4.3.11 Recreation

Impact 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 Proposed Water Conveyance Facilities

NEPA Effects: The extent of the permanent displacement of public use or private commercial recreation areas located within the Delta occurring under Alternative 4A would be the same as described for Alternative 4, as described in Chapter 15, *Recreation,* Section 15.3.3.9 in Appendix A of this RDEIR/SDEIS. The recreation areas that could be adversely affected are the Cosumnes River Preserve and Clifton Court Forebay. Recreation could be disrupted at the Cosumnes River Preserve by placing an RTM area to the north of the preserve, constructing an east-west permanent transmission line adjacent to the northern boundary of the preserve, and locating permanent tunnel shafts on the preserve. Modifications made to Clifton Court Forebay would disrupt recreation activities occurring on and near the forebay's south embankment. Other potential impacts along the alignment of the water conveyance facility include disruption of use of portions of Staten Island and use of DWR ponds currently used for water ski instruction and hound racing. As described in detail under Alternative 4, construction of the water conveyance facilities under Alternative 4A would not result in an adverse effect on public use or private commercial recreation facilities because none of these facilities would be permanently displaced.

CEQA Conclusion: The extent of permanent displacement of public use or private commercial recreation areas under Alternative 4A would be the same as discussed for Alternative 4 because the type and alignment of the water conveyance facilities are identical between the two alternatives. This includes placing permanent facilities on or disrupting access to the Cosumnes River Preserve, including public access to portions of Staten Island. Similarly, recreation use of the Clifton Court Forebay embankments would be disrupted during construction. Specifically, public access to the forebay's south embankment, which supports fishing and hunting, would be disrupted during construction. Alternative 4A would not result in the permanent displacement of well-established public use or private commercial recreation facilities available for public access. The impact on these facilities would be less than significant and no mitigation is required.

Impact REC-2: Result in Long-Term Reduction of Recreation Opportunities and Experiences as a Result of Constructing the Proposed Water Conveyance Facilities

NEPA Effects: The extent of the long-term reduction of recreation experiences within the Delta as a result of construction the water conveyance facilities under Alternative 4A would be the same as described for Alternative 4. Two recreation sites, Clifton Court Forebay and Cosumnes River Preserve, are within the construction footprint and six recreation sites or areas (Stone Lakes National Wildlife Refuge, Clarksburg Boat Launch, Wimpy's Marina, Delta Meadows, Bullfrog Landing Marina, and Lazy M Marina) are within the 1,200- to 1,400-foot indirect impact area. Potential indirect effects on recreation include loss of access, construction noise, and changes in the visual character of the area surrounding the recreation sites.

As discussed in detail under Alternative 4, impacts on recreation occurring within the Stone Lakes NWR would be attributable to noise and changes in visual character as a result of temporary work areas, RTM storage, geotechnical exploration, construction of Intakes 2 and 3, and construction of

the temporary transmission lines. Recreation activities that could be adversely affected include wildlife and environmental education.

The Clarksburg Boat Launch is on the west bank of the Sacramento River across the river from the site of Intake 3. Although access to the boat launch would be maintained during the construction period, noise generated during construction and geotechnical testing could adversely affect use of the public access areas near the boat launch for fishing or other activities.

As discussed under Alternative 4, impacts on recreation opportunities occurring within the Cosumnes River Preserve would include disruption of wildlife viewing and docent-guided tours. Although no recreation opportunities would be permanently displaced, recreation opportunities occurring within portions of the preserve could be adversely affected during construction as result of the introduction of noise, light, and temporary facilities such as access roads, safe haven work sites, and tunnel shaft with temporary work areas.

Wimpy's Marina is a private boating facility located on the south fork of the Mokelumne River southeast of Walnut Grove. Geotechnical exploration would occur along the tunnel corridor for approximately 2.5 years and would introduce noise that would adversely affect recreation occurring at the marina.

As discussed in detail under Alternative 4, recreation occurring at Delta Meadows could be affected by geotechnical testing and construction and operation of the intermediate forebay and spillway. These features would generate noise and introduce visual disturbances to the recreation site.

Recreation occurring at the Bullfrog Landing Marina on Middle River could be affected by noise and visual disturbance as a result of constructing the water conveyance across Bacon Island. This would include impacts from constructing a temporary access road on the island as well as a temporary safe haven work area. Anglers on the river between the marina and the construction area would also experience noise and visual disturbances during construction.

On-water recreation opportunities not associated with formal recreation sites could be affected by the introduction of noise and light during the construction period. The quality of recreation opportunities in the vicinity of construction sites may be adversely affected by noise and changes in visual character.

