

## 1 ES.5 Summary of Impacts

2 Table ES-9, Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures  
3 summarizes, by resource area, the environmental impacts of implementing Alternatives 4, 4A, 2D,  
4 and 5A. NEPA and CEQA impact conclusions are provided for all of the impacts presented in this  
5 RDEIR/SDEIS and mitigation measures are identified that if implemented would reduce impacts.  
6 The impact conclusions after mitigation measures are applied are also summarized.

Table ES-9. Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures

Notes:

1. These conclusions reflect implementation of Environmental Commitments 3, 4, 6–12, 15 and 16 (as described in Section 4.1 of the RDEIR/SDEIS), and Avoidance and Minimization Measures (described in detail in the Appendix 3C of the BDCP and in Appendix D of the RDEIR/SDEIS), which are considered a part of each action alternative. In some cases, mitigation measures proposed under one resource section (e.g., terrestrial biological resources) are also proposed to reduce effects on another resource topic (e.g., recreation). These mitigation measures are cross-referenced wherever they may reduce effects. Additional discussion of each effect and mitigation measure can be found under the referenced resource-specific chapter(s).
2. **While many impact headers (see “Potential Impact” column) describe specific effects associated with BDCP action alternatives** (e.g., the effects of implementing one or more conservation measures proposed as part of the BDCP), the conclusions provided for No Action Alternative (NAA) represent the anticipated effects on a resource as a result of future conditions in the absence of BDCP implementation. For the EIR/EIS analysis, the No Action Alternative assumptions are described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*.
3. The names of some of the numbered impacts have been slightly modified in the text to more accurately reflect the impacts resulting from implementing Alternatives 4A, 2D, or 5A. Although names of some of these impacts have been modified, the impact number sequence remains accurate as are the findings shown in this table. The impact names in the table reflect the same as what was shown in the DEIR/SEIS.
4. Impacts which refer to conservation measures (from the Draft EIR/S) correspond to identically numbered Environmental Commitments for Alternatives 4A, 2D, and 5A in the Recirculated Draft EIR/Supplemental EIS. (For more information, see Section 4.1 in the RDEIR/SDEIS.)

Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
<b>Water Supply</b>					
WS-1: Changes in SWP/CVP water deliveries during construction	NAA, 2D, 4, 4A, 5A	NI		NI	NE
WS-2: Change in SWP and CVP deliveries	NAA, 2D, 4, 4A, 5A	N/A <sup>1</sup>		N/A	N/A
WS-3: Effects of water transfers on water supply	NAA, 2D, 4, 4A, 5A	N/A <sup>2</sup>		N/A	N/A
<b>Surface Water</b>					
SW-1: Changes in SWP or CVP reservoir flood storage capacity	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
SW-2: Changes in Sacramento and San Joaquin River flood flows	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
SW-3: Change in reverse flow conditions in Old and Middle Rivers	NAA, 2D, 4, 4A, 5A	ND		ND	ND
SW-4: Substantially alter the existing drainage pattern or substantially increase the rate or amount of surface runoff in a manner that would result in flooding during construction of conveyance facilities	NAA, 2D, 4, 4A, 5A	S	SW-4: Implement measures to reduce runoff and sedimentation	LTS	NA
SW-5: Substantially alter the existing drainage pattern or substantially increase the rate or amount of surface runoff in a manner that would result in flooding during construction of habitat restoration area facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	SW-4: Implement measures to reduce runoff and sedimentation	LTS	NA

<sup>1</sup> Findings were not made for these due to the approach in this analysis.

<sup>2</sup> Findings were not made for these due to the approach in this analysis.

Level of Significance/Determination of Effects:

CEQA				NEPA		
SU=significant and unavoidable (any mitigation not sufficient to render impact less than significant)	LTS=less than significant S=significant	NI=no impact B=beneficial	ND=no determination N/A=not applicable	A=adverse NA=not adverse	NE=no effect B=beneficial	ND=no determination N/A=not applicable

Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
SW-6: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	SW-4: Implement measures to reduce runoff and sedimentation	LTS	NA
SW-7: Expose people or structures to a significant risk of loss, injury or death involving flooding due to the construction of new conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	SW-7: Implement Measures to Reduce Flood Damage	LTS	NA
SW-8: Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding due to habitat restoration	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	SW-8: Implement measures to address potential wind fetch issues	LTS	NA
SW-9: Place within a 100-year flood hazard area structures which would impede or redirect flood flows, or be subject to inundation by mudflow	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	SW-4: Implement measures to reduce runoff and sedimentation	LTS	NA
<b>Groundwater</b>					
Changes in Central and South Delta flow	NAA (ELT)	NI		NI	NE
Changes in Delta Groundwater Levels <sup>3</sup>	NAA (ELT)	NI		NI	NE <sup>4</sup>
Changes in Delta Groundwater Quality <sup>1</sup>	NAA (ELT)	LTS		LTS	NA
Changes in Delta Agricultural Drainage <sup>1</sup>	NAA (ELT)	LTS		NI	NE
San Joaquin Basin Groundwater Levels <sup>5</sup>	NAA (ELT)	S		S	A
Tulare Basin Groundwater Levels <sup>3</sup>	NAA (ELT)	S		S	A
Tulare Basin Groundwater Flow <sup>3</sup>	NAA (ELT)	LTS		LTS	NA
San Joaquin and Tulare Basin Land Subsidence <sup>3</sup>	NAA (ELT)	LTS		LTS	NA
Other Portions of the Export Service Areas—Groundwater supplies, recharge, and local groundwater table levels	NAA (ELT)	S		S	A
Ongoing Plans, Policies, and Programs	NAA (ELT)	LTS		LTS	NA
GW-1: During construction, deplete groundwater supplies or interfere with groundwater recharge, alter local groundwater levels, or reduce the production capacity of preexisting nearby wells	2D, 4, 4A, 5A	S	GW-1: Maintain water supplies in areas affected by construction dewatering	SU	A
GW-2: During operations, deplete groundwater supplies or interfere with groundwater recharge, alter local groundwater levels, or reduce the production capacity of preexisting nearby wells	2D, 4, 4A, 5A	LTS		LTS	NA

<sup>3</sup> Includes effects of climate change and sea level rise at 2060 (2025 for REIR/S)

<sup>4</sup> Increased groundwater level due to sea level rise in San Francisco Bay may result in a beneficial effect on shallow well yields

<sup>5</sup> SWP/CVP Export Service Areas

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
GW-3: Degrade groundwater quality during construction and operation of conveyance facilities	2D, 4, 4A, 5A	LTS		LTS	NA
GW-4: During construction of conveyance facilities, interfere with agricultural drainage in the Delta	2D, 4, 4A, 5A	LTS		LTS	NA
GW-5: During operations of new facilities, interfere with agricultural drainage in the Delta	2D, 4, 4A, 5A	S	GW-5: Agricultural lands seepage minimization	SU	A
GW-6: Deplete groundwater supplies or interfere with groundwater recharge, alter local groundwater levels, reduce the production capacity of preexisting nearby wells, or interfere with agricultural drainage as a result of implementing CM2-CM22	2D, 4, 4A, 5A	S	GW-5: Agricultural lands seepage minimization	SU	A
GW-7: Degrade groundwater quality as a result of implementing CM2-CM22	2D, 4, 4A, 5A	S	GW-7: Provide an alternate source of water	SU	A
GW-8: During operations, deplete groundwater supplies or interfere with groundwater recharge, alter groundwater levels, or reduce the production capacity of preexisting nearby wells	2D, 4A, 5A	LTS <sup>6</sup>	No feasible mitigation to address this impact	LTS	B
	4, 6A, 6B, 6C, 7, 8, 9	S		SU	A
GW-9: Degrade groundwater quality	2D, 4, 4A, 5A	LTS <sup>7</sup>		LTS	NA
GW-10: Result in groundwater level-induced land subsidence	2D, 4, 4A, 5A	LTS		LTS	NA
<b>Water Quality</b>					
WQ-1: Effects on ammonia concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-2: Effects on ammonia concentrations resulting from implementation of CM2-CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-3: Effects on boron concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-4: Effects on boron concentrations resulting from implementation of CM2-CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-5: Effects on bromide concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-6: Effects on bromide concentrations resulting from implementation of CM2-CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-7: Effects on chloride concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-8: Effects on chloride concentrations resulting from implementation of CM2-CM22	2D, 4, 4A, 5A	LTS		LTS	NA

<sup>6</sup> For Alternative 4A, the impact could be significant/adverse in certain areas of Southern California depending on the range of Spring Delta outflows that affect the surface water deliveries and associated groundwater usage.

<sup>7</sup> For Alternative 4A, the impact could be significant/adverse, as related to impact GW-8

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
WQ-9: Effects on dissolved oxygen resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-10: Effects on dissolved oxygen resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-11: Effects on electrical conductivity concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	S	WQ-11: Avoid or Minimize Reduced Water Quality Conditions WQ-11a: Adaptively Manage Diversions at the North and South Delta Intakes to Reduce or Eliminate Water Quality Degradation in Western Delta. WQ-11b: Adaptively Manage Head of Old River Barrier and Diversions at the North and South Delta Intakes to Reduce or Eliminate Exceedances of the Bay-Delta WQCP Objective at Prisoners Point.	LTS	NA
WQ-12: Effects on electrical conductivity concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-13: Effects on mercury concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-14: Effects on mercury concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	S	No available mitigation to address this impact	SU	A
WQ-15: Effects on nitrate concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-16: Effects on nitrate concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-17: Effects on organic carbon concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-18: Effects on organic carbon concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-19: Effects on pathogens resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-20: Effects on pathogens resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-21: Effects on pesticide concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-22: Effects on pesticide concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-23: Effects on phosphorus concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-24: Effects on phosphorus concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
WQ-25: Effects on selenium concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-26: Effects on selenium concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-27: Effects on trace metal concentrations resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-28: Effects on trace metal concentrations resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-29: Effects on TSS and turbidity resulting from facilities operations and maintenance (CM1)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-30: Effects on TSS and turbidity resulting from implementation of CM2–CM22	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-31: Water quality impacts resulting from construction-related activities (CM1–CM22)	2D, 4, 4A, 5A	LTS		LTS	NA
WQ-32: Effects on Microcystis Bloom Formation Resulting from Facilities Operations and Maintenance (CM1).	1A-2C, 3, 4, 5, 6A-9	S	WQ-32a: Design Restoration Sites to Reduce Potential for Increased Microcystis Blooms WQ-32b: Investigate and Implement Operational Measures to Manage Water Residence Time	SU	A
	2D, 4A, 5A	LTS		LTS	NA
WQ-33: Effects on Microcystis Bloom Formation Resulting from Other Conservation Measures (CM2–CM21).	1A-2C, 3, 4, 5, 6A-9	S	No available mitigation to address this impact	SU	A
	2D, 4A, 5A	LTS		LTS	NA
WQ-34: Effects on San Francisco Bay Water Quality Resulting from Facilities Operations and Maintenance (CM1) and Implementation of CM2–CM21	1A-9	LTS		LTS	NA
<b>Geology and Seismicity</b>					
GEO-1: Loss of property, personal injury, or death from structural failure resulting from strong seismic shaking of water conveyance features during construction	NAA	NI		NI	NA
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-2: Loss of property, personal injury, or death from settlement or collapse caused by dewatering during construction of water conveyance features	NAA	NI		NI	NA
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-3: Loss of property, personal injury, or death from ground settlement during construction of water conveyance features	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-4: Loss of property, personal injury, or death from slope failure during construction of water conveyance features	NAA	B		B	B
	2D, 4, 4A, 5A	LTS		LTS	NA

