



**California Department of Fish and Wildlife
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534**

Native Plant Protection Act
Incidental Take Permit No. 2081-2020-062-03

Bradmoor Island and Arnold Slough Restoration Project

Authority:

This Native Plant Protection Act (NPPA) Incidental Take Permit (ITP) is issued by the California Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code sections 1907 and 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, sections 786.9 and 783.0 et seq. NPPA prohibits the take¹ of any native plant designated by the California Fish and Game Commission as an endangered or rare species.² CDFW may authorize the take of any such species by permit. (Fish and Game Code, § 1907, subdivision (b); Cal. Code Regs., tit. 14, § 786.9).

Permittee:	Department of Water Resources
Principal Officer:	Dan Riordan, Environmental Program Manager
Contact Person:	Elaine Jeu, (916) 376-9796
Mailing Address:	3500 Industrial Boulevard, West Sacramento, CA 95691

Effective Date and Expiration Date of this ITP:

This ITP shall become effective when signed by all parties and returned to CDFW as described in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on **December 31, 2025**.

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until CDFW accepts as complete Permittee's Final Mitigation Report required by Condition of Approval 5.7 of this ITP.

Project Location:

The Bradmoor Island and Arnold Slough Restoration Project (Project) is located in the northeastern section of Suisun Marsh, approximately 8.5 miles southeast of the City of Fairfield, in Solano County (Figure 1); Latitude 38.190841, Longitude -121.921019. Bradmoor Island is approximately 754 acres in size and is bordered on the north and east by Denverton

¹Pursuant to Fish and Game Code section 86, "'take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (See also *Environmental Protection Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 507 [for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "'take' ... means to catch, capture or kill"]).

²The definitions of an endangered and rare species for purposes of NPPA are found in Fish and Game Code section 1901. Rev. 2015.3.17.

Slough, to the west by Nurse Slough, and to the south by Little Honker Bay. Arnold Slough is approximately 263 acres in size and is located southeast of Bradmoor Island. Arnold Slough is bordered to the west by Denverton Slough, the Blacklock Restoration Project, and Arnold Slough; to the south by an unnamed marsh, to the east by Blacklock Ranch, and to the north by a gravel access road to Bradmoor Island. The Project is accessed by two gravel roads located at the intersection of Shiloh Road and Little Honker Bay Road.

Project Description:

The Project consists of breaching levees in strategic locations, grading down sections of the levees, and filling ditches near the breach locations to the elevation of the adjacent marsh plain to restore tidal hydrology to approximately 607 acres on Bradmoor Island (Figure 2) and approximately 137 acres at Arnold Slough (Figure 3).

Bradmoor Island restoration consists of removing three water control structures, creating seven breaches of varying length (five on the exterior levee and two on interior levees) and grading down a berm. At each breach, fill will be placed in ditches adjacent to the existing levees, so that the ditch elevations will match the elevations of the adjacent marsh plain to create 13 ditch blocks.

Arnold Slough restoration consists of removing two water control structures (one at Arnold and a remnant one on Blacklock), creating three breaches on the exterior levee, grading down sections of the exterior levee, and filling in ditches near the breaches to create four ditch blocks. As part of the restoration, a beach seine monitoring ramp will be installed to facilitate effectiveness monitoring of the interior of Arnold Slough.

Project Activities Include:

Demolition and Debris Removal. Permittee will remove and properly dispose of approximately 2,830 cubic yards of debris that occupies roughly a half-acre in the project area, including abandoned equipment, water control systems, and other structures that could negatively affect the restoration sites. Buildings, remnant fencing, and structures will be dismantled on-site as feasible, removed, and transported to appropriately licensed waste facilities by haul trucks.

Beach Seine Monitoring Ramp Construction. Permittee will construct an approximately 33- by 50-foot ramp with a 15 percent grade into the slope of an existing interior levee. Permittee will use a bulldozer or loader to remove approximately 60 cubic yards of levee material and grade the ramp. Geotextile fabric will be placed on the ramp to discourage the growth of emergent vegetation and 4 inches of 0.75-inch-diameter aggregate base (40 cubic yards) will be placed on the ramp surface.

Staging Areas and Stockpiles. Permittee will construct temporary staging areas in the upland areas for temporary storage of materials and equipment. A stockpile site will be co-located

with one of the staging areas at Arnold Slough. Permittee will use existing roads on already disturbed upland habitat for transport. Staging areas will have stabilized entrances and exits and be located at least 100 feet from wetlands and water bodies to the maximum extent possible. Permittee will implement appropriate best management practices for erosion control, including use of straw waddles and reseeding. Permittee will restore the access route along the existing fence line to pre-construction conditions upon completing construction activities in 2021. Permittee will compare post-construction to pre-construction photographs to determine if upland restoration along the access route is necessary.

Culvert Removal. Permittee will use a backhoe to remove 11 culvert and ditch crossing on Bradmoor Island and one culvert and ditch crossing on Arnold Slough. Permittee will not backfill removed culverts except in locations that require a ditch block.

Breaching of Interior Levees. Permittee will breach three interior levees on Bradmoor Island. The breach openings will be approximately 206, 350, and 863 feet wide and will require removing approximately 3,753 cubic yards of material. Permittee will stockpile this material for later use at designated stockpile sites on-site or will deposit the material directly into the adjacent ditch-filling locations.

Filling of Borrow Ditches. Permittee will fill portions of existing borrow ditches, that are located next to exterior and interior levees, to minimize the creation of backwater habitats. These ditches will be brought up to the surrounding marsh plain using an excavator. Permittee will fill ditches at 13 locations on Bradmoor Island, impacting approximately 284,500 square feet (6.5 acres), and requiring approximately 34,650 cubic yards of material. Permittee will fill four ditches at Arnold Slough, impacting approximately 132,000 square feet (3.0 acres), and requiring approximately 17,240 cubic yards of material.

Removal of Water Control Structures and Bulkheads. Permittee will remove existing water control structures (culverts, flashboards risers, flap/screw gates, bulkheads, wheel) with an excavator. The maximum depth of excavation to remove the water control structures is -4 feet NAVD88. Permittee will remove some water control structures as part of a breach and at locations without planned breaches, they will be removed in two stages. Culverts will be severed near the levee centerline and one half of the culvert removed and backfilled, and then the other half removed and backfilled to the original levee dimensions. A temporary levee overbuild on the interior side of the levee on Bradmoor Island may be required for removal of water control structures that are not at breach locations.

Permittee will remove six water control structures on Bradmoor Island: three will be removed and backfilled and three will be removed during breaching. A bulkhead that is not associated with a water control structure will be removed as part of construction of breach EB5. To avoid creating navigation hazards, Permittee will remove bulkheads by pulling piles or snapping them off 3 feet below the mudline. The bulkheads and associated wooden debris will be removed and hauled off-site for disposal at an appropriately licensed facility.

