 Discretionary Actions

A list of permits anticipated for the Approved Project is presented as Table 1-1 of the 2019 EIS/EIR. An updated list for the Modified Project is shown in Table ES-1.

Table ES-1. Anticipated Permits or Approvals for the Modified Project

Approving Agency	Permit or Approval	Applying Agency
USFWS	Federal Endangered Species Act Formal Consultation	Reclamation
CVRWQCB	Clean Water Act Section 401 Certification	Reclamation/DWR
USACE	Clean Water Act Section 404 Permit	Reclamation
CDFW	California Fish and Game Code Section 2081 (b) Incidental Take Permit	Reclamation/DWR
CDFW	California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement	Reclamation/DWR
SHPO and/or ACHP	NHPA Section 106 Compliance	Reclamation
CVRWQCB	NPDES Permit for General Construction	Reclamation/DWR
CVRWQCB	NPDES/WDR Individual Permit for Discharge	Reclamation/DWR
SJAPCD	Clean Air Act Fugitive Dust Control Plan & Indirect Source Review Air Impact Assessment	Reclamation/DWR
Caltrans	Encroachment Permit for work in State Route 152 right-of-way	Reclamation/DWR
CVRWQCB	Construction dewatering discharge permit	Reclamation/DWR
WAPA	Plan approval for electrical tower relocation	Reclamation/DWR
Merced County	Encroachment Permit for work on Gonzaga Road	Reclamation/DWR

Notes: USFWS = U.S. Fish and Wildlife Service; Reclamation = Bureau of Reclamation; CVRWQCB = Central Valley Regional Water Quality Control Board; DWR = California Department of Water Resources; USACE = U.S. Army Corps of Engineers; CDFW = California Department of Fish and Wildlife; SHPO = State Historic Preservation Officer; ACHP = Advisory Council on Historic Preservation; NHPA = National Historic Preservation Act; NPDES = National Pollutant Discharge Elimination System; WDR = water discharge requirement; SJAPCD = San Joaquin Air Pollution Control District; Caltrans = California Department of Transportation; WAPA = Western Area Power Administration.

ES.3 Areas of Controversy

In September 2009, DWR issued a Notice of Preparation of an EIR for the B.F. Sisk Dam Safety of Dams Modification Project pursuant to CEQA, and Reclamation published a Notice of Intent to prepare an EIS in the Federal Register. The Notice of Preparation was circulated for a 30-day period to responsible agencies under CEQA. Reclamation and DWR held one scoping meeting at the San Luis Reservoir State Recreation Area on September 23, 2009. Comments received during public scoping addressed the following areas of concern:

- Water quality impacts during and after project construction
- Flooding due to a major earthquake
- Loss of access to recreational areas and potential interference of daily park operations
- Construction and operational impacts to project area wildlife
- Change in dam storage capacity

After completion of the Draft 2019 EIS/EIR, Reclamation and DWR met their respective public review obligations for the 2019 EIS/EIR relative to NEPA and CEQA. A Notice of Availability was published in the Federal Register (Vol. 84, No. 71) on Friday, April 12, 2019, commencing the mandatory public review period that then concluded on May 28, 2019. Five written comments on the 2019 EIS/EIR were received during the public review period and raised the following key areas of concern:

- Inclusion of the San Luis Reservoir Low Point Improvement Project in the cumulative analysis
- Preference of the Crest Raise Alternative (i.e., Approved Project)
- Potential interruptions to operations of the SWP during construction
- Coordination of water supply considerations with other water supply projects, the SWP, and CVP

ES.4 Issues to be Resolved by the Decision-Making Body

The issues to be resolved by DWR as the decision-making agency are (1) whether to approve the Modified Project and (2) how to mitigate significant effects that could result from implementation of the Modified Project. In accordance with Public Resources Code, Section 21081 and CEQA Guidelines Section 15093, whenever significant effects cannot be mitigated to below a level of significance, the decision-making agency must consider the benefits of a project against any unavoidable environmental risks when determining whether to approve the project. DWR must therefore consider the benefits of the Modified Project and make a determination on whether the benefits of the Modified Project outweigh and make “acceptable” the significant and unavoidable impacts associated with air quality and noise that have been identified by the CEQA review process.

DWR must also make a determination as to whether the significant impacts associated with the environmental issues of air quality, greenhouse gas emissions, visual resources, traffic and transportation, biological resources, cultural resources, and tribal cultural resources would be less than significant with implementation of mitigation measures identified in the 2019 EIS/EIR and this SEIR.

ES.5 Summary of Impacts and Mitigation Measures

Table ES-2 provides a summary of significant impacts identified by the analysis of the Modified Project, mitigation measures identified to reduce the impact, and the level of impact significance after implementation of the mitigation measures. Please refer to Table 1-1 in Chapter 1 for a comparison of mitigation measures from the 2019 EIS/EIR to mitigation measures identified by this SEIR. As described under Section 1.9 in Chapter 1, all mitigation measures from the 2019 EIS/EIR would be implemented unless new or revised measures are identified by this SEIR.

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
<i>Air Quality</i>				
<p>Would the Modified Project conflict with or obstruct implementation of the applicable air quality plan?</p>	<p>PS</p>	<p>AQ-1 (Same as AQ-1 in 2019 EIS/EIR): Reduce Emissions from Off-Road Construction Equipment by Using Tier 4 Construction Equipment. Impacts on air quality from construction activities will be reduced by using construction equipment compliant with the Tier 4 emission standards for off-road diesel engines instead of the fleet average for the San Joaquin Valley Air Basin. Records will be maintained by the construction contractor that demonstrate that actual emissions would not exceed the SJVAPCD’s significance criteria and would be submitted to Reclamation monthly.</p> <p>If NOx emissions are forecasted to exceed thresholds, then changes will be made so that the threshold is not exceeded, or work will be stopped.</p> <p>AQ-2 (Same as AQ-2 in 2019 EIS/EIR) Reduce Exhaust Emissions from On-Road Trucks. All haul trucks, vendor trucks, and other heavy-heavy duty trucks operating on site with on-road engines will meet model year 2015 or better emission standards.</p> <p>AQ-3 (Same as AQ-3 in 2019 EIS/EIR) Implement Best Available Mitigation Measures for Construction Phase. As required by the SJVAPCD, the project must apply the following best available mitigation measures for the construction phase:</p>	<p>LTS</p>	<p>No</p>

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		<p>All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.</p> <p>All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.</p> <p>All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.</p> <p>With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.</p> <p>When materials are transported off site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.</p> <p>All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. <i>(The use of dry rotary brushes is expressly prohibited except where</i></p>		

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		<p><i>preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)</i></p> <p>Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.</p> <p>Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.</p> <p>An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles shall implement mitigation measures to prevent carryout and trackout.</p>		
<p>Would the Modified Project violate any ambient air quality standard or contribute substantially to an existing or projected violation of any ambient air quality standard?</p>	<p>PS</p>	<p>AQ-1 through AQ-3 above.</p>	<p>LTS</p>	<p>No</p>

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Would the Modified Project result in a cumulatively considerable net increase of any criteria pollutant for which the area of analysis is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone [O ₃] precursors)?	PS	AQ-1 through AQ-3 above.	SU	No
Would the Modified Project expose sensitive receptors to substantial pollutant concentrations?	PS	AQ-1 through AQ-3 above.	LTS	No
Greenhouse Gas Emissions				
Would the Modified Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	PS	<p>SEIR-GHG-1 (New mitigation measure): Construction GHG Emissions Reductions. To reduce greenhouse gas (GHG) emissions generated by equipment during construction, the following measures shall be incorporated into the Modified Project:</p> <ul style="list-style-type: none"> i. The proper tuning and maintenance of all construction equipment in accordance with manufacturer’s specifications ii. Where feasible, employing the use of electrical or alternative fueled (i.e., non-diesel) construction equipment, including forklifts, concrete/industrial saws, pumps, aerial lifts, air compressors, and other comparable equipment types to the extent commercially available 	LTS	No

