

A. Environmental Review

On 11 September 2018, the County of Sacramento, as lead agency, certified a Final Environmental Impact Report (FEIR)) (State Clearinghouse (SCH) No. 2008062030) for the Project and filed a Notice of Determination (NOD) at the SCH on 18 January 2019. The Central Valley Water Board is a responsible agency under CEQA (Public Resources Code, section 21069) and in making its determinations and findings, must presume that the County of Sacramento's certified environmental document comports with the requirements of CEQA and is valid. (Public Resources Code, section 21167.3.) The Central Valley Water Board has reviewed and considered the environmental document and finds that the environmental document prepared by the County of Sacramento addresses the Project's water resource impacts. (California Code of Regulations, Title 14, section 15096, subd. (f).) The environmental document includes the Impact Avoidance and Minimization Measures (AMMs) developed by the County of Sacramento for all measures that have been adopted for the Project to eliminate or reduce potential significant impacts. (Public Resources Code, section 21081.6, subd. (a)(1); California Code of Regulations, Title 14, section 15091, subd. (d).)

B. Incorporation by Reference

Pursuant to CEQA, these Findings of Facts (Findings) support the issuance of this Order based on the Project FEIR, the application for this Order, and other supplemental documentation.

All CEQA project impacts, including those discussed in subsection C below, are analyzed in detail in the Project FEIR which is incorporated herein by reference. The Project FEIR is available at: Sacramento County Planning and Community Development Department 827 7th Street, Room 225 Sacramento, CA 95814.

Requirements under the purview of the Central Valley Water Board in the MMRP are incorporated herein by reference.

The Permittee's application for this Order, including all supplemental information provided, is incorporated herein by reference.

C. Findings

The FEIR describes the potential significant environmental effects to water resources. Having considered the whole of the record, the Central Valley Water Board makes the following findings:

- (1) Findings regarding impacts that will be avoided or mitigated to a less than significant level. (Public Resources Code, section 21081, subd. (a)(1); California Code of Regulations, Title 14, section 15091, subd. (a)(1).)

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

a.i. Potential Significant Impact: The Project may result in potentially significant

impacts to hydrology and water quality from the depletion of groundwater supplies, interference with groundwater recharge, alteration of existing drainage patterns, increase of surface runoff that may result in flooding, development within a 100-year floodplain or local flood hazard area, placement of structures within a 100-year floodplain that may impede or redirect flood flows, risk of loss, injury or death from flooding, creation or contribution of runoff that may exceed the capacity of stormwater drainage systems, and creation of sources of polluted runoff that may degrade ground or surface water quality.

a.ii. Facts in Support of Finding: In addition to the Avoidance and Minimization Measures listed below, from Attachment D of the SSHCP EIR, the Project will implement mitigation measures for impacts to hydrology and water quality listed in the Sacramento County 2030 General Plan, Sacramento County Floodplain Management Ordinance, Improvement Standards, and Local Floodplain Management Plan, 2030 Galt General Plan, City of Galt Floodplain Management Regulations, Rancho Cordova General Plan, and Local Stormwater Runoff, Grading, and Erosion Control Ordinances and Municipal Code Requirements.

Condition 1. Avoid and Minimize Urban Development Impacts to Watershed Hydrology and Water Quality

Development Covered Activities may adversely alter watershed hydrology and degrade water quality, which, in turn, could diminish or eliminate the conservation benefits provided by the SSHCP Preserve System. Condition 1 is designed to conserve and/or rehabilitate on-site natural creeks and streams. This condition will require the provision of BMPs and low-impact development (LID) drainage control measures to ensure that runoff from developed lands will closely mimic the pre-development hydrograph and retain most pre-development hydrologic functions. Condition 1 will accomplish the hydrograph and hydrologic objectives through application of the listed AMMs to all UDA Covered Activities that occur at the parcel, subdivision, or master plan scale.

LID-1 (Stormwater Quality): When the size of a Covered Activity individual project exceeds the thresholds established by the State Water Resources Control Board (SWRCB) (see the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions, or future SWRCB-approved design manuals applicable to the SSHCP boundary), incorporate stormwater management into site design to satisfy the requirements outlined in the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Stormwater management may include groundwater recharge (LID-2) and natural site features (LID-3).

LID-2 (Groundwater Recharge): When siting new HCP Preserves containing Riparian, Open water, or Freshwater Marsh land cover types, the HCP Implementing Entity will prioritize locations that are suitable for groundwater recharge.

LID-3 (Natural Site Features): Incorporate preservation of a site's natural aquatic features (such as creeks and streams) into the individual project's

design to retain natural hydrologic patterns and to retain habitat that might be used by Covered Species.