On Arnold Slough, Permittee will remove a single water control structure and associated bulkhead at a breach location. Additionally, a water control structure on Blacklock will be removed and left open as a breach.

Levee Grading and Exterior Levee Breaching. Permittee will lower and breach sections of exterior levees after the removal of water control structures. Permittee will conduct both levee grading and exterior levee breaching at Arnold Slough and only exterior levee breaching at Bradmoor Island. Material from the levee breaching and grading will be used to finish filling ditches to create ditch block. Permittee will construct temporary turnarounds and ramps to access exterior features for construction. Ramps will be constructed in areas planned for ditch filling and ditch blocks. Following breaching, the access ramps will be graded down to design elevation.

To maintain access to levee breaching sites at Arnold Slough, Permittee will start in-water grading and breaching activities at the southeasternmost portion and proceed in sequence from southeast to northwest. Similarly, breaching work on Bradmoor Island will begin on the southwestern side of the island at breach EB8, with equipment moving counterclockwise toward EB5 and EB6 before concluding at EB1 (Figure 2). Permittee will perform breaching activities from 3 hours before to 3 hours after low tide to minimize any impacts on fish and water quality.

Permittee will use an excavator to grade the levee down at Arnold Slough, push the graded material into the adjacent borrow ditch to existing marsh plain elevation, and then compact it. Excess fill will be placed on top of the ditch fill, at a continuous slope, to a maximum elevation of 6 feet NAVD88 (below mean higher high water). The field engineer will determine the top elevations and slopes of the graded-down levees which is based on the elevation of the tidal berm and the marsh plain. The graded-down levee slope will vary from 25 to 50 feet wide. Permittee will not disturb the tidal berms on the slough side of the levee which will help the engineer determine appropriate grade-down elevations. Levee grading at Arnold Slough will impact four sections of levee, varying in length between 440 and 1,370 feet, impacting approximately 114,300 square feet (2.6 acres), and removing approximately 14,890 cubic yards of material.

Exterior Levee Breaching. Permittee will construct five trapezoidal shaped breaches at Bradmoor Island and three at Arnold Slough using an excavator. The breaches will have bottom elevations around 0 to -1 feet NAVD88 and vary between 130 and 230 feet wide at Bradmoor Island and between 70 and 120 feet wide at Arnold Slough. Approximately 95,700 square feet (2.2 acres) will be impacted by excavating approximately 27,230 cubic yards of material at Bradmoor Island and approximately 16,700 square feet (0.38 acres) will be impacted by excavating approximately 5,010 yards of material. Excavated material will be transported to nearby ditch block locations for placement and compaction. Permittee will place any remaining fill after the creation of ditch blocks at the designated stockpile location at Arnold Slough.

Incidental Take Permit
No. 2081-2020-062-03

DEPARTMENT OF WATER RESOURCES
BRADMOOR ISLAND AND ARNOLD SLOUGH RESTORATION PROJECT

Stockpile Stabilization. After completion of restoration activities, Permittee will place any excess material from excavation or grading in the designated stockpile area at Arnold Slough. The excess material is expected to total approximately 3,050 cubic yards and stockpiled up to 3 feet high. The stockpile site will be seeded, mulched, and stabilized in accordance with applicable best management practices to minimize potential soil erosion. The stockpile will be available for beneficial re-use for levee maintenance elsewhere in Suisun Marsh.

Vegetation Management. Permittee will monitor the Project site for undesirable invasive vegetation during tidal restoration activities and for five years after restoration activities are completed. When invasive vegetation is found at the restoration sites, Permittee will assess the invasive species and take appropriate management actions (hand removal, mowing, spraying herbicides) in an attempt to control it, consistent with the Bradmoor Island and Arnold Slough Restoration Project Invasive Vegetation Management Plan and incorporating relevant best management practices.

Construction Schedule, Equipment, and Labor Force. Permittee will implement construction activities between July 1, 2021 and December 31, 2022 (Table 1). Permittee will use an assortment of tools and heavy equipment, including rubber tire and tracked excavators, tracked mini-dumpers, bulldozers, rollers, loaders, drill rigs, pickup trucks, and other light-duty vehicles. Conditions in the field during construction may influence the type of equipment best suited for the work, which ultimately will be chosen by the construction contractor.

Post-Construction Conditions. Upon completion of the Project, tidal waters from the surrounding waterways will flow into the interior portions of the Bradmoor Island and Arnold Slough creating new tidal waters and wetland habitat. The Project is expected to result in the creation of new tidal wetlands and open tidal waters from levee cut locations that currently are developed/barren and/or grassland/uplands. In the tidal wetlands and waters outside of the areas where exterior levee breaches are proposed, a relatively small area of existing tidal fringe marsh will have a channel cut through it to promote tidal flow. Fringe marsh at these locations will be converted to surface waters and high marsh. Tables 2 and 3 summarize the pre- and post-restoration habitat outcomes.

Table 1. General Construction Timeline.

Timing	Bradmoor	Arnold
2021–Site preparation and construction	<ul style="list-style-type: none"> • Drain and pump interior berm and culvert removal locations. • Remove structures and any debris from both sites. • Construct IB7 and IB2. • Manage <i>Phragmites australis</i> (mow and spray). • Remove culverts C5, C8, and C11. • Construct associated ditch blocks F12, F13, F6, and a portion of F9. 	<ul style="list-style-type: none"> • Drain and pump interior berm and culvert removal locations. • Remove culvert C1. • Remove the boat dock and pile, old building, and any debris. • Construct the monitoring ramp. • Manage <i>Phragmites australis</i> (mow and spray).
2021–In-water work	<ul style="list-style-type: none"> • Remove and backfill three WCSs. 	<ul style="list-style-type: none"> • Remove any remaining infrastructure (e.g., culverts). • Grade levees, place ditch blocks, and complete breaches.
2022	<ul style="list-style-type: none"> • Drain and pump interior berm and culvert removal locations. • Remove any remaining infrastructure and complete all remaining restoration features (IB4, all exterior breaches, and ditch filling). • Conduct monitoring and adaptive management 	<ul style="list-style-type: none"> • Conduct monitoring and adaptive management.
	<ul style="list-style-type: none"> • Clean up the site, stabilize the stockpile, and demobilize. 	