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		<p>iii. To reduce the need for electric generators and other fuel-powered equipment, providing on-site electrical hookups for the use of hand tools such as saws, drills, and compressors used for construction where feasible and appropriate</p> <p>iv. Encouraging and providing carpools, shuttle vans, transit passes and/or secure bicycle parking for construction worker commutes</p> <p>SEIR-GHG-2 (Replaces GHG-1 in the 2019 EIS/EIR): Carbon Offsets – Construction Emissions. The California Department of Water Resources (DWR) and Bureau of Reclamation (Reclamation) shall retire carbon offsets in a quantity sufficient to offset the Modified Project’s construction greenhouse gas (GHG) emissions to below the DWR thresholds of 25,000 metric ton carbon dioxide equivalent (MT CO₂e) total and 12,500 MT CO₂e per year for Extraordinary Construction Projects, consistent with the performance standards and requirements set forth below. Based on modeling conducted to date, a minimum of 104,537 MT CO₂e would be required to reduce emissions below the project-level significance threshold.</p> <p>Carbon Offset Standards – Eligible Registries, Acceptable Protocols and Defined Terms</p> <p>“Carbon offset” shall mean an instrument, credit, or other certification verifying the reduction of GHG emissions issued by the Climate Action Reserve,</p>		

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		<p>the American Carbon Registry, or Verra (previously, the Verified Carbon Standard). This shall include, but is not limited to, an instrument, credit or other certification issued by these registries for GHG reduction activities within the Merced County region. Offsets from the Clean Development Mechanism (CDM) registry or generated under CDM protocols shall not be purchased or used to satisfy offset requirements. Qualifying carbon offsets presented for compliance with this mitigation measure may be used provided that each registry shall continue its existing practice of requiring the following for the development and approval of protocols or methodologies:</p> <ul style="list-style-type: none"> i. Adherence to established GHG accounting principles set forth in the International Organization for Standardization (ISO) 14064, Part 2 or the World Resources Institute/World Business Council for Sustainable Development (WRI/WBCSD) Greenhouse Gas Protocol for Project Accounting ii. Oversight of the implementation of protocols and methodologies that define the eligibility of carbon offset projects and set forth standards for the estimation, monitoring and verification of GHG reductions achieved from such projects. The protocols and methodologies shall: <ul style="list-style-type: none"> a. Be developed by the registries through a transparent public and expert stakeholder 		

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		<p>review process that affords an opportunity for comment and is informed by science</p> <p>b. Incorporate standardized offset crediting parameters that define whether and how much emissions reduction credit a carbon offset project should receive, having identified conservative project baselines and the length of the crediting period and considered potential leakage and quantification uncertainties</p> <p>c. Establish data collection and monitoring procedures, mechanisms to ensure permanency in reductions, and additionality and geographic boundary provisions</p> <p>d. Adhere to the principles set forth in the program manuals of each of the aforementioned registries, as such manuals are updated from time to time</p> <p>Further, any carbon offset used to reduce the Modified Project’s GHG emissions shall be a carbon offset that represents the past or forecasted reduction or sequestration of one MT of CO₂e that is “not otherwise required” (California Environmental Quality Act [CEQA] Guidelines Section 15126.4(c)(3)). Each carbon offset used to reduce GHG emissions shall achieve additional, real, permanent, quantifiable, verifiable, and</p>		

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		<p>enforceable reductions, which are defined for purposes of this mitigation measure as follows:</p> <ul style="list-style-type: none"> i. “Additional” means that the carbon offset is not otherwise required by law or regulation, and not any other GHG emissions reduction that otherwise would occur. ii. “Real” means that the GHG reduction underlying the carbon offset results from a demonstrable action or set of actions, and is quantified under the protocol or methodology using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources and sinks within the boundary of the applicable carbon offset project, uncertainty, and the potential for activity-shifting leakage and market-shifting leakage. iii. “Verifiable” means that the GHG reduction underlying the carbon offset is well documented, transparent, and set forth in a document prepared by an independent verification body that is accredited through the American National Standards Institute (ANSI). iv. “Permanent” means that the GHG reduction underlying the carbon offset is not reversible; or, when GHG reduction may be reversible, that a mechanism is in place to replace any reversed GHG emission reduction. 		

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		<p>v. “Quantifiable” means the ability to accurately measure and calculate the GHG reduction relative to a project baseline in a reliable and replicable manner for all GHG emission sources and sinks included within the boundary of the carbon offset project, while accounting for uncertainty and leakage.</p> <p>vi. “Enforceable” means that the implementation of the GHG reduction activity must represent the legally binding commitment of the offset project developer to undertake and carry it out.</p> <p>The protocols and methodologies of the Climate Action Reserve, the American Carbon Registry, and Verra establish and require carbon offset projects to comply with standards designed to achieve additional, real, permanent, quantifiable, verifiable, and enforceable reductions. The above definitions are provided as criteria and performance standards associated with the use of carbon offsets. Such criteria and performance standards are intended only to further construe the standards under CEQA for mitigation related to GHG emissions (see, e.g., State of California CEQA Guidelines Section 15126.4[a][c]), and are not intended to apply or incorporate the requirements of any other statutory or regulatory scheme not applicable to the Modified Project (e.g., the California Cap-and-Trade Program).</p>		

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Would the Modified Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	PS	SEIR-GHG-1 and SEIR-GHG-2 above.	LTS	No
Visual Resources				
Would the Modified Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	PS	VIS-1 (Same as VIS-1 in 2019 EIS/EIR): To reduce visual intrusion from light sources, Reclamation shall require the contractors to implement measures to reduce light and glare while meeting minimum safety and security standards. Light reduction measures must include: directing lighting downward to prevent spillover onto nearby areas, utilization of lighting fixtures with directional shielding to focus on areas being lit, and a construction requirement that all lighting in areas not under active construction be shut off. To reduce the amount of glare, building finishes shall be subdued and earth-toned. On-site mechanical equipment roofing materials, and any exposed vents or flashings must be constructed of non-glare finishes that minimizes reflectivity.	LTS	No
Noise and Vibration				
Would the Modified Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	PS	NOISE-1 (Same as NOISE-1 in 2019 EIS/EIR): A Noise Control Plan (NCP) will be developed by the construction contractor prior to the start of any construction activities to address increased noise levels as a result of the proposed project and alternatives. The NCP will identify the procedures for predicting construction noise levels at sensitive	SU	No

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		<p>receptors and will describe the reduction measures required to minimize construction noise. The noise mitigation measures in the NCP will include, but are not limited to:</p> <ul style="list-style-type: none"> • Appropriate level of sound attenuation will be used or constructed to minimize noise levels by at least 3 dBA. Potential sound attenuation measures could include, but are not limited to stationary equipment and stockpiles, or otherwise placed between the source(s) of construction noise and noise-sensitive receptors, as appropriate. The feasible measures will be determined by the construction contractor based on an initial evaluation of each construction site. • Contractor will be responsible for maintaining equipment in best possible working condition and outfitting construction equipment with the most effective locally available commercial mufflers or other noise attenuation devices; • When feasible, the loudest construction activities will be conducted during Merced County construction noise exempt hours, between 7 a.m. and 6 p.m.; • Operation of construction equipment between the hours between 6 p.m. and 10 p.m. will be prohibited within 9,100 feet of the subdivision off SR 152. During the hours between 10 p.m. and 6 a.m. the operation of construction equipment will 		