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		CEQA		CEQA	NEPA
GEO-5: Loss of property, personal injury, or death from structural failure resulting from construction-related ground motions during construction of water conveyance features	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-6: Loss of property, personal injury, or death from structural failure resulting from rupture of a known earthquake fault during operation of water conveyance features	NAA	NI		NI	NE
	2D, 4, 4A, 5A	NI		NI	NE
GEO-7: Loss of property, personal injury, or death from structural failure resulting from strong seismic shaking during operation of water conveyance features	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-8: Loss of property, personal injury, or death from structural failure resulting from seismic-related ground failure (including liquefaction) during operation of water conveyance features	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-9: Loss of property, personal injury, or death from landslides and other slope instability during operation of water conveyance features	NAA	B		B	B
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-10: Loss of property, personal injury, or death from seiche or tsunami during operation of water conveyance features	NAA	B		B	B
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-11: Ground failure caused by increased groundwater surface elevations from unlined canal seepage as a result of operating the water conveyance facilities	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-12: Loss of property, personal injury, or death resulting from structural failure caused by rupture of a known earthquake fault at Restoration Opportunity Areas	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-13: Loss of property, personal injury, or death from structural failure resulting from strong seismic shaking at Restoration Opportunity Areas	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-14: Loss of property, personal injury, or death from structural failure resulting from seismic-related ground failure (including liquefaction) beneath Restoration Opportunity Areas	NAA	NI		NI	NE
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-15: Loss of property, personal injury, or death from landslides and other slope instability at Restoration Opportunity Areas	NAA	B		B	B
	2D, 4, 4A, 5A	LTS		LTS	NA
GEO-16: Loss of property, personal injury, or death from seiche or tsunami at Restoration Opportunity Areas as a result of implementing the conservation actions	NAA	B		B	B
	2D, 4, 4A, 5A	LTS		LTS	NA
<b>Soils</b>					
SOILS-1: Accelerated erosion caused by vegetation removal and other soil disturbances as a result of constructing the proposed water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
SOILS-2: Loss of topsoil from excavation, overcovering, and inundation as a result of constructing the proposed water conveyance facilities	NAA	S		S	A
	2D, 4, 4A, 5A	S	SOILS-2a: Minimize extent of excavation and soil disturbance SOILS-2b: Salvage, stockpile, and replace topsoil and prepare a topsoil storage and handling plan	SU	A
SOILS-3: Property loss, personal injury, or death from instability, failure, and damage from construction on or in soils subject to subsidence as a result of constructing the proposed water conveyance facilities	NAA	S		S	A
	2D, 4, 4A, 5A	LTS		LTS	NA
SOILS-4: Risk to life and property as a result of constructing the proposed water conveyance facilities in areas of expansive, corrosive, and compressible soils	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
SOILS-5: Accelerated bank erosion from increased channel flow rates as a result of operations	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
SOILS-6: Accelerated erosion caused by clearing, grubbing, grading, and other disturbances associated with implementation of proposed Environmental Commitments 3, 4, and 6-11	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
SOILS-7: Loss of topsoil from excavation, overcovering, and inundation associated with restoration activities as a result of implementing the proposed Environmental Commitments 3, 4, and 6-11	NAA	S		S	A
	2D, 4, 4A, 5A	S	SOILS-2a: Minimize extent of excavation and soil disturbance SOILS-2b: Salvage, stockpile, and replace topsoil and prepare a topsoil storage and handling plan	SU	A
SOILS-8: Property loss, personal injury, or death from instability, failure, and damage from construction on soils subject to subsidence as a result of implementing the proposed Environmental Commitments 3, 4, and 6-11	NAA	B		B	B
	2D, 4, 4A, 5A	LTS		LTS	NA
SOILS-9: Risk to life and property from construction in areas of expansive, corrosive, and compressible soils as a result of implementing the proposed Environmental Commitments 3, 4, and 6-11	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
<b>Fish and Aquatic Resources</b>					
AQUA-NAA1: Effects of construction of facilities on covered fish species	NAA	LTS		LTS	NA
AQUA-NAA2: Effects of maintenance of facilities on covered fish species	NAA	LTS		LTS	NA
AQUA-NAA3: Effects of water operations on entrainment of covered fish species	NAA	LTS		LTS	NA

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		CEQA		CEQA	NEPA
AQUA-NAA4: Effects of water operations on spawning and egg incubation habitat for covered fish species	NAA	LTS S (winter-run Chinook salmon and green sturgeon)	No feasible mitigation to address this impact on Chinook salmon	SU	A (winter-run Chinook salmon and green sturgeon)
AQUA-NAA5: effects of water operations on rearing habitat for covered fish species	NAA	S		S	NA
AQUA-NAA6: Effects of water operations on migration habitat for covered fish species	NAA	LTS		LTS	NA
AQUA-NAA7: Effects of habitat restoration on covered fish species	NAA	LTS		LTS	NA
AQUA-NAA8: Effects of other Conservation Measures on covered fish species	NAA	LTS		LTS	B
AQUA-NAA9: Effects of construction of facilities on non-covered fish species	NAA	LTS		LTS	NA
AQUA-NAA10: Effects of maintenance of facilities on non-covered fish species	NAA	LTS		LTS	NA
AQUA-NAA11: Effects of water operations on entrainment of non-covered fish species	NAA	LTS		LTS	NA
AQUA-NAA12: Effects of water operations on spawning and egg incubation habitat for non-covered fish species	NAA	LTS		LTS	NA
AQUA-NAA13: Effects of water operations on rearing habitat for non-covered fish species	NAA	LTS		LTS	NA
AQUA-NAA14: Effects of water operations on migration habitat for non-covered fish species	NAA	LTS		LTS	NA
AQUA-NAA15: Effects of habitat restoration on non-covered fish species	NAA	LTS		LTS	NA
AQUA-NAA16: Effects of other Conservation Measures on non-covered fish species	NAA	LTS		LTS	B
AQUA-1: Effects of construction of water conveyance facilities on delta smelt	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-2: Effects of maintenance of water conveyance facilities on delta smelt	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-3: Effects of water operations on entrainment of delta smelt	2D, 4, 4A	LTS		LTS	B
	5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-4: Effects of water operations on spawning and egg incubation habitat for delta smelt	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-5: Effects of water operations on rearing habitat for delta smelt	4, 4A	LTS		LTS	NE
	1A, 1B, 1C, 3	LTS		LTS	A
	2A, 2B, 2C, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 5A	LTS		LTS	NA
AQUA-6: Effects of water operations on migration conditions for delta smelt	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-7: Effects of construction of restoration measures on delta smelt	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-8: Effects of contaminants associated with restoration	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-9: Effects of restored habitat conditions on delta smelt	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-10: Effects of methylmercury management on delta smelt (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-13: Effects of localized reduction of predatory fish on delta smelt (CM15)	2D, 4, 4A, 5A	NI		NI	NE
AQUA-14: Effects of nonphysical fish barriers on delta smelt (CM16)	4, 4A	LTS		LTS	NE
	2D, 5A	LTS		LTS	NA
AQUA-19: Effects of construction of water conveyance facilities on longfin smelt	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-20: Effects of maintenance of water conveyance facilities on longfin smelt	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-21: Effects of water operations on entrainment of longfin smelt	4, 4A, 5A	B		B	NA
	2D	B		B	B

Level of Significance/Determination of Effects:

CEQA				NEPA		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-22: Effects of water operations on spawning, egg incubation, and rearing habitat for longfin smelt	4, 4A	S	AQUA-22D: Ensure January through June Delta outflows do not result in changes in longfin smelt abundance	LTS	NA
	5A	S	AQUA-22a: Following initial operations of water conveyance facilities, conduct additional evaluation and modeling of impacts to longfin smelt to determine feasibility of mitigation to reduce impacts to spawning and rearing habitat AQUA-22b: Conduct additional evaluation and modeling of impacts on longfin smelt rearing habitat following initial operations of water conveyance facilities AQUA-22c: Consult with USFWS and CDFW to identify and implement feasible means to minimize effects on longfin smelt rearing habitat consistent with water conveyance facilities	S	A
	2D	S	AQUA-22a: Following initial operations of water conveyance facilities, conduct additional evaluation and modeling of impacts to longfin smelt to determine feasibility of mitigation to reduce impacts to spawning and rearing habitat AQUA-22b: Conduct additional evaluation and modeling of impacts on longfin smelt rearing habitat following initial operations of water conveyance facilities AQUA-22c: Consult with USFWS and CDFW to identify and implement feasible means to minimize effects on longfin smelt rearing habitat consistent with water conveyance facilities	S	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9	LTS		LTS	NA
AQUA-25: Effects of construction of restoration measures on longfin smelt	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-26: Effects of contaminants associated with restoration measures on longfin smelt	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4A, 5A	LTS		LTS	NA
AQUA-27: Effects of restored habitat conditions on longfin smelt	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-28: Effects of methylmercury management on longfin smelt (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-31: Effects of localized reduction of predatory fish on longfin smelt (CM15)	2D, 4, 4A, 5A	NI		NI	NE
AQUA-32: Effects of nonphysical fish barriers on longfin smelt (CM16)	4, 4A	NI		NI	NE
	2D, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-37: Effects of construction of water conveyance facilities on Chinook salmon (winter-run ESU)	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-38: Effects of maintenance of water conveyance facilities on Chinook salmon (winter-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-39: Effects of water operations on entrainment of Chinook salmon (winter-run ESU)	2D, 4, 4A, 5A	B		B	B
AQUA-40: Effects of water operations on spawning and egg incubation habitat for Chinook salmon (winter-run ESU)	4, 4A, 5A, 7	LTS		LTS	NA
	2D	S	AQUA-40a: Following initial operations of water conveyance facilities, conduct additional evaluation and modeling of impacts to winter-run Chinook salmon to determine feasibility of mitigation to reduce impacts to spawning habitat AQUA-40b: Conduct additional evaluation and modeling of impacts on winter-run Chinook salmon spawning habitat following initial operations of water conveyance facilities AQUA-40c: Consult with NMFS, USFWS, and CDFW to identify and implement potentially feasible means to minimize effects on winter-run Chinook salmon spawning habitat consistent with water conveyance facilities	S	NA
	3	S		S	A
AQUA-41: Effects of water operations on rearing habitat for Chinook salmon (winter-run ESU)	2A, 2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-42: Effects of water operations on migration conditions for Chinook salmon (winter-run ESU)	4, 5, 7, 4A, 5A	LTS		LTS	NA
	2D	S	AQUA-42a: Following initial operations of water conveyance facilities, conduct additional evaluation and modeling of impacts to winter-run Chinook salmon to determine feasibility of mitigation to reduce impacts to migration conditions AQUA-42b: Conduct additional evaluation and modeling of impacts on winter-run Chinook salmon migration conditions following initial operations of water conveyance facilities AQUA-42c: Consult with NMFS and CDFW to identify and implement potentially feasible means to minimize effects on winter-run Chinook salmon migration conditions consistent with water conveyance facilities operations	S	A

Level of Significance/Determination of Effects:

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 8, 9	LTS		LTS	NA/B <sup>8</sup>
AQUA-43: Effects of construction of restoration measures on Chinook salmon (winter-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-44: Effects of contaminants associated with restoration measures on Chinook salmon (winter-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-45: Effects of restored habitat conditions on Chinook salmon (winter-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-46: Effects of methylmercury management on Chinook salmon (winter-run ESU) (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-49: Effects of localized reduction of predatory fish on Chinook salmon (winter-run ESU) (CM15)	2D, 4, 4A, 5A	NI		NI	NE
AQUA-50: Effects of nonphysical fish barriers on Chinook salmon (winter-run ESU) (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-55: Effects of construction of water conveyance facilities on Chinook salmon (spring-run ESU)	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-56: Effects of maintenance of water conveyance facilities on Chinook salmon (spring-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-57: Effects of water operations on entrainment of Chinook salmon (spring-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-58: Effects of water operations on spawning and egg incubation habitat for Chinook salmon (spring-run ESU)	2A, 2B, 2C, 4, 5, 7, 2D, 4A, 5A	LTS		LTS	NA
AQUA-59: Effects of water operations on rearing habitat for Chinook salmon (spring-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NE

<sup>8</sup> The effects of short-term restoration construction activities would not be adverse; the overall long-term effects of habitat restoration are expected to be beneficial to winter-run Chinook salmon and other covered species by providing additional or improved habitat.