Table 2. Bradmoor Island Pre- and Post-Restoration Habitat Outcomes

Habitat Classification	Existing (acres)	Post-Restoration Outcome (acres)	Gain/Loss in Project Area (acres)
Subtidal/Open Water	15.25	72.37	57.12
Open Water/Mudflat Mosaic	0.00	409.33	409.33
Low Marsh/Mudflat Mosaic	0.00	8.49	8.49
High Marsh	0.00	2.36	2.36
Existing Tidal Marsh	125.74	124.66	-1.08
Managed Wetland	468.82	0.00	-468.82

Incidental Take Permit
No. 2081-2020-062-03
DEPARTMENT OF WATER RESOURCES
BRADMOOR ISLAND AND ARNOLD SLOUGH RESTORATION PROJECT

Upland/Grassland	122.28	137.01	14.73
Barren/Disturbed	22.13	0.00	-22.13
Total	754.22	754.22	0

Table 3. Arnold Slough Pre- and Post-Restoration Habitat Outcomes

Habitat Classification	Existing (acres)	Post-Restoration Outcome (acres)	Gain/Loss in Project Area (acres)
Subtidal/Open Water	4.54	7.13	2.59
Open Water/Mudflat Mosaic	0	113.47	113.47
Low Marsh/Mudflat Mosaic	0	18.79	18.79
High Marsh	0	5.42	5.42
Existing Tidal Marsh	15.76	15.05	-0.71
Managed Wetland	137.9	0	-137.9
Upland/Grassland	102.15	102.26	0.11
Barren/Disturbed	3.13	1.36	-1.77
Total	263.48	263.48	0

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

Name	NPPA Status
1. Mason's lilaepsis (<i>Lilaeopsis masonii</i>)	Rare ³

This species and only this species is the "Covered Species" for the purposes of this ITP.

Impacts of the Taking on Covered Species:

Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The activities described above expected to result in incidental take of individuals of the Covered Species include excavation of levee soil; removal of water control structures, culverts, and bulkheads; levee grading; post-construction erosion; and the collection, handling, and transplanting of the Covered Species (Covered Activities).

³See Cal. Code Regs. tit. 14 § 670.2, subd. (c)(3)(A).

Incidental take of individuals of the Covered Species in the form of mortality (“kill”) may occur as a result of Covered Activities such as excavation of levee breaches, erosion of habitat, siltation, and the handling, collection, and translocation of Covered Species. The areas where authorized take of the Covered Species is expected to occur include the levees and adjacent tidal wetlands encompassing Bradmoor Island and Arnold Slough restoration sites, including areas used for heavy equipment ingress and egress, staging and parking (collectively, the Project Area).

The Project is expected to cause the permanent loss of 5.42 square feet of Covered Species. Impacts of the authorized taking also include adverse impacts to the Covered Species related to temporal losses, increased habitat fragmentation and edge effects, the Project’s incremental contribution to cumulative impacts (indirect impacts), and stress resulting from collection, handling, and transplanting of the Covered Species.

Incidental Take Authorization of Covered Species:

This ITP authorizes incidental take of the Covered Species and only the Covered Species. With respect to incidental take of the Covered Species, CDFW authorizes the Permittee, its employees, contractors, and agents to take Covered Species incidentally in carrying out the Covered Activities, subject to the limitations described in this section and the Conditions of Approval identified below. This ITP does not authorize take of Covered Species from activities outside the scope of the Covered Activities, take of Covered Species outside of the Project Area, take of Covered Species resulting from violation of this ITP, or intentional take of Covered Species except for translocation of Covered Species as authorized by this ITP.

Conditions of Approval:

Unless specified otherwise, the following measures apply to all Covered Activities within the Project Area. CDFW’s issuance of this ITP and Permittee’s authorization to take the Covered Species are subject to Permittee’s compliance with and implementation of the following Conditions of Approval:

- 1. Legal Compliance:** Permittee shall comply with all applicable federal, state, and local laws in existence on the effective date of this ITP or adopted thereafter.
- 2. CEQA Compliance:** CDFW, acting as lead agency, certified an Environmental Impact Report (SCH No. 2003112039) on December 22, 2011, and DWR, acting as responsible agency, adopted an Addendum on December 1, 2020 analyzing the Project pursuant to the California Environmental Quality Act (CEQA)(Pub. Resources Code, § 21000 et seq.). Permittee shall implement and adhere to the mitigation measures related to the Covered Species in the Biological Resources section of DWR’s 2020 Addendum.
- 3. ITP Time Frame Compliance:** Permittee shall fully implement and adhere to the conditions of this ITP within the time frames set forth below and as set forth in the

Incidental Take Permit
No. 2081-2020-062-03
DEPARTMENT OF WATER RESOURCES
BRADMOOR ISLAND AND ARNOLD SLOUGH RESTORATION PROJECT

Mitigation Monitoring and Reporting Program (MMRP), which is included as Attachment 1 to this ITP.

4. General Provisions:

- 4.1. Designated Representative. Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.
- 4.2. Designated Biologist and Biological Monitors. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information for the Designated Biologist and Biological Monitors at least 30 days before starting Covered Activities. As part of the qualification submittal, Permittee shall require that the Designated Biologist and each Biological Monitor submit a resume or complete the Biologist Resume Form (Attachment 2) for CDFW review and approval. The Designated Biologist shall be responsible for overseeing the Biological Monitors working on the project. Permittee shall ensure that the Designated Biologist and Biological Monitors are knowledgeable and experienced in the biology, natural history, and collecting and handling of the Covered Species which they are monitoring. The Designated Biologist and Biological Monitors shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist and Biological Monitors in writing before starting Covered Activities and shall also obtain approval at least 14 days in advance, in writing, if there is a staffing change for the Designated Biologist or Biological Monitors.
- 4.3. Designated Biologist and Biological Monitors Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist and Biological Monitors shall have authority to immediately stop any activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species in consultation with CDFW.
- 4.4. Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to NPPA including legal

protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures.

- 4.5. Construction Monitoring Notebook. The Designated Biologist shall maintain a construction-monitoring notebook on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring notebook is available for review at the Project site upon request by CDFW.
- 4.6. Trash Abatement. Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed at least once a week to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.
- 4.7. Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by the Designated Biologist and Biological Monitors. Permittee shall keep the amount of water used to the minimum amount needed, and shall not allow water to form puddles.
- 4.8. Erosion Control Materials. Permittee shall prohibit use of erosion control materials that cover, inhibit, or alter the spread of Covered Species along levees in the Project Area, except at breaches or other locations after consulting with and receiving written approval from CDFW.
- 4.9. Delineation of Occupied Habitat. Permittee shall clearly delineate occupied habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to avoid impacts to Covered Species.
- 4.10. Project Access. Project-related personnel shall access the Project Area using existing routes, or routes identified in the Project Description, and shall not cross Covered Species' habitat outside of or en route to the Project Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. If Permittee determines construction of routes for travel are necessary outside

of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.

- 4.11. Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the Project Area unless provided for as described in Condition of Approval 4.10 of this ITP.
- 4.12. Hazardous Waste. Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.
- 4.13. CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project and shall otherwise fully cooperate with CDFW efforts to verify compliance with this ITP or evaluate effectiveness of mitigation measures set forth in this ITP.
- 4.14. Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.

5. Monitoring, Notification and Reporting Provisions:

- 5.1. Notification Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.
- 5.2. Notification of Non-compliance. The Designated Representative shall immediately notify CDFW in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours.
- 5.3. Compliance Monitoring. The Designated Biologist and/or Biological Monitor shall be on-site daily when Covered Activities occur. The Designated Biologist and Biological Monitor shall conduct compliance inspections to (1) minimize incidental take of the

Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; and (5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area. The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP.