Condition 2. Avoid and Minimize Urban Development Direct and Indirect Impacts to Existing Preserved Lands and SSHCP Preserves

Development Covered Activities adjacent to Preserves may adversely impact species that use the Preserve, and erode or eliminate the conservation benefits provided by the Preserve. Condition 2 seeks to avoid or minimize the following Covered Activity environmental stressors that may result in direct and indirect impacts to the SSHCP Preserve System:

- Alterations to landscape hydrology from new impervious surfaces may adversely affect natural communities in the lower watershed, the ecology of preserved lands, and/or downstream aquatic resources.
- Water runoff from development or from roadways directed into Preserves may introduce harmful substances into Preserves. Unseasonal and/or additional water entering a Preserve may eliminate vernal pools and other seasonal wetlands native to the region by converting them to low-functioning perennial wetlands.
- Development adjacent to Preserves may partially to fully remove the soil's "perched aquifer" (see Chapter 3 in the EIS/EIR) and reduce or eliminate the micro-watersheds that support the hydrology of vernal pools within the Preserve boundary. These changes may adversely affect the existing hydrologic regime of vernal pools by changing the timing, depth, and/or duration of vernal pool saturation and/or ponding, causing long-term changes to a suite of vernal pool functions. For example, changes to water chemistry could adversely affect species habitat. Although the vernal pools remain, the environmental conditions of the pools may no longer provide habitat for vernal pool Covered Species, or provide the benefit of other wetland functions (e.g., stormwater attenuation) compared to pre-project conditions.
- Introduction or proliferation of non-native or invasive plant and wildlife species may displace native species.
- Landscaping in the interface of a development and a Vernal Pool–Grassland Preserve often includes native or non-native trees and other plant species that are not found in California grasslands and, therefore, cannot survive on the Vernal Pool–Grassland Preserve border without intensive irrigation and cultivation. In addition to adverse effects from irrigation and landscape maintenance, adult trees may become landscape barriers that inhibit species movement and may act to isolate individual Preserves from the larger SSHCP Preserve System.
- Recreational use of Preserves near developed areas may compact soils, eliminate vegetation, impair hydrologic functions, introduce weeds or invasive plant species, and disturb plants and wildlife.

- Introduction of light, noise, or vibrations may disrupt normal nocturnal and diurnal cycles of native species.

AMMs associated with Condition 2 must be applied to all Covered Activities implemented within the UDA that border an existing Preserve or a planned SSHCP Preserve.

EDGE-4 (Locate Stormwater Control Outside Preserves): Roads, sidewalks, and other impermeable surfaces of Urban Development Covered Activities adjacent to existing or planned Preserves will slope away from Preserves and Preserve Setbacks or intercept drainage with swales or curbs and gutters to preclude drainage from entering Preserves and Preserve Setbacks. Stormwater flows must be directed away from Preserves and Preserve Setbacks and directed into stormwater control facilities inside the development (outside Preserves and Preserve Setbacks) (see EDGE-6 for exception to EDGE-4 in certain SSHCP Linkage Preserves).

EDGE-5 (Stormwater Control in Preserve Setbacks): If trails are established in any Preserve Setback in compliance with EDGE-3, the trail must be sloped away from the Preserve, and rainwater leaving the trail surface must flow into an adjacent low-velocity bio-retention swale or cell to keep rainwater runoff and trail contaminants from entering the Preserve. Low-velocity bio-retention swales or cells are typically small linear features placed on one or both sides of a trail. As required by EDGE-3, trails and their adjacent bio-retention swales or cells must be located on the side of the Preserve Setback nearest development.

EDGE-6 (Detention Basins in Linkage Preserves): Because planned SSHCP Linkage Preserves L1, L2, L4, L7, L8, L9, and L10 (see Section 7.5 of the SSHCP document) surround natural creeks or streams that must receive stormwater from planned adjacent Urban Development Covered Activities, a limited number of stormwater detention basins will be allowed on those Linkage Preserves. Detention basins within Linkage Preserves (see Section 5.2.7 of the SSHCP document) will be designed and constructed with fill material to build up the perimeter of the detention basin so as not to impact the soil restrictive layer (duripan or hardpan) and function of the soil perched aquifer. Detention basins within Linkage Preserves will capture stormwater flows and runoff, and will discharge water to the stream/creek or percolate collected water to the soil perched aquifer. Detention basin structures that collect stormwater entering the basin or convey stormwater leaving the basin must be designed to avoid and minimize effects to Covered Species habitat in the Linkage Preserve.

EDGE-10 (Prevent Invasive Species Spread): Completed Covered Activities (including roads) will be maintained in a manner that avoids the spread of invasive species into Preserve and Open Space areas. Such maintenance measures will include the following:

- To prevent the transport of non-native invasive species onto Preserves, before bringing any equipment onto an SSHCP Preserve or Preserve Setback, equipment must be cleaned of mud, dirt, and plant material.