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-60: Effects of water operations on migration conditions for Chinook salmon (spring-run ESU)	4, 4A, 5A, 3, 5, 7	LTS		LTS	NA
	2D	S	AQUA-60a: Following initial operations of water conveyance facilities, conduct additional evaluation and modeling of impacts to spring-run Chinook salmon to determine feasibility of mitigation to reduce impacts to migration conditions AQUA-60b: Conduct additional evaluation and modeling of impacts on spring-run Chinook salmon migration conditions following initial operations of water conveyance facilities AQUA-60c: Consult with NMFS and CDFW to identify and implement potentially feasible means to minimize effects on spring-run Chinook salmon migration conditions consistent with water conveyance facilities	S	A
AQUA-61: Effects of construction of restoration measures on Chinook salmon (spring-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-62: Effects of contaminants associated with restoration measures on Chinook salmon (spring-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-63: Effects of restored habitat conditions on Chinook salmon (spring-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-64: Effects of methylmercury management on Chinook salmon (spring-run ESU) (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-67: Effects of localized reduction of predatory fish on Chinook salmon (spring-run ESU) (CM15)	2D, 4, 4A, 5A	NI		NI	NE
AQUA-68: Effects of nonphysical fish barriers on Chinook salmon (spring-run ESU) (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-73: Effects of construction of water conveyance facilities on Chinook salmon (fall- and late fall-run ESU)	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-74: Effects of maintenance of water conveyance facilities on Chinook salmon (fall- and late fall-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-75: Effects of water operations on entrainment of Chinook salmon (fall-/late fall-run ESU)	4, 4A, 5A	LTS		LTS	NA
	2D	B		B	NA
	5A	B		B	B
AQUA-76: Effects of water operations on spawning and egg incubation habitat for Chinook salmon (fall- and late fall-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-77: Effects of water operations on rearing habitat for Chinook salmon (fall-/late fall-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-78: Effects of water operations on migration conditions for Chinook salmon (fall-/late fall-run ESU)	4, 4A	S	AQUA-78D: Slightly adjust the timing and magnitude of Shasta, Folsom, and/or Oroville Reservoir releases, within all existing regulations and requirements, to ameliorate changes in instream, slows that would cause an adverse effect to fall-run Chinook salmon	LTS	NA
	2D, 5A	S	AQUA-78a: Following initial operations of water conveyance facilities, conduct additional evaluation and modeling of impacts to fall-/late fall-run Chinook salmon to determine feasibility of mitigation to reduce impacts to migration conditions AQUA-78b: Conduct additional evaluation and modeling of impacts on fall-/late fall-run Chinook salmon migration conditions following initial operations of water conveyance facilities AQUA-78c: Consult with NMFS and CDFW to identify and implement potentially feasible means to minimize effects on fall-/late fall-run Chinook salmon migration conditions consistent with water conveyance facility operations	S	A
	7	LTS		LTS	NA
AQUA-79: Effects of construction of restoration measures on Chinook salmon (fall-/late fall-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-80: Effects of contaminants associated with restoration measures on Chinook salmon (fall-/late fall-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-81: Effects of restored habitat conditions on Chinook salmon (fall-/late fall-run ESU)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-82: Effects of methylmercury management on Chinook salmon (fall-/late fall-run ESU) (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-85: Effects of localized reduction of predatory fish on Chinook salmon (fall-/late fall-run ESU) (CM15)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-86: Effects of nonphysical fish barriers on Chinook salmon (fall-/late fall-run ESU) (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-91: Effects of construction of water conveyance facilities on steelhead	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-92: Effects of maintenance of water conveyance facilities on steelhead	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-93: Effects of water operations on entrainment of steelhead	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-94: Effects of water operations on spawning and egg incubation habitat for steelhead	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-95: Effects of water operations on rearing habitat for steelhead	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-96: Effects of water operations on migration conditions for steelhead	3, 4, 5, 7, 4A, 5A	LTS		LTS	NA
	2D	S	AQUA-96a: Following initial operations of water conveyance facilities, conduct additional evaluation and modeling of impacts to steelhead to determine feasibility of mitigation to reduce impact to migration conditions AQUA-96b: Conduct additional evaluation and modeling of impacts on steelhead migration conditions following initial operations of water conveyance facilities AQUA-96c: Consult with NMFS and CDFW to identify and implement potentially feasible means to minimize effects on steelhead migration conditions consistent with water conveyance facility operations	S	A
AQUA-97: Effects of construction of restoration measures on steelhead	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-98: Effects of contaminants associated with restoration measures on steelhead	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 6A, 6B, 6C, 8, 9, 2D, 4A, 5A	LTS		LTS	NA
AQUA-99: Effects of restored habitat conditions on steelhead	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-100: Effects of methylmercury management on steelhead (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-103: Effects of localized reduction of predatory fish on steelhead (CM15)	2D, 4, 4A, 5A	LTS		LTS	NE
AQUA-104: Effects of nonphysical fish barriers on steelhead (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-109: Effects of construction of water conveyance facilities on Sacramento splittail	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-110: Effects of maintenance of water conveyance facilities on Sacramento splittail	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-111: Effects of water operations on entrainment of Sacramento splittail	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-112: Effects of water operations on spawning and egg incubation habitat for Sacramento splittail	2D, 4, 4A, 5A	B		B	NE
AQUA-113: Effects of water operations on rearing habitat for Sacramento splittail	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-114: Effects of water operations on migration conditions for Sacramento splittail	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-115: Effects of construction of restoration measures on Sacramento splittail	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-116: Effects of contaminants associated with restoration measures on Sacramento splittail	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-117: Effects of restored habitat conditions on Sacramento splittail	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-118: Effects of methylmercury management on Sacramento splittail (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-121: Effects of localized reduction of predatory fish on Sacramento splittail (CM15)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-122: Effects of nonphysical fish barriers on Sacramento splittail (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-127: Effects of construction of water conveyance facilities on green sturgeon	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-128: Effects of maintenance of water conveyance facilities on green sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-129: Effects of water operations on entrainment of green sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-130: Effects of water operations on spawning and egg incubation habitat for green sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-131: Effects of water operation on rearing habitat for green sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-132: Effects of water operations on migration conditions for green sturgeon	4, 5, 6A, 6B, 6C, 7, 9, 2A, 2D, 4A, 5A	LTS		LTS	NA
AQUA-133: Effects of construction of restoration measures on green sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-134: Effects of contaminants associated with restoration measures on green sturgeon	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4A, 5A	LTS		LTS	NA
AQUA-135: Effects of restored habitat conditions on green sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-136: Effects of methylmercury management on green sturgeon (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-139: Effects of localized reduction of predatory fish on green sturgeon (CM15)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-140: Effects of nonphysical fish barriers on green sturgeon (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-145: Effects of construction of water conveyance facilities on white sturgeon	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-146: Effects of maintenance of water conveyance facilities on white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-147: Effects of water operations on entrainment of white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-148: Effects of water operations on spawning and egg incubation habitat for white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-149: Effects of water operations on rearing habitat for white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-150: Effects of water operations on migration conditions for white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-151: Effects of construction of restoration measures on white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-152: Effects of contaminants associated with restoration measures on white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-153: Effects of restored habitat conditions on white sturgeon	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-154: Effects of methylmercury management on white sturgeon (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-157: Effects of localized reduction of predatory fish on white sturgeon (CM15)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-158: Effects of nonphysical fish barriers on white sturgeon (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-163: Effects of construction of water conveyance facilities on Pacific lamprey	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-164: Effects of maintenance of water conveyance facilities on Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-165: Effects of water operations on entrainment of Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-166: Effects of water operations on spawning and egg incubation habitat for Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-167: Effects of water operations on rearing habitat for Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-168: Effects of water operations on migration conditions for Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-169: Effects of construction of restoration measures on Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-170: Effects of contaminants associated with restoration measures on Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-171: Effects of restored habitat conditions on Pacific lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-172: Effects of methylmercury management on Pacific lamprey (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-175: Effects of localized reduction of predatory fish on Pacific lamprey (CM15)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-176: Effects of nonphysical fish barriers on Pacific lamprey (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-181: Effects of construction of water conveyance facilities on river lamprey	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-182: Effects of maintenance of water conveyance facilities on river lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-183: Effects of water operations on entrainment of river lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-184: Effects of water operations on spawning and egg incubation habitat for river lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-185: Effects of water operations on rearing habitat for river lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-186: Effects of water operations-related decline on migration conditions for river lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-187: Effects of construction of restoration measures on river lamprey	2D, 4, 4A, 5A	LTS		LTS	NA

Level of Significance/Determination of Effects:

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-188: Effects of contaminants associated with restoration measures on river lamprey	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-189: Effects of restored habitat conditions on river lamprey	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-190: Effects of methylmercury management on river lamprey (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-193: Effects of localized reduction of predatory fish on river lamprey (CM15)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-194: Effects of nonphysical fish barriers on river lamprey (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-199: Effects of construction of water conveyance facilities on non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	S (noise associated with pile driving)	AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Monitor underwater noise and if necessary, use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
AQUA-200: Effects of maintenance of water conveyance facilities on non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-201: Effects of water operations on entrainment of non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	S (striped bass, American shad) LTS (threadfin shad, largemouth bass, Sacramento tule perch, Sacramento San-Joaquin roach, hardhead, and California bay shrimp)		S (striped bass, American shad) LTS (threadfin shad, largemouth bass, Sacramento tule perch, Sacramento San-Joaquin roach, hardhead, and California bay shrimp)	NA (striped bass, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento San-Joaquin roach, hardhead, and California bay shrimp) A (American shad)
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8	S (striped bass, American shad)		S (striped bass, American shad)	A
	9	LTS		LTS	NA
AQUA-202: Effects of water operations on spawning and egg incubation habitat for non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	LTS (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)		LTS (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)	NA (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)

Level of Significance/Determination of Effects:

CEQA				NEPA		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQUA-203: Effects of water operations on rearing habitat for non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	LTS (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)		LTS (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)	NA (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9	LTS (striped bass, American shad, California bay shrimp)		LTS (striped bass, American shad, California bay shrimp)	NA (striped bass, American shad, California bay shrimp)
AQUA-204: Effects of water operations on migration conditions for non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	LTS (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)		LTS (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)	NA (striped bass, American shad, threadfin shad, largemouth bass, Sacramento tule perch, Sacramento-San Joaquin roach, hardhead, California bay shrimp)
AQUA-205: Effects of construction of restoration measures on non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-206: Effects of contaminants associated with restoration measures on non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-207: Effects of restored habitat conditions on non-covered aquatic species of primary management concern	2D, 4, 4A, 5A	B		B	NA
AQUA-208: Effects of methylmercury management on non-covered aquatic species of primary management concern (CM12)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-211: Effects of localized reduction of predatory fish on non-covered aquatic species of primary management concern (CM15)	2D, 4, 4A, 5A	LTS		LTS	NA
AQUA-212: Effects of nonphysical fish barriers on non-covered aquatic species of primary management concern (CM16)	2D, 4, 4A, 5A	LTS		LTS	NA (striped bass, American shad, threadfin shad, largemouth bass) NE (Sacramento-San Joaquin roach, hardhead, California bay shrimp)
AQUA-217: Effects of water operations on reservoir coldwater fish habitat	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
<b>Terrestrial Biological Resources</b>					
BIO-1: Changes in tidal perennial aquatic natural community as a result of implementing BDCP conservation measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	B		B	B
BIO-2: Increased frequency, magnitude and duration of periodic inundation of tidal perennial aquatic natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-3: Modification of tidal perennial aquatic natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		NI	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-4: Changes in tidal brackish emergent wetland natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	B		B	B
BIO-5: Modification of tidal brackish emergent wetland natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-6: Changes in tidal freshwater emergent wetland natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	LTS (short-term)/ B (long-term)		LTS (short-term)/ B (long-term)	NA (short term-term)/ B (long-term)
BIO-7: Increased frequency, magnitude and duration of periodic inundation of tidal freshwater emergent wetland natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-8: Modification of tidal freshwater emergent wetland natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-9: Changes in valley/foothill riparian natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	B		B	B
BIO-10: Increased frequency, magnitude and duration of periodic inundation of valley/foothill riparian natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	B		B	B
BIO-11: Modification of valley/foothill riparian natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-12: Changes in nontidal perennial aquatic natural community as a result of implementing BDCP conservation measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	B		B	B
BIO-13: Increased frequency, magnitude and duration of periodic inundation of nontidal perennial aquatic natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-14: Modification of nontidal perennial aquatic natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-15: Changes in nontidal freshwater perennial emergent wetland natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	B		B	B
BIO-16: Increased frequency, magnitude and duration of periodic inundation of nontidal freshwater perennial emergent wetland natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-17: Modification of nontidal freshwater perennial emergent wetland natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-18: Changes in alkali seasonal wetland complex natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-19: Increased frequency, magnitude and duration of periodic inundation of alkali seasonal wetland complex natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-20: Modification of alkali seasonal wetland complex natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-21: Changes in vernal pool complex natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-22: Increased frequency, magnitude and duration of periodic inundation of vernal pool complex natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-23: Modification of vernal pool complex natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-24: Changes in managed wetland natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-25: Increased frequency, magnitude and duration of periodic inundation of managed wetland natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-26: Modification of managed wetland natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-27: Modification of other natural seasonal wetland natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-28: Modification of other natural seasonal wetland natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-29: Changes in grassland natural community as a result of implementing BDCP Conservation Measures	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-30: Increased frequency, magnitude and duration of periodic inundation of grassland natural community	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-31: Modification of grassland natural community from ongoing operation, maintenance and management activities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-32: Loss or conversion of habitat for and direct mortality of vernal pool crustaceans	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-33: Indirect effects of Plan implementation on vernal pool crustaceans	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-34: Periodic effects of inundation of vernal pool crustacean habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-35: Loss of valley elderberry longhorn beetle habitat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-36: Indirect effects on valley elderberry longhorn beetle and its habitat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-37: Periodic effects of inundation of valley elderberry longhorn beetle habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-38: Loss or conversion of habitat for and direct mortality of nonlisted vernal pool invertebrates	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-39: Indirect effects of Plan implementation on nonlisted vernal pool invertebrates	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-40: Periodic effects of inundation of nonlisted vernal pool <b>invertebrates'</b> habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-41: Loss or conversion of habitat for and direct mortality of Sacramento and Antioch Dunes anthicid beetles	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-42: Loss or conversion of habitat for and direct mortality of delta green ground beetle	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-42: Avoid impacts on delta green ground beetle and its habitat	LTS	NA
BIO-43: Loss or conversion of habitat for and direct mortality of Callippe silverspot butterfly	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-43: Avoid and minimize loss of Callippe silverspot butterfly habitat	LTS	NA
BIO-44: Loss or conversion of habitat for and direct mortality of California red-legged frog	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-45: Indirect effects of Plan implementation on California red-legged frog	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-46: Loss or conversion of habitat for and direct mortality of California tiger salamander	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-47: Indirect effects of Plan implementation on California tiger salamander	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-48: Periodic effects of inundation of California tiger salamander habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-49: Loss or conversion of habitat for and direct mortality of giant garter snake	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-50: Indirect effects of Plan implementation on giant garter snake	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-50a: Loss of connectivity among giant garter snakes in the Coldani Marsh/White Slough subpopulation, Stone Lakes National Wildlife Refuge, and the Delta	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-51: Periodic effects of inundation of giant garter snake habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-52: Loss or conversion of habitat for and direct mortality of western pond turtle	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-53: Indirect effects of Plan implementation on western pond turtle	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-54: Periodic effects of inundation of western pond turtle habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-55: Loss or conversion of habitat for and direct mortality of special-status reptiles	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-55: Conduct preconstruction surveys for noncovered special-status reptiles and implement applicable CM22 measures	LTS	NA