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		<p>be prohibited within 9,550 feet of the subdivision off SR 152.</p> <ul style="list-style-type: none"> • Shutting down equipment that are queued or not in use for 5 minutes or more; • Pre-construction meeting with contractors and project managers to confirm that noise mitigation procedures are in place; • Signs shall be posted at the construction sites that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number in the event of problems; • The public will be kept informed of the construction hours and days; • List contact information for complaints and respond to noise complaints; and • An on-site complaint and enforcement manager shall respond to and track complaints and questions related to noise. <p>NOISE-2 (Same as NOISE-2 in 2019 EIS/EIR: A Blasting Plan for construction shall be prepared and followed that includes the following:</p> <ul style="list-style-type: none"> • Identification of blast officer; • Scaled drawings of blast locations, and neighboring buildings, streets, or other locations which could be inhabited; • Blasting notification procedures, lead times, and list of those notified. Public notification to 		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>potentially affected vibration and nuisance noise receptors describing the expected extent and duration of the blasting;</p> <ul style="list-style-type: none"> • Description of means for transportation and on-site storage and security of explosives in accordance with local, State, and Federal regulations; • Minimum acceptable weather conditions for blasting and safety provisions for potential stray current (if electric detonation); • Traffic control standards and traffic safety measures (if applicable); • Required personal protective equipment; • Minimum standoff distances and description of blast impact zones and procedures for clearing and controlling access to blast danger; • Procedures for handling, setting, wiring, and firing explosives; and procedures for handling misfires per Federal code; • Type and quantity of explosives and description of detonation device; • Methods of matting or covering of blast area to prevent flyrock and excessive air blast pressure; • Description of blast vibration and air blast monitoring programs; • Dust control measures in compliance with applicable air pollution control regulations 		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>(to interface with general construction dust control plan);</p> <ul style="list-style-type: none"> • Emergency Action Plan to provide emergency telephone numbers and directions to medical facilities; • Procedures for action in the event of injury; • Material Safety Data Sheets for each explosive or other hazardous materials to be used; • Evidence of licensing, experience, qualifications of blasters, and description of insurance for the blasting work; • A sound attenuation plan shall be prepared outlining the sound control measures that would include the use of blasting mats or sound walls; • If vibration results in damage to any nearby structures or utilities, or scenic rock faces, blasting shall immediately cease. The stability of segmental retaining walls, existing slopes, creek canals, etc. shall be monitored and any evidence of instability due to blasting operations shall result in immediate termination of blasting; • Explosive materials shall be delivered in specially built vehicles marked with United Nations (UN) hazardous materials placards. Explosives and detonators shall be delivered in separate vehicles or be separated in compartments meeting the Department of Transportation (DOT) rules within the same vehicle. Vehicles shall have at least two ten-pound Class-A fire extinguishers 		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>and all sides of the vehicles display placards displaying the UN Standard hazard code for the onboard explosive materials. Drivers shall have commercial driver licenses (CDL) with Hazmat endorsements, and drivers shall carry bill-of-landing papers detailing the exact quantities and code dates of transported explosives or detonators;</p> <ul style="list-style-type: none"> The contractor must comply with U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) table-of-distance requirements (Code of Federal Regulations [CFR] 27, U.S. Department of Justice, Alcohol, Tobacco, Firearms and Explosives Division Part 555) that restrict explosive quantities based on distance from occupied buildings and public roadways. Employees must also comply with the security requirements of the Safe Explosives Act (Title XI, Subtitle C of Public Law 107-296, Interim Final Rule), implemented in March 2003. These requirements require background checks for all persons that use, handle or have access to explosive materials; and responsible persons on a now required Federal explosives license must submit photographs and fingerprints with the application to ATF. <p>NOISE-3 (Same as NOISE-3 in 2019 EIS/EIR): A pre-construction noise survey will be completed during the daytime and nighttime periods at</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>multiple locations across the project area, including identified sensitive receptors, to establish background noise levels at those times. During construction, noise will be periodically monitored at these locations to assess any increases in noise levels that exceed the local noise ordinances. If noise levels are recorded exceeding the background noise level by 10 dBA between 6 p.m. and 10 p.m. or by 5 dBA between 10 p.m. and 7 a.m. or if noise complaints are received, an investigation will be conducted to determine the source of the noise. After the investigation, noise will be reduced using all feasible measures, including mitigation at the receiver impacted by the noise. Potential mitigation at the receiver would include building envelope improvements and acoustical window treatments.</p> <p>All mitigation requirements will be included in bid documents and construction contracts.</p>		
<p>Would the Modified Project result in substantial temporary or periodic increase in ambient noise levels in the Modified Project vicinity above levels existing without the Modified Project?</p>	PS	NOISE-1 through NOISE-3 above.	SU	No
Traffic and Transportation				
<p>Would the Modified Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous</p>	PS	<p>TR-1 (Same as TR-1 in 2019 EIS/EIR): Construction Traffic Control Plan. The following construction management actions will be documented in a temporary traffic control plan developed by the</p>	LTS	No

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
intersections) or incompatible uses (e.g., farm equipment)?		<p>contractor as a requirement that will be included in its construction contract. The temporary traffic control plan will be submitted for Caltrans review and approval during the Encroachment Permit process. Construction contractors shall install signage at affected intersections in accordance with the California Manual on Uniform Traffic Control Devices guidelines warning motorists of slow moving construction traffic and lane closures, including SR-152, Basalt Road, Romero Visitor Center access road, and the San Luis Creek Campground Road. Signage shall also be posted at these intersections one month in advance to allow motorists time to plan for delays or alternate routes. Construction contractors shall implement dust abatement and perform proper construction traffic management actions, including signage warning motorists of construction activity and traffic controls like flaggers or temporary traffic lights where construction equipment will be entering roadways, to reduce conflicts during periods of high traffic volume in and around each construction site and to avoid conflicts with emergency responders entering and exiting the area during an emergency. In addition to the temporary traffic control plan, prior to the initiation of any construction actions, construction contractors shall develop and adhere to a health and safety plan outlining all applicable Occupational Safety and Health Administration requirements, important traffic</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		safety plans including identification of emergency access routes in and through construction areas that would will need to be kept clear at all times during construction. The health and safety plan shall include coordination with emergency service personnel to ensure adequate mitigation for all impacts.		
Would the Modified Project result in inadequate emergency access?	PS	TR-1 above.	LTS	No
Hazards and Hazardous Materials				
Would the Modified Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	PS	TR-1 above.	LTS	No
Would the Modified Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	PS	HAZ-1 (Same as HAZ-1 in 2019 EIS/EIR): The construction contractor in coordination with the Lead Agencies shall work with the CDPR and the Central Valley RWQCB to review existing monitoring data of the San Luis Reservoir SRA LUST Cleanup Site to evaluate the potential for interacting with hazardous soil contamination during construction. If the construction contractor and the Lead Agencies (as the responsible party for this potential disturbance) determine that interaction with contaminated soil cannot be avoided and these construction actions could generate a release of this soil to nearby water bodies or elsewhere off site, the construction contractor shall prepare a Contaminated Soil/Groundwater Remediation Plan.	LTS	No

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>This remediation plan will detail the nature of the contaminants on site, measures required to avoid interaction with these contaminants including if necessary a pre-construction cleanup of the site, and a response action plan in the event of an inadvertent release of contaminated soils from the construction site. This plan will be submitted to the CDPR and the Central Valley RWQCB for review and approval prior to any construction taking place.</p> <p>In addition, the construction contractor shall also prepare a Spill Prevention and Response Plan for preventing spills and responding to chemical or hazardous substance spills. This plan will include spill prevention management, including employee training, hazardous substance inventory, and spill response equipment. The plan will also include a spill response plan, including evacuation procedures, spill containment and cleanup, and reporting a release.</p> <p>Finally, the construction contractor shall prepare a Fire Prevention Plan to prevent a fire from occurring. The plan must include (Occupational Safety and Health Administration 2018 [as cited in 2019 EIS/EIR]):</p> <ul style="list-style-type: none"> • A list of all major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and 		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>the type of fire protection equipment necessary to control each major hazard.</p> <ul style="list-style-type: none"> • Procedures to control accumulations of flammable and combustible waste materials. • Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials. • The name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires. • The name or job title of employees responsible for the control of fuel source hazards. <p>Note that HAZ-1 is identified in the 2019 EIS/EIR and includes additional content that is not required for reduction of significant fire impacts resulting from components of the Modified Project. However, for consistency, the entirety of the mitigation measure is listed here.</p> <p>HAZ-3 (Same as HAZ-3 in 2019 EIS/EIR) This measure is eliminated with the SEIR because the San Luis Reservoir Seaplane Base is no longer operational.</p> <p>HAZ-4 (Same as HAZ-4 in 2019 EIS/EIR): The Lead Agencies will include requirements in all construction contracts requiring the use of spark arrestors on all construction equipment. The</p>		