As discussed in detail under Alternative 4, recreation opportunities, including fishing and hunting, could be adversely affected by expanding Clifton Court Forebay. Recreation would be adversely affected because access to the forebay would not be allowed during construction.

Construction of Alternative 4A intakes and water conveyance facilities would result in disruption to recreational opportunities. Indirect effects on recreation experiences may occur as a result of impaired access, construction noise, or negative visual effects. Overall, construction and geotechnical exploration may occur year-round and last from 2.5 to 13.5 years at individual construction sites near recreation sites or areas and in-river construction would be primarily limited to June 1 through October 31 each year, which would result in a long-term reduction of recreational opportunities or experiences. Mitigation measures (REC-2, BIO-75, AES-1a, AES-1b, AES-1c, AES-1d, AES-1e, AES-1f, AES-1g, AES-4a, AES-4b, AES-4c, TRANS-1a, TRANS-1b, TRANS-1c, NOI-1a, and NOI-1b) are available to address adverse effects on recreation resulting from introduction of noise and light and the loss of access. However, due to the length of time that construction would occur and the dispersed effects across the Delta, the direct and indirect effects

related to temporary disruption of existing recreational activities at facilities within the impact area would be adverse.

CEQA Conclusion: Construction of the Alternative 4A intakes and related water conveyance facilities would result in permanent and long-term (i.e., lasting over 2 years) impacts on well-established recreational opportunities and experiences in the study area because of access, noise, and visual setting disruptions that could result in loss of public use. These impacts would occur year-round. The mitigation measures described below, in combination with environmental commitments, would reduce some construction-related impacts by compensating for effects on wildlife habitat and species; minimizing the extent of changes to the visual setting, including nighttime light sources; manage construction-related traffic; and implementing noise reduction and complaint tracking measures. However, the level of impact would not be reduced to a less-than-significant level because it is not certain the mitigation would reduce the level of these impacts to less than significant in all the instances occurring within the entire study area. Therefore, these impacts are considered significant and unavoidable.

Mitigation Measure REC-2: Provide Alternative Bank Fishing Access Sites

Please see Mitigation Measure REC-2 under Impact REC-2 in the discussion of Alternative 4 in Chapter 15, *Recreation* of the Draft EIR/EIS.

Mitigation Measure BIO-75: Conduct Preconstruction Nesting Bird Surveys and Avoid Disturbance of Nesting Birds

Please see Mitigation Measure BIO-75 under Impact BIO-75 in the discussion of Alternative 4 in Chapter 12, *Biological Resources*, of the Draft EIR/EIS.

Mitigation Measure 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

Please see Mitigation Measure AES-1a under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources* of the Draft EIR/EIS.

Mitigation Measure AES-1b: Install Visual Barriers between Construction Work Areas and Sensitive Receptors

Please see Mitigation Measure AES-1b under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1c: Develop and Implement a Spoil/Borrow and Reusable Tunnel Material Area Management Plan

Please see to Mitigation Measure AES-1c under Impact AES-1in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1d: Restore Barge Unloading Facility Sites Once Decommissioned

Please see to Mitigation Measure AES-1d under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1e: Apply Aesthetic Design Treatments to All Structures to the Extent Feasible

Please see Mitigation Measure AES-1e under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1f: Locate Concrete Batch Plants and Fuel Stations Away from Sensitive Visual Resources and Receptors and Restore Sites upon Removal of Facilities

Please see Mitigation Measure AES-1f under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1g: Implement Best Management Practices to Implement Project Landscaping Plan

Please see Mitigation Measure AES-1g under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-4a: Limit Construction to Daylight Hours within 0.25 Mile of Residents

Please see Mitigation Measure AES-4a under Impact AES-4 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-4b: Minimize Fugitive Light from Portable Sources Used for Construction

Please see Mitigation Measure AES-4b under Impact AES-4 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-4c: Install Visual Barriers along Access Routes, Where Necessary, to Prevent Light Spill from Truck Headlights toward Residences

Please see Mitigation Measure AES-4c under Impact AES-4 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management Plan

Please see Mitigation Measure TRANS-1a under TRANS-1 in the discussion of Alternative 4 in Chapter 19, *Transportation*, of the Draft EIR/EIS.

Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on Congested Roadway Segments

Please see Mitigation Measure TRANS-1b under Impact TRANS-1 in the discussion of Alternative 4 in Chapter 19, *Transportation*, of the Draft EIR/EIS.

Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation Agreements to Enhance Capacity of Congested Roadway Segments

Please see Mitigation Measure TRANS-1c under Impact TRANS-1 in the discussion of Alternative 4 in Chapter 19, *Transportation*, of the Draft EIR/EIS.

Mitigation Measure NOI-1a: Employ Noise-Reducing Construction Practices during Construction

Please see Mitigation Measure NOI-1a under Impact NOI-1 in the discussion of Alternative 4 in Chapter 23, *Noise*, of the Draft EIR/EIS.

Mitigation Measure NOI-1b: Prior to Construction, Initiate a Complaint/Response Tracking Program

Please see Mitigation Measure NOI-1b under Impact NOI-1 in the discussion of Alternative 4 in Chapter 23, *Noise*, of the Draft EIR/EIS.

Impact REC-3: Result in Long-Term Reduction of Recreational Navigation Opportunities as a Result of Constructing the Proposed Water Conveyance Facilities

NEPA Effects: The extent of the long-term reduction in recreational navigation opportunities as a result of constructing the proposed water conveyance facilities under Alternative 4A would be identical to Alternative 4. Construction activities associated with constructing the three intakes on the Sacramento River, siphons near Clifton Court Forebay, Head of Old River barrier and operating barges and constructing temporary barge unloading facilities at Snodgrass Slough, Potato Slough, San Joaquin River, Middle River, Connection Slough, Old River, and the West Canal would disrupt boat passage and navigation at and near these sites. Although implementing Mitigation Measure TRANS-1a and helping to fund measures to reduce aquatic weeds would reduce impacts on recreational navigation, these effects would remain adverse because of the long duration of construction which would continually reduce recreation opportunities and distract from experiences occurring near construction activity.

CEQA Conclusion: Impacts on recreational navigation during construction of the water conveyance facilities under Alternative 4A would be identical to those described under Alternative 4. Impeding boat passage and navigation and resulting impacts on recreation would occur during construction of the intakes, temporary barge unloading facilities, and siphons. Although Mitigation Measure TRANS-1a would reduce impacts on navigation associated with barge unloading facilities and participating in the aquatic weed reduction program would help address impacts on navigation, the impact of constructing the water conveyance facilities would be considered significant and unavoidable.

Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management Plan

Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative 4 in Chapter 19, *Transportation*, of the Draft EIR/EIS.

Impact REC-4: Result in Long-Term Reduction of Recreational Fishing Opportunities as a Result of Constructing the Proposed Water Conveyance Facilities

NEPA Effects: The extent of changes in sport fishing opportunities occurring within the study area under Alternative 4A would be the same as Alternative 4. Constructing water intakes, siphons, and operable barrier and placement and use of barge unloading facilities during tunnel/pipeline construction would result in temporary water quality effects (e.g., turbidity, accidental spills, disturbance of contaminated sediments); elevated underwater noise (associated with pile driving and other construction activities); fish exposure to stranding and direct physical injury; and temporary exclusion or degradation of spawning and rearing habitats. Expanding Clifton Court Forebay would restrict access to bank fishing sites during the construction period. Although fish populations likely would not be affected to the degree that the abundance of sport fish would be substantially reduced, construction conditions would introduce noise and visual disturbances that would affect the recreation experience for anglers.

Although construction would occur for more than 2 years and cause a long-term reduction in fishing opportunities at one recreational site, construction of the proposed water conveyance facilities would not affect most fishing opportunities throughout the Delta. Additionally, mitigation measures are available to enhance and ensure access to nearby fishing sites and to address noise and visual disturbances.

Construction of the water conveyance facilities would not result in a long-term adverse effect on fishing opportunities because the effects would be limited to construction sites and would not limit fishing opportunities occurring in other parts of the Delta. Mitigation Measures REC-2, NOI-1a, NOI-1b, AES-1a, AES-1b AES-1c AES-1d, AES-1e, AES-1f, and AES-1g would help reduce or avoid impacts on recreational fishing occurring at construction sites.

CEQA Conclusion: The impact on recreational fishing opportunities as a result of constructing the water conveyance facilities under Alternative 4A would be the same as Alternative 4. The combined impact on recreational fishing opportunities would be considered significant. Implementing mitigation measures REC-2, NOI-1a, NOI-1b, AES-1a, AES-1b AES-1c AES-1d, AES-1e, AES-1f, and AES-1g would reduce the impact on recreational fishing to a less-than-significant level by providing alternate fishing sites, reducing noise generated during construction activities, and limiting changes in the visual character of recreational fishing sites.

