Master Response 9 Alternatives Development

Overview

This master response is intended to respond to multiple similar or reoccurring comments received on the RDEIR/SDEIS analysis of alternatives. It addresses the alternatives screening analysis conducted and presented in the EIR/EIS to identify a reasonable range of feasible alternatives. There was an extensive screening process conducted through multiple water resource planning efforts spanning decades that considered a wide variety of factors, including potentially significant environmental effects, to develop the range of alternatives ultimately evaluated in the EIR/EIS. This master response describes CEQA and NEPA requirements to identify and evaluate feasible alternatives. It also provides readers with a summary of the information regarding alternatives development that was included in the EIR/EIS (see Chapter 2, *Project Description and Alternatives*, Section 2.1, *Alternatives Development Process*). The primary topics of discussion in this master response are the following:

- CEQA and NEPA requirements related to the development of the objectives and purpose and need of a project, respectively, and appropriate application of the objectives and purpose and need for the Project to develop a reasonable range of feasible alternatives.
- CEQA and NEPA requirements for developing the reasonable range of potentially feasible alternatives for evaluation in the EIR/EIS.
- Feasibility and applicability of other suggested alternatives identified by commenters.

Some commenters suggested that the range of alternatives was inadequate but did not provide supporting information. Some commenters expressed general support for the preferred alternative (Alternative 1) or another alternative described in the RDEIR/SDEIS (Alternative 2 or Alternative 3) but did not specify a reason or provided only a conclusory reason such as “this project will help fish.” Some expressed general opposition to the preferred alternative or another alternative but did not specify a reason or gave only a conclusory reason without providing support such as “this project will harm fish.” The Authority and Reclamation acknowledge general support of or opposition to either the preferred alternative or the other alternatives described in the RDEIR/SDEIS.

For ease of reference, this master response includes a table of contents on the following page to guide readers to topics of their concern. The table of contents is based on general reoccurring and common themes found in the comments received.

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CEQA and NEPA Requirements for the Discussion of Alternatives

The Authority and Reclamation conducted an extensive screening process that considered the Project objectives and purpose and need to develop a reasonable range of potentially feasible alternatives (including the preferred Project [alternative]) for evaluation in the RDEIR/SDEIS. This screening process conducted by the Authority and Reclamation built upon prior water supply evaluations that examined a broad array of factors (see Appendix 2A, *Alternatives Screening and Evaluation*, and Appendix 2B, *Additional Alternatives Screening and Evaluation*). This section discusses the CEQA and NEPA requirements for the development of the Project objectives, purpose and need, and reasonable range of potentially feasible alternatives.

The CEQA Guidelines require a clearly written statement of objectives that describe the underlying purpose of a project (CEQA Guidelines, Section 15124(b)).As the caselaw explains, CEQA does not restrict an agency's discretion to identify and pursue a particular project designed to meet a particular set of objectives (*California Oak Foundation v. Regents of University of California* (2010) 188 Cal.App.4th 227). An EIR alternatives analysis may be structured around a reasonable definition of the project's underlying purpose, and it need not study alternatives that are incompatible with the project's fundamental purpose.

NEPA regulations require a statement of "the underlying purpose and need to which the agency is responding in proposing alternatives, including the proposed action" (40 Code of Federal Regulations [C.F.R.] § 1502.13). Similar to CEQA, lead agencies have considerable discretion under NEPA in defining the purpose and need of a proposed project. Alternatives evaluated must meet the purpose and need for the proposed action as described below.

Reasonable Range of Feasible Alternatives

This section discusses CEQA and NEPA requirements to identify and discuss potentially feasible alternatives that could reduce or avoid the Project's significant environmental impacts, as well as how these principles were applied in developing the alternatives that were brought forward for detailed evaluation. Neither CEQA nor NEPA requires lead agencies to maximize environmental benefits.

Under CEQA, the lead agency must consider a reasonable range of alternatives that would feasibly attain all or most of a project's objectives but would avoid or substantially lessen any of the significant impacts of the preferred alternative. (14 Cal. Code of Regs. § 15126.6, subd. (a).) However, CEQA does not require that the scope of alternatives included be exhaustive, and lead agencies need not consider every conceivable alternative to a project or action.