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Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>contract shall also include requirements for the contractor to educate all construction workers about the risk of starting a wildfire and how to avoid it and who to contact in case a wildfire is started. In addition, restrictions shall be placed on smoking and campfires for any personnel utilizing Basalt Campground.</p> <p>SEIR-HAZ-1 (New mitigation measure): Maintenance of Modified Project buildings, grounds, and infrastructure, including defensible space areas, shall be conducted using firesafe practices to minimize the potential for wildfire ignitions resulting from equipment use. Firesafe practices shall be consistent with California Public Resources Code Sections 4427, 4428, 4431, and 4442. Maintenance activities shall be ceased during periods of high fire hazard (e.g., red flag warnings), except where necessary to maintain public safety and available water supply for fire suppression purposes.</p> <p>SEIR-HAZ-2 (New mitigation measure): Campground operations shall be modified during periods of high fire hazard (e.g., red flag warnings) to reduce the potential for wildfire ignitions. Modifications may include, but are not limited to, banning campfires and open flames, and partially or completely closing the campground to the public.</p>		

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Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
Biological Resources				
<p>Would the Modified Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as an endangered, threatened, candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW, NMFS, or USFWS?</p>	<p>PS</p>	<p>TERR-1 (Same as TERR-1 in 2019 EIS/EIR): Special-status Plant Species and Special-Status Natural Communities. Surveys of the project area for special-status plant species will be conducted during the identifiable blooming period prior to commencement of work. Special-status plants include: Arcuate bush-mallow (blooms April through September), big-scale balsamroot (blooms March through June), California alkali grass (blooms March through May), chaparral harebell (blooms May through June), Congdon’s tarplant (blooms May through October), Hall’s bushmallow (blooms May through September), Hispid bird’s beak (blooms June through September), Hospital Canyon larkspur (blooms March through June), Lemmon’s jewelflower (blooms February through May), Lime Ridge navarretia (blooms May through June), round-leaved filaree (blooms March through May), shining navarretia (blooms April through July), and spiny-sepaed button-celery (blooms April through June).</p> <p>A qualified DWR biologist (qualified biologist) will be present prior to and during construction to ensure avoidance of impacts on special-status plant species and special-status natural communities by</p>	<p>LTS</p>	<p>No</p>

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>implementing one, or more, of the following, as appropriate, per the biologist’s recommendation:</p> <ul style="list-style-type: none"> a. Flag the population or natural community areas to be protected; b. Allow adequate buffers; and/or, c. Time construction or other activities during dormant and/or non-critical life cycle periods. <p>For unavoidable impacts to special-status plant species, compensatory mitigation may be required based on recommendations of the qualified biologist. If any impacts occur to listed plant species, consultation with USFWS and/or CDFW will be initiated. If deemed necessary based on the type and extent of special-status plant populations affected, compensatory mitigation will entail:</p> <ul style="list-style-type: none"> a. The protection, through land acquisition or a conservation easement, of a population of equal or greater size and health. Or, b. If it is not feasible to acquire and preserve a known population of a special-status plant to be impacted, suitable unoccupied habitat capable of supporting the species will be acquired, and used to create a new population. For population creation, the following considerations will also be met: <ul style="list-style-type: none"> • Prior to unavoidable and permanent disturbance to a population of a special-status plant species, propagules shall be 		

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Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>collected from the population to be disturbed. This may include seed collection or cuttings, and these propagules will be used to establish a new population on suitable, unoccupied habitat as described above. Transplantation may be attempted but will not be used as the primary means of plant salvage and new population creation.</p> <ul style="list-style-type: none"> • Creation of new populations will require identifying suitable locations and researching and determining appropriate and viable propagation or planting techniques for the species. It will also require field and literature research to determine the appropriate seed sampling techniques and harvest numbers for acquisition of seed from existing populations. • A minimum ten-year monitoring plan with adaptive management will be implemented to document the success of creating new plant populations. Adequate funding for compensatory mitigation will be provided on an agreed-to schedule, following a discussion with the appropriate regulatory agencies, to ensure long-term protection and management of lands acquired or placed under conservation easement. 		

Table ES-2. Summary of Impacts and Mitigation Measures

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		<p>TERR-6 (Same as TERR-6 in 2019 EIS/EIR): Nesting Bird Surveys. A qualified biologist would conduct nesting bird surveys prior to construction and supervise avoidance of nests during construction. The generally accepted nesting season extends from February 1 through September 15. If an active nest of a special-status bird is found, construction within 300 feet of the nest (500 feet for raptor nests, excluding Swainson’s hawk) would be postponed until the nest is no longer active.</p> <p>TERR-7 (Same as TERR-7 in 2019 EIS/EIR): Preconstruction Surveys for and Avoidance of Swainson’s Hawk Nests. Prior to construction, surveys for active Swainson’s hawk nests will be conducted in and around all potential nest trees within 0.5 mile of construction areas. If known or active nests are identified through preconstruction surveys or other means, a 0.5 mile no-disturbance buffer shall be established around all active nest sites if construction cannot be limited to occur outside the nesting season (February 15 through September 15). Buffer sizes may be reduced if approved by CDFW and active nest sites are monitored during construction by a qualified biologist.</p> <p>Permanent foraging habitat losses (i.e., grasslands) within one mile of active Swainson’s hawk nests shall be compensated by preserving in perpetuity suitable foraging habitat at a ratio of 1:1. This</p>		

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		<p>includes permanently disturbed construction sites. The CDFW shall approve the location and types of habitats preserved.</p> <p>TERR-10 (Same as TERR-10 in 2019 EIS/EIR): Tricolored Blackbird. Prior to construction, appropriately timed surveys for tricolored blackbirds would be conducted in areas supporting potentially suitable habitat within 0.25 mile of construction areas. Habitat within 0.25 mile of tricolored blackbird colonies will be avoided during nesting season, which can begin as early as mid-March and extend through August. If colonies cannot be avoided, CDFW shall be consulted to potentially reduce buffer distances with active monitoring during construction by a qualified biologist.</p> <p>TERR-11 (Same as TERR-11 in 2019 EIS/EIR): Special-Status Bats. Impacts to special-status bats shall be minimized by performing preconstruction surveys and creating no-disturbance buffers around active bat roosting sites.</p> <p>Before construction activities (i.e., ground clearing and grading, including trees or shrub removal) within 200 feet of trees that could support special-status bats, a qualified bat biologist shall survey for special-status bats. If no evidence of bats (i.e., direct observation, recorded vocalizations, guano,</p>		

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		<p>staining, or strong odors) is recorded, no further mitigation shall be required.</p> <p>If evidence of bats is observed, the following measures shall be implemented to avoid potential impacts on breeding populations:</p> <ul style="list-style-type: none"> • A no-disturbance buffer of 200 feet shall be created around active bat roosts during the breeding season (April 15 through August 15). Bat roosts initiated during construction are presumed to be unaffected by the indirect effects of noise and construction disturbances. However, the direct take of individuals will be prohibited. • Removal of trees showing evidence of active bat activity shall occur during the period least likely to affect bats, as determined and monitored by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula, and between August 15 and April 15 for maternity roosts). If the exclusion of bats from potential roost sites is necessary to prevent indirect impacts due to construction noise and human activity adjacent, bat exclusion activities (e.g., installation of netting to block roost entrances) shall also be conducted during these periods. If special-status bats are identified in the dam or special allowances must be made to relocate bats, Reclamation will coordinate the effort in advance with CDFW. 		