Mitigation Measure REC-2: Provide Alternative Bank Fishing Access Sites

Please see Mitigation Measure REC-2 under Impact REC-2 in the discussion of Alternative 4 in Chapter 15, *Recreation*, of the Draft EIR/EIS.

Mitigation Measure NOI-1a: Employ Noise-Reducing Construction Practices during Construction

Please see Mitigation Measure NOI-1a under Impact NOI-1 in the discussion of Alternative 4 in Chapter 23, *Noise*, of the Draft EIR/EIS.

Mitigation Measure NOI-1b: Prior to Construction, Initiate a Complaint/Response Tracking Program

Please see Mitigation Measure NOI-1b under, Alternative 1A in the discussion of Alternative 4 in Chapter 23, *Noise*, of the Draft EIR/EIS.

Mitigation Measure 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

Please see Mitigation Measure AES-1a under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1b: Install Visual Barriers between Construction Work Areas and Sensitive Receptors

Please see Mitigation Measure AES-1b under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1c: Develop and Implement a Spoil/Borrow and Reusable Tunnel Material Area Management Plan

Please see Mitigation Measure AES-1c under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1d: Restore Barge Unloading Facility Sites Once Decommissioned

Please see Mitigation Measure AES-1d under Impact AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1e: Apply Aesthetic Design Treatments to All Structures to the Extent Feasible

Please see Mitigation Measure AES-1e under AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1f: Locate Concrete Batch Plants and Fuel Stations Away from Sensitive Visual Resources and Receptors and Restore Sites upon Removal of Facilities

Please see Mitigation Measure AES-1f under AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Mitigation Measure AES-1g: Implement Best Management Practices to Implement Project Landscaping Plan

Please see Mitigation Measure AES-1g under AES-1 in the discussion of Alternative 4 in Chapter 17, *Aesthetics and Visual Resources*, of the Draft EIR/EIS.

Impact REC-5: Result in Long-Term Reduction of Recreational Fishing Opportunities as a Result of the Operation of the Proposed Water Conveyance Facilities

NEPA Effects: The effects of operating the water conveyance facilities on recreational fishing opportunities under Alternative 4A would be the same as described under Alternative 4, because the same conveyance facilities would be built under Alternative 4A as under Alternative 4 and the operational scenarios analyzed under Alternative 4 cover the range of operational scenarios under Alternative 4A. Operation of Alternative 4A may result in changes in entrainment, spawning, rearing, and migration. However, effects on fish species that are popular for recreational fishing are not of a nature/level that will adversely affect recreational fishing. While there are some significant impacts

on specific non-listed species, as discussed in Section 4.3.7, *Fish and Aquatic Resources*, of this RDEIR/SDEIS they are typically limited to specific rivers and not the population of that species as a whole. The effect is not adverse because it would not result in a substantial long-term reduction in recreational fishing opportunities.

CEQA Conclusion: The potential impact on covered and non-covered sport fish species from operation of Alternative 4A would be considered less than significant because any impacts on fish and, as a result, impacts on recreational fishing, are anticipated to be isolated to certain areas and would not affect the abundance of popular sport fish.

Impact 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

NEPA Effects: The methodology for assessing effects on recreation at major upstream storage reservoirs for Alternative 4A is the same as applied to Alternative 4 with the exception that Alternative 4A includes only Operational Scenarios H3 and H4. The results of this assessment are shown in Tables 4.3.11-1 and 4.3.11-2 below.

Existing Conditions (CEQA Baseline) Compared to Alternative 4A ELT (2025)

Under Alternative 4A Operational Scenarios H3 and H4 recreation thresholds would be exceeded more frequently at Trinity, Shasta, Oroville, Folsom, and San Luis Reservoirs relative to Existing Conditions. These changes represent a greater than 10% increase in the frequency the recreation thresholds are exceeded under Operational Scenario H3 and H4 at Trinity, Shasta, Oroville, Folsom, and San Luis Reservoirs, compared to Existing Conditions. However, as discussed in Section 15.3.1, *Methods for Analysis*, of the Draft EIR/EIS these changes in SWP/CVP reservoir elevations are primarily attributable to change in demand and other external factors such as sea level rise and climate change. It is not possible to specifically define the exact extent of the changes due to implementation of the action alternative using these model simulation results. Thus, the precise contributions of the external factors to the total differences between Existing Conditions and Alternative 4A Operational Scenarios H3 and H4 cannot be isolated in this comparison. Please refer to the comparison of the No Action Alternative (ELT) to Alternative 4A for a discussion of the potential effects on end-of-September reservoir and lake elevations attributable to operation of Alternative 4A.