Under CEQA, the range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The range of feasible alternatives must be selected and discussed in a manner to foster meaningful public participation and informed decision making. CEQA also requires identification of any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process with a brief explanation of the reasons underlying the lead agency's determination. (14 Cal. Code Regs. § 15126.6, subd. (c).) Among the factors that may be used to eliminate alternatives from detailed consideration are: "(i) failure to meet most of the basic

project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts." *Ibid.*

Under NEPA, the federal agency must evaluate a range of reasonable alternatives, which encompasses alternatives that are technically and economically feasible and meet the purpose and need for the proposed action (42 United States Code § 4332(2)(C)(iii); 40 C.F.R. §§ 1502.14, 1502.13). Under NEPA, the purpose of the alternatives analysis is to define the issues and provide a clear basis for choice among the options by the decision makers and the public.

This EIR/EIS identifies a reasonable range of alternatives for analysis under CEQA and NEPA. As described in Chapter 2, *Project Description and Alternatives*, Appendix 2A, *Alternatives Screening and Evaluation*, and Appendix 2B, *Additional Alternatives Screening and Evaluation*, an extensive screening process was conducted through multiple water resource planning efforts that considered a wide variety of factors, including potentially significant environmental effects, to develop the alternatives evaluated in the RDEIR/SDEIS. Chapter 1, *Introduction*, outlines the purpose and need of the Project, and Chapter 2, *Project Description and Alternatives*, as well as two supporting appendices (Appendices 2A and 2B), summarize alternatives that the Authority and Reclamation considered and eliminated from detailed analysis.

Consideration of Alternatives

Screening processes spanning decades identified a Sites Reservoir in the Antelope Valley as the preferred type and location of a reservoir to provide additional water storage in the western Sacramento Valley (Appendix 2A, *Alternatives Screening and Evaluation*). Appendix 2A describes the following:

- The background of the development of alternatives to provide additional water storage in the western Sacramento Valley prior to the CALFED Bay-Delta Program (CALFED) process.
- The range of water storage concepts considered as part of the CALFED alternatives screening process between 1995 and 2000 and the results of the preliminary alternatives evaluation completed under the CALFED Integrated Storage Investigation and the CALFED EIS/EIR.
- Results of the evaluation of alternatives completed under the California Department of Water Resources (DWR) and Reclamation Surface Water Storage Investigation process starting in 2001, which resulted in the selection of the Project for further evaluation in the EIR/EIS.

These screening processes facilitated the evaluation and elimination of non-structural and non-reservoir proposals through the identification and assessment of management measures to address primary planning objectives (Bureau of Reclamation and California Department of Water Resources 2006, 2008). For example, developing groundwater storage was not recommended for further consideration because aquifers in the Sacramento River Basin were considered fully recharged during years of normal precipitation, and this proposal would have

high potential for public and legal challenges due to water rights issues and potential third-party impacts (Bureau of Reclamation and California Department of Water Resources 2008). Reoperating existing reservoir facilities was not recommended for further consideration because it was determined to have very low potential for implementation given adverse impacts on flood control, and only a very small increase in storage volume would be possible (Bureau of Reclamation and California Department of Water Resources 2008).

CALFED Alternatives Screening Process

The Preferred Program Alternative in the CALFED Record of Decision (ROD) identified eight program components to build a framework for managing California's water resources into the future. The storage component identified the potential for groundwater and surface water storage as a method of improving water supply reliability, providing water for the environment at times when it is needed most, providing flows for water quality maintenance, and protecting levees through coordination with existing flood control reservoirs. Preliminary studies in support of the CALFED ROD considered more than 50 potential surface water storage sites throughout California, many previously studied, and recommended more detailed study of five locations. One of these locations was the Project, which was known at that time as the North of Delta Offstream Storage Investigation. Consistent with the CALFED ROD, which identified that water storage north of the Sacramento–San Joaquin Delta (Delta) was needed to support Delta fisheries and statewide water supply reliability, Reclamation and DWR began further investigation of the viability of the Project in 2001.