- 5.4. Monthly Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Compliance Monitoring 5.3 into a Monthly Compliance Report and submit it to CDFW, along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure, by the 5th of each month following the first month of Covered Activities. Monthly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and/or via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative is Andy Rockriver (Andy.Rockriver@wildlife.ca.gov) and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.
- 5.5. Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Monitoring Reports for that year identified in Condition of Approval 5.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to both temporary and permanent disturbance since ITP issuance; and (7) information about other Project impacts on the Covered Species.
- 5.6. CNDDDB Observations. The Designated Biologist shall submit all observations of listed species to CDFW's California Natural Diversity Database (CNDDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Monthly Compliance Report or ASR, whichever is submitted first relative to the observation.

- 5.7. Final Mitigation Report. No later than 45 days after completion of all mitigation measures, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.
- 5.8. Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken, including translocated, or impacted by a Project-related activity, or if a Covered Species is otherwise found dead within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at (707) 428-2002. The initial notification to CDFW shall include information regarding the location, species, and number of plants (or area of occupied habitat) taken or impacted and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the plant, and if possible provide a photograph, explanation as to cause of take or impact, and any other pertinent information.

6. Take Minimization Measures:

The following requirements are intended to ensure the minimization of incidental take of Covered Species in the Project Area during Covered Activities. Permittee shall implement and adhere to the following conditions to minimize take of Covered Species:

- 6.1. Daily Work Restriction. Permittee shall terminate all Covered Activities at sunset and shall not resume Covered Activities until sunrise. Permittee shall use sunrise and sunset times established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area (<https://www.esrl.noaa.gov/gmd/grad/solcalc/sunrise.html>).
- 6.2. Precipitation Work Limit. Permittee shall restrict work activities on exterior levees to periods of low rainfall (less than 1/10th of an inch per 24-hour period) and periods of dry weather (with less than a 30% chance of rain). Permittee shall initiate all erosion control measures prior to all storm events. Permittee shall monitor the National Weather Service (<http://www.nws.noaa.gov>) 72-hr forecast for the Project site. No

work shall occur during a dry-out period of 24 hours after the above referenced wet weather. Weather forecasts shall be documented upon request by CDFW.

- 6.3. SWPPP Preparation. Prior to initiating Covered Activities, Permittee shall submit to CDFW a Stormwater Pollution Prevention Plan (SWPPP) to address Best Management Practices (BMPs) utilized to prevent erosion, sediment loss, and potential pollution within the Project site for CDFW review and approval.
- 6.4. Pesticide and Herbicide Use. Integrated pest management solutions that emphasize non-chemical pest management shall be used over chemical pesticides when working within 10 feet of Covered Species. Rodenticides shall not be used under this ITP, and insecticides shall not be used in the stream zone without prior written permission from CDFW. Herbicides may be used at the Permittee's discretion with implementation of the following protective measures:
 - 6.4.1. All herbicides shall be applied by a certified pesticide applicator or under the supervision of a certified pesticide applicator in accordance with regulations set by the California Department of Pesticide Regulation and according to labeled instructions.
 - 6.4.2. Herbicides shall only be applied on calm days with wind speed below 5 miles per hour.
 - 6.4.3. Permittee shall use caution to apply the least practicable amount of herbicides necessary to effectively control nuisance plants.
 - 6.4.4. Permittee shall use the least concentrated formulation of herbicide possible and practicable to accomplish the task.
 - 6.4.5. Permittee shall not apply certain herbicides within 60 feet from the edge of salmon-supporting waters (<http://www.cdpr.ca.gov/docs/endspec/salmonid.htm>).
 - 6.4.6. Herbicide mixing sites shall be located on existing roadways or upland locations where they may not enter into streams or wetlands.
 - 6.4.7. Permittee shall only apply herbicides after vegetation removal by another method, such as hand trimming or mowing, except during the spot treatment on non-native invasive vegetation.
 - 6.4.8. Permittee shall only use herbicides registered with the California Department of Pesticide Regulation (CDPR). Permittee shall consult the Pesticide Regulation's Endangered Species Custom Realtime Internet Bulletin Engine (PRESCRIBE) to determine specific pesticide use limitations (<http://www.cdpr.ca.gov/docs/endspec/precint.htm>).

- 6.4.9. Permittee shall only use pesticides for which a “no effect” determination has been issued by the U.S. EPA’s Endangered Species Protection Program (<http://www.epa.gov/espp/>) for any species likely to occur within the Project site or downstream. Prior to applying pesticides, Permittee shall verify that selected pesticides are not on an endangered species bulletin issued by the U.S. EPA for the Project Area. Bulletins can be accessed using the interactive map, Bulletins Live! Two, at: <https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins>.
- 6.4.10. A list of the herbicides intended for use and their labeled instructions shall be made available to CDFW for review prior to an application event.
- 6.4.11. Permittee is responsible for maintaining its herbicide use records for ensuring herbicide use and timing is consistent with any federal, State, or local regulations.
- 6.4.12. Any hazardous or toxic materials that could be deleterious to aquatic life that could be washed into State waters or their tributaries shall be contained in watertight containers or removed from the Project site.
- 6.4.13. Care shall be taken to avoid spraying native vegetation with herbicides. Spraying within 100 feet of existing mitigation sites shall be done by hand.
- 6.4.14. Should any fish or animal kills occur following application of herbicides, such kills shall be reported to CDFW Bay Delta Region within 24 hours.

Regardless of the contents of this ITP, Permittee is responsible for any environmental damage caused by the application or use of substances that prove harmful to fish and aquatic wildlife.

- 6.5. Pre-Construction Survey for Covered Species. A Qualified Biologist (a pre-approved Designated Biologist or Biological Monitor with a combination of academic training and professional experience, as determined by CDFW, in the surveying, monitoring, handling, and/or relocation of Mason’s lilaepsis) shall conduct pre-construction surveys for Covered Species within a month prior to starting construction activities each construction year. If Covered Species are identified in the Project Area, they shall be flagged (as described in Condition of Approval 4.9) and avoided.
- 6.6. Translocation of Mason’s Lilaepsis. If impacts to Covered Species cannot be avoided, a Qualified Biologist shall translocate the individuals to suitable habitats. Permittee shall consult with CDFW before attempting to transplant these individuals. At least 6 months prior to take of Covered Species, Permittee shall submit to CDFW for approval a Mason’s lilaepsis translocation plan pursuant to Condition of Approval 7.2.6.2.