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		<p>TERR-13 (Same as TERR-13 in 2019 EIS/EIR): American Badger. Impacts on badgers within annual grasslands and oak woodland at San Luis Reservoir will be minimized through a combination of worker training, preconstruction surveys, and passively or actively relocating animals. Concurrent with other required surveys, during winter/spring months before new project activities, and concurrent with other preconstruction surveys (e.g., kit fox and burrowing owl), a qualified biologist shall perform a survey to identify the presence of active or inactive American badger dens. If this species is not found, no further mitigation shall be required. If badger dens are identified within the construction footprint during the surveys or afterwards, they shall be inspected and closed using the following methodology:</p> <p>When unoccupied dens are encountered outside of work areas but within 100 feet of proposed activities, vacated dens shall be inspected to ensure they are empty and temporarily covered using plywood sheets or similar materials. If badger occupancy is determined at a given site within the work area, work activities at that site should be halted. Depending on the den type, reasonable and prudent measures to avoid harming badgers will be implemented and may include seasonal limitations on project construction near the site (i.e., restricting the construction period to avoid spring-summer pupping season), and/or establishing a construction exclusion zone around the</p>		

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		<p>identified site, or resurveying the den at a later time to determine species presence or absence. Badgers may be passively relocated using burrow exclusion (e.g., installing one-way doors on burrows) or similar CDFW-approved exclusion methods. In unique situations it might be necessary to actively relocate badgers (e.g., using live traps) to protect individuals from potentially harmful situations. Such relocation would be performed with advance CDFW coordination and concurrence.</p> <p>TERR-15 (Same as TERR-15 in 2019 EIS/EIR): Contractor Environmental Awareness Training and Site Protection Measures. All construction personnel working in biologically sensitive areas shall attend an environmental education program delivered by a qualified biologist prior to starting work. The training shall include an explanation as how to best avoid the accidental take of special-status plants and wildlife. The field meeting shall include species identification, life history, descriptions, and habitat requirements. The program shall include an explanation of Federal and State laws protecting endangered species, and avoidance and minimization methods being implemented to protect these species. A qualified biologist will be present on the site at all times during construction. The contractor shall provide closed garbage containers for the disposal of all trash items (e.g., wrappers, cans, bottles, food</p>		

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		<p>scraps). Work sites shall be cleaned of litter before closure each day, and placed in wildlife-proof garbage receptacles. Construction personnel shall not feed or otherwise attract any wildlife. No pets, excluding service animals, shall be allowed on site or in construction areas.</p> <p>Nighttime vehicle traffic shall be kept to a minimum on non-maintained roads with a maximum speed of 15 mph.</p> <p>To minimize disturbance to wildlife, temporary and permanent exterior lighting shall be installed such that:</p> <ul style="list-style-type: none"> • lamps and reflectors are not visible from beyond the project site, • reflective glare will be minimized to the extent feasible; • illumination of the project and its immediate vicinity is minimized; • lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated; • all lighting shall be of minimum necessary brightness consistent with operational safety and security; lights in areas not occupied on a continuous basis (such as maintenance areas) shall have (in addition to hoods) switches, timer 		

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		<p>switches, or motion detectors so that the lights operate only when the area is occupied, and</p> <ul style="list-style-type: none"> the plan complies with local policies and ordinances. <p>SEIR-BIO-1 (Replaces TERR-3 in 2019 EIS/EIR): Special-Status Amphibians. Before and after construction:</p> <ul style="list-style-type: none"> The Modified Project proponent shall submit the name and credentials of a California Department of Water Resources (DWR) biologist qualified to act as construction monitor to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) for approval at least 15 days before construction work begins. General minimum qualifications are a 4-year degree in biological sciences and experience in surveying, identifying, and handling California tiger salamanders and California red-legged frogs. The qualified biologist shall be present at all times during construction. Consultation with the USFWS through the Section 7 process may be required to determine avoidance, conservation, and mitigation measures. The USFWS- and CDFW-approved biologist, under the appropriate federal and state authorities (e.g., permitting and consultation), shall survey the work sites 2 weeks before the onset of construction. If 		

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		<p>California tiger salamanders or California red-legged frogs (or their tadpoles or eggs) are found, the approved biologist shall contact USFWS and CDFW to determine whether moving any of these life stages is appropriate. If USFWS and CDFW approve moving the animals, the biologist shall be allowed sufficient time to move frogs and/or salamanders from the work sites before work begins. If these species are not identified, construction can proceed at these sites. The biologist shall use professional judgment to determine whether (and if so, when) the California tiger salamanders and/or California red-legged frogs are to be moved. The biologist shall immediately inform the construction manager that work shall be halted, if necessary, to avert avoidable take of listed species.</p> <ul style="list-style-type: none"> • The known location of California red-legged frogs and Willow Spring, the water source for the perennial frog pond near the borrow area, shall be avoided during construction with a buffer of 250 feet to avoid modifying aquatic habitat that supports the frog population; or as otherwise approved by the resource agencies. • Areas impacted by construction shall be monitored during construction to identify, capture, and relocate special-status amphibians, if present. • Areas beneath construction equipment and vehicles shall be inspected daily, prior to operation, 		

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		<p>for presence of special-status amphibians under tracks/tires and within machinery. If special-status amphibians are found, a qualified biologist shall capture and relocate animals from work sites.</p> <ul style="list-style-type: none"> • Appropriate state and federal permits for handling of special-status species shall be acquired. • If necessary, a detailed amphibian relocation plan shall be prepared at least 3 weeks before the start of groundbreaking and submitted to CDFW and USFWS for review. The purpose of the plan is to standardize amphibian relocation methods and relocation sites. • The USFWS- and CDFW-approved biologist shall be present at the active work sites until special-status amphibians have been removed, and habitat disturbance has been completed. Thereafter, compliance with all minimization measures shall be monitored by an individual who has received training from a CDFW- and USFWS-approved biologist, consistent with USFWS requirements. • The Modified Project proponent and its contractors shall install frog-exclusion fencing (i.e., silt fences) around all construction areas that are within 100 feet of any identified ponds that provide potential special-status amphibian aquatic breeding habitat. During and after rain events, an approved biologist shall monitor work areas for the presence of special-status amphibians. 		