Several non-structural, non-reservoir proposals were retained in the early water resource planning efforts; however, they were not pursued further since they would not meet the primary planning objectives of increased surface water storage as identified in the CALFED Program. Increasing opportunities for conjunctive use of surface water and groundwater storage was retained for further consideration during the CALFED planning process because there was significant potential to integrate the proposal with the operation of a new surface water storage reservoir, and it would be effective in combination with surface storage (Bureau of Reclamation and California Department of Water Resources 2008). Implementing water-use efficiency methods was retained throughout the CALFED planning process because, although such methods do not increase overall supplies, conservation was being actively pursued as part of the CALFED Program (Bureau of Reclamation and California Department of Water Resources 2008).

Alternatives Analyzed in the EIR/EIS

Additional alternatives screening was conducted to develop the alternatives carried forward in the RDEIR/SDEIS. This screening focused on the precise location, scale, and operational configurations of a storage reservoir located in the Antelope Valley. The Authority and Reclamation considered Alternatives 1, 2, and 3 in the RDEIR/SDEIS after receiving input during the Water Storage Investment Program (WSIP) application process (see Section 2B.2, *2018 WSIP Application*, in Appendix 2B, *Additional Alternatives Screening and Evaluation*), from state and federal agencies (also see Section 2B.3, *2019 Agency Input*), and from numerous stakeholders, including non-governmental organizations, elected officials, landowners, and local communities, through the public comment period on the 2017 Draft EIR/EIS. Appendix 2B describes the screening process and evaluations of alternatives proposed for inclusion in the

RDEIR/SDEIS. It summarizes the screening process that generated the alternatives evaluated in the 2017 Draft EIR/EIS and describes the subsequent processes and input used to develop Alternatives 1, 2, and 3 in the RDEIR/SDEIS, including the value planning process.

Conjunctive use and water-use efficiency methods were not included in the EIR/EIS because they are not consistent with the Project's objectives and purpose and need statement, which identifies the need for surface water storage consistent with the CALFED screening process. The Project purpose and need also includes enhancing water management and flexibility in the Sacramento River and increased reliability of California water supplies for net improvements to ecosystems, as well as other consumptive uses. Therefore, non-structural and non-reservoir proposals were eliminated from further consideration and were not considered feasible as alternatives to be evaluated in the EIR/EIS.

Multiple alternatives were evaluated through the value planning process between October 2019 and April 2020 (Sites Project Authority 2020). Value planning alternatives that combined different types and sizes of diversions, releases, reservoirs, and road and bridge facilities were developed. Four alternatives (Alternatives VP 1 through VP 4) were developed for the 1.3-million-acre-feet Sites Reservoir. An additional three alternatives were developed during the review process that considered the sizes of the diversion, releases, and Sites Reservoir, as well as the primary objectives for the Project. The Authority and Reclamation carried forward Alternative VP 7 and parts of Alternatives VP 5 and VP 6 to be evaluated as Alternatives 1, 2, and 3 in the RDEIR/SDEIS because they were determined to be feasible and reasonable, achieve the Project goals and objectives, and meet the purpose and need of the Project.

Commenter-Suggested Alternatives

The Authority and Reclamation received comments on the range of alternatives evaluated. Some commenters claimed that additional alternatives should have been included in the assessment. This section identifies various suggested proposals recommended by commenters and provides information regarding the approach taken in the EIR/EIS that is relevant to the suggested alternatives. Most commenters did not provide information to explain how their suggested plans or proposals would avoid or substantially lessen significant effects of the Project alternatives in Chapter 2, *Project Description and Alternatives*. In addition, most commenters did not provide information as to how their suggested plans or proposals would meet the Project objectives and purpose and need identified in Chapter 1, *Introduction*.

Three common themes were identified regarding commenter suggestions for alternatives, as follows:

- Operational criteria should be consistent with the 2006 Bay-Delta Water Quality Control Plan, as amended in 2018 (Bay-Delta Plan) (State Water Resources Control Board 2006, 2018), updates or alternative bypass flows and should incorporate or include the updates to the Bay-Delta Plan water quality control objectives or include a range of bypass flows that might then support the Bay-Delta Plan updates.