- 6.7. Minimize Impacts to Waterside Wetlands. Permittee shall minimize impacts to tidal wetland habitat along levees as this habitat may support Covered Species. Permittee shall operate construction equipment from the top of levees or from barges to the extent possible.
- 6.8. Stockpiles. Permittee shall not stockpile soil or store construction material or debris where it could wash into the waterway or where it would cover Covered Species habitat.
- 6.9. Vehicle/Equipment Cleaning and Maintenance. Prior to the entry of any vehicle or equipment into the Project site including the staging area, Permittee shall ensure equipment and vehicles are clean of vegetation and not leaking fluids. Any equipment or vehicles driven and/or operated in proximity of sloughs and wetlands shall be maintained in good working order to prevent the release of contaminants that if introduced to water could be deleterious to aquatic life, wildlife, or riparian habitat. If a vehicle is found to be leaking fluids of any kind, Permittee shall take immediate measures to stop and/or contain the leak and then remove the vehicle to an off-site location until properly repaired.
- 6.10. Invasive Species. Permittee shall conduct Project activities in a manner that prevents the introduction, transfer, and spread of invasive species, including plants, animals, and microbes (e.g., algae, fungi, parasites, bacteria, etc.), from one project site and/or waterbody to another. Prevention best management practices and guidelines for invasive plants can be found on the California Invasive Plant Council's website at: <http://www.cal-ipc.org/ip/prevention/index.php> and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website: <http://www.protectyourwaters.net/>.
- 6.11. Post-Construction Survey for Covered Species. Permittee shall conduct a Post-Project Survey for the Covered Species at each breach location where the Pre-Construction Survey (Condition of Approval 6.5) indicated Covered Species was present within 100 feet of each side of the breach. This survey shall be conducted within 45 days of completing breaching activities. If no suitable low tides occur within the first 45 days, the survey shall be completed during the first suitable low tide thereafter. The survey shall indicate the relative condition of each population, identify any construction-related impacts (e.g., covered in silt, crushed by equipment, erosion, etc.), and assess the erosion risk to the Covered Species caused by the breach. Permittee shall submit the survey results to CDFW no later than 30 days after completing the Post-Project Survey.
- 6.12. Post-Project Breach Stabilization. If bank erosion at a constructed breach will result in the take or foreseeable take of Covered Species in the upcoming wet season(s), Permittee shall consult with CDFW to discuss bank stabilization measures or other

measures to prevent Covered Species from eroding away. If bank stabilization measures are not feasible, CDFW may require Permittee to transplant and monitor the Covered Species.

7. Habitat Management Land Acquisition and Restoration:

CDFW has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to NPPA to fully mitigate Project-related impacts of the taking of the Covered Species that will result from implementation of the Covered Activities. This determination is based on factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation.

To meet this requirement, Permittee shall translocate, monitor, and manage Mason's lilaepsis that will be impacted by Covered Activities and provide for the preservation, permanent protection and management of 54.2 square feet of occupied Mason's lilaepsis habitat on the Project site, which is currently owned by Permittee. Collectively, these mitigation lands are Habitat Management (HM) lands pursuant to Condition of Approval 7.2 below and the calculation and funding of management funds are subject to Condition of Approval 7.3 below. The final size of the HM lands may be adjusted up or down depending on the results of the pre-construction and post-construction surveys for Covered Species (Conditions of Approval 6.5 and 6.11). Permanent protection and funding for perpetual management of compensatory habitat must be complete before starting Covered Activities, or within 18 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 8 below for all uncompleted obligations.

7.1. Cost Estimates. CDFW has estimated the cost of acquisition, permanent protection, and perpetual management of the HM lands and restoration of temporarily disturbed habitat as follows:

- 7.1.1. Land acquisition costs for the purpose of performance security for HM lands identified in Condition of Approval 7.2 below, estimated at \$3,000/acre for one acre: **\$3,000**. Land acquisitions costs are estimated using local fair market current value for lands with habitat values meeting mitigation requirement. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 7.2.4 below, estimated at **\$20,000**.
- 7.1.2. Interim management period funding as described in Condition of Approval 7.2.5 below, estimated at **\$18,000**.
- 7.1.3. Long-term management funding as described in Condition of Approval 7.3 below of **\$6,000** annually in perpetuity for 54.2 square feet. Long-term

management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.

7.1.4. Covered Species management and monitoring funding as described in Condition of Approval 7.2.6 below, estimated at **\$140,000**.

7.1.5. Related transaction fees including but not limited to account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW, estimated at **\$3,000**.

7.2. Habitat Protection, Management and Monitoring. To provide for the perpetual protection and management of HM lands, Permittee shall:

7.2.1. Fee Title/Conservation Easement. Transfer fee title to the HM lands to CDFW pursuant to terms approved in writing by CDFW. Alternatively, CDFW, in its sole discretion, may authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended. If CDFW does not hold fee title to the HM lands, CDFW shall act as grantee for a conservation easement over the HM lands or shall, in its sole discretion, approve a non-profit entity, public agency, or Native American tribe to act as grantee for a conservation easement over the HM lands provided that the entity, agency, or tribe meets the requirements of Civil Code section 815.3. If CDFW does not hold the conservation easement, CDFW shall be expressly named in the conservation easement as a third-party beneficiary. The Permittee shall obtain CDFW written approval of any conservation easement before its execution or recordation. No conservation easement shall be approved by CDFW unless it complies with Government Code sections 65965-65968, as amended and includes provisions expressly addressing Government Code sections 65966(j) and 65967(e).

7.2.2. HM Lands Documentation. Provide a recent preliminary title report, initial hazardous materials survey report, and other necessary documents (see Attachment 3B). All documents conveying a conservation easement over the HM lands and all conditions of title are subject to the approval of CDFW, and if applicable, the Wildlife Conservation Board and the Department of General Services.

7.2.3. Land Manager. Designate both an interim and long-term land manager approved by CDFW. The interim and long-term land managers may, but need not, be the same. The interim and/or long-term land managers may be the landowner or

another party. Documents related to land management shall identify both the interim and long-term land managers. Permittee shall notify CDFW of any subsequent changes in the land manager within 30 days of the change.

- 7.2.4. Start-up Activities. Provide for the implementation and funding of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by CDFW. Start-up activities include, at a minimum: (1) preparing a final management plan for CDFW approval (see <https://www.wildlife.ca.gov/Conservation/Planning/Banking>). This plan can be incorporated into the larger Bradmoor Island and Arnold Slough land management plan; (2) conducting a baseline biological assessment and land survey report within four months of recording or transfer; (3) developing and transferring Geographic Information Systems (GIS) data if applicable; (4) conducting litter removal; (5) conducting initial habitat enhancement; and (6) installing signage.
- 7.2.5. Interim Management (Initial and Capital). Enhancement of the HM lands shall begin in 2021 with site preparation related to preparing and enhancing the site for the translocation and monitoring of the Covered Species. Permittee shall fund and ensure implementation of the interim management on the HM lands. The interim management period shall be a minimum of three years from the date that the Permittee begins the Covered Activities. Interim management period activities shall be those defined as necessary to manage the land and shall include trash removal, site monitoring, vegetation and invasive species management, mowing, and overall site maintenance.
- 7.2.6. Covered Species Management and Monitoring. To mitigate habitat impacts associated with Covered Activities, Permittee shall survey and monitor the status of translocated plants and representative reference occurrences of the Covered Species on Project levees. Permittee shall develop a monitoring and management plan to benefit Covered Species using management funds as described in Condition of Approval 7.3 and subject to Condition of Approval 7.4.
- 7.2.6.1. At least 6 months prior to take of Covered Species, Permittee shall prepare and submit to CDFW for approval a Mason's lilaepsis Monitoring and Management Plan (MLMMP), including a baseline assessment, to facilitate management and monitoring of Mason's lilaepsis on the Project site. The MLMMP shall include detail adequate to allow efficient implementation by vegetation management contractors under the direction of a Qualified Biologist. Management activities may include, but are not limited to, invasive species control, trash removal, and biotechnical bank stabilization measures to abate Project-related erosion of Mason's lilaepsis habitat.

