Table 8. Continued

Table 8. Potential CALFED Program Effects and Mitigation Measures for Mason*s Lilaeopsis

Overall Program Effect with Mitigation: Implementation of CALFED would result in substantial increases in the species* preferred habitat within its current and historical range. Because historical loss of habitat is one important reason for the species* decline, substantial increases in habitat could result in expansion of the population into formerly occupied areas of its historical range and result in substantial increases in the number of individuals.

Summary Outcomes (General Program Objectives and Targets)	Applicable Programmatic Actions	Potential Beneficial Effects on Species	Potential Adverse Effects on Species (Take)	Potential Conservation Strategies	Overall Effect of Summary Outcomes with Mitigation
Delta Region					
1. Restore 30,000 to 45,000 acres of tidal freshwater emergent wetland	E010401, E010402, E010403, E010404, E010405, E010407, E010601, E011101, E011102, E011202, E011401, E011402, E011403, E011404, E011405 *Action implementation activities potentially affecting the species:* *1. Constructing setback levees* *2. Grading and filling* *3. Removing or breaching of levees* *4. Excavating channels*	BE1. Increase in habitat suitable for occupation by the species within the species historical range. BE2. Potential increase in the number of individuals and populations of the species resulting from increases in the preferred habitat.	AE1. Temporary loss or degradation of occupied habitat and individuals could result if construction and related activities required to implement actions occur in areas currently supporting the species. Adverse effects on habitat would be temporary because affected habitat would be restored onsite as a result of the actions. Adverse effects on individuals and populations would be permanent if natural recolonization does not take place.	C1. Avoid species populations and individuals to the maximum extent feasible. C2. Implement the ERPP, to the extent feasible, to restore suitable habitat. C3. Replant species in suitable habitat to compensate for loss of individuals and populations.	Substantial increase in suitable habitat compared to existing conditions and replacement of populations and individuals lost during project implementation.

Table 8. Continued

				C4. To the extent feasible, locate mitigation habitats near suitable existing habitat areas to create larger and more contiguous units of habitat area preferred by the species.	
2. Restore 7,000 acres of shallow tidal perennial aquatic habitat.	E010901, E010902, E010903, E010904, E010905 *Action implementation activities potentially affecting the species:* *1. Placing fill in existing channels* *2. Setting levees back* *3. Placing fill to bring Delta islands to grade and breaching island levees*	BE3. Restoration of this habitat type would improve many of the ecological processes (e.g., nutrient exchange) that support tidal emergent wetlands, thereby indirectly benefitting the species by increasing the productivity of suitable habitat areas.	AE1.	C1 through C4.	Increase in suitable freshwater emergent wetland habitat areas if habitat acreage loss is mitigated at ratios greater than 1 to 1. Restoration of shallow tidal perennial aquatic habitat would reestablish ecological processes necessary to maintain healthy tidal freshwater emergent wetland habitats used by the species.
3. Protect existing tidal freshwater emergent wetlands from loss to erosion and dredging	E011201, E016001, E016002, E016003, E016004, E016005 *Action implementation activities potentially affecting the species:* *1. Installing wave attenuation or bank protection structures*	BE4. Reduction in the rate of erosion of tidal wetlands associated with dredging and boat wakes would prevent or reduce the rate of existing species habitat loss and, in occupied habitat affected by these activities, individuals and populations of the species. BE5. Improving existing channel islands may lead to an increase in habitat suitable for colonization by the species.	None.	None.	Reduction in loss of habitat area to erosion (and potential increase in habitat) would provide long-term protection of suitable habitat areas available for occupation by the species and would reduce losses of existing populations.