- The EIR/EIS should assess more than one operational scenario because evaluating more than one operational scenario could reduce or avoid adverse environmental impacts.
- Modifications to reservoir operations should be made regarding decreases in diversions and/or increases in bypass flows compared to those evaluated in the RDEIR/SDEIS.

Bay-Delta Water Quality Control Plan Updates

Refer to Master Response 1, *CEQA and NEPA Process, Regulatory Requirements, and General Comments*, for a description of the Bay-Delta Plan, the process of the State Water Resources Control Board (State Water Board) to update it, and the status of the updates. Please also see Master Response 2, *Alternatives Description and Baseline*, for an explanation of why the No Project Alternative cannot include the Bay-Delta Water Quality Control Plan revised water quality objectives and why incorporating the Bay-Delta Plan updates into an operational scenario for the Project is not presently feasible. As noted in Master Response 2, the State Water Board does not intend to complete the Bay-Delta Water Quality Control Plan until 2025, and the associated modeling has not been released. The Bay-Delta Water Quality Control Plan is discussed in Chapter 31, *Cumulative Impacts*, of the Final EIR/EIS.

As described in Master Responses 1 and 2, the Bay-Delta Plan and its update process are a different effort that is not part of the Project or its environmental review process. The State Water Board is in the process of updating the Bay-Delta Plan for the Sacramento River watershed but has not approved an update of the plan. The State Water Board has not provided enough information as part of the water quality control planning update process to disaggregate the potential estimated water supply effect for an evaluation of the potential change to water available for Sites Reservoir at its proposed points of diversion on the Sacramento River, Funks Creek, and Stone Corral Creek. Nor is there enough information currently available to evaluate the water supply effects during the Project's proposed diversion season. As such, including an operational scenario that "incorporates" the Bay-Delta Plan updates is not currently possible. However, as identified in Master Response 1, the Authority recognizes and acknowledges that updates to the Bay-Delta Plan could result in restrictions on diversions for Sites Reservoir and could occur through the water rights application and issuance process and implementation of Standard Permit Term 96 (Sites Project Authority 2022). Should diversions be reduced in the future due to issuance of the water right, implementation of Standard Permit Term 96, and implementation of the Bay-Delta Plan updates, impacts on aquatic biological resources would be no more severe or greater in magnitude than currently disclosed in the EIR/EIS, as the purpose of any Bay-Delta Plan update and subsequent diversion restriction would be to provide for the water quality beneficial uses, including ecosystem and cold-water fishery uses in the Sacramento River.

As described in Chapter 2, *Project Description and Alternatives*, the Project is intended to be operated in a cooperative manner with CVP and SWP facilities to assist in providing additional storage and release capability. This is intended to support improving stream temperatures, instream flows and habitat, supply deliveries (including Level 4 refuges), and water quality to the extent possible each year to achieve multiple benefits in specific Water Year types and months of the year consistent with the Project's primary objectives. The modeled representation of the operational scenario evaluated in the EIR/EIS evaluates the cooperative operation of Sites Reservoir with the CVP and SWP through the modeling of CVP and SWP reservoir operations,

exchanges, and other such mechanisms. The results of the modeling for the three Project alternatives are used to inform the impact analysis of each resource in Volume 1 of the Final EIR/EIS.

Multiple Operational Scenarios or Modifications to Operational Scenarios

The Authority and Reclamation considered multiple operational scenarios over the course of Project development that were designed to meet the Project objectives, purpose, and need; enhance Project benefits; and reduce or avoid impacts. The features of alternatives, including Sites Reservoir capacity, conveyance systems, and operational scenarios, were conceptually developed and refined over time to maximize the achievement of the objectives. This process is described in Appendix 2A, *Alternatives Screening and Evaluation*, and Appendix 2B, *Additional Alternatives Screening and Evaluation*. As described below, the evaluations of multiple operational scenarios to support preparation of the 2017 Draft EIR/EIS and RDEIR/SDEIS have included decreases in diversions and/or increases in bypass flows.