- 7.2.6.2. As part of the MLMMP, Permittee shall include a translocation plan for Mason's lilaepsis occurrences where Mason's lilaepsis could be permanently impacted by Covered Activities. This plan shall describe: (1) the location and patch size of the existing occurrences to be transplanted; (2) identify the HM lands where the Mason's lilaepsis will be transplanted. Subject to CDFW approval, this identified area shall become part of the HM lands; (3) the existing habitat conditions of the proposed HM lands; (4) transplanting methods and techniques; (5) a monitoring and maintenance plan for the HM lands; and (6) success criteria for the transplanted Covered Species. The monitoring and maintenance plan reporting shall be incorporated into the Annual Mason's Lilaepsis Monitoring Report (Annual Report) as described below in Condition of Approval 7.2.6.4.
- 7.2.6.3. Permittee shall monitor all transplanted individuals and populations in the vicinity of the breach for potential erosion impacts to Mason's lilaepsis for a minimum of seven years. HM lands shall be managed and monitored in perpetuity.
- 7.2.6.4. Permittee shall provide CDFW an Annual Report on the status of the Covered Species located on the Project Area, no later than January 31 of every year beginning with issuance of this ITP and continuing for seven years. Each annual report shall include, at a minimum: (1) names and titles of each survey crew member; (2) survey methods and dates; (3) the size and location of each reference site and translocated occurrence of the Covered Species in the HM lands; (4) the relative habitat condition of each occurrence; (5) the specific habitat conditions in the HM lands, including percent cover of all other plant species in the HM lands; and (6) a brief analysis of the status of translocated Covered Species relative to the other occurrences in the Project Area. Each Annual Report shall also include a summary of any Covered Species management that occurred during the year.
- 7.2.6.5. After initiating management activities, Permittee or CDFW may determine that an alternative management approach would be more successful in protecting or enhancing Mason's lilaepsis habitat or is necessary to ensure successful implementation of this mitigation. The MLMMP may be revised accordingly. Permittee shall acquire CDFW's approval of all revisions to the MLMMP at least one month prior to conducting new or modified activities.
- 7.2.6.6. Following completion of the seven-year monitoring period for translocated Mason's lilaepsis, Permittee shall prepare a summary report describing the success of the translocated plants as specified in the MLMMP. The

report shall detail Mason's lilaepsis monitoring and management approaches used in the Project Area, any management adaptations attempted, the percent invasive species cover in each management area at the end of each management year, a description of the response of Mason's lilaepsis to management activities over the management period, and any other information that would inform future monitoring and management activities in the Project Area. The report shall be submitted to CDFW staff for review.

- 7.3. In-Perpetuity Management Funding. The Permittee shall ensure that the HM lands are perpetually managed, maintained, and monitored by the long-term land manager as described in this ITP, the conservation easement, and the final management plan approved by CDFW. Permittee shall provide long-term management funding for the perpetual management of the HM lands by using revenues derived from the SWP as defined in the October 18, 2010, *Agreement between the Department of Water Resources and the Department of Fish and Game (now Department of Fish and Wildlife) Regarding Implementation of a Fish Restoration Program in Satisfaction of Federal Biological Opinions for State Water Project Delta Operations; Section "H. Property Transfer and Management Costs."*

The Permittee shall enter into a Project-specific agreement with CDFW which will include assurances for sufficient funding through DWR's SWP operations and maintenance budget for perpetual operations and maintenance (O&M) of the restoration project in perpetuity and adjusted for inflation. If funding is no longer available from SWP charges to the SWP Contractors, Permittee shall annually fund in-perpetuity management activities through another funding source, until Permittee has established and fully funded an Endowment. If another funding source is required, it shall be established within six months of identifying that the previous funding source will no longer be available. Additionally, if funding from SWP charges to the SWP Contractors is no longer available, Permittee shall fund an Endowment amount sufficient to fund these activities in perpetuity as established through the Property Analysis Record (PAR) prepared for this Project pursuant to Condition 7.3.2 of this ITP. Permittee shall fund the Endowment by contributing a minimum of ten percent of the amount required by the PAR (adjusted for present value) annually, commencing the fiscal year that SWP charges to the SWP Contractors funding is no longer available, to a mutually agreed upon account, until the Endowment is fully funded, after which time the activities under the management plan will be funded from interest generated from the Endowment principal.

The Endowment as used in this ITP is a sum of money, held in a CDFW-approved fund that provides funds for the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with the management plans required by Condition of Approval 7.2.6. The Endowment shall refer to the endowment deposit

and all interest, dividends, other earnings, additions and appreciation thereon. The Endowment shall be governed by this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended. After the interim management period, Permittee shall ensure that the designated long-term land manager implements the management and monitoring of the HM lands according to the final management plan. The long-term land manager shall be obligated to manage and monitor the HM lands in perpetuity to preserve their conservation values in accordance with this ITP, the conservation easement, and the final management plan. Such activities shall be funded as described above.

- 7.3.1. Identify an Endowment Manager. If Endowment establishment is triggered, per Condition of Approval 7.3, the Endowment shall be held by the Endowment Manager, which shall be either CDFW or another entity qualified pursuant to Government Code sections 65965-65968, as amended. Permittee shall submit to CDFW a written proposal that includes: (i) the name of the proposed Endowment Manager; (ii) whether the proposed Endowment Manager is a governmental entity, special district, nonprofit organization, community foundation, or congressionally chartered foundation; (iii) whether the proposed Endowment Manager holds the property or an interest in the property for conservation purposes as required by Government Code section 65968(b)(1) or, in the alternative, the basis for finding that the Project qualifies for an exception pursuant to Government Code section 65968(b)(2); and (iv) a copy of the proposed Endowment Manager's certification pursuant to Government Code section 65968(e). Within thirty days of CDFW's receipt of Permittee's written proposal, CDFW shall inform Permittee in writing if it determines the proposal does not satisfy the requirements of Fish and Game Code section 2081(b)(4) and, if so, shall provide Permittee with a written explanation of the reasons for its determination. If CDFW does not provide Permittee with a written determination within the thirty-day period, the proposal shall be deemed consistent with Section 2081(b)(4).
- 7.3.2. Calculate the Endowment Funds Deposit. If Endowment establishment is triggered, per Condition of Approval 7.3, and after obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment Manager, Permittee shall prepare a PAR to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). If the HM lands have been managed pursuant to a final long-term management plan approved by CDFW for at least five years, the PAR and Endowment shall be based on the actual costs of managing the HM lands. Permittee shall submit to CDFW for review and approval the results of the PAR before transferring funds to the Endowment Manager.