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		<ul style="list-style-type: none"> • DWR shall ensure that compensation is provided for permanent and temporary impacts on California tiger salamander and California red-legged frog aquatic habitat. Compensatory mitigation shall be provided for the loss of aquatic breeding sites that will be filled or otherwise directly affected by the Modified Project, as well as mitigate for any impacts on associated California red-legged frog upland habitat through compensatory mitigation. If possible, compensatory mitigation areas shall be located within a California red-legged Frog Recovery Area, as identified in the 2002 California Red-legged Frog Recovery Plan (USFWS 2002). • The total area, size, and number of California red-legged frog or California tiger salamander mitigation ponds to be created will be based on a comparable loss of breeding sites (e.g., a minimum 1:1 replacement ratio) as a result of the Modified Project. These ponds shall concurrently satisfy wetland mitigation requirements identified in Mitigation Measure TERR-16 in the 2019 EIS/EIR. To the degree possible, new mitigation ponds that are created for California red-legged frog and California tiger salamander shall be hydrologically self-sustaining and shall not require a supplemental water supply. 		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>SEIR-BIO-2 (Replaces TERR-5 in the 2019 EIS/EIR): Special-Status Reptiles. Before construction activities begin, a qualified biologist shall conduct special-status reptile (i.e., San Joaquin whipsnake and coast horned lizard) surveys 2 weeks prior to construction activities within work sites and within 100 feet of disturbance areas. A qualified biologist shall relocate any special-status reptiles to suitable habitat outside of areas of disturbance. There is possibility of special-status reptiles to move into the work sites after preconstruction surveys have checked the area and some individuals could be subject to mortality. If special-status reptiles are detected in work sites during construction, activities and equipment travel shall cease in the immediate area of detection until the special-status reptile has left work site or has been relocated out of the area by a qualified biologist.</p> <p>SEIR-BIO-3 (Replaces TERR-9 in the 2019 EIS/EIRS): Burrowing Owl. Prior to construction, surveys for burrowing owls shall be conducted in areas supporting potentially suitable habitat.</p> <p>Breeding season surveys shall be performed to determine the presence of burrowing owls for the purposes of inventory, monitoring, avoidance of take, and determining appropriate mitigation. In California, the breeding season begins as early as February 1 and continues through August 31.</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>Under the survey guidelines in the California Department of Fish and Wildlife’s (CDFW’s) Staff Report on Burrowing Owl Mitigation (CDFG 2012)’, a biologist shall: 1) perform a habitat assessment to identify essential components of burrowing owl habitat, including artificial nest features; 2) perform intensive burrow surveys in areas that are identified to provide suitable burrowing owl habitat, and; 3) perform at least four appropriately-timed breeding season surveys (four survey visits spread evenly [roughly every 3 weeks] during the peak of the breeding season, from April 15 to July 15) to document habitat use.</p> <p>Preconstruction surveys (referred to as take avoidance surveys in CDFG [2012]) shall be used to assess the owl presence before site modification is scheduled to begin. Generally, initial preconstruction surveys should be conducted within 7 days, but no more than 30 days prior to ground-disturbing activities. Additional surveys may be required when the initial disturbance is followed by periods of inactivity or the development is phased spatially and/or temporally over the Modified Project area. Up to four or more survey visits performed on separate days may be required to assure with a high degree of certainty that site modification and grading will not take owls. The full extent of the preconstruction survey effort shall be described and mapped in detail (e.g., dates, time</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>periods, area[s] covered, and methods employed) in a biological report that shall be provided for review to CDFW.</p> <p>In addition to the above survey requirements, the following measures shall be implemented to reduce Modified Project impacts to burrowing owls:</p> <ul style="list-style-type: none"> • Construction exclusion areas (e.g., orange exclusion fence or signage) shall be established around occupied burrows, where no disturbance shall be allowed. During the nonbreeding season (September 1 through January 31), the exclusion zone shall extend at least 160 feet around occupied burrows. During the breeding season (February 1 through August 31), exclusion areas shall extend 250 feet around occupied burrows (or farther if warranted to avoid nest abandonment). • If work or exclusion areas conflict with owl burrows, passive relocation of on-site owls could be implemented as an alternative, but only during the nonbreeding season and only with CDFW approval. The approach to owl relocation and burrow closure will vary depending on the number of occupied burrows. Passive relocation shall be accomplished by installing one-way doors on the entrances of burrows within 160 feet of the Modified Project area. The one-way doors shall be left in place for 48 hours to ensure the owls have 		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>left the burrow. The burrows shall then be excavated with a qualified biologist present. Construction shall not proceed until the Modified Project area is deemed free of owls.</p> <ul style="list-style-type: none"> • Unoccupied burrows within the immediate construction area shall be excavated using hand tools, and then filled to prevent reoccupation. The qualified biologist shall be present during construction to continue examination of burrows. If any burrowing owls are discovered during the excavation, the excavation shall cease and the owl allowed to escape. Excavation shall be completed once the biological monitor confirms the burrow is empty. • Artificial nesting burrows shall be provided as a temporary measure when natural burrows are lacking. To compensate for lost nest burrows, artificial burrows shall be provided outside the 160-foot buffer zone. The alternate burrows shall be monitored daily for 7 days to confirm that the owls have moved in and acclimated to the new burrow. <p>SEIR-BIO-4 (Replaces TERR-12 in the 2019 EIS/EIR): San Joaquin Kit Fox. San Joaquin kit fox would be affected by construction activities if animals are harmed or killed by equipment, their movement is blocked, or their dens or other habitat is altered or destroyed. Consultation with the U.S. Fish and Wildlife Service (USFWS) through the</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>Section 7 process may be required to determine avoidance, conservation, and mitigation measures. Prior to construction, a qualified biologist shall conduct surveys to identify potential dens more than 4 inches in diameter. A multispecies burrow assessment in 2020 located numerous potential San Joaquin kit fox dens in suitable habitat throughout the Modified Project site (Dudek 2020b). If dens are located within the proposed work area and cannot be avoided during construction activities, a USFWS- and California Department of Fish and Wildlife (CDFW)-approved biologist shall determine if the dens are occupied. If occupied dens are present within the proposed work area, their disturbance and destruction shall be avoided. Exclusion zones shall be implemented following the latest USFWS procedures (USFWS 2011b). The Modified Project proponent shall implement San Joaquin kit fox protection measures.</p> <p>The following measures, which are intended to reduce direct and indirect Modified Project impacts on San Joaquin kit foxes, are derived from the San Joaquin Kit Fox Survey Protocol for the Northern Range (USFWS 1999) and the Standardized Recommendations for Protection of the San Joaquin Kit Fox (USFWS 2011b). The following</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>measures shall be implemented for construction areas at San Luis Reservoir:</p> <ul style="list-style-type: none"> • Preconstruction surveys shall be conducted within 200 feet of work areas to identify potential San Joaquin kit fox dens or other refugia in and surrounding workstations. A qualified biologist shall conduct the survey for potential kit fox dens 14 to 30 days before construction begins. All identified potential dens shall be monitored for evidence of kit fox use by placing an inert tracking medium at den entrances and monitoring for at least 3 consecutive nights. If no activity is detected at these den sites, they shall be closed following guidance established in the USFWS Standardized Recommendations report (USFWS 2011b). • If kit fox occupancy is determined at a given site during the preconstruction surveys or during the construction period, the construction manager should be immediately informed that work should be halted within 200 feet of the den and the USFWS contacted. Depending on the den type, reasonable and prudent measures to avoid effects to kit foxes could include seasonal limitations on Modified Project construction at the site (i.e., restricting the construction period to avoid spring–summer pupping season), and/or establishing a construction exclusion zone around 		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>the identified site, or resurveying the den 1 week later to determine species presence or absence.</p> <ul style="list-style-type: none"> • Off-road vehicle and equipment movement shall be limited to the Modified Project footprint. • To compensate for permanent impacts to grassland, which provides habitat for San Joaquin kit fox, lands shall be acquired and covered by conservation easements or mitigation credits shall be purchased at a 2:1 mitigation ratio, or other compensation ratios approved by USFWS and CDFW. <p>SEIR-BIO-6 (New mitigation measure): Avoidance of Bridge-Nesting Birds. Prior to the construction and removal of the temporary haul road under State Route (SR) 152, surface modification treatment (Polytetrafluoroethylene [PTFE] sheeting) shall be applied to the SR-152 bridge to prevent nesting by species such as cliff swallow, black phoebe, and white-throated swift (if weep holes are present). PTFE sheeting shall be installed vertically at the junctures of vertical and overhead surfaces on the sides and underneath the first 75 feet of the SR-152 bridge extending from the southern abutment of the bridge to the north along the bridge. The treatment shall be applied before the nesting season (February 1). In combination with PTFE sheets, broadcast call units playing distress calls from adult cliff swallows may be used to further deter nesting. If used, distress calls</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>should be played for 26 seconds in duration continuously via broadcast call units installed within the nest exclusion area as described in “Methods for Excluding Cliff Swallows from Nesting on Highway Structures” (UC Davis 2009). During the nesting season, the exclusion treatment shall be supplemented with bi-weekly inspections by a qualified biologist to evaluate treatment integrity, inspect the area for active nests, and subsequently remove any partial nests, as feasible. The 75-foot treatment area has been established as a standard disturbance buffer for cliff swallow, black phoebe, and white-throated swift for work activities that involve heavy machinery and personnel (PG&E 2016).</p>		
<p>Would the Modified Project have a substantial adverse effect on any riparian habitat or other sensitive (or special-status) natural community identified in local or regional plans, policies, regulations, or by the CDFW, NMFS, or USFWS?</p>	<p>PS</p>	<p>SEIR-BIO-5 (Replaces TERR-16 in the 2019 EIS/EIR): Mitigation Measures for Special-Status Communities, including Native Grassland, and Jurisdictional Wetlands or Waters and Streambeds and Banks Regulated by CDFW, RWQCB, and USACE.</p> <p>SEIR-BIO-5a. Final project design shall avoid and minimize the fill of wetlands and other waters to the greatest practicable extent. The following actions shall be performed to protect jurisdictional wetlands:</p> <p>The distribution of federal and state jurisdictional wetlands and waters; streambeds and banks regulated by the California Department of Fish and</p>	<p>LTS</p>	<p>No</p>