Cleaning will occur in the infested area or another appropriate location as approved by a Plan Permittee.

- Mowing rotation will start in un-infested areas and move to infested areas.
- Invasive plant prevention techniques will be incorporated into maintenance plans.
- The SSHCP Implementing Entity will survey road shoulders, ditches, and rights-of-way that border SSHCP Preserves for invasive weeds or other exotic plant species. Where roadside weed infestations have reached a critical control point, the Implementing Entity or Land Use Authority Permittee will apply the appropriate manual, mechanical, or chemical treatment.

Condition 6. Avoid and Minimize Impacts When Re-Establishing or Establishing Wetlands

As discussed in Chapter 7 of the SSHCP document, the Permit Applicants anticipate that approximately 389 acres of Vernal Pool habitat will be re-established or established within the SSHCP boundary as part of the SSHCP Conservation Strategy. Although re-establishment or establishment of vernal pools is a Measurable Objective under this Plan, if not done correctly, the action could have an adverse impact on existing vernal pools.

RE-ESTABLISHMENT/ESTABLISHMENT-1 (Vernal Pool): Re-establish or establish Vernal Pool Wetland according to the following guidelines:

- Re-establishment will always take priority over establishment of vernal pools. Establishment will be permitted only after it has been determined that sites with the potential to re-establish vernal pools no longer exist in the SSHCP boundary or cannot be acquired through a willing seller/buyer agreement.
- When possible, re-established or established sites will be located adjacent to an existing Preserve(s) to maximize connectivity and Preserve area.
- Re-establishment or establishment will not result in direct or indirect adverse impacts to the hydrologic regime of existing vernal pools. Vernal pool re-establishment or establishment actions will not remove more than 10% of any existing vernal pool watershed, as defined by the SSHCP LIDAR analysis (see Section 3.3 and Conservation Action VPI1.2 in Table 7.1 of the SSHCP document).
- Vernal pool re-establishment will attempt to restore the historical density and range of vernal pool sizes to the maximum extent feasible using historical aerial photography of the site, if available. Where aerial photography of the site's historical conditions is not available, vernal pool re-establishment will include a range of pool sizes (area and depth) to accommodate the different habitat needs and life history characteristics of the vernal pool invertebrate Covered Species.

- Established vernal pools must be located on sites with vernal pool soils, defined as any plan area soil type where vernal pools currently exist.
- Established vernal pool sites will include a range of pool sizes to accommodate the different habitat needs and life history characteristics of the three vernal pool invertebrate Covered Species.
- The total density of vernal pools will not exceed 10% of the suitable soil areas in any vernal pool re-establishment and/or establishment site, unless it can be shown that the suitable areas of that site historically supported greater densities.
- Re-establishment or establishment may include inoculation when it is likely that no seed or cyst bank of vernal pool species remains at a site. Vernal Pool inocula will come from nearby vernal pools that are on the same geologic formation and soil type.

RE-ESTABLISHMENT/ESTABLISHMENT-2 (Vernal Pool Inocula Bank):

Vernal pool reestablishment or establishment may include “soil inoculation” when it is likely that no seed or cyst bank of vernal pool species remains at a re-establishment or establishment site.

- During conversion of UDA vernal pools to a developed land cover type, individual project proponents will excavate and retain soil from vernal pools following protocols developed by the SSHCP Technical Advisory Committee (see Chapter 9 of the SSHCP document).
- Inocula applied in re-established or established vernal pools must be harvested from a vernal pool that is on the same geologic formation and soil type shown on the County General Soil Map as the reestablishment/ establishment site. Geologic formations and soil types will follow U.S. Department of Agriculture Soil Conservation Service’s 1993 Soil Survey of Sacramento County, California. Proposed off-site inocula sources must be approved by the Wildlife Agencies.

RE-ESTABLISHMENT/ESTABLISHMENT-3 (Re-Establishment/Establishment of Freshwater Marsh or Open Water near Airports):

During review of proposed re-establishment/ establishment individual projects for freshwater marsh or open water on SSHCP Preserves, the Implementing Entity shall consider the potential for the location of the reestablishment/establishment individual projects to increase the risk of wildlife strikes or generation of ground fog at airports. If a re-establishment/ establishment individual project would result in (1) a net increase in open water or freshwater marsh acreage over baseline conditions within 5 miles of Mather Field, Sacramento Executive Airport, or Franklin Field; or (2) replacement of open water/freshwater marsh habitat that is located 2 or more miles from Mather Field or Sacramento Executive Airport with open water/freshwater marsh habitat that is located less than 2 miles from those airports, a qualified biologist shall prepare a concise letter report. The letter report shall summarize the biologist’s findings regarding (1) the species likely to use the

reestablished/established habitat, (2) a rough order of magnitude estimate on the peak number of birds that might use the re-established/established habitat, and (3) potential movement patterns for birds using the re-established/established habitat and whether they might cross through the airport safety zones (e.g., to reach foraging habitat or another wildlife attractant). The letter report will also provide recommendations to the Implementing Entity on how they could reduce any of the identified wildlife hazards if there are any feasible means to do so that would not conflict with the biological goals and measurable objectives of the Conservation Plan.