2017 Draft EIR/EIS

The 2017 Draft EIR/EIS evaluated alternatives using the existing capacities in the TC Canal and GCID Main Canal and proposed a new Delevan Pipeline with up to 2,000 cubic feet per second (cfs) diversion capacity and 1,500 cfs release capacity. The diversions from the Sacramento River would have taken place only when flow monitoring indicated that bypass flows were present in the river due to storm event flows. Several existing and additional proposed bypass flow criteria were assumed at specified locations for the project as described in the 2017 Draft EIR/EIS. In the 2017 Draft EIR/EIS, it was determined that the proposed Sacramento River diversions could affect fish migration and increase the potential for fish entrainment or impingement. These effects were identified as potentially significant when compared to the Existing Conditions/No Project/No Action Alternative in the 2017 Draft EIR/EIS. Mitigation Measure Fish-1f in the 2017 Draft EIR/EIS included the establishment and funding of an ongoing juvenile Chinook salmon (*Oncorhynchus tshawytscha*) trapping program and network to collect real-time data to inform operations for diversions and minimize potential fish impacts. In addition, the project as described in the 2017 Draft EIR/EIS would protect naturally occurring, storm-induced pulse flows in the Sacramento River from October through May to minimize mortality of out-migrating juvenile winter-run, spring-run, fall-run, and late fall–run Chinook salmon, as well as steelhead (*Oncorhynchus mykiss*). With implementation of Mitigation Measure Fish-1f, the impact determination was less than significant.

2019 Value Planning Process

The Authority participated in meetings with the California Department of Fish and Wildlife (CDFW) in May 2019 and performed a value planning process to refine alternative components as described in Appendix 2B, *Additional Alternatives Screening and Evaluation*. In the 2019 and 2020 timeframe and in response to discussions with non-governmental organizations, the Authority also conducted a sensitivity analysis. This work also considered comments on the 2017 Draft EIR/EIS. The following key considerations were developed during this work:

- Use the existing TC Canal to deliver water to the southern terminus of the canal, where it would be conveyed to either the CBD or the Sacramento River through a newly constructed pipeline originating near the town of Dunnigan (i.e., Dunnigan Pipeline).

This new option for releasing water eliminated the entire Delevan Facility from the project evaluated in the 2017 Draft EIR/EIS, providing a substantial cost savings and reducing potential environmental effects associated with constructing and operating a new intake/discharge facility on the Sacramento River (Sites Project Authority 2020: Appendix C-1).

- Assess viability of Project with the following operating criteria to be met prior to the Project being able to divert: (1) bypass flows of at least 15,000 cfs past all diversion locations from October through June; (2) bypass flows of at least 35,000 cfs at Freeport from October through June; and (3) Delta outflow ranging from 42,800 cfs to 44,500 cfs from January through June. Based on these criteria, Project deliveries were reduced to a long-term average annual delivery of 131,000 acre-feet (AF). This operational criteria scenario resulted in Project per acre-foot costs increasing by $480 to $525/AF above the costs estimated in the Value Planning Report (Sites Project Authority 2020). This scenario also resulted in a long-term average of 35,000 AF for Proposition 1 (described in Appendix 2B) benefits, reducing the overall Project environmental benefits by decreasing water availability for Central Valley Project Improvement Act refuges north and south of the Delta and providing additional flow into the Yolo Bypass and increasing the cost of the environmental benefits to a point that they would likely no longer result in a cost/benefit ratio sufficient to qualify for Proposition 1 funding. Due to the substantial increase in costs resulting from the elimination of Proposition 1 funding, increasing the cost of Project water from approximately $611/AF to approximately $1,113/AF, the operational criteria scenario discussed with CDFW (as well as similar operational scenarios that would substantially reduce Project diversions) would not result in a financially viable project.

