

Table O-1. Valley/Foothill Woodland and Forest Communities: Potential CALFED Effects and Conservation Measures

Summary Effect of Implementing CALFED Actions with Conservation Measures on Valley/Foothill Woodland and Forest Communities: Potential for increase in habitat area near affected channels in the Sacramento River Region and San Joaquin River Region as a result of restoring floodplains. Potential for short-term loss of habitat area with construction of new or enlarged storage reservoirs and associated facilities and long-term increase in and/or enhancement of habitat area with implementation of conservation measures to compensate for CALFED impacts.

Associated Evaluated Species: California condor, Alameda whipsnake, limestone salamander, Shasta salamander, ringtail, golden eagle, Swainson's hawk, greater western mastiff-bat, long-eared owl, Cooper's hawk, osprey, monarch butterfly (roost), Sharsmith onion, dimorphic snapdragon, Mount Diablo manzanita, Baker's manzanita, Clara Hunt's milkvetch, Big Bear Valley woollypod, Jepson's milk-vetch, tree-anemone, El Dorado bedstraw, Hartweg's golden sunburst, rock sanicle, English peak greenbriar, Layne's ragwort, pallid manzanita, Pine Hill ceanothus, Pine Hill flannelbush, adobe-lily, Hall's tarplant, Brewer's western flax, drymaria-like western flax, Naps western flax, Tehama County western flax, pale-yellow layia, Bellinger's meadowfoam, Mount Tedoc linanthus, Madera linanthus, San Benito evening-primrose, San Joaquin adobe sunburst, Mount Diablo phacelia, Stebbin's morning-glory, Mount Diablo fairy-lantern, California vervain, Ione manzanita, Rawhide Hill onion, Ben Lomond buckwheat, Congdon's lomatium, Hospital Canyon larkspur, recurved larkspur, Brandegee's eriastrum, Mariposa clarkia, Shasta clarkia, beaked clarkia, Mount Hamilton coreopsis, silky cryptantha, Mount Hamilton jewelflower, red-flowered lotus, Parry's horkelia, shaggyhair lupine, showy madia, Shasta snow-wreath, Ahart's paronychia, thread-leaved beardtongue, and San Antonio Hills monardella.

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
Delta Region					
Associated Evaluated Species: Swainson's hawk, Cooper's hawk, and osprey.					
Summary Programmatic Action Outcomes E1, E4, E5a, E8, E9, E10a, E11, E13a, E16a, E17, E18a, E19-E22, E24, E25, E27a, E28, L1, L2, Q1, Q2, Q4, Q7, Q8, W1-W4, T1, C1, S1, O1, and O2 are likely to have no discernable effect on valley/foothill woodland and forest communities in the Delta Region.					
Watershed Management Program					
M1. Fund and implement watershed restoration, maintenance, conservation, and monitoring activities.	None.	Potential beneficial effects of the program are not analyzed. The type and magnitude of potential beneficial effects would depend on the type of specific program actions that are implemented (N/A).	Potential adverse effects of the program are not analyzed. The type and magnitude of potential adverse effects would depend on the type of specific program actions that are implemented (N/A).		Potential program effects cannot be evaluated.

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Table O-1. Continued

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
Conveyance Facilities					
C2. Construct and operate modifications to existing north-Delta conveyance features.	C020101, C020102, C020103	Likely to be no discernable beneficial effects on existing habitat areas and associated evaluation species (N/E).	<p>Construction of conveyance channels could result in the loss of individual trees within woodlands (AE1).</p> <p>Construction-related activities associated with implementing actions could result in take of evaluated species (AE2).</p>	<p>To the extent practicable, avoid disturbance to existing habitat areas (M1).</p> <p>Restore or enhance 2 to 5 acres of additional inkind habitat for every acre of existing habitat effected by the actions near affected areas (M2).</p> <p>To the extent practicable, avoid construction activities during the breeding period of species that could be adversely affected by the actions (M3).</p>	Potential for loss of woodland trees within conveyance facility corridors. Potential for long-term increase in habitat area from existing conditions with implementation of conservation measures.
C3 Construct and operate an isolated conveyance facility from the Sacramento River along the east side of the Delta to Clifton Court Forebay.	C030101	N/E	<p>AE1.</p> <p>AE2.</p>	<p>M1.</p> <p>M2.</p> <p>M3.</p>	Potential for loss of woodland trees within conveyance-facility corridors. Potential for long-term increase in habitat area from existing conditions with implementation of conservation measures.