7.3.2.1. Capitalization Rate and Fees. Permittee shall obtain the capitalization rate from the selected Endowment Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.

7.3.2.2. Endowment Buffers/Assumptions. Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment:

7.3.2.2.1. 10 Percent Contingency. A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.

7.3.2.2.2. Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding.

7.3.2.2.3. Non-annualized Expenses. For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Manager and CDFW.

7.3.3. Transfer Long-term Endowment Funds. If Endowment establishment is triggered, per Condition of Approval 7.3, the Permittee shall fund the Endowment Deposit Amount over a 10-year period, in annual amount of 10% of the total Endowment Deposit Amount, adjusted for inflation, as approved by CDFW in writing. The approved Endowment Manager may pool the Endowment with other endowments for the operation, management, and protection of HM lands for local populations of the Covered Species but shall maintain separate accounting for each Endowment. The Endowment Manager shall, at all times, hold and manage the Endowment in compliance with this ITP, Government Code sections 65965- 65968, as amended, and Probate Code sections 18501-18510, as amended.

7.4. Reimburse CDFW. Permittee shall reimburse CDFW for all reasonable expenses incurred by CDFW such as transaction fees, account set-up fees, administrative fees, and expenses incurred from other state agency reviews.

8. Performance Security:

Permittee may proceed with Covered Activities based on the Security as described below. Permittee is a party to a long-term water supply contract with each of its 29 water supply customers, who are generally referred to as "SWP Contractors." SWP

Contractors contract with Permittee to pay for the operation, maintenance, planning and capital costs of the SWP. Under Water Code section 11651, “any agency which contracts to purchase from the department any water, use of water, water storage, electric power, or other service shall provide for the punctual payment to the department of all amounts which become due under the contract.” In accordance with a statutory requirement, each water supply contract between Permittee and an SWP Contractor requires that if that SWP Contractor fails or is unable to raise sufficient funds by other means, the SWP Contractor must levy upon all taxable property in the SWP Contractor’s service area a tax or assessment sufficient (with other available moneys) to provide for all payments under the water supply contract. If the SWP Contractor defaults in payment, Permittee may, and under certain conditions is required to, upon six months’ notice, suspend water deliveries during the period of default.

Permittee will treat the costs of ITP implementation as components of the SWP and address such costs to fulfill those requirements as part of overall SWP costs. Costs, such as routine operation, maintenance, and power (e.g., monitoring of mitigation sites) are not financed, but are instead paid in monthly installments in the calendar year, incurred based upon estimates developed by Permittee and delivered to the SWP Contractors in July of the preceding year.

Permittee shall provide Security as follows:

- 8.1. Security Amount. Security is assured by Permittee’s long-term water supply contracts and applicable state law. Estimated costs to implement acquisition, protection, restoration, and perpetual management of Covered Species HM lands is **\$184,000**. This amount is based on the cost estimates identified in Condition of Approval 7.1 of this ITP.
- 8.2. Mitigation Implementation. Payment of the costs of mitigation projects, is assured by Permittee’s long-term water supply contracts and applicable state law. All costs of the Project, including the costs of mitigation and monitoring activities required by this ITP shall be paid by Permittee and charged to SWP Contractors.

Permittee shall prepare and submit to CDFW within one year of the effective date of this ITP an initial CESA mitigation funding strategy for review and approval. The strategy shall include detailed cost estimates regarding: (1) HM lands acquisition and start-up costs and interim management period costs; and (2) long-term management costs for HM lands.

Permittee shall submit annual updates to the strategy to CDFW for review and approval. These updates shall include extension of the detailed funding strategy for five years post submission date and shall include a description of expenditures to date for compliance with Conditions of Approval 7.1 and 7.2. To the degree that

annual charges to SWP Contractors are relied upon, the funding strategy shall demonstrate that those funds have been or will be charged to SWP Contractors and received by Permittee consistent with SWP Contractor billing practices.

8.3. Demonstration of Performance. Permittee shall demonstrate to CDFW that Covered Species requirements have been satisfied, as evidenced by:

- Within one year of the effective date of this ITP, submission of an initial CESA mitigation funding strategy for concurrence by CDFW;
- Receipt by CDFW of documentation, acceptable to CDFW, demonstrating that Permittee will treat the mitigation obligations of this ITP as components of SWP and will fulfill these mitigation obligations as part of the overall SWP costs;
- Within 18 months of the effective date of this ITP, receipt by CDFW of documentation of the required acquisition and protection of Covered Species HM lands and copies of all recorded and executed conservation easements for HM lands; and
- Within 18 months of the effective date of this ITP, receipt by CDFW of the final CDFW-approved management plans for HM lands.

Permittee shall demonstrate to CDFW that Covered Species requirements have been satisfied on an ongoing basis, as evidenced by:

- Timely submission of CESA mitigation funding strategy annual updates for HM lands;
- Timely submission of all required reports; and
- If Endowment establishment is triggered, Condition of Approval 7.3, written confirmation from approved Endowment Manager of its receipt of the full Endowment.

CDFW may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.

Amendment:

This ITP may be amended as provided by California Code of Regulations, Title 14, sections 786.9, subdivision (b), section 783.6, subdivision (c), and other applicable law. This ITP may be amended without the concurrence of the Permittee as required by law, including if CDFW determines that continued implementation of the Project as authorized under this ITP would

jeopardize the continued existence of the Covered Species or where Project changes or changed biological conditions necessitate an ITP amendment to ensure that all Project-related impacts of the taking to the Covered Species are minimized and fully mitigated.

Stop-Work Order:

CDFW may issue Permittee a written stop-work order requiring Permittee to suspend any Covered Activity for an initial period of up to 25 days to prevent or remedy a violation of this ITP, including but not limited to the failure to comply with reporting or monitoring obligations, or to prevent the unauthorized take of any CESA endangered, threatened, or candidate species or NPPA rare plants. Permittee shall stop work immediately as directed by CDFW upon receipt of any such stop-work order. Upon written notice to Permittee, CDFW may extend any stop-work order issued to Permittee for a period not to exceed 25 additional days. Suspension and revocation of this ITP shall be governed by California Code of Regulations, Title 14, section 783.7, and any other applicable law. Neither the Designated Biologist nor CDFW shall be liable for any costs incurred in complying with stop-work orders.