Existing Conditions (CEQA Baseline) Compared to Alternative 4A LLT (2060)

Under Alternative 4A Operational Scenarios H3 and H4 recreation thresholds would be exceeded more frequently at Trinity, Shasta, Oroville, Folsom, New Melones, and San Luis Reservoirs relative to Existing Conditions. These changes represent a greater than 10% increase in the frequency the recreation thresholds are exceeded under Operational Scenario H3 at Trinity, Shasta, Oroville, Folsom, and San Luis Reservoirs and under Operational Scenario H4 at Trinity, Shasta, Oroville, Folsom, New Melones, and San Luis Reservoirs. However, as discussed in Section 15.3.1, *Methods for Analysis*, of the Draft EIR/EIS these changes in SWP/CVP reservoir elevations are primarily attributable to change in demand and other external factors such as sea level rise and climate change. It is not possible to specifically define the exact extent of the changes due to implementation of the action alternative using these model simulation results. Thus, the precise contributions of the external factors to the total differences between Existing Conditions and Alternative 4A Operational Scenarios H3 and H4 cannot be isolated in this comparison.

No Action Alternative (ELT) Compared to Alternative 4A

The comparison of Alternative 4A to the No Action Alternative (ELT) condition most closely represents changes in reservoir elevations that may occur as a result of operation of Alternative 4A because both conditions external factors such as change in demand and sea level rise and climate change (see Appendix 5A, *BDCP EIR/EIS Modeling Technical Appendix*, of the Draft EIR/EIS). As shown in Table 4.3.11-1 and Table 4.3.11-2, below, Alternative 4A Operational Scenarios H3 and H4 would result in changes in the frequency with which the end-of-September reservoir levels at Trinity, Shasta, Oroville, Folsom, New Melones, and San Luis Reservoirs would fall below levels identified as important water-dependent recreation thresholds. The CALSIM II modeling results indicate that reservoir levels under Alternative 4A operations would either not change or would fall below the individual reservoir recreation thresholds less frequently than under No Action Alternative (ELT) conditions at Trinity, Shasta, Oroville, and New Melones Reservoirs. Operation of Alternative 4A would not adversely affect water-dependent or water-enhanced recreation at these reservoirs. Overall, these conditions represent improved recreation conditions under operation of Alternative 4A because there would be slightly fewer years in which end-of-September reservoir levels would fall below the recreation thresholds thus indicating better boating opportunities, when compared to No Action Alternative (ELT) conditions.

The modeling result for Folsom Reservoir indicates there could be up to 3 and 2 additional years under Alternative 4A Operational Scenarios H3 and H4, respectively, during which the reservoir level would fall below the reservoir's boating threshold at the end of September. The incremental change would not exceed the 10% increase in the frequency threshold that would indicate an adverse impact on recreation occurring at the reservoir.

The modeling results for San Luis Reservoir indicate there could be up to 23 and 45 additional years under Alternative 4A Operational Scenarios H3 and H4, respectively, during which the reservoir level would fall below the reservoir boating threshold at the end of September relative to the No Action Alternative (ELT) condition. This is a greater than 10% change and would be considered a substantial reduction in recreational boating opportunities at San Luis Reservoir. Shoreline fishing would still be possible, and other recreation activities at the reservoir—picnicking, biking, hiking, and fishing—would be available. The reduction in surface elevations at San Luis Reservoir under Operational Scenarios H3 and H4 would result in an adverse impact on recreation occurring at the reservoir by restricting access by boaters. Mitigation Measure REC-6 would be available to address this effect.

CEQA Conclusion: This impact on water-dependent and water-enhanced recreation opportunities at north- and south-of-Delta reservoirs would be less than significant because, with the exception of San Luis Reservoir, the CALSIM II modeling results indicate that reservoir levels attributable to Alternative 4A operations would either slightly decrease (Folsom Reservoir) or would fall below the individual reservoir thresholds less frequently than under No Action Alternative (ELT). These changes in reservoir and lake elevations would result in a less-than-significant impact on recreation opportunities and experiences at Trinity, Shasta, Oroville, Folsom, and New Melones Reservoirs. At Trinity, Shasta, Oroville, and Folsom Reservoirs, because there would be fewer years in which the reservoir or lake levels fall below the recreation threshold relative to No Action Alternative (ELT) conditions, these effects would be considered beneficial to recreation opportunities and experiences. At Trinity, Shasta, Oroville, Folsom, New Melones, and San Luis Reservoirs, there would be more years in which the reservoir or lake levels fall below the recreation threshold at Late Long Term relative to Existing Conditions. However, as discussed in Section 15.3.1, *Methods for Analysis*,