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Table O-1. Continued

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
Bay Region					
Associated Evaluated Species: Clara Hunt's milkvetch, pallid manzanita, ringtail, golden eagle, Swainson's hawk, greater western mastiff-bat, long-eared owl, Cooper's hawk, osprey, monarch butterfly (roost), Ben Lomond buckwheat, Hospital Canyon larkspur, and showy madia.					
Summary Programmatic Action Outcomes E1, E5b, E7, E10b, E12, E13b, E14, E15b, E16b, E21, E22, E24, E25, E28, E30, L3, Q2, Q4, Q7, Q8, W1-W4, and T1 are likely to have no discernable effect on valley/foothill woodland and forest communities in the Bay Region.					
Watershed Management Program					
M1. Fund and implement watershed restoration, maintenance, conservation, and monitoring activities.	None.	N/A	N/A		Potential program effects cannot be evaluated.
Sacramento River Region					
Associated Evaluated Species: Ringtail, golden eagle, Swainson's hawk, greater western mastiff-bat, long-eared owl, Cooper's hawk, osprey, Shasta salamander, El Dorado bedstraw, Hartweg's golden sunburst, Layne's ragwort, Pine Hill ceanothus, Pine Hill flannelbush, red-flowered lotus, dimorphic snapdragon, Jepson's milk-vetch, Shasta clarkia, silky cryptantha, Brandegees' eriastrum, adobe-lily, Drymaria-like western flax, Tehama County western flax, Bellinger's meadowfoam, Mount Tedoc linanthus, Shasta snow-wreath, Ahart's paronychia, threadleaved beardtongue, English peak greenbrier, and showy madia.					
Summary Programmatic Action Outcomes E1-E3, E13c, E16c, E18b, E22-E26, E27b, Q1-Q4, Q7, W1-W4, T1, S2, O1, and O2 are likely to have no discernable effect on valley/foothill woodland and forest communities in the Sacramento River Region.					

Table O-1. Continued

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
Ecosystem Restoration Program					
E6. Restoration and maintenance of riverine aquatic habitats.	E031602, E030301, E030302, E030303, E030604, E040301, E040402, E050201, E050202, E050203, E050301, E050401, E050402, E050403, E050404, E050405, E060401, E070201, E070202, E070203, E080301, E080302, E080303, E080401, E080402, E090401, E090402, E090403, E090404, E090407, E090408, E090408, E091604, E091605, E090201	Potential increase in habitat area if restoring stream meander corridors and associated floodplain processes create conditions suitable for the natural reestablishment of valley oak woodland or savanna habitat (BE1).	N/E	None.	Potential for an increase in habitat area on restored floodplains.
E15c. Protection and enhancement of 9,000–13,000 acres of riparian habitat in meander zones along the Sacramento River and its tributaries; protection, enhancement, and restoration of riparian habitat and shaded riverine aquatic (SRA) cover along other reaches of the Sacramento River and its tributaries; and reduction of populations of non-native invasive plants.	E031601, E031602, E031603, E031604, E031605, E030302, E030303, E030304, E035301, E035302, E040301, E040401, E041601, E041602, E041603, E051601, E051602, E051603, E061601, E065301, E071601, E071603, E071604, E080301, E080302, E080303, E080401, E081601, E081602, E081603, E090401, E090403, E090404, E090407, E091601, E091602, E091603, E091606, E095301, E101601, E101602, E101603, E101604, E105301	BE1.	N/E	None.	Potential for an increase in habitat area on restored floodplains.

Table O-1. Continued

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
Watershed Management Program					
M1. Fund and implement watershed restoration, maintenance, conservation, and monitoring activities.	None.	N/A	N/A		Potential program effects cannot be evaluated.
Storage Facilities					
S1. Construct and operate enlarged or new surface storage facilities.	None.	N/E	<p>Construction of storage facilities and associated infrastructure could result in permanent loss of habitat area (AE3).</p> <p>AE2.</p>	<p>M1.</p> <p>M2.</p> <p>M3.</p> <p>To the extent practicable, avoid direct disturbance to populations and individuals of evaluated plant species (M4).</p> <p>When feasible, establish and protect additional populations of evaluated plant species in suitable nearby habitat areas before construction activities are implemented that could affect existing populations or individuals (M5).</p>	<p>Potential for loss of habitat area within the constructed footprint of storage facilities and associated infrastructure. Potential for long-term increase in habitat area from existing conditions with implementation of conservation measures.</p>

Table O-1. Continued

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
			Recreation-related activities potentially associated with new storage facilities could result in take of evaluated species (AE4).	Manage recreational uses to avoid or reduce the likelihood for recreation-related impacts on sensitive plant populations and wildlife use areas (M6).	
San Joaquin River Region					
<p>Associated Evaluated Species: California condor, Alameda whipsnake, limestone salamander, El Dorado bedstraw, Hartweg's golden sunburst, Layne's ragwort, Pine Hill ceanothus, Pine Hill flannelbush, San Benito evening-primrose, San Joaquin adone sunburst, Stebbin's morning-glory, ringtail, golden eagle, Swainson's hawk, California vervain, Ione manzanita, Rawhide Hill onion, greater western mastiff-bat, long-eared owl, Cooper's hawk, osprey, Ben Lomond buckwheat, Congdon's lomatium, Hospital Canyon larkspur, Mariposa clarkia, Mount Hamilton coreopsis, Mount Hamilton jewelflower, Red Hills ragwort, red-flowered lotus, shaggyhair lupine, showy madia, Sharsmith's onion, Big Bear Valley woollypod, Mount Diablo fairy-lantern, tree-anemone, beaked clarkia, recurved larkspur, Hall's tarplant, Brewer's western flax, pale-yellow layia, Madera linanthus, Parry's horkelia, Mount Diablo phacelia, and San Antonio Hills monardella.</p>					
<p>Summary Programmatic Action Outcomes E1, E2, E13d, E15d, E18c, E22-E26, E27b, E29, Q1, Q2, Q4-Q8, W1-W4, T1, S2, O1, and O2 are likely to have no discernable effect on valley/foothill woodland and forest communities in the San Joaquin River Region.</p>					