Compliance with Other Laws:

This ITP sets forth CDFW's requirements for the Permittee to implement the Project pursuant to NPPA. This ITP does not necessarily create an entitlement to proceed with the Project. Permittee is responsible for complying with all other applicable federal, state, and local law.

Notices:

The Permittee shall sign and return this ITP to CDFW. Digital signatures facilitated by CDFW will be automatically returned and shall comply with Government Code section 16.5. Wet signatures on duplicate original paper copies shall be returned by the Permittee via registered first-class mail or overnight delivery to the following address:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090

Written notices, reports and other communications relating to this ITP shall be delivered to CDFW by email or registered first class mail at the following address, or at addresses CDFW may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number (2081-2020-062-03) in a cover letter and on any other associated documents.

Incidental Take Permit
No. 2081-2020-062-03
DEPARTMENT OF WATER RESOURCES
BRADMOOR ISLAND AND ARNOLD SLOUGH RESTORATION PROJECT

Original cover with attachment(s) to:

Gregg Erickson, Regional Manager
California Department of Fish and Wildlife – Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
Telephone: (707) 428-2002
R3CESA@wildlife.ca.gov

and a copy to:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090
CESA@wildlife.ca.gov

Unless Permittee is notified otherwise, CDFW's Regional Representative for purposes of addressing issues that arise during implementation of this ITP is:

Andy Rockriver, Senior Environmental Scientist (Specialist)
California Department of Fish and Wildlife – Bay Delta Region
2109 Arch Airport Road, Suite 100
Stockton, CA 95206
Telephone: (209) 234-3433
Andy.Rockriver@wildlife.ca.gov

Compliance with CEQA:

CDFW's issuance of this ITP is subject to CEQA. CDFW is the lead agency pursuant to CEQA with respect to this ITP because of its prior environmental review of the Project. (See generally Pub. Resources Code, §§ 21067, 21069). CDFW's prior environmental review of the Project is set forth in the Suisun Marsh Habitat Management, Preservation, and Restoration Plan Environmental Impact Statement/Environmental Impact Report (SCH No. 2003112039). DWR, as responsible agency, adopted the Bradmoor Island and Arnold Slough Restoration Project CEQA Addendum for the Bradmoor Island and Arnold Slough Restoration Project on December 1, 2020. At the time DWR adopted the CEQA Addendum and approved the Project it also adopted various mitigation measures for the Covered Species as conditions of Project approval.

The Lead Agency action of ITP approval carries out an activity contemplated by CDFW's 2011 Suisun Marsh Habitat Management, Preservation, and Restoration Plan EIR, which activity is described in more specificity by the 2020 DWR Responsible Agency Addendum

Incidental Take Permit
No. 2081-2020-062-03
DEPARTMENT OF WATER RESOURCES
BRADMOOR ISLAND AND ARNOLD SLOUGH RESTORATION PROJECT

adopted December 1, 2020. This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's consideration of its EIR and DWR's Addendum for the Project and the environmental effects related to issuance of this ITP [CEQA Guidelines, § 15096, subd. (f)]. CDFW finds that issuance of this ITP will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead agency. Furthermore, to the extent the potential for such effects exists, CDFW finds adherence to and implementation of the Conditions of Project Approval adopted by CDFW in 2011 and DWR in 2020, and that adherence to and implementation of the Conditions of Approval imposed by CDFW through the issuance of this ITP, will avoid or reduce to below a level of significance any such potential effects. CDFW consequently finds that issuance of this ITP will not result in any significant, adverse impacts on the environment.

Findings Pursuant to CESA:

These findings are intended to document CDFW's compliance with the specific findings requirements set forth in the NPPA, CESA and related regulations. [Fish and Game Code § 1907, 2081, subds. (b)-(c); Cal. Code Regs., tit. 14, §§ 786.9, subds. (b), 783.4, subds. (a)-(b), 783.5, subd. (c)(2)].

CDFW finds based on substantial evidence in the ITP application, Bradmoor Island and Arnold Slough Restoration Project CEQA Addendum to the Suisun Marsh Habitat Management, Preservation, and Restoration Plan Environmental Impact Statement/Environmental Impact Report, the results of site visits and consultations, and the administrative record of proceedings, that issuance of this ITP complies and is consistent with the criteria governing the issuance of ITPs pursuant to NPPA:

- (1) Take of Covered Species as defined in this ITP will be incidental to the otherwise lawful activities covered under this ITP;
- (2) Impacts of the taking on Covered Species will be minimized and fully mitigated through the implementation of measures required by this ITP and as described in the MMRP. Measures include: (1) implementation of a MLMMP; (2) establishment of avoidance zones; (3) worker education; and (4) Monthly Compliance Reports. CDFW evaluated factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation. Based on this evaluation, CDFW determined that the translocation of Covered Species from the breach location, the protection and management in perpetuity of 54.2 square feet of compensatory occupied Covered Species habitat, along with the minimization, monitoring, reporting, and funding requirements of this ITP minimizes and fully mitigates the impacts of the taking caused by the Project;

Incidental Take Permit
No. 2081-2020-062-03
DEPARTMENT OF WATER RESOURCES
BRADMOOR ISLAND AND ARNOLD SLOUGH RESTORATION PROJECT

- (3) The take avoidance and mitigation measures required pursuant to the conditions of this ITP and its attachments are roughly proportional in extent to the impacts of the taking authorized by this ITP;
- (4) The measures required by this ITP maintain Permittee's objectives to the greatest extent possible;
- (5) All required measures are capable of successful implementation;
- (6) This ITP is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114;
- (7) Permittee has ensured adequate funding to implement the measures required by this ITP as well as for monitoring compliance with, and the effectiveness of, those measures for the Project; and
- (8) Issuance of this ITP will not jeopardize the continued existence of the Covered Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, CDFW's finding is based, in part, on CDFW's express authority to amend the terms and conditions of this ITP without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.

Attachments:

FIGURE 1	Map of Project
FIGURE 2	Bradmoor Island Restoration Site Plan
FIGURE 3	Arnold Slough Restoration Site Plan
ATTACHMENT 1	Mitigation Monitoring and Reporting Program
ATTACHMENT 2	Biologist Resume Form
ATTACHMENT 3B	Habitat Management Lands Checklist

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on 6/21/2021.

DocuSigned by:
Gregg Erickson
BE74D4C93C604EA...

Gregg Erickson, Regional Manager
Bay Delta Region

ACKNOWLEDGMENT

The undersigned: (1) warrants that he or she is acting as a duly authorized representative of the Permittee, (2) acknowledges receipt of this ITP, and (3) agrees on behalf of the Permittee to comply with all terms and conditions.

By: *Dan Riordan* Date: 6/22/2021
ED300E337DB0409...

Printed Name: Dan Riordan Title: EPM 1

Incidental Take Permit
No. 2081-2020-062-03
DEPARTMENT OF WATER RESOURCES
BRADMOOR ISLAND AND ARNOLD SLOUGH RESTORATION PROJECT