2021 RDEIR/SDEIS

In consideration of the value planning process and sensitivity analysis, the Project objectives, and the Project purpose and need, there are several changes in the facilities and operational characteristics between the RDEIR/SDEIS Alternatives 1, 2, and 3 and the alternatives evaluated in the 2017 Draft EIR/EIS. These changes include the following:

- Elimination of the Delevan Facility (previously discussed) from the Project.
- Bend Bridge Pulse Protection was included in the Project and not as a mitigation measure for monthly protection as it was in the 2017 Draft EIR/EIS (Mitigation Measure Fish-1F in 2017 Draft EIR/EIS). This involved protection of all qualified precipitation-generated pulse events from October to May based on the detection of fish presence and migration during the beginning of the flow event.
- Higher minimum bypass flows in the Sacramento River at Wilkins Slough were included in the Project: 8,000 cfs in April and May; 5,000 cfs all other times.
- The Freeport Bypass Flow criterion was removed from the Project.

Chapter 11, *Aquatic Biological Resources*, of the RDEIR/SDEIS disclosed potential impacts on aquatic biological resources using multiple models and other lines of evidence for evaluating operational impacts. The analysis in Chapter 11 for Impacts FISH-2, FISH-3, FISH-4, and FISH-

5, which are related to Project operations effects on downstream migration survival of juvenile salmon and steelhead, determined that these impacts were potentially significant. Mitigation Measure FISH-2.1 in the RDEIR/SDEIS was proposed to reduce the potentially significant impacts from Project operation. Implementation of this mitigation measure would have prevented Project diversions from reducing Sacramento River flows below 10,700 cfs at Wilkins Slough during March, April, and May.

2023 Final EIR/EIS

For the Final EIR/EIS, the refinements include modification to the minimum bypass Wilkins Slough flow criteria, which now require that diversions to Sites Reservoir do not cause flow at Wilkins Slough to decline below 10,700 cfs for an extended time period (October 1 to June 14), with no diversion occurring from June 15 to August 31 (Sacramento River fully appropriated) and minimum bypass flows of 5,000 cfs in September. The Project description in the Final EIR/EIS has been refined to include Wilkins Slough bypass flow criteria as part of the Project, which supports the impact determination of less than significant for Impacts FISH-2, FISH-3, FISH-4, and FISH-5. This refinement allows incorporation of the prohibition on diversions during this period into the Project description, which supports commenter requests to limit or reduce diversions. Providing for a minimum of 10,700 cfs in the Sacramento River at Wilkins Slough from October through June would increase Delta inflow compared to the criteria proposed in the RDEIR/SDEIS, which would reduce the potential for negative flow-related effects of the Project alternatives relative to the No Action Alternative for delta smelt (*Hypomesus transpacificus*) and longfin smelt (*Spirinchus thaleichthys*); refer to further discussion in Master Response 5, *Aquatic Biological Resources*. The Bend Bridge Pulse Protection criteria are retained in the Final EIR/EIS but modified slightly: Pulse Protection events are determined by forecasted flows instead of 3-day trailing average of flows at Bend Bridge and can end earlier than 7 days upon initiation under specific circumstances (please refer to Master Response 2, *Alternatives Description and Baseline*, for details). The revised minimum bypass flows in the Sacramento River at Wilkins Slough and Bend Bridge Pulse Protection provide protections for Fremont Weir Notch; therefore, the Fremont Weir Notch Protections that were included in the RDEIR/SDEIS are no longer necessary and have been removed from the Project description in the Final EIR/EIS.

Pursuant to their respective authorities, various state and federal regulatory agencies (including the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and CDFW) will review the operating criteria as part of the permitting process to ensure environmental requirements for relevant species are met. The Authority will then be responsible for operating the Sites Reservoir as described by the permit requirements and this Final EIR/EIS and implementing the bypass flow criteria and diversion criteria. Furthermore, adaptive management as described in Appendix 2D, *Best Management Practices, Management Plans, and Technical Studies*, would be conducted to refine and improve Project operations to ensure that the most-up-to-date data and information is utilized during future operation of the Project for protection of environmental resources.

Significant Impacts Unrelated to Operations

Many of the impacts identified as significant in the RDEIR/SDEIS are associated with Project construction and are not related to operational scenarios or specific operational criteria.