Table O-1. Continued

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
Ecosystem Restoration Program					
E6. Restoration and maintenance of riverine aquatic habitats.	E110401, E110401, E130301, E130302, E130303, E130304, E130305, E130306, E130307, E130402, E135601, E131601, E131602, E131603, E140401, E140402, E140403	BE1.	N/E	None.	Potential for an increase in habitat area on restored floodplains.
E15d. Restore up to 4,720 acres of riparian and shaded riverine aquatic habitat; protection and enhancement of up to 1,000 acres of riparian habitat in meander zones along San Joaquin River tributaries; restoration of up to 75 miles of riparian habitat along the San Joaquin River and its tributaries; protection, enhancement, and restoration of riparian habitat and SRA cover along other reaches of the San Joaquin River and its tributaries; and reduction of populations of non-native invasive plants along the northern tributaries to the San Joaquin River.	E110401, E111601, E111602, E111603, E111604, E111605, E111606, E111607, E111608, E111609, E111610, E111611, E111612, E111613, E111614, E111615, E115301, E121601, E121602, E121603, E124901, E130301, E130302, E130303, E130304, E130305, E130306, E130307, E130401, E131601, E131602, E131603, E134101, E134103, E140401, E140402, E140403, E141601	BE1.	N/E	None.	Potential for an increase in habitat area on restored floodplains.

Table O-1. Continued

Summary Programmatic Action Outcomes	Applicable Programmatic Actions	Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program	Overall Effect of Summary Programmatic Action Outcomes with Conservation Measures
Watershed Management Program					
M1. Fund and implement watershed restoration, maintenance, conservation, and monitoring activities.	None.	N/A	N/A		Potential program effects cannot be evaluated.
Storage Facilities					
S1. Construct and operate enlarged or new surface storage facilities.	None.	N/E	AE3. AE2. AE4.	M1. M2. M3. M4. M5. M6.	Potential for loss of habitat area within the constructed footprint of storage facilities and associated infrastructure. Potential for long-term increase in habitat area from existing conditions with implementation of conservation measures.

Contributors to the development of this table: Todd Sloat, Pete Rawlings, and Gerrit Platenkamp of Jones & Stokes Associates.

Table O-2. Key to Table O-1 Potential Beneficial Effects, Potential Adverse Effects, and Conservation Measures Codes

Potential Beneficial Effects	Potential Adverse Effects	Conservation Measures Incorporated into the Program
Potential increase in habitat area if restoring stream meander corridors and associated floodplain processes create conditions suitable for the natural reestablishment of valley oak woodland or savanna habitat (BE1).	Construction of conveyance channels could result in the loss of individual trees within woodlands (AE1).	To the extent practicable, avoid disturbance to existing habitat areas (M1).
Potential beneficial effects of the program are not analyzed. The type and magnitude of potential beneficial effects would depend on the type of specific program actions that are implemented (N/A).	Construction-related activities associated with implementing actions could result in take of evaluated species (AE2).	Restore or enhance 2 to 5 acres of additional in-kind habitat for every acre of existing habitat effected by the actions near affected areas (M2).
Likely to be no discernable beneficial effects on existing habitat areas and associated evaluation species (N/E).	Construction of storage facilities and associated infrastructure could result in permanent loss of habitat area (AE3).	To the extent practicable, avoid construction activities during the breeding period of species that could be adversely affected by the actions (M3).
	Recreation-related activities potentially associated with new storage facilities could result in take of evaluated species (AE4).	To the extent practicable, avoid direct disturbance to populations and individuals of evaluated plant species (M4).
	Potential adverse effects of the program are not analyzed. The type and magnitude of potential adverse effects would depend on the type of specific program actions that are implemented (N/A).	When feasible, establish and protect additional populations of evaluated plant species in suitable nearby habitat areas before construction activities are implemented that could affect existing populations or individuals (M5).
	Likely to be no discernable adverse effects on existing habitat areas and associated evaluation species (N/E).	Manage recreational uses to avoid or reduce the likelihood for recreation-related impacts on sensitive plant populations and wildlife use areas (M6).