Level of Significance/Determination of Effects:

CEQA				NEPA		
SU=significant and unavoidable (any mitigation not sufficient to render impact less than significant)	LTS=less than significant S=significant	NI=no impact B=beneficial	ND=no determination N/A=not applicable	A=adverse NA=not adverse	NE=no effect B=beneficial	ND=no determination N/A=not applicable

Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-56: Indirect effects of Plan implementation on special-status reptile species	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-55: Conduct preconstruction surveys for noncovered special-status reptiles and implement applicable CM22 measures	LTS	NA
BIO-57: Loss or conversion of habitat for and direct mortality of California black rail	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-58: Effects on California black rail associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-59: Indirect effects of Plan implementation on California black rail	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-60: Fragmentation of California black rail habitat as a result of conservation component implementation	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-61: Periodic effects of inundation of California black rail habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-62: Loss or conversion of habitat for and direct mortality of California clapper rail	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-63: Indirect effects of Plan implementation on California clapper rail	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-64: Effects on California clapper rail associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-65: Fragmentation of California clapper rail habitat as a result of conservation component implementation	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

Level of Significance/Determination of Effects:

CEQA				NEPA		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-66: Loss or conversion of habitat for and direct mortality of California least tern	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-66: California least tern nesting colonies shall be avoided and indirect effects on colonies will be minimized	LTS	NA
BIO-67: Indirect effects of Plan implementation on California least tern	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-66: California least tern nesting colonies shall be avoided and indirect effects on colonies will be minimized	LTS	NA
BIO-68: Effects on California least tern associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-69: Loss or conversion of habitat for and direct mortality of greater sandhill crane	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	S	BIO-69a: Compensate for the loss of Medium to Very High-Value Greater Sandhill Crane Foraging Habitat	LTS	NA
BIO-70: Effects on greater sandhill crane associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-71: Indirect effects of Plan implementation on greater sandhill crane	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-72: Loss or conversion of habitat for and direct mortality of lesser sandhill crane	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	S	BIO-72: Compensate for the loss of medium- to over high-value lesser sandhill crane foraging habitat	LTS	NA
BIO-73: Effects on lesser sandhill crane associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-74: Indirect effects of Plan implementation on lesser sandhill crane	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-75: Loss or conversion of habitat for and direct mortality of least Bell's vireo and yellow warbler	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-76: Fragmentation of least Bell's vireo and yellow warbler habitat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-77: Effects on least Bell's vireo and yellow warbler associated with electrical transmission facilities	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-78: Indirect effects of Plan implementation on least Bell's vireo and yellow warbler	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-79: Periodic effects of inundation of least Bell's vireo and yellow warbler habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	B		B	B
BIO-80: Loss or conversion of habitat for and direct mortality of Suisun song sparrow and saltmarsh common yellowthroat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-81: Indirect effects of Plan implementation on Suisun song sparrow and saltmarsh common yellowthroat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-82: Effects on Suisun song sparrow and saltmarsh common yellowthroat associated with electrical transmission facilities	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-83: Loss or conversion of habitat for and direct mortality of Swainson's hawk	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-84: Effects on Swainson's hawk associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-85: Indirect effects of Plan implementation on Swainson's hawk	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-86: Periodic effects of inundation of Swainson's hawk nesting and foraging habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-87: Loss or conversion of habitat for and direct mortality of tricolored blackbird	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-88: Effects on tricolored blackbird associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-89: Indirect effects of Plan implementation on tricolored blackbird	NAA	v		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-90: Periodic effects of inundation of tricolored blackbird habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-91: Loss or conversion of habitat for and direct mortality of western burrowing owl	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
	4	S	BIO-91: Compensate for near-term loss of high-value western burrowing owl habitat	LTS	NA
BIO-92: Effects on western burrowing owl associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-93: Indirect effects of Plan implementation on western burrowing owl	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-94: Periodic effects of inundation on western burrowing owl habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-95: Loss or conversion of habitat for and direct mortality of western yellow-billed cuckoo	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-96: Fragmentation of western yellow-billed cuckoo habitat as a result of constructing the water conveyance facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-97: Effects on western yellow-billed cuckoo associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-98: Indirect effects of Plan implementation on western yellow-billed cuckoo	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-99: Periodic effects of inundation of western yellow-billed cuckoo habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-100: Loss or conversion of habitat for and direct mortality of white-tailed kite	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-101: Effects on white-tailed kite associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-102: Indirect effects of Plan implementation on white-tailed kite	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-103: Periodic effects of inundation of white-tailed kite habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-104: Loss or conversion of habitat for and direct mortality of yellow-breasted chat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-105: Fragmentation of yellow-breasted chat habitat as a result of constructing the water conveyance facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-106: Effects on yellow-breasted chat associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-107: Indirect effects of Plan implementation on yellow-breasted chat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-108: Periodic effects of inundation of yellow-breasted chat habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	B		B	B
BIO-109: Loss or conversion of habitat for and direct mortality of Cooper's hawk and osprey	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-110: Effects on Cooper's hawk and osprey associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-111: Indirect effects of Plan implementation on Cooper's hawk and osprey	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-112: Periodic effects of inundation of Cooper's hawk and osprey nesting habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-113: Loss or conversion of habitat for and direct mortality of golden eagle and ferruginous hawk	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	S	BIO-113: Compensate for the near-term loss of golden eagle and ferruginous hawk foraging habitat	LTS	NA
BIO-114: Effects on golden eagle and ferruginous hawk associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-115: Indirect effects of Plan implementation on golden eagle and ferruginous hawk	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-116: Periodic effects of inundation on golden eagle and ferruginous hawk habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-117: Loss or conversion of nesting habitat for and direct mortality of cormorants, herons and egrets	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds BIO-117: Avoid impacts on rookeries	LTS	NA
BIO-118: Effects associated with electrical transmission facilities on cormorants, herons and egrets	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-119: Indirect effects of Plan implementation on cormorants, herons and egrets	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds BIO-117: Avoid impacts on rookeries	LTS	NA
BIO-120: Periodic effects of inundation on cormorants, herons and egrets as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-121: Loss or conversion of habitat for short-eared owl and northern harrier	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-122: Effects on short-eared owl and northern harrier associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-123: Indirect effects of Plan implementation on short-eared owl and northern harrier	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-124: Periodic effects of inundation on short-eared owl and northern harrier as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-125: Loss or conversion of habitat for and direct mortality of mountain plover	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	S	BIO-125: Compensate for the near-term loss of mountain plover wintering habitat	LTS	NA
BIO-126: Effects on mountain plover associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-127: Indirect effects of Plan implementation on mountain plover	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-128: Periodic effects of inundation on mountain plover as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-129a: Loss or conversion of habitat for and direct mortality of black tern	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds BIO-129a: Compensate for loss of black tern nesting habitat (short-term)	LTS	NA
BIO-129b: Indirect effects of Plan implementation on black tern	NAA	B (short-term)// SS (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-129c: Periodic effects of inundation on black tern nesting habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-130: Loss or conversion of habitat for and direct mortality of California horned lark and grasshopper sparrow	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
	4	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds BIO-130: Compensate for near-term loss of California horned lark and grasshopper sparrow habitat	LTS	NA
BIO-131: Effects on California horned lark and grasshopper sparrow and associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-132: Indirect effects of Plan implementation on grasshopper sparrow and California horned lark	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-133: Periodic effects of inundation on California horned lark and grasshopper sparrow as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-134: Loss or conversion of habitat for and direct mortality of least bittern and white-faced ibis	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-135: Effects on least bittern and white-faced ibis associated with electrical transmission facilities	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-136: Indirect effects of Plan implementation on least bittern and white-faced ibis	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-137: Periodic effects of inundation on least bittern and white-faced ibis as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-138: Loss or conversion of modeled habitat for and direct mortality of loggerhead shrike	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
	4	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds BIO-138: Compensate for the near-term loss of high-value loggerhead shrike habitat	LTS	NA
BIO-139: Effects on loggerhead shrike associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-140: Indirect effects of Plan implementation on loggerhead shrike	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-141: Periodic effects of inundation on loggerhead shrike as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-142: Loss or conversion of habitat for and direct mortality of Modesto song sparrow	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA

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		CEQA		CEQA	NEPA
BIO-143: Effects on Modesto song sparrow associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-144: Indirect effects of Plan implementation on Modesto song sparrow	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-145: Periodic effects of inundation on Modesto song sparrow as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-146: Indirect effects of implementation of conservation components on bank swallow	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-146: Active bank swallow colonies shall be avoided and indirect effects on bank swallow will be minimized	LTS	NA
BIO-147: Effects of upstream reservoir and water conveyance facility operations on bank swallow	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-147: Monitor bank swallow colonies and evaluate winter and spring flows upstream of the study area	LTS	NA
BIO-148: Loss of habitat for and direct mortality of yellow-headed blackbird	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-149: Effects on yellow-headed blackbird associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-150: Indirect effects of Plan implementation on yellow-headed blackbird	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-151: Periodic effects of inundation of yellow-headed blackbird nesting habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-152: Loss or conversion of habitat for and direct mortality of riparian brush rabbit	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-153: Indirect effects of Plan implementation on riparian brush rabbit	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-154: Periodic effects of inundation of riparian brush rabbit habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-155: Loss or conversion of habitat for and direct mortality of riparian woodrat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-156: Indirect effects of Plan implementation on riparian woodrat	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-157: Periodic effects of inundation of riparian woodrat habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-158: Loss or conversion of habitat for and direct mortality of salt marsh harvest mouse	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-159: Indirect effects of Plan implementation on salt marsh harvest mouse	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-160: Loss or conversion of habitat for and direct mortality of Suisun shrew	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-161: Indirect effects of Plan implementation on Suisun shrew	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	LTS		LTS	NA
BIO-162: Loss or conversion of habitat for and direct mortality of San Joaquin kit fox and American badger	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-162: Conduct preconstruction survey for American badger	LTS	NA
BIO-163: Indirect effects of Plan implementation on San Joaquin kit fox and American badger	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-162: Conduct preconstruction survey for American badger	LTS	NA
BIO-164: Loss or conversion of habitat for and direct mortality of San Joaquin pocket mouse	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-165: Indirect effects of Plan implementation on San Joaquin pocket mouse	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-166: Loss or conversion of habitat for and direct mortality of special-status bats	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-166: Conduct preconstruction surveys for roosting bats and implement protective measures	LTS	NA
BIO-167: Indirect effects of Plan implementation on special-status bats	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-166: Conduct preconstruction surveys for roosting bats and implement protective measures	LTS	NA
BIO-168: Periodic effects of inundation of special-status bat habitat as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NE
	4	S	BIO-166: Conduct preconstruction surveys for roosting bats and implement protective measures	LTS	NA
BIO-169: Effects on habitat and populations of vernal pool plants	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-170: Effects on habitat and populations of alkali seasonal wetland plants	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-170: Avoid, minimize, or compensate for impacts on noncovered special-status plant species	LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-171: Effects on habitat and populations of grassland plant species	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NA
	4	LTS		LTS	NA
BIO-172: Effects on habitat and populations of valley/foothill riparian plants	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	NI		NI	NA
	4	LTS		LTS	NA
BIO-173: Effects on habitat and populations of tidal wetland plants	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	S	BIO-170: Avoid, minimize, or compensate for impacts on noncovered special-status plant species	LTS	NA
BIO-174: Effects on habitat and populations of inland dune plants	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	NI		NI	NE
BIO-175: Effects on habitat and populations of nontidal wetland plants	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-170: Avoid, minimize, or compensate for impacts on noncovered special-status plant species	LTS	NA
BIO-176: Effects of constructing water conveyance facilities (CM1) on wetlands and other waters of the United States	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	4, 2D, 4A, 5A	S	BIO-176: Compensatory Mitigation for Fill of Waters of the U.S.	LTS	NA
BIO-177: Effects of implementing other conservation measures (CM2–CM10) on wetlands and other waters of the United States	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4A, 5A	LTS		LTS	NA
	4	B		B	B
BIO-178: Loss or conversion of habitat for waterfowl and shorebirds as a result of water conveyance facilities construction	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
BIO-179: Loss or conversion of habitat for wintering waterfowl as a result of implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-179a: Conduct food studies and monitoring for wintering waterfowl in Suisun Marsh BIO-179b: Conduct food studies and monitoring to demonstrate food quality of palustrine tidal wetlands in the Yolo and Delta Basins	LTS	NA
BIO-180: Loss or conversion of habitat for breeding waterfowl from implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-180: Conduct food and monitoring studies of breeding waterfowl in Suisun Marsh	LTS	NA
BIO-181: Loss or conversion of habitat for shorebirds from implementation of conservation components	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-182: Effects on shorebirds and waterfowl associated with electrical transmission facilities	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-183: Indirect effects of Plan implementation on shorebirds and waterfowl	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds	LTS	NA
BIO-184: Effects on habitat and populations of common wildlife and plants	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-185: Effect of BDCP Conservation Measures on wildlife corridors	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-186: Effects on natural communities resulting from the introduction and spread of invasive plant species	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	LTS		LTS	NA
BIO-187: Compatibility of the proposed water conveyance facilities and other Conservation Measures with federal, state, or local laws, plans, policies, or executive orders addressing terrestrial biological resources in the study area	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	NI		NI	NE

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		CEQA		CEQA	NEPA
<b>Land Use</b>					
LU-1: Incompatibility with applicable land use designations, goals, and policies as a result of constructing the proposed water conveyance facility (CM1)	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	NI		NI	NE
LU-2: Conflicts with existing land uses as a result of constructing the proposed water conveyance facility (CM1)	NAA, 2D, 4, 4A, 5A	NI		NI	A
LU-3: Create physical structures adjacent to and through a portion of an existing community as a result of constructing the proposed water conveyance facility (CM1)	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	TRANS-1a: Implement site-specific construction traffic management plan TRANS-1b: Limit hours or amount of construction activity on congested roadway segments	SU	A
LU-4: Incompatibility with applicable land use designations, goals and policies as a result of implementing the proposed Conservation Measures 2-21	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	4	NI		NI	NE
	2D, 4A, 5A	LTS		LTS	NA
LU-5: Conflicts with existing land uses as a result of implementing the proposed Conservation Measures 2-21	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	4	NI		NI	A
	2D, 4A, 5A	LTS		LTS	NA
LU-6: Create physical structures adjacent to and through a portion of an existing community as a result of implementing the proposed Conservation Measures 2-21	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
<b>Agricultural Resources</b>					
AG-1: Temporary conversion, short-term conversion, and permanent conversion of Important Farmland or of farmland under Williamson Act contracts or in Farmland Security Zones as a result of constructing the proposed water conveyance facility.	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones	SU	A

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<b>CEQA</b>				<b>NEPA</b>		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AG-2: Other effects on agriculture as a result of constructing and operating the proposed water conveyance facility	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones GW-1: Maintain water supplies in areas affected by construction dewatering GW-5: Agricultural lands seepage minimization WQ-11: Avoid, minimize, or offset, as feasible, reduced water quality conditions	SU	A
AG-3: Temporary conversion, short-term conversion, and permanent conversion of Important Farmland or of land subject to Williamson Act contracts or in Farmland Security Zones as a result of implementing the proposed Conservation Measures 2-11, 13, 15, 16, 20, and 21	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones	SU	A
AG-4: Other effects on agriculture as a result of implementing the proposed Conservation Measures 2-11, 13, 15, 16, 20, and 21	NAA	B (short-term)/ S (long-term)		B (short-term)/ S (long-term)	B (short-term)/ A (long-term)
	2D, 4, 4A, 5A	S	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones GW-5: Agricultural lands seepage minimization	SU	A
<b>Recreation</b>					
REC-1: Permanent displacement of existing well-established public use or private commercial recreation facility available for public access as a result of the location of the proposed water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	LTS		LTS	NA
REC-2: Result in long-term reduction of recreation opportunities and experiences as a result of constructing the proposed water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	REC-2: Provide alternative bank fishing access sites BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible	SU/LTS <sup>9</sup>	A/NA <sup>13</sup>

<sup>9</sup> Impacts and effects on recreation from constructing the intakes would be LTS and NA, respectively, following mitigation.

Level of Significance/Determination of Effects:

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
			AES-1b: Install visual barriers between construction work areas and sensitive receptors AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1d: Restore barge unloading facility sites once decommissioned AES-1e: Apply aesthetic design treatments to all structures to the extent feasible AES-1f: Locate concrete batch plants and fuel stations away from sensitive visual resources and receptors and restore sites upon removal of facilities AES-1g: Implement best management practices to implement project landscaping plan AES-4a: Limit construction to daylight hours within 0.25 mile of residents AES-4b: Minimize fugitive light from portable sources used for construction AES-4c: Install visual barriers along access routes, where necessary, to prevent light spill from truck headlights toward residences TRANS-1a: Implement site-specific construction traffic management plan TRANS-1b: Limit hours or amount of construction activity on congested roadway segments TRANS-1c: Make good faith efforts to enter into mitigation agreements to enhance capacity of congested roadway segments NOI-1a: Employ noise-reducing construction practices during construction NOI-1b: Prior to construction, initiate a complaint/response tracking program		
REC-3: Result in long-term reduction of recreational navigation opportunities as a result of constructing the proposed water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	TRANS-1a: Implement site-specific construction traffic management plan	SU	A
REC-4: Result in long-term reduction of recreational fishing opportunities as a result of constructing the proposed water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	REC-2: Provide alternative bank fishing access sites AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Use an attenuation device to reduce effects of pile driving and other construction-related underwater noise NOI-1a: Employ noise-reducing construction practices during construction	LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
			NOI-1b: Prior to construction, initiate a complaint/response tracking program AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible AES-1b: Install visual barriers between construction work areas and sensitive receptors AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1d: Restore barge unloading facility sites once decommissioned AES-1e: Apply aesthetic design treatments to all structures to the extent feasible AES-1f: Locate concrete batch plants and fuel stations away from sensitive visual resources and receptors and restore sites upon removal of facilities AES-1g: Implement best management practices to implement project landscaping plan		
REC-5: Result in long-term reduction of recreational fishing opportunities as a result of the operation of the proposed water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
REC-6: Cause a change in reservoir or lake elevations resulting in substantial reductions in water-based recreation opportunities and experiences at north- and south-of-Delta reservoirs	NAA	LTS	LTS	NA	
	2D, 4, 4A, 5A	LTS (for north-and south-of-Delta reservoirs for all operational scenarios except for San Luis Reservoir) S (for Scenarios H2 and H4 for San Luis Reservoir)	REC-6: Provide a Temporary Alternative Boat Launch to Ensure Access to San Luis Reservoir	LTS	NA
REC-7: Result in long-term reduction in water-based recreation opportunities as a result of maintenance of the proposed water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
REC-8: Result in long-term reduction in land-based recreation opportunities as a result of maintenance of the proposed water conveyance facilities	NAA, 2D, 4, 4A, 5A	NI		NI	NE

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
REC-9: Result in long-term reduction in fishing opportunities as a result of implementing Conservation Measures 2-21	NAA	LTS		LTS	NA
	4	LTS	AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible AES-1b: Install visual barriers between construction work areas and sensitive receptors AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1d: Restore barge unloading facility sites once decommissioned AES-1e: Apply aesthetic design treatments to all structures to the extent feasible AES-1f: Locate concrete batch plants and fuel stations away from sensitive visual resources and receptors and restore sites upon removal of facilities AES-1g: Implement best management practices to implement project landscaping plan AES-4b: Minimize fugitive light from portable sources used for construction AES-4c: Install visual barriers along access routes, where necessary, to prevent light spill from truck headlights toward residences TRANS-1a: Implement site-specific construction traffic management plan TRANS-1b: Limit hours or amount of construction activity on congested roadway segments TRANS-1c: Make good faith efforts to enter into mitigation agreements to enhance capacity of congested roadway segments NOI-1a: Employ noise-reducing construction practices during construction NOI-1b: Prior to construction, initiate a complaint/response tracking program AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
	2D, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
REC-10: Result in long-term reduction in boating-related recreation opportunities as a result of implementing Conservation Measures 2-21	4	S	AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible AES-1b: Install visual barriers between construction work areas and sensitive receptors AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1d: Restore barge unloading facility sites once decommissioned AES-1e: Apply aesthetic design treatments to all structures to the extent feasible AES-1f: Locate concrete batch plants and fuel stations away from sensitive visual resources and receptors and restore sites upon removal of facilities AES-1g: Implement best management practices to implement project landscaping plan AES-4b: Minimize fugitive light from portable sources used for construction AES-4c: Install visual barriers along access routes, where necessary, to prevent light spill from truck headlights toward residences TRANS-1a: Implement site-specific construction traffic management plan TRANS-1b: Limit hours or amount of construction activity on congested roadway segments TRANS-1c: Make good faith efforts to enter into mitigation agreements to enhance capacity of congested roadway segments NOI-1a: Employ noise-reducing construction practices during construction NOI-1b: Prior to construction, initiate a complaint/response tracking program AQUA-1a: Minimize the use of impact pile driving to address effects of pile driving and other construction-related underwater noise AQUA-1b: Use an attenuation device to reduce effects of pile driving and other construction-related underwater noise	LTS	NA
	NAA, 2D, 4A, 5A	LTS		LTS	NA
REC-11: Result in long-term reduction in upland recreational opportunities as a result of implementing Conservation Measures 2-21	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
REC-12: Compatibility of the proposed water conveyance facilities and other conservation measures with federal, state, or local plans, policies, or regulations addressing recreation resources	NAA, 2D, 4, 4A, 5A	NI		NI	NE
ECON-1: Temporary effects on regional economics and employment in the Delta region during construction of the proposed water conveyance facilities.	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones	NI	A
ECON-2: Effects on population and housing in the Delta region during construction of the proposed water conveyance facilities.	NAA	NI		NI	NA
	4	LTS		LTS	LTS
	2D, 4A, 5A	NI		NI	NA
ECON-3: Changes in community character as a result of constructing the proposed water conveyance facilities.	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI		NI	A/B <sup>10</sup>
ECON-4: Changes in local government fiscal conditions as a result of constructing the proposed water conveyance facilities.	NAA, 2D, 4, 4A, 5A	NI		NI	NA
ECON-5: Effects on recreational economics as a result of constructing the proposed water conveyance facilities.	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	Various mitigation measures introduced in the following chapters: Chapter 12, <i>Terrestrial Biological Resources</i> ; Chapter 15, <i>Recreation</i> ; Chapter 17, <i>Aesthetics and Visual Resources</i> ; Chapter 19, <i>Transportation</i> ; and Chapter 23, <i>Noise</i> .	NI	A
ECON-6: Effects on agricultural economics in the Delta region during construction of the proposed water conveyance facilities	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones	NI	A
ECON-7: Permanent regional economic and employment effects in the Delta region during operation and maintenance of the proposed water conveyance facilities.	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones	NI	A
ECON-8: Permanent effects on population and housing in the Delta region during operation and maintenance of the proposed water conveyance facilities	NAA, 2D, 4, 4A, 5A	NI		NI	NA

<sup>10</sup> While water conveyance construction could result in beneficial effects relating to the economic welfare of a community through additional regional employment and income, adverse social effects could also arise as a result of declining economic stability in communities closest to construction effects and in those most heavily influenced by agricultural and recreational activities.