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>Wildlife (CDFW); and sensitive habitat regulated by CDFW, shall be defined and avoided to the greatest possible extent.</p> <p>Prior to construction, a qualified biologist shall delineate the extent of jurisdictional areas to be avoided in the field. The Bureau of Reclamation (Reclamation) shall designate areas to be avoided as “Restricted Areas” and protect them using highly visible fencing, rope, or flagging, as appropriate based on site conditions. No construction activities or disturbance shall occur within restricted areas that are designated to protect wetlands.</p> <p>The removal of riparian and wetland vegetation shall be minimized. The disturbance of riparian and aquatic habitat north of the access road to the dam shall be avoided.</p> <p>The removal or damage to purple needlegrass grassland, gum plant patches and tarweed fields communities within annual grassland, and <i>Baccharis pilularis</i>/(<i>Nassella pulchra</i>-<i>Elymus glaucus</i>-<i>Bromus carinatus</i>), and narrowleaf goldenbush communities within scrub/chaparral shall be minimized. Impacts to these communities in the staging area shall be avoided.</p> <p>SEIR-BIO-5b. Where jurisdictional wetlands and other waters cannot be avoided, to offset temporary and permanent impacts that would occur as a result</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>of the Modified Project, restoration and compensatory mitigation shall be provided as described below. A wetland mitigation and monitoring plan shall be developed in coordination with CDFW, the U.S. Army Corps of Engineers (USACE), and/or the Regional Water Quality Control Board (RWQCB) that details mitigation and monitoring obligations for temporary and permanent impacts to wetlands and other waters as a result of construction activities; and other CDFW-jurisdictional areas. The plan shall quantify the total acreage affected; provide for mitigation as described below to wetland or riparian habitat; annual success criteria; mitigation sites; monitoring and reporting requirements; and site-specific plans to compensate for wetland losses resulting from the Modified Project.</p> <p>Prior to construction, the aquatic structure of wetland and riparian areas to be disturbed shall be photo-documented, and measurements of width, length, and depth shall be recorded. Reclamation shall recontour and revegetate disturbed portions of jurisdictional areas in areas temporarily affected by construction prior to demobilization by the contractor at the end of Modified Project construction. Creek banks shall be recontoured to a more stable condition if necessary.</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>Revegetation shall include a palette of species native to the watershed area according to a revegetation plan to be developed by Reclamation and submitted to USACE, CDFW, and RWQCB for approval. Following removal, woody trees habitat acreage shall be replanted at a minimum 1:1 ratio, or as determined and agreed upon by the permitting agencies. Interim vegetation or other measures shall be implemented as necessary to control erosion in disturbed areas prior to final revegetation.</p> <p>Wetland and other waters impacts in the construction area shall be compensated at a ratio of 2:1 or at a ratio agreed upon by the wetland permitting agencies. Compensatory mitigation shall be conducted by creating or restoring wetland and aquatic habitat at an agency-approved location on nearby lands or through purchasing mitigation credits at a USACE- and/or CDFW-approved mitigation bank (depending on the resource). If mitigation is conducted on or off-site, a 5-year wetland mitigation and monitoring program for on-site and off-site mitigation shall be developed. Appropriate performance standards may include, but are not limited to a 75% survival rate of restoration plantings; absence of invasive plant species; and a viable, self-sustaining creek or wetland system at the end of 5 years.</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		A weed control plan to limit the Modified Project’s potential to spread noxious or invasive weeds shall be developed. This plan would be consistent with current integrated pest management plans that are already in practice on lands surrounding San Luis Reservoir. Noxious or invasive weeds include those rated as “high” in invasiveness by the California Invasive Plant Council. The plan shall include a baseline survey to identify the location and extent of invasive weeds in the Modified Project area prior to ground-disturbing activity, a plan to destroy existing invasive weeds in the construction area prior to initiation of ground-disturbing activity, weed-containment measures while the Modified Project is in progress, and monitoring and control of weeds following completion of construction.		
Would the Modified Project have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coast, etc.) through direct removal, filling, hydrological interruption, or other means?	PS	SEIR-BIO-5 above.	LTS	No
Would the Modified Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident	PS	SEIR-BIO-7 (New mitigation measure): Elk Avoidance and Minimization. In order to minimize conflicts between construction activities and tule elk within the Modified Project area, a Tule elk site management plan shall be developed to direct control measures. At a minimum, the plan shall specify that Tule elk shall	LTS	No

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		be directed (herded) from the work area(s) such that they are not confined (trapped) between construction activities and landscape features such as fences, buildings, water bodies, and in particular State Route 152. When herding elk, they should always be provided an escape route to the general south. The California Department of Fish and Wildlife (CDFW) indicates that Tule elk are readily herded by people or vehicles and quickly associate the need to move with specific people or vehicles; the plan should specify that particular vehicles (choose red trucks, for example) or personnel shall be tasked with herding activities. Once elk have been herded away from the construction zone, they will generally stay a comfortable distance from activities. If Tule elk do re-enter the construction zone, then additional herding efforts shall be required. Additionally, during the March and April periods, lone females shall be provided additional monitoring because they may be birthing, though they quickly rejoin the herd within a few days after birthing. Once developed, the plan shall be reviewed by CDFW elk biologists.		
Recreation				
Would Modified Project construction activities substantially reduce access to or close recreation areas?	PS	SEIR-REC-1 (Replaces REC-1 in the 2019 EIS/EIR): Campsite and Facilities Replacement. Campsites closed at San Luis Reservoir during construction of the Modified Project shall be replaced at a 1:1 ratio at the San Luis Creek Use Area and then as necessary at the Los Banos Creek Use Area, including six	LTS	No

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>American with Disabilities Act (ADA)-accessible campsites and RV accommodations. These new replacement campsites shall be developed consistent with the new facilities considered in the San Luis Reservoir State Recreation Area Resource Management Plan/General Plan (San Luis Reservoir SRA RMP/GP) and shall not exceed the quantities of new facilities considered in the San Luis Reservoir SRA RMP/GP at each use area. The new campsites shall be constructed concurrent to the crest construction period during a period of low precipitation in order to reduce the risk of accidental leaks or spills, potential for soil contamination, and to minimize erosion of loose materials in construction areas, as per Goal RES-WQ4 in the San Luis Reservoir SRA RMP/GP (Reclamation and CDPR 2013):</p> <ul style="list-style-type: none"> • Design, construct, and maintain buildings, roads, trails, campsites, boat launches and marinas, and associated infrastructure to minimize stormwater runoff, promote groundwater recharge, and prevent soil erosion. <p>The new campsites shall be constructed within the San Luis Creek Use Area at the SRA on O’Neill Forebay. The Bureau of Reclamation (Reclamation) shall include this mitigation requirement in bid documents and construction contracts.</p>		

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Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>In addition, Reclamation shall work with the California Department of Parks and Recreation to implement the following measure:</p> <ul style="list-style-type: none"> The boat launch at the San Luis Creek Use Area shall be expanded by adding a launch lane and a boarding float. In addition, a fish cleaning station, public storage lockers, and shower facilities shall be developed at San Luis Creek Use Area. 		
Cultural Resources				
<p>Would the Modified Project result in adverse effects to a cultural resource included in or eligible for inclusion in the NRHP and/or the CRHR?</p>	<p>PS</p>	<p>SEIR-CR-1 (New mitigation measure): Unanticipated Discovery of Archaeological Resources. Prior to construction, a qualified cultural resources specialist, meeting the Secretary of the Interior’s Professional Qualification Standards for Archaeology, shall review the final Modified Project design to confirm impacts to all known cultural resources and/or resources identified to be of importance to consulting Native American tribes, have been considered and addressed. As stipulated by Mitigation Measure CR-1 of the B.F. Sisk Dam Safety of Dams Modification Project Environmental Impact Statement/Environmental Impact Report (2019 EIS/EIR), the Programmatic Agreement Among The Bureau of Reclamation, Interior Region 10 California-Great Basin; and The California State Historic Preservation Officer Regarding Compliance</p>	<p>LTS</p>	<p>No</p>