Specifically, the following significant and unavoidable impacts are all related to Project construction and would not be substantially reduced or lessened as a result of different operational scenarios: Impacts VEG-2 and VEG-4 (Chapter 9, *Vegetation and Wetland Resources*), Impact GEO-7 (Chapter 12, *Geology and Soils*), Impacts AQ-1 and AQ-4b (Chapter 20, *Air Quality*), Impact CUL-1 (Chapter 22, *Cultural Resources*), Impact TCR-1 (Chapter 23, *Tribal Cultural Resources*), and Impact VIS-1 (Chapter 24, *Visual Resources*).

Many other significant and unavoidable impacts related to Project operations and disclosed in the RDEIR/SDEIS would not be reduced by different operational scenarios. Table MR9-1 summarizes these significant and unavoidable impacts and indicates why they would not be reduced by different operational scenarios or modifications to the operational scenarios evaluated in the RDEIR/SDEIS.

Table MR9-1. Summary of Significant and Unavoidable Impacts and Operational Effects

Impact	Description	Rationale for Why Reduction of Effects Would Not Occur
Impact WQ-1	• Impact mechanism with respect to methylmercury is the filling of the reservoir. • Magnitude and duration of mercury methylation after the initial filling of Sites Reservoir would partially depend on the amount of organic carbon in the underlying soils and how much organic material is inundated when the reservoir fills.	• The impact is not a result of the diversion or bypass flow requirements used during operation. • The impact would not be substantially reduced or lessened as a result of different operational scenarios.
Impact WILD-1k Impact WILD-2	• Construction and operation of the Project would result in significant impacts on golden eagle and bald eagle. • Construction and operation would create barriers to or impede wildlife movement within existing natural landscape blocks and essential connectivity areas, may remove or disturb wildlife nursery sites, and may cause disturbance of breeding sites or cause wildlife to avoid these areas as breeding sites.	• These impacts are associated with construction and maintenance of Sites Reservoir and not associated with the diversion or bypass flow requirements used during operation. • The impact would not be substantially reduced or lessened as a result of different operational scenarios.
Impact LAND-1 Impact TRA-5 Impact AG-2 Impact AG-3	• Land use impacts would result in a physical division for the community of Lodoga from the community of Maxwell and would substantially increase travel time between the communities. • Transportation impacts would substantially affect school bus travel provided by the Maxwell Unified School District. • Agricultural impacts are associated with the locations of the aboveground Project facilities.	• These impacts are associated with the physical location of Sites Reservoir and not associated with the diversion or bypass flow requirements used during operation. • These impacts would not be substantially reduced or lessened as a result of different operational scenarios.
Impact AQ-1	• Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during construction or	• These impacts are associated with construction of Sites Reservoir and not associated with the

Impact	Description	Rationale for Why Reduction of Effects Would Not Occur
	conflict with or obstruct implementation of the applicable air quality plan.	diversion or bypass flow requirements used during operation. • The impact would not be substantially reduced or lessened as a result of different operational scenarios.
Impact AQ-2	• Exceedance of the applicable thresholds of the Colusa County Air Pollution Control District for reactive organic gases, and the net increase in emissions would result in a cumulatively considerable net increase of a criteria pollutant.	• These impacts are primarily the result of recreational boating activity on Sites Reservoir. • These impacts would not be substantially reduced or lessened as a result of different operational scenarios because Sites Reservoir would be filled regardless of the type of operational scenario, and boating would occur.
Impact CUL-2 Impact CUL-3 Impact TCR-1	• Potentially significant archaeological resources would be altered or destroyed due to inundation and fluctuating water surface elevations. • Similarly, fluctuating water levels can cause erosion, which would affect unknown buried human remains that occur within the inundation area. • Tribal cultural resources also have the potential to be disturbed during construction and initial fill and by fluctuating water surface elevations.	• These impacts are a result of construction and initial fill and the fluctuation in the water surface elevations of Sites Reservoir. • These impacts would not be substantially reduced or lessened as a result of different operational scenarios because Sites Reservoir would still be filled, and releases would be made even if the operational scenario changed, thus resulting in the fluctuation of water surface elevations.

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