of the Draft EIR/EIS these changes in SWP/CVP reservoir elevations are primarily attributable to change in demand and other external factors such as sea level rise and climate change. It is not possible to specifically define the exact extent of the changes due to implementation of the action alternative using these model simulation results. Operation of Alternative 4A would not substantially affect water-dependent or water-enhanced recreation at these reservoirs. At San Luis Reservoir, the reduction in reservoir access by boaters under Operational Scenarios H3 and H4 would be significant because it is a greater than 10% change and could result in a significant impact on recreation. Mitigation Measure REC-6 would reduce this impact to less than significant.

Mitigation Measure REC-6: Provide a Temporary Alternative Boat Launch to Ensure Access to San Luis Reservoir

Consistent with applicable recreation management plans, DWR and Reclamation will work with DPR to establish a boat ramp extension at or near the Basalt boat launch or other alternative boat ramp site at San Luis Reservoir to maintain reservoir access in years when access becomes unavailable.

Table 4.3.11-1. Summary of Years with Reduced SWP and CVP Reservoir Recreation Opportunities (End-of September Elevations below Recreation Thresholds) for Alternative 4A

	Recreation Threshold[a]								
	Trinity Lake			Shasta Lake			Lake Oroville		
	<2,270 ft Elevation			<967 ft Elevation			<700 ft Elevation		
Scenario	Years[b]	Change Relative to Existing Condition (CEQA)[c]	Change Relative to No Action Alternative (ELT) (CEQA/ NEPA)	Years[b]	Change Relative to Existing Condition (CEQA)[c]	Change Relative to No Action Alternative (ELT) (CEQA/ NEPA)	Years[b]	Change Relative to Existing Condition (CEQA)[c]	Change Relative to No Action Alternative (ELT) (CEQA/ NEPA)
Existing Condition (CEQA)	21			17			17		
No Action Alternative (ELT)	32	11		22	5		26	9	
Alternative 4A (ELT)									
Operational Scenario H3	29	8	-3	22	5	0	21	4	-5
Operational Scenario H4	29	8	-3	20	3	-2	24	7	-2
Alternative 4A (LLT)									
Operational Scenario H3	41	20		28	11		29	12	
Operational Scenario H4	40	18		24	7		35	18	

[a] Recreation thresholds selected for the analysis represent the reservoir surface water elevation at which recreation opportunities become diminished due to restricted access to boat ramps, exposure of previously submerged islands or shoals that affect boater safety, and shoreline degradation.

[b] The number of years out of the 82 simulated when the September end-of-month elevation is less than the recreation elevation threshold for the selected project alternative scenario. An elevation less than the recreation threshold indicates occurrences during which recreation opportunities may be diminished (see note a, above).

[c] The change values are the number of years of the simulated conditions that the selected alternative differs from the comparison condition (i.e., the Existing Condition or No Action Alternative ELT). A positive change would indicate more years with reduced recreation opportunities.

Table 4.3.11-2. Summary of Years with Reduced SWP and CVP Reservoir Recreation Opportunities (End-of September Elevations below Recreation Thresholds) for Alternative 4A

	Recreation Threshold[a]								
	Folsom Lake			New Melones Lake			San Luis Reservoir		
	<405 ft Elevation			<900 ft Elevation			<360 ft Elevation		
Scenario	Years[b]	Change Relative to Existing Condition (CEQA)[c]	Change Relative to No Action ELT (CEQA/ NEPA)	Years[b]	Change Relative to Existing Condition (CEQA)[c]	Change Relative to No Action ELT (CEQA/ NEPA)	Years[b]	Change Relative to Existing Condition (CEQA)[c]	Change Relative to No Action ELT (CEQA/ NEPA)
Existing Condition (CEQA)	22			9			3		
No Action (ELT)	33	11		8	-1		9	6	
Alternative 4A (ELT)									
Scenario H3	36	14	3	8	-1	0	32	29	23
Scenario H4	35	13	2	9	0	1	54	51	45
Alternative 4A (LLT)									
Operational Scenario H3	44	22		13	4		37	34	
Operational Scenario H4	47	25		12	3		55	52	

[a] Recreation thresholds selected for the analysis represent the reservoir surface water elevation at which recreation opportunities become diminished due to restricted access to boat ramps, exposure of previously submerged islands or shoals that affect boater safety, and shoreline degradation.