Table 8. Continued

4. Implement annual programs to eradicate invasive non-native aquatic plants from sloughs and channels	E015201 *Action implementation activities potentially affecting the species:* *1. Application of herbicides* *2. Mechanical removal of vegetation*	BE6. Reduction in competition with invasive non-native plant species would promote the health of existing species populations and provide opportunities for the species* expansion.	AE2. Species may be indirectly disturbed or removed during weed control activities.	C5. Avoid adversely affecting all individuals of species by conducting surveys prior to weed eradication activities to identify whether species is present and, if so, take measures to avoid disturbing individuals and populations.	Improvement in the health of ecological processes that support freshwater wetland habitat areas adjacent to Delta sloughs and channels.
5. Alter hydrologic flows in the Delta	E010101, E010102, E010103, E010104, E010603, E010604, E010605, E010606 *Action implementation activities potentially affecting the species:* *1. Increasing rates and timing of flows during dry and normal years*	BE8. A benefit would occur only if the timing and rates of hydrologic flow alterations would promote tidal emergent wetland habitat.	AE2. Species may be adversely affected if flow alterations cause erosion of occupied habitat or if timing and rates of flows reduce occupied tidal emergent wetland habitat.	C5. Develop flow regime that would promote sustainable habitat for species.	Potential increase in suitable wetland habitat or, if mitigation is required, no net loss in numbers of individuals and populations of the species resulting from the actions.
6. Other program objectives that potentially could adversely affect the species as a result of construction activities	E010607, E010608, E014701 *Action implementation activities potentially affecting the species:* *1. Hydrologic alteration* *2. Removing, replacing, and/or relocating existing improvements* *3. Modifying channels*	None.	AE1.	C1, C3, and C4.	Increase in suitable freshwater emergent wetland habitat areas if habitat acreage loss is mitigated at ratios greater than 1 to 1.

Bay Region

Table 8. Continued

7. Restore 8,000-13,000 acres of tidal saline emergent wetland and restore tidal sloughs	E020401, E021301, E023901, E023903, E023905, E026401 *Action implementation activities potentially affecting the species:* *1. Constructing setback levees* *2. Grading and filling* *3. Removing or breaching levees* *4. Excavating channels*	BE1 and BE2.	AE1.	C1 through C3.	Substantial increase in suitable habitat compared to existing conditions and possible replacement of populations and individuals lost during project implementation.
8. Restore 2,500 acres of shallow tidal perennial aquatic habitat	E020401, E020901, E020902 *Action implementation activities potentially affecting the species:* *1. Placing fill in existing channels* *2. Setting back or breaching dikes and levees* *3. Placing fill to bring lands to grade*	BE3.	AE1.	C1 through C3.	Increase in suitable saline emergent wetland habitat areas if habitat acreage loss is mitigated at ratios greater than 1 to 1. Restoration of shallow tidal perennial aquatic habitat would reestablish ecological processes necessary to maintain healthy tidal saline emergent wetland habitats used by the species.
9. Implement annual weed eradication programs to eradicate invasive non-native aquatic plants from sloughs and channels.	E025201 *Action implementation activities potentially affecting the species:* *1. Application of herbicides* *2. Mechanical removal of vegetation*	BE6.	AE2.	C5.	Improvement in the health of ecological processes that support freshwater wetland habitat areas adjacent to Delta sloughs and channels.

Table 8. Continued

10. Protect tidal wetlands from loss to boat-wake-induced erosion.	E026001, E026002, E026003 *Action implementation activities potentially affecting the species:* *None*	BE4 and BE5.	None.	None.	Reduction in loss of habitat area to erosion (and potential increase in habitat) would provide long-term protection of suitable habitat areas available for occupation by the species and would reduce losses of existing populations.
11. Alter hydrologic flows in Bay region.	E020101 *Action implementation activities potentially affecting the species:* *1. Increasing rates and timing of flows during dry and normal years*	BE8.	AE2.	C5.	Potential increase in suitable wetland habitat or, if mitigation is required, no net loss in numbers of individuals and populations of the species resulting from the actions.
12. Other program objectives that potentially could adversely affect the species as a result of construction activities	E024701 *Action implementation activities potentially affecting the species:* *1. Demolishing, relocating, and/or constructing water diversions, intakes, and other management structures*	None.	AE1.	C1 through C3.	Increase in suitable saline emergent wetland habitat areas if habitat acreage loss is mitigated at ratios greater than 1 to 1.
Sacramento River Region					
None. Mason*s lilaeopsis is not known to occur in the Sacramento River Region and would unlikely be affected as a result of implementing CALFED.	None.	None.	None.	None.	None.

Table 8. Continued

San Joaquin River Region					
None. Mason*s lilaeopsis is not known to occur in the San Joaquin River Region and would unlikely be affected as a result of implementing CALFED.	None.	None.	None.	None.	None.