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
ECON-9: Changes in community character during operation and maintenance of the proposed water conveyance facilities	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	Various mitigation measures and environmental commitments related to noise, visual effects, transportation, agriculture and recreation would reduce adverse effects (See Appendix 3B, Environmental Commitments).	NI	A
ECON-10: Changes in local government fiscal conditions during operation and maintenance of the proposed water conveyance facilities.	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI		NI	A/B <sup>11</sup>
ECON-11: Effects on recreational economics during operation and maintenance of the proposed water conveyance facilities	2D, 4, 4A, 5A	NI		NI	NA
ECON-12: Permanent effects on agricultural economics in the Delta region during operation and maintenance of the proposed water conveyance facilities.	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones	NI	A
ECON-13: Effects on the Delta region's economy and employment due to the implementation of the proposed Conservation Measures 2-22	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones MIN-5: Design Conservation Measures 4, 5, and 10 to avoid displacement of active natural gas wells to the extent feasible	NI	A/B <sup>12</sup>
ECON-14: Effects on population and housing in the Delta region as a result of implementing the proposed Conservation Measures 2-22	NAA, 2D, 4, 4A, 5A	NI		NI	NA
ECON-15: Changes in community character as a result of implementing the proposed Conservation Measures 2-22	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	Various mitigation measures and environmental commitments related to transportation, agriculture, and recreation would be anticipated to reduce these adverse effects (See Appendix 3B).	NI	A
ECON-16: Changes in local government fiscal conditions as a result of implementing the proposed Conservation Measures 2-22	NAA, 2D, 4, 4A, 5A	NI		NI	NA

<sup>11</sup> A decrease in revenue as a result property tax and assessment revenue forgone as a result of the proposed water conveyance facilities could result in the loss of a substantial share of some agencies' tax bases, which would be considered an adverse effect. However, the BDCP proponents would make arrangements to compensate local governments for the loss of property tax or assessment revenue for land used for constructing, locating, operating, or mitigating for new Delta water conveyance facilities. Additionally, operation and maintenance of the water conveyance facilities would be anticipated to result in a net increase of income and employment in the Delta region. This would also create an indirect beneficial effect through increased sales tax revenue for local government entities that rely on sales taxes.

<sup>12</sup> Implementation of CMs 2-22 would result in an increase in construction and operation and maintenance-related employment and labor income, which would be considered a beneficial effect. However, there may also be a resulting decrease in agricultural-related and natural gas production-related employment and labor income as a result of implementing these conservation measures, which would be considered an adverse effect.

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
ECON-17: Effects on recreational economics as a result of implementing the proposed Conservation Measures 2–22	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI		NI	A/B <sup>13</sup>
ECON-18: Effects on agricultural economics in the Delta region as a result of implementing the proposed Conservation Measures 2–22	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI	AG-1: Develop an Agricultural Lands Stewardship Plan (ALSP) to maintain agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security Zones	NI	A
ECON-19: Socioeconomic effects in the south-of-Delta hydrologic regions	NAA, 2D, 4, 4A, 5A	NI		NI	A/B <sup>14</sup>
<b>Aesthetics and Visual Resources</b>					
AES-1: Substantial alteration in existing visual quality or character during construction of conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible AES-1b: Install visual barriers between construction work areas and sensitive receptors AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1d: Restore barge unloading facility sites once decommissioned AES-1e: Apply aesthetic design treatments to all structures to the extent feasible AES-1f: Locate concrete batch plants and fuel stations away from sensitive visual resources and receptors and restore sites upon removal of facilities AES-1g: Implement best management practices to implement project landscaping plan	SU	A

<sup>13</sup> Adverse effects would be primarily limited to areas close to restoration areas and during site preparation and earthwork phases. These effects could result in a decline in visits to the Delta and reduction in recreation-related spending, creating an adverse economic effect throughout the Delta. Beneficial recreational effects would generally result during later stages of the BDCP permit period as CM2–CM22 are implemented and environmental conditions supporting recreational activities are enhanced. These effects could improve the quality of recreational experiences, leading to increased economic activities related to recreation, particularly in areas where conservation measure implementation would create new recreational opportunities.

<sup>14</sup> If operation of water conveyance facilities under Alternative 6A reduced M&I deliveries to the extent that it would, in the long run, constrain population growth, its implementation could reinforce a socioeconomic status quo or limit potential economic and employment growth in hydrologic regions. Such changes to agricultural production and population growth with its associated economic activity could also lead to shifts in the character of communities in the hydrologic regions with resultant beneficial or adverse effects. Likewise, limited growth associated with reduced deliveries could require lower expenditures for local governments while also leading to reduced revenue.

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AES-2: Permanent effects on a scenic vista from presence of conveyance facilities.	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1e: Apply aesthetic design treatments to all structures to the extent feasible	SU	A
AES-3: Permanent damage to scenic resources along a state scenic highway from construction of conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1e: Apply aesthetic design treatments to all structures to the extent feasible	SU	A
AES-4: Creation of a new source of light or glare that would adversely affect views in the area as a result of construction and operation of conveyance facilities.	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	AES-4a: Limit construction to daylight hours within 0.25 mile of residents AES-4b: Minimize fugitive light from portable sources used for construction AES-4c: Install visual barriers along access routes, where necessary, to prevent light spill from truck headlights toward residences	SU	A
AES-5: Substantial alteration in existing visual quality or character during operation.	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	LTS		LTS	NA
AES-6: Substantial alteration in existing visual quality or character during construction of CM2-CM22.	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible AES-1b: Install visual barriers between construction work areas and sensitive receptors AES-1c: Develop and implement a spoil/borrow and reusable tunnel material area management plan AES-1d: Restore barge unloading facility sites once decommissioned AES-1e: Apply aesthetic design treatments to all structures to the extent feasible	SU	A

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
			AES-1f: Locate concrete batch plants and fuel stations away from sensitive visual resources and receptors and restore sites upon removal of facilities AES-1g: Implement best management practices to implement project landscaping plan AES-4a: Limit construction to daylight hours within 0.25 mile of residents AES-4b: Minimize fugitive light from portable sources used for construction AES-4c: Install visual barriers along access routes, where necessary, to prevent light spill from truck headlights toward residences AES-6a: Underground new or relocated utility lines where feasible AES-6b: Develop and implement an afterhours low-intensity and lights off policy AES-6c: Implement a comprehensive visual resources management plan for the Delta and study area		
AES-7: Compatibility of the proposed water conveyance facilities and other conservation measures with federal, state, or local plans, policies, or regulations addressing aesthetics and visual resources	NAA	NI		NI	NA
	2D, 4, 4A, 5A	NI		NI	NE
<b>Cultural Resources</b>					
CUL-1: Effects on identified archaeological sites resulting from construction of conveyance facilities	NAA	S		SU	A
	2D, 4, 4A, 5A	S	CUL-1: Prepare a data recovery plan and perform data recovery excavations on the affected portion of the deposits of identified and significant archaeological sites	SU	A
CUL-2: Effects on archaeological sites to be identified through future inventory efforts	NAA	S		SU	A
	2D, 4, 4A, 5A	S	CUL-2: Conduct inventory, evaluation, and treatment of archaeological resources	SU	A
CUL-3: Effects on archaeological sites that may not be identified through inventory efforts	NAA	S		SU	A
	2D, 4, 4A, 5A	S	CUL-3: Implement an archaeological resources discovery plan, perform training of construction workers, and conduct construction monitoring	SU	A
CUL-4: Effects on buried human remains damaged during construction	NAA	S		SU	A
	2D, 4, 4A, 5A	S	CUL-4: Follow state and federal law governing human remains if such resources are discovered during construction	SU	A
CUL-5: Direct and indirect effects on eligible and potentially eligible historic architectural/built environment-resources resulting from construction activities	NAA	S		SU	A
	2D, 4, 4A, 5A	S	CUL-5: Consult with relevant parties, prepare and implement a built environment treatment plan	SU	A

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
CUL-6: Direct and indirect effects on unidentified and unevaluated historic architectural/built environment resources resulting from construction activities	NAA	S		SU	A
	2D, 4, 4A, 5A	S	CUL-6: Conduct a survey of inaccessible properties to assess eligibility, determine if these properties will be adversely impacted by the project, and develop treatment to resolve or mitigate adverse impacts	SU	A
CUL-7: Effects of other Conservation Measures on cultural resources	NAA	S		SU	A
	2D, 4, 4A, 5A	S	CUL-7: Conduct cultural resource studies and adopt cultural resource mitigation measures for cultural resource impacts associated with implementation of Conservation Measures 2-22	SU	A
CUL-8: Compatibility of the proposed water conveyance facilities and other Conservation Measures with plans and policies	NAA	NI		NI	NE
	2D, 4, 4A, 5A	NI		NI	NE
<b>Transportation</b>					
TRANS-1: Increased construction vehicle trips resulting in unacceptable LOS conditions	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	TRANS-1a: Implement site-specific construction traffic management plan TRANS-1b: Limit hours or amount of construction activity on congested roadway segments TRANS-1c: Make good faith efforts to enter into mitigation agreements to enhance capacity of congested roadway segments	SU <sup>20</sup>	A <sup>21</sup>
TRANS-2: Increased construction vehicle trips exacerbating unacceptable pavement conditions	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	TRANS-2a: Prohibit construction activity on physically deficient roadway segments TRANS-2b: Limit construction activity on physically deficient roadway segments TRANS-2c: Improve physical condition of affected roadway segments as stipulated in mitigation agreements or encroachment permits	SU <sup>21</sup>	A <sup>22</sup>
TRANS-3: Increase in safety hazards, including interference with emergency routes during construction	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	TRANS-1c: Make good faith efforts to enter into mitigation agreements to enhance capacity of congested roadway segments	SU <sup>22</sup>	A <sup>23</sup>
TRANS-4: Disruption of marine traffic during construction	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA

Level of Significance/Determination of Effects:

CEQA				NEPA		
SU=significant and unavoidable (any mitigation not sufficient to render impact less than significant)	LTS=less than significant S=significant	NI=no impact B=beneficial	ND=no determination N/A=not applicable	A=adverse NA=not adverse	NE=no effect B=beneficial	ND=no determination N/A=not applicable

Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
TRANS-5: Disruption of rail traffic during construction.	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A		TRANS-1a: Implement site-specific construction traffic management plan	LTS	NA
TRANS-6: Disruption of transit service during construction.	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 2D, 4, 4A, 5A	S	TRANS-1a: Implement site-specific construction traffic management plan TRANS-1b: Limit hours or amount of construction activity on congested roadway segments TRANS-1c: Make good faith efforts to enter into mitigation agreements to enhance capacity of congested roadway segments	SU	A
	9	S	TRANS-1a: Implement site-specific construction traffic management plan	LTS	NA
TRANS-7: Interference with bicycle routes during construction.	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	TRANS-1a: Implement site-specific construction traffic management plan	LTS	NA
TRANS-8: Increased traffic volumes and delays during operations and maintenance.	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
TRANS-9: Permanent alteration of transportation patterns during operations and maintenance.	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
TRANS-10: Increased traffic volumes during implementation of CM2–CM22	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	TRANS-1a: Implement site-specific construction traffic management plan TRANS-1b: Limit hours or amount of construction activity on congested roadway segments TRANS-1c: Make good faith efforts to enter into mitigation agreements to enhance capacity of congested roadway segments	SU <sup>23, 24</sup>	A <sup>24, 25</sup>
TRANS-11: Compatibility of the proposed water conveyance facilities and other conservation measures with plans and policies	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	NI		NI	NE
TRANS-12: Potential Effects on Navigation From Changes in Surface Water Elevations Caused by Construction of Water Conveyance Facilities	NAA	NI		NI	NE
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 4A, 2D, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
TRANS-13: Potential Effects of Navigation from Changes in Surface Elevations Caused by Operation of Intakes	NAA	NI		NI	NE
	4A	LTS	SW-4: Implement Measures to Reduce Runoff and Sedimentation	LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 5A	LTS		LTS	NA
TRANS-14: Potential Effects on Navigation Caused by Sedimentation From Construction of Intakes	NAA	NI		NI	NE
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 4A, 2D, 5A	LTS	SW-4: Implement Measures to Reduce Runoff and Sedimentation	LTS	NA
TRANS-15: Potential Effects on Navigation Caused by Sedimentation From Construction of Barge Facilities	NAA	NI		NI	NE
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 4A, 2D, 5A	LTS	SW-4: Implement Measures to Reduce Runoff and Sedimentation	LTS	NA
TRANS-16: Potential Effects on Navigation Caused by Sedimentation From Construction of Clifton Court Forebay	NAA	NI		NI	NE
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 4A, 2D, 5A	NI		NI	NE
TRANS-17: Potential Effects on Navigation Caused by Sedimentation From Operation of Intakes	NAA	NI		NI	NE
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 4A, 2D, 5A	LTS	SW-4: Implement Measures to Reduce Runoff and Sedimentation	LTS	NA
TRANS-18: Potential Effects on Navigation From Construction and Operations of Head of Old River Barrier	NAA	NI		NI	NE
	4A, 2A, 2B, 2C, 3, 4, 2D	LTS		LTS	NA
	1A, 1B, 1C, 5, 6A, 6B, 6C, 7, 8, 9, 5A	NI		NI	NE
TRANS-19: Potential Cumulative Effects on Navigation From Construction and Operations of Water Conveyance Facilities	NAA	NI		NI	NE
	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 4A, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 5A	LTS		LTS	NA
<b>Public Services and Utilities</b>					
UT-1: Increased demand on law enforcement, fire protection, and emergency response services from new workers in the Plan Area as a result of constructing the proposed water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
UT-2: Displacement of public service facilities as a result of constructing the proposed water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
UT-3: Effects on public schools as a result of constructing the proposed water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
UT-4: Effects on water or wastewater treatment services and facilities as a result of constructing the proposed water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
UT-5: Effects on landfills as a result of solid waste disposal needs during construction of the proposed water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
UT-6: Effects on regional or local utilities as a result of constructing the proposed water conveyance facilities.	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	UT-6a: Verify locations of utility infrastructure UT-6b: Relocate utility infrastructure in a way that avoids or minimizes any effect on operational reliability UT-6c: Relocate utility infrastructure in a way that avoids or minimizes any effect on worker and public health and safety	SU <sup>15</sup>	A <sup>16</sup>
UT-7: Effects on public services and utilities as a result of operation and maintenance of the proposed water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
UT-8: Effects on public services and utilities as a result of implementing the proposed CM2–CM11	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	UT-6a: Verify locations of utility infrastructure UT-6b: Relocate utility infrastructure in a way that avoids or minimizes any effect on operational reliability UT-6c: Relocate utility infrastructure in a way that avoids or minimizes any effect on worker and public health and safety	SU	NA
<b>Energy</b>					
ENG-1: Wasteful or inefficient energy use for temporary construction activities	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
ENG-2: Wasteful or inefficient energy use for pumping and conveyance	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
ENG-3: Compatibility of the proposed water conveyance facilities and CM2–CM22 with plans and policies	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	NI		NI	

<sup>15</sup> If coordination with all appropriate utility providers and local agencies to integrate with other construction projects and minimize disturbance to communities were successful under Mitigation Measure UT-6b, the impact would be less than significant (CEQA) and there would be no adverse effect (NEPA).

<sup>16</sup> If coordination with all appropriate utility providers and local agencies to integrate with other construction projects and minimize disturbance to communities were successful under Mitigation Measure UT-6b, the impact would be less than significant (CEQA) and there would be no adverse effect (NEPA).

Level of Significance/Determination of Effects:

CEQA				NEPA		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
<b>Air Quality and Greenhouse Gases</b>					
AQ-1: Generation of criteria pollutants in excess of the SMAQMD regional thresholds during construction of the proposed water conveyance facility (previously AQ-1).	NAA	S	AQ-1a: Mitigate and offset construction-generated criteria pollutant emissions within the SFNA to net zero (0) for emissions in excess of general conformity <i>de minimis</i> thresholds (where Applicable) and to quantities below applicable CEQA thresholds for other pollutants  AQ-1b: Develop an alternative or complementary offsite mitigation program to mitigate and offset construction-generated criteria pollutant emissions within the SFNA to net zero (0) for emissions in excess of general conformity <i>de minimis</i> thresholds (where applicable) and to quantities below applicable CEQA thresholds for other pollutants	S	A
	1A, 1B, 2A, 2B, 6A, 6B, 2D	S (for ROG, NO <sub>x</sub> , and PM10)		LTS	NA
	1C, 2C, 6C, 3, 7, 8	S (for ROG, NO <sub>x</sub> )		LTS	NA
	4, 4A, 5, 5A	S (for NO <sub>x</sub> )		LTS	NA
AQ-2: Generation of criteria pollutants in excess of the YSAQMD regional thresholds during construction of the proposed water conveyance facility (previously AQ-1).	NAA	S	AQ-1a: Mitigate and offset construction-generated criteria pollutant emissions within the SFNA to net zero (0) for emissions in excess of general conformity <i>de minimis</i> thresholds (where Applicable) and to quantities below applicable CEQA thresholds for other pollutants  AQ-1b: Develop an alternative or complementary offsite mitigation program to mitigate and offset construction-generated criteria pollutant emissions within the SFNA to net zero (0) for emissions in excess of general conformity <i>de minimis</i> thresholds (where applicable) and to quantities below applicable CEQA thresholds for other pollutants	S	A
	1A, 1B, 2A, 2B, 6A, 6B, 7, 8, 9, 2D	S (for ROG, NO <sub>x</sub> , and PM10)		LTS	NA
	3	S (for PM10)		LTS	NA
	4, 4A, 5, 5A	LTS		LTS	NA
AQ-3: Generation of criteria pollutants in excess of the BAAQMD regional thresholds during construction of the proposed water conveyance facility.	NAA	S	AQ-3a: Mitigate and offset construction-generated criteria pollutant emissions within BAAQMD/SFBAAB to net zero (0) for emissions in excess of General Conformity <i>de minimis</i> thresholds (where applicable) and to quantities below applicable BAAQMD CEQA thresholds for other pollutants  AQ-3b: Develop an alternative or complementary off-site mitigation program to mitigate and offset construction-generated criteria pollutant emissions within the BAAQMD/SFBAAB to net zero (0) for emissions in excess of General Conformity <i>de minimis</i> thresholds (where applicable) and to quantities below applicable BAAQMD CEQA thresholds for other pollutants	S	A
	1A, 1B, 2A, 2B, 3, 5, 6A, 6B, 7, 8, 9, 2D, 4, 4A, 5A	S (for ROG and NO <sub>x</sub> )		LTS	NA
	1C, 2C, 6C	S (for ROG and NO <sub>x</sub> )		S (for ROG and NO <sub>x</sub> )	A (for ROG and NO <sub>x</sub> )

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CEQA				NEPA		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQ-4: Generation of criteria pollutants in excess of the SJVAPCD regional thresholds during construction of the proposed water conveyance facility.	NAA	S		S	A
	1A, 1B, 2A, 2B, 2D, 3, 4, 4A, 5, 5A, 7, 8	S (for ROG, NO <sub>x</sub> and PM10)	AQ-4a: Mitigate and offset construction-generated criteria pollutant emissions within SJVAPCD/SJVAB to net zero (0) for emissions in excess of General Conformity <i>de minimis</i> thresholds (where applicable) and to quantities below applicable SJVAPCD CEQA thresholds for other pollutants AQ-4b: Develop an alternative or complementary off-site mitigation program to mitigate and offset construction-generated criteria pollutant emissions within the SJVAPCD/SJVAB to net zero (0) for emissions in excess of General Conformity <i>de minimis</i> thresholds (where applicable) and to quantities below applicable SJVAPCD CEQA thresholds for other pollutants	LTS	NA
	9	S (NO <sub>x</sub> and PM10)		LTS	NA
	1C, 2C, 6C	LTS		LTS	NA
AQ-5: Generation of criteria pollutants in excess of the SMAQMD regional thresholds from operation and maintenance of the proposed water conveyance facility (previously AQ-6).	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-6: Generation of criteria pollutants in excess of the YSAQMD regional thresholds from operation and maintenance of the proposed water conveyance facility (previously AQ-5).	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-7: Generation of criteria pollutants in excess of the BAAQMD regional thresholds from operation and maintenance of the proposed water conveyance facility.	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-8: Generation of criteria pollutants in excess of the SJVAPCD regional thresholds from operation and maintenance of the proposed water conveyance facility.	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-9: Exposure of Sensitive Receptors to Health Hazards from Localized Particulate Matter in Excess of SMAQMD's Health-Based Concentration Thresholds (new impact).	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	AQ-9: Implement Measures to Reduce Re-Entrained Road Dust and Receptor Exposure to PM2.5 and PM10	LTS	NA
AQ-10: Exposure of Sensitive Receptors to Health Hazards from Localized Particulate Matter in Excess of YSAQMD's Health-Based Concentration Thresholds (new impact).	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-11: Exposure of Sensitive Receptors to Health Hazards from Localized Particulate Matter in Excess of BAAQMD's Health-Based Concentration Thresholds (new impact)	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-12: Exposure of Sensitive Receptors to Health Hazards from Localized Particulate Matter in Excess of SJVAPCD's Health-Based Concentration Thresholds (new impact)	NAA	LTS		LTS	NA
	1A, 1B, 2A, 2B, 2D, 3, 5, 5A, 6A, 6B, 7, 8, 9	S	AQ-9: Implement Measures to Reduce Re-Entrained Road Dust and Receptor Exposure to PM2.5 and PM10	LTS	NA
	1C, 2C, 6C, 4, 4A	LTS		LTS	NA

Level of Significance/Determination of Effects:

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQ-13: Exposure of Sensitive Receptors to Health Hazards from Localized Carbon Monoxide (new impact)	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-14: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of SMAQMD's Chronic Non-Cancer and Cancer Risk Thresholds (previously Impact AQ-11)	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9	LTS		LTS	NA
AQ-15: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of YSAQMD's Chronic Non-Cancer and Cancer Risk Thresholds (previously impact AQ-10)	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-16: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of BAAQMD's Chronic Non-Cancer and Cancer Risk Thresholds (previously impact AQ-13)	1A, 1C, 2A, 2C, 2D, 3, 5, 5A, 6A, 6C, 7, 8	S (cancer risk)	AQ-16: Relocate Sensitive Receptors to Avoid Excess Cancer Risk	SU (cancer risk) <sup>17</sup>	A (cancer risk) <sup>38</sup>
	NAA, 1B, 2B, 4, 4A, 6B, 9	LTS		LTS	NA
AQ-17: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of SJVAPCD's Chronic Non-Cancer and Cancer Risk Thresholds (previously impact AQ-12)	1B, 2B, 6B	S (cancer risk)	AQ-16: Relocate Sensitive Receptors to Avoid Excess Cancer Risk	SU (cancer risk) <sup>18</sup>	A (cancer risk) <sup>39</sup>
	NAA, 1A, 1C, 2A, 2C, 2D, 3, 4, 4A, 5, 5A, 6A, 6C, 7, 8, 9	LTS		LTS	NA
AQ-18: Exposure of Sensitive Receptors to <i>Coccidioides immitis</i> (Valley Fever) (new impact)	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-19: Creation of Potential Odors Affecting a Substantial Number of People	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-20: Generation of Criteria Pollutants in the Excess of Federal De Minimis Thresholds from Construction and Operation and Maintenance of the Proposed Water Conveyance Facility	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 2D, 3, 5, 5A, 6A, 6B, 6C, 7, 8, 9	S	AQ-1a: Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the SFNA to Net Zero (0) for Emissions in Excess of General Conformity De Minimis Thresholds (Where Applicable) and to Quantities below Applicable CEQA Thresholds for Other Pollutants	SU	A
	4, 4A	S	AQ-1b: Develop an Alternative or Complementary Offsite Mitigation Program to Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the SFNA to Net Zero (0) for Emissions in Excess of General Conformity De Minimis Thresholds (Where Applicable) and to Quantities below Applicable CEQA Thresholds for Other Pollutants	LTS	NA

<sup>17</sup> Mitigation Measure AQ-16 would reduce exposure to substantial cancer risk by relocating affected receptors. The BDCP proponents cannot ensure that the affected landowners will accept DWR's offer for relocation assistance. If the landowners choose not to accept DWR's offer of relocation assistance, a significant impact in the form of exposure to substantial excess cancer risk would occur. Therefore, this impact would be significant and unavoidable. If, however, the landowners accept DWR's offer of relocation assistance, the impact would be less than significant.