[b] The number of years out of the 82 simulated when the September end-of-month elevation is less than the recreation elevation threshold for the selected project alternative scenario. An elevation less than the recreation threshold indicates occurrences during which recreation opportunities may be diminished (see note a, above).

[c] The change values are the number of years of the simulated conditions that the selected alternative differs from the comparison condition (i.e., the Existing Condition or No Action ELT). A positive change indicates more years with reduced recreation opportunities relative to the comparison condition. A negative change indicates fewer years with reduced recreation opportunities relative to the comparison condition.

Impact REC-7: Result in Long-Term Reduction in Water-Based Recreation Opportunities as a Result of Maintenance of the Proposed Water Conveyance Facilities

NEPA Effects: The effects of maintaining the water conveyance facilities on water-based recreation under Alternative 4A would be the same as described under Alternative 4. These potential effects would occur as a result of regular maintenance activities of the intakes. The effect on boating is not considered adverse because the boat passage around the intakes would be maintained and disruption of boat access in the immediate vicinity of the intakes would be short-term.

CEQA Conclusion: Effects on recreation resulting from the maintenance of intake facilities would be short-term and intermittent and would not result in significant impacts on boat passage, navigation, or water-based recreation within the vicinity of the intakes.

Impact REC-8: Result in Long-Term Reduction in Land-Based Recreation Opportunities as a Result of Maintenance of the Proposed Water Conveyance Facilities

NEPA Effects: The effects of maintaining the water conveyance facilities on land-based recreation under Alternative 4A would be the same as described under Alternative 4. Maintenance activities would be short-term and intermittent, occur within the immediate vicinity of water conveyance facility, and are not expected to generate noise that would distract from adjacent recreation

opportunities. Therefore, there would be no effects on recreation opportunities as a result of maintenance of the proposed water conveyance facilities.

CEQA Conclusion: Maintenance of conveyance facilities would be short-term and intermittent and would not result in any changes to land-based recreational opportunities. Therefore, there would be no impact and no mitigation would be required.

Impact REC-9: Result in Long-Term Reduction in Fishing Opportunities as a Result of Implementing Environmental Commitments 3, 4, 6–12, 15, and 16

NEPA Effects: Implementing conservation and stressor reduction components as part of Alternative 4A would result in effects on fishing opportunities similar to those described for Alternative 4. The magnitude of the effects occurring under Alternative 4A would be much less than under Alternative 4 because the total acreage that would be affected by the conservation and stressor reduction actions (Environmental Commitments 3, 4, 6–12, 15, and16) occurring in the Plan Area would be much less than the conservation measures proposed under Alternative 4. Construction, operation, and maintenance of the conservation and stressor reduction components could have affects that would be similar in nature to those discussed above for construction, operation, and maintenance of proposed water conveyance facilities. Although similar in nature, the potential intensity of any effects would likely be substantially lower because the nature of the activities associated with implementing the conservation and stressor reduction components would be much less when compared to Alternative 4. In addition, the conservation and stressor reduction components would be expected to result in long-term benefits to aquatic species.

During the implementation stage, construction activity associated with the conservation and stressor reduction components could result in adverse effects on recreation by temporarily or permanently limiting access to fishing sites and disturbing fish habitat. The impact on fishing opportunities as the conservation and stressor reduction components are constructed would not be considered adverse because the actions would be small and localized. In the long term, the impact on fishing opportunities would be considered beneficial because the conservation and stressor reduction measures could benefit aquatic habitat and fish abundance. Therefore, overall, there would not be an adverse impact to fishing opportunities in the long-term.

CEQA Conclusion: Conservation and stressor reduction components would be expected to improve fishing opportunities within the Plan Area. The adverse and beneficial impacts would be similar to those described under Alternative 4, however the extent of those impacts would be much less because the restoration actions occurring under Alternative 4A would include much less acreage and a smaller geographic scope than the conservation measures described under Alternative 4. The impact on fishing opportunities as the conservation and stressor reduction components are constructed would be considered less than significant because the actions would be small and localized. In the long term, the impact on fishing opportunities would be considered beneficial because the conservation and stressor reduction measures could benefit aquatic habitat and fish abundance.

Impact REC-10: Result in Long-Term Reduction in Boating-Related Recreation Opportunities as a Result of Implementing Environmental Commitments 3, 4, 6–12, 15, and 16

NEPA Effects: Implementing conservation and stressor reduction components as part of Alternative 4A would result in effects on boating-related recreation similar to the effects discussed under Alternative 4 for implementing conservation measures. However, the extent of the effects on boating

under Alternative 4A would be much less because the total acreage that would be affected by the conservation and stressor reduction actions occurring in the Plan Area would be much less when compared to Alternative 4. Restoration of channel margin enhancement, riparian natural community, and nontidal marsh could provide increased boating opportunities within the study area.