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>with Section 106 of the National Historic Preservation Act Pertaining to the Implementation of the Safety of Dams B.F. Sisk Dam Project (Programmatic Agreement) was prepared. This document, specifically the section pertaining to Treatment of Post Review Discoveries, provides that in the event of a post-review discovery during construction or other Modified Project-related activities, the Bureau of Reclamation (Reclamation) in conjunction with California Department of Water Resources (DWR) shall determine if ongoing construction activities will affect a previously unidentified cultural resource that may be eligible for the National Register of Historic Places and California Register of Historical Resources or affect a known cultural resource in an unanticipated manner, and address the discovery or unanticipated effect in accordance with Title 36, Part 800.13(b) of the Code of Federal Regulations (CFR) (Reclamation and SHPO 2019). There remain areas within the Modified Project that have not been subject to cultural resources survey because no activities are presently planned in these areas with potential to impact cultural resources. As stipulated by Mitigation Measure CR-1 of the 2019 EIS/EIR, should project plans change such that use of these areas could introduce impacts to cultural resources, additional cultural resources survey and evaluation efforts will be performed as stipulated in</p>		

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Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>the Programmatic Agreement shall act as a guide for additional cultural resources survey and evaluation efforts.</p> <p>All construction crews shall be alerted to the potential to encounter sensitive cultural and tribal cultural material. This may occur through inclusion of a cultural resources component within a Worker Environmental Awareness Program or other preconstruction training. Prior to construction, a communication matrix with primary and secondary cultural resources points of contact from Reclamation, DWR, consulting parties, and other pertinent project personnel shall be developed and circulated. A simple overview guide with roles and responsibilities, cultural resource management protocols, and a list of guiding documents shall be prepared as a companion to this communication matrix prior to construction. In the event that archaeological resources (e.g., sites, features, or artifacts) are exposed during construction activities for the Modified Project, all construction work occurring in the vicinity shall immediately stop until a qualified archaeologist can evaluate its significance and determine whether additional study is warranted. A minimum work exclusion buffer should be assumed to be no less than 100 feet, or as otherwise specified by the approved Programmatic Agreement (Reclamation and SHPO 2019) and its future amendments. This buffer may</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>be adjusted by the qualified archaeologist in consultation with the lead agency. Prehistoric archaeological deposits may be indicated by the presence of discolored or dark soil, fire-affected material, the presence of imported shell, burned or complete bone, non-local lithic materials, or other characteristics observed to be atypical of the surrounding area. Common prehistoric artifacts may include modified or battered lithic materials; lithic or bone tools that appeared to have been used for chopping, drilling, or grinding; projectile points; fired-clay ceramics or non-functional items; and other items. Historic-age deposits are often indicated by the presence of glass bottles and shards, ceramic material, building or domestic refuse, ferrous metal, or old features such as concrete foundations or privies. Depending on the nature and the significance of the find under the California Environmental Quality Act (14 CCR 15064.5[f]; California Public Resources Code, Section 21082) and/or Section 106 of the National Historic Preservation Act, it may be appropriate for the qualified archaeologist to simply record the find and allow work to continue. Avoidance should be considered the preferred option for treatment of unanticipated cultural resources. Prior to any ground-disturbing investigative techniques, the feasibility of resource avoidance should be considered. If the discovery proves significant, as</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>determined by the qualified archaeologist in consultation with the lead agency(s) and other consulting parties, additional work, such as testing, data recovery, or other alternatives, may be warranted. The qualified archaeologist shall prepare a report to document compliance with approved mitigation requirements and to DWR/Reclamation standards. This report shall be reviewed by lead agency staff and, once finalized, submitted to a California Historical Resources Information System information center.</p> <p>Reclamation will ensure that any non-Native American Graves Protection and Repatriation Act-related cultural materials and associated records falling under Reclamation’s Scope of Collections Statement (Programmatic Agreement, Appendix F) that result from the identification, evaluation, and treatment of historic properties on Reclamation land conducted under the Programmatic Agreement shall be properly maintained in accordance with 36 CFR 79. If there is an adverse effect determined that requires the development of a Historic Properties Treatment Plan (HPTP) under the Programmatic Agreement, Reclamation shall ensure that documentation of the curation of these materials is prepared and provided to parties named in the HPTP specific to the resolution of effects for that historic property as stipulated within the HPTP. Reclamation’s responsibilities</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>under the Programmatic Agreement shall continue and shall include follow-up with consulting parties should any changes to the Modified Project occur.</p> <p>SEIR-CR-2 (New mitigation measure): Unanticipated Discovery of Human Remains. In the event that Native American human remains, funerary objects, sacred objects, and/or objects of cultural patrimony are inadvertently discovered under or on the surface of Bureau of Reclamation (Reclamation) lands, Reclamation shall follow the procedures outlined in the Native American Graves Protection and Repatriation Act (NAGPRA), as specified in the implementing regulations at Title 43, Section 10.2(d)(1–2) of the Code of Federal Regulations (CFR) and Stipulation X and Appendix E of the Programmatic Agreement Among The Bureau of Reclamation, Interior Region 10 California-Great Basin; and The California State Historic Preservation Officer Regarding Compliance with Section 106 of the National Historic Preservation Act Pertaining to the Implementation of the Safety of Dams B.F. Sisk Dam Project. Reclamation shall ensure that all such NAGPRA cultural items encountered during any undertaking on Reclamation lands are treated in accordance with the requirements at Section 3(c–d) of NAGPRA and the implementing regulations at 43 CFR 10.</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>On State-owned or private lands, in accordance with Section 7050.5 of the California Health and Safety Code, if suspected human remains are found, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur on either federal or State-owned lands until agency approval is provided. On State-owned or private lands, the county coroner shall determine within 2 working days of notification of the discovery whether the remains are human in origin. If the county coroner determines that the remains are, or are believed to be, Native American, the county coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant from the deceased Native American. The descendants or authorized representative may, with the permission of the owner of the land, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The most likely descendant shall complete inspection of the remains within 48 hours of being granted access to the site.</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
		<p>SEIR-CR-3 (New mitigation measure): Archaeological and Native American Monitors and Worker Environmental Awareness Program. The Bureau of Reclamation (Reclamation) has developed a geoarchaeological sensitivity map and supporting summary that identifies areas of elevated potential for encountering buried resources within the area of potential effect; archaeological monitoring shall be required in the higher sensitivity areas identified by this map. Archaeological monitors shall be provided a copy of Reclamation’s geoarchaeological sensitivity map and supporting documentation at least 30 days prior to the initiation of ground-disturbing activities. Consulting Native American tribes shall be given the opportunity to monitor in higher sensitivity areas identified as having elevated potential for encountering buried resources. A copy of the geoarchaeological sensitivity map and supporting documentation shall be provided to Native American Monitors at least 30 days prior to the initiation of ground-disturbing activities within areas subject to monitoring. Prior to and during construction, all construction crews shall be alerted to these monitoring requirements and the potential to encounter sensitive cultural and tribal cultural material. This may occur through inclusion of a cultural resources component within a Worker Environmental Awareness Program or other preconstruction training.</p>		

Table ES-2. Summary of Impacts and Mitigation Measures

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Modified Project – Level of Significance After Mitigation	New Significant Increase in Impact Severity Compared to 2019 EIS/EIR?
<i>Tribal Cultural Resources</i>				
<p>Would the Modified 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:</p> <ul style="list-style-type: none"> i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? 	<p>Determination with regard to impacts to TCRs remains pending.</p>	<p>SEIR-CR-1 through SEIR-CR-3 above.</p>	<p>LTS</p>	<p>No</p>

Notes: PS = potentially significant; LTS = less than significant; SU = significant and unavoidable.

References to citations included in this table may not appear in sequential order due to mitigation measures being pulled from individual resource sections in Chapter 3.

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