<sup>18</sup> Mitigation Measure AQ-16 would reduce exposure to substantial cancer risk by relocating affected receptors. The BDCP proponents cannot ensure that the affected landowners will accept DWR's offer for relocation assistance. If the landowners choose not to accept DWR's offer of relocation assistance, a significant impact in the form of exposure to substantial excess cancer risk would occur. Therefore, this impact would be significant and unavoidable. If, however, the landowners accept DWR's offer of relocation assistance, the impact would be less than significant.

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CEQA				NEPA			
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
			AQ-3a: Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within BAAQMD/SFBAAB to Net Zero (0) for Emissions in Excess of General Conformity De Minimis Thresholds (Where Applicable) and to Quantities below Applicable BAAQMD CEQA Thresholds for Other Pollutants AQ-3b: Develop an Alternative or Complementary Offsite Mitigation Program to Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the BAAQMD/SFBAAB to Net Zero (0) for Emissions in Excess of General Conformity De Minimis Thresholds (Where Applicable) and to Quantities below Applicable BAAQMD CEQA Thresholds for Other Pollutants AQ-4a: Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within SJVAPCD/SJVAB to Net Zero (0) for Emissions in Excess of General Conformity De Minimis Thresholds (Where Applicable) and to Quantities below Applicable SJVAPCD CEQA Thresholds for Other Pollutants AQ-4b: Develop an Alternative or Complementary Offsite Mitigation Program to Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the SJVAPCD/SJVAB to Net Zero (0) for Emissions in Excess of General Conformity De Minimis Thresholds (Where Applicable) and to Quantities below Applicable SJVAPCD CEQA Thresholds for Other Pollutants		
AQ-21: Generation of cumulative greenhouse gas emissions during construction of the proposed water conveyance facility (previously Impact AQ-15)	NAA	S		S	A
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	AQ-21: Develop and implement a GHG mitigation program to reduce construction related GHG emissions to net zero (0)	LTS	NA
AQ-22: Generation of cumulative greenhouse gas emissions from operation and maintenance of the proposed water conveyance facility and increased pumping (previously Impact AQ-16)	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-23: Generation of cumulative greenhouse gas emissions from increased CVP pumping as a result of implementation of CM1 (previously Impact AQ-17)	1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 4A, 5, 5A	S	No feasible mitigation to address this impact	SU	A
	NAA, 6A, 6B, 6C, 7, 8, 9	LTS		LTS	NA
AQ-24: Generation of regional criteria pollutants from implementation of CM2–CM11 (previously Impact AQ-18)	NAA	S		S	A
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	AQ-24: Develop an Air Quality Mitigation Plan (AQMP) to ensure air district regulations and recommended mitigation are incorporated into future conservation measures and associated project activities.	SU	A

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CEQA				NEPA		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
AQ-25: Exposure of Sensitive Receptors to Health Hazards from Localized Particulate Matter, Carbon Monoxide, and Diesel Particulate Matter from Implementation of CM2–CM11 (new impact)	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	AQ-24: Develop an Air Quality Mitigation Plan (AQMP) to ensure air district regulations and recommended mitigation are incorporated into future conservation measures and associated project activities. AQ-25: Prepare a Project-Level Health Risk Assessment to Reduce Potential Health Risks from Exposure to Localized DPM and PM Concentrations	LTS	NA
AQ-26: Creation of Potential Odors Affecting a Substantial Number of People from Implementation of CM2–CM11	NAA, 1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	LTS		LTS	NA
AQ-27: Generation of cumulative greenhouse gas emissions from implementation of CM2–CM11 (previously Impact AQ-19)	NAA	S		S	A
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	AQ-24: Develop an Air Quality Mitigation Plan (AQMP) to ensure air district regulations and recommended mitigation are incorporated into future conservation measures and associated project activities. AQ-27 Prepare a land use sequestration analysis to quantify and mitigate (as needed) GHG flux associated with conservation measures and associated project activities	SU	A
<b>Noise</b>					
NOI-1: Exposure of noise-sensitive land uses to noise from construction of water conveyance facilities	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	NOI-1a: Employ noise-reducing construction practices during construction. NOI-1b: Prior to construction, initiate a complaint/response tracking program.	SU	A
NOI-2: Exposure of sensitive receptors to vibration or groundborne noise from construction of water conveyance facilities	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 2D, 4, 4A, 5A	S	NOI-2: Employ vibration-reducing construction practices during construction of water conveyance facilities.	SU	A
	NAA, 9	LTS		LTS	NA
NOI-3: Exposure of noise-sensitive land uses to noise from operation of water conveyance facilities	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	NOI-3: Design and construct intake facilities and other pump facilities such that operational noise does not exceed 50 dBA (one-hour $L_{eq}$ ) during daytime hours (7:00 a.m. to 10:00 p.m.) or 45 dBA (one-hour $L_{eq}$ ) during nighttime hours (10:00 p.m. to 7:00 a.m.) or the applicable local noise standard (whichever is less) at nearby noise sensitive land uses.	LTS	NA

Level of Significance/Determination of Effects:

CEQA				NEPA		
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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
NOI-4: Exposure of noise-sensitive land uses to noise from implementation of proposed Conservation Measures 2-10	NAA	LTS		LTS	NA
	1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, 9, 2D, 4, 4A, 5A	S	NOI-1a: Employ noise-reducing construction practices during construction. NOI-1b: Prior to construction, initiate a complaint/response tracking program.	SU	A
<b>Hazards and Hazardous Materials</b>					
HAZ-1: Create a substantial hazard to the public or the environment through the release of hazardous materials or by other means during construction of the water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S		LTS	NA
HAZ-2: Expose sensitive receptors located within 0.25 miles of a construction site to hazardous materials, substances, or waste during construction of the water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
HAZ-3: Potential to conflict with a known hazardous materials site and, as a result, create a significant hazard to the public or the environment	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	NI		NI	NE
HAZ-4: Result in a safety hazard associated with an airport or private airstrip within 2 miles of the water conveyance facilities footprint for people residing or working in the study area during construction of the water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
HAZ-5: Expose people or structures to a substantial risk of property loss, personal injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, as a result of construction, and operation and maintenance of the water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
HAZ-6: Create a substantial hazard to the public or the environment through the release of hazardous materials or by other means during operation and maintenance of the water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S		LTS	
HAZ-7: Create a substantial hazard to the public or the environment through the release of hazardous materials or by other means as a result of implementing Conservation Measures CM2-CM11, CM13, CM14, CM16 and CM18	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S		LTS	NA
HAZ-8: Increased risk of bird - aircraft strikes during implementation of conservation components that create or improve wildlife habitat	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S		SU	A

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
<b>Public Health</b>					
PH-1: Increase in vector-borne diseases as a result of construction and operation of the intakes, solids lagoons, and/or sediment basins associated with the water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
PH-2: Exceedances of water quality criteria for constituents of concern such that there is an adverse effect on public health as a result of operation of the water conveyance facilities.	NAA	LTS		LTS	NA
	4	S	WQ-5: Avoid, minimize, or offset, as feasible, adverse water quality conditions.	SU <sup>19</sup>	A <sup>31</sup>
	2D, 4A, 5A	LTS		LTS	NA
PH-3: Substantial mobilization or increase in constituents known to bioaccumulate as a result of construction, operation or maintenance of the water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
PH-4: Expose substantially more people to transmission lines generating new sources of EMFs as a result of the operation of the water conveyance facilities.	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
PH-5: Increase in vector-borne diseases as a result of implementing CM2–CM7, CM10, and CM11	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
PH-6: Substantial increase in recreationists' exposure to pathogens as a result of implementing the restoration conservation measures	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
PH-7: Substantial mobilization of or increase in constituents known to bioaccumulate as a result of implementing CM2, CM4, CM5, and CM10	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
PH-8: Increase in Microcystis Bloom Formation as a Result of Operation of the Water Conveyance Facilities.	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	WQ-32a: Design Restoration Sites to Reduce Potential for Increased Microcystis Blooms. WQ-32b: Investigate and Implement Operational Measures to Manage Water Residence Time.	SU	A
PH-9: Increase in Microcystis Bloom Formation as a Result of Implementing CM2 and CM4.	4	S	WQ-32a: Design Restoration Sites to Reduce Potential for Increased Microcystis Blooms. WQ-32b: Investigate and Implement Operational Measures to Manage Water Residence Time.	SU	A
PH-9: Increase in <i>Microcystis</i> Bloom Formation as a Result of Implementing Environmental Commitment 4	NAA, 2D, 4A, 5A	LTS		LTS	NA

<sup>19</sup> This impact/effect would be less than significant/not adverse if all financial contributions, technical contributions, or partnerships required to avoid significant impacts prove feasible and any necessary agreements are completed before the project's contribution to the effect.

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
<b>Mineral Resources</b>					
MIN-1: Loss of availability of locally important natural gas wells as a result of constructing the water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	NI		NI	NA
MIN-2: Loss of availability of extraction potential from natural gas fields as a result of constructing the water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
MIN-3: Loss of availability of locally important natural gas wells as a result of operation and maintenance of the water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	NI		NI	NA
MIN-4: Loss of availability of natural gas fields as a result of operation and maintenance of the water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	NI		NI	NA
MIN-5: Loss of availability of locally important natural gas wells as a result of implementing Conservation Measures 2-22	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	MIN-5: Design CM4, CM5, and CM10 to avoid displacement of active natural gas wells to the extent feasible	SU	A
MIN-6: Loss of availability of extraction potential from natural gas fields as a result of implementing Conservation Measures 2-22	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	S	MIN-6: Design CM4, CM5, and CM10 to maintain drilling access to natural gas fields to the extent feasible	SU	A
MIN-7: Loss of availability of locally important aggregate resource sites (mines and MRZs) as a result of constructing the water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	NI		NI	NE
MIN-8: Loss of availability of known aggregate resources as a result of constructing the proposed water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
MIN-9: Loss of availability of locally important aggregate resource sites (mines and MRZs) as a result of operation and maintenance of the water conveyance facilities	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	NI		NI	NE
MIN-10: Loss of availability of known aggregate resources as a result of operation and maintenance of the water conveyance facilities	NAA, 2D, 4, 4A, 5A	LTS		LTS	NA
MIN-11: Loss of availability of locally important aggregate resource sites (mines and MRZs) as a result of implementing Conservation Measures 2-22	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	LTS	MIN-11: Purchase affected aggregate materials for use in BDCP construction	LTS	NA
MIN-12: Loss of availability of known aggregate resources as a result of implementing Conservation Measures 2-22	NAA	LTS		LTS	NA
	2D, 4, 4A, 5A	LTS		LTS	NA

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Potential Impact	Alternatives	Impact Conclusions Before Mitigation	Proposed Mitigation (CEQA and NEPA)	Impact After Mitigation	
		CEQA		CEQA	NEPA
<b>Paleontological Resources</b>					
PALEO-1: Destruction of unique or significant paleontological resources as a result of construction of water conveyance facilities.	NAA	S		S	A
	2D, 4, 4A, 5A	S	PALEO-1a: Prepare a monitoring and mitigation plan for paleontological resources PALEO-1b: Review 90% design submittal and develop specific language identifying how the mitigation measures will be implemented along the alignment PALEO-1c: Educate construction personnel in recognizing fossil material PALEO-1d: Collect and preserve substantial potentially unique or significant fossil remains when encountered	SU	A
PALEO-2: Destruction of unique or significant paleontological resources associated with the implementation of other conservation measures.	NAA	S		S	A
	2D, 4, 4A, 5A	S	PALEO-1a: Prepare a monitoring and mitigation plan for paleontological resources PALEO-1b: Review 90% design submittal and develop specific language identifying how the mitigation measures will be implemented along the alignment PALEO-1c: Educate construction personnel in recognizing fossil material PALEO-1d: Collect and preserve substantial potentially unique or significant fossil remains when encountered	LTS	NA

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