CEQA Conclusion: Channel modification and other activities associated with implementation of some of the conservation and stressor reduction components may limit some opportunities for boating and boating-related recreation by reducing the extent of navigable water available to boaters. However, overall the conservation and stressor reduction components would also lead to an enhanced boating experience by expanding the extent of waterways available to boaters. Overall, these measures would not be anticipated to result in a long-term reduction in boating-related recreation activities; therefore, this impact is considered less than significant.

Impact REC-11: Result in Long-Term Reduction in Upland Recreational Opportunities as a Result of Implementing Environmental Commitments 3, 4, 6–12, 15, and16

NEPA Effects: Implementing conservation and stressor reduction components as part of Alternative 4A would result in effects on upland recreational opportunities similar to Alternative 4. However, the extent of these effects occurring under Alternative 4A would be much less than under Alternative 4 because the total acreage that would be affected by the conservation and stressor reduction actions occurring in the Plan Area would be much less. The actions could benefit the same types of recreation opportunities (e.g., hunting, hiking, walking, wildlife viewing, botanical viewing, nature photography, picnicking, and sightseeing) as described for Alternative 4, however the recreational benefits accruing from these actions would be much less because of the smaller acreage that would be restored. Conversely, the conservation and stressor reduction actions could adversely affected established recreation activities that would no longer be possible or compatible with restoration. These potential adverse effects would be would be similar to those described under Alternative 4, however the effects are expected to be much less because of the smaller total acreage that would be restored.

Implementing the conservation and stressor reduction components could result in an adverse effect on recreation opportunities by reducing the extent of upland recreation sites and activities available to hiking, nature photography, or other similar activity. However, implementation of the measures would also restore or enhance new potential sites for upland recreation thereby potentially improving the quality of recreational opportunities. Therefore, overall, there would not be an adverse impact.

CEQA Conclusion: Similar to Alternative 4, site preparation and earthwork activities occurring under Alternative 4A required to implement the conservation and stressor reduction components could temporarily limit or disrupt opportunities for upland recreational. These impacts on upland recreational opportunities would be considered less than significant because—similar to Alternative 4—environmental commitments incorporated into the project would require the project proponents to consult with CDFW to expand wildlife viewing, angling, and hunting opportunities as an element of the conservation and stressor reduction components. These components would not be anticipated to result in a substantial long-term disruption of upland recreational activities; thus, this impact is considered less than significant.

Impact REC-12: Compatibility of the Proposed Water Conveyance Facilities and Other Environmental Commitments with Federal, State, or Local Plans, Policies, or Regulations Addressing Recreation Resources

NEPA Effects: Similar to Alternative 4A, constructing the water conveyance facilities and implementing the conservation and stressor reduction components under Alternative 4A could result in incompatibilities with plans and policies that address recreation. A number of plans and policies that coincide with the study area provide guidance for recreation resource issues are overviewed in Chapter 15, *Recreation*, Section 15.2, *Regulatory Setting*, of the Draft EIR/EIS. This overview of plan and policy compatibility evaluates whether Alternative 4A is compatible or incompatible with such enactments, rather than whether impacts are adverse or not adverse or significant or less than significant. If the incompatibility relates to an applicable plan, policy, or regulation adopted to avoid or mitigate recreation effects, then an incompatibility might be indicative of a related significant or adverse effect under CEQA and NEPA, respectively. Such physical effects of Alternative 4A on recreation resources are addressed in Impacts REC-1 through REC-11, and in other sections, such as Section 4.3.19, *Noise*, and Section 4.3.13, *Aesthetics and Visual Resources*, of this RDEIR/SDEIS. A summary of the compatibility evaluations related to recreation resources for plans and policies is contained in the analysis of Alternative 4 and is applicable to Alternative 4A. Generally the evaluation found that implementing Alternative 4A would not be compatible with some provisions of The Johnston-Baker-Andal-Boatwright Delta Protection Act of 1992 and some policies of the Sacramento, San Joaquin, Contra Costa, and Alameda Counties general plans that address recreation.

CEQA Conclusion: The incompatibilities identified in the analysis indicate the potential for a physical consequence to the environment. The physical effects are discussed in Alternative 4A, impacts REC-1 through REC-11, and no additional CEQA conclusion is required related to the compatibility of the alternative with relevant plans and polices.