Condition 7. Avoid and Minimize Impacts to Streams and Creeks

AMMs associated with Condition 7 must be applied to all Covered Activities where a stream or creek is located within an individual project footprint.

STREAM-1 (Laguna Creek Wildlife Corridor): A 150-foot setback measured from the top of the bank on both sides of the stream will be applied to Laguna Creek within the UDA (minimum 300-foot corridor width). If trails are located within the Laguna Creek Wildlife Corridor, the nearest edge of the trail will be located at least 80 feet from the top of the bank.

STREAM-2 (UDA Stream Setbacks): A 100-foot setback measured from the top of the bank on both sides of the stream channel will be applied to all streams listed in Table 5-1 of the SSHCP document (see also Figure 2-4). If a stream reach supports woody riparian vegetation, the setback will be equal to the riparian edge plus 25 feet or will be the setback defined above, whichever is greater. If trails are located within the Stream Setback, the nearest edge of the trail will be located at least 50 feet from the top of the bank.

STREAM-3 (Minor Tributaries to UDA Streams): A 25-foot setback measured from the top of the bank on both sides of the stream channel will be applied to all avoided first and second order tributaries to the streams listed in Table 5-1 and Laguna Creek. Refer to Objective W6 in Chapter 7 of the SSHCP document (Table 7-1) regarding avoided first and second order tributaries. Trails are not permitted within headwater ephemeral Stream Setbacks.

STREAM-4 (Minimize Effects from Temporary Channel Re-Routing): When an Urban Development Covered Activity temporarily re-routes a stream, creek, or drainage, the re-routing will be completed in a manner that minimizes impacts to beneficial uses and habitat. The following measures will be employed to minimize disturbances that will adversely impact water quality:

- No equipment will be operated in areas of flowing or standing water.
- Construction materials and heavy equipment must be stored outside of the active flow of any waters.
- When work within waters is necessary, the entire stream flow will be diverted around the work area.
- In the event of rain, the disturbed in-water work area will be temporarily stabilized before water body flow exceeds the capacity of the diversion

structure. The disturbed water body will be stabilized so that the disturbed areas will not come in contact with the flow.

- Once construction is complete, all individual project-introduced material (e.g., pipes, gravel, cofferdam, sandbags) must be removed, leaving the water as it was before construction. Excess materials will be disposed of at an appropriate disposal site.
- All work areas will be effectively isolated from stream flows using suitable control measures before commencement of any in-water work. The diverted stream flow will not be contaminated by construction activities. Structures for isolating the in-water work area and/or diverting the stream flow (e.g., cofferdam, geo-textile silt curtain) will not be removed until all disturbed areas are cleaned and stabilized.
- Any flow diversion used during construction will be designed in a manner to prevent pollution and minimize siltation, and will provide flows to downstream reaches. Flows will be maintained to support existing aquatic life, riparian wetlands, and habitat that may be located upstream and downstream from any temporary diversion.
- All surface waters, including ponded waters, will be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity that may result in a discharge to waters.
- All temporary dewatering methods will be designed to have the minimum necessary impacts to waters to isolate the immediate work area. All dewatering methods will be installed such that natural flow is maintained upstream and downstream of the diversion area. Any temporary dams and diversions will be installed such that the diversion does not cause sedimentation, siltation, or erosion upstream or downstream of the diversion area. All dewatering methods will be removed immediately upon completion of diversion activities.
- A method of containment must be used below any bridge, boardwalk, and/or temporary crossing to prevent debris from falling into the waters through the entire duration of an individual project.
- If temporary surface water diversions and/or dewatering are anticipated, the Permit Applicant or their Third-Party Project Proponent will develop and maintain on site a surface water diversion and/or dewatering plan. The plan(s) must be developed prior to initiation of any water diversions and will include the proposed method and duration of diversion activities. The plan(s) must be made available to Central Valley Water Board staff upon request.
- When work in a flowing stream is unavoidable and any dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water will be allowed at all times to pass downstream to maintain beneficial uses of waters below the dam. Construction, dewatering, and

removal of temporary cofferdams will not violate the turbidity, settle-able matter, pH, temperature, or dissolved oxygen requirements of any Water Quality Control Plan.

- Any temporary dam or other artificial obstruction will only be built from clean materials such as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no siltation. Stream flow will be temporarily diverted using gravity flow through temporary culverts or pipes, or pumped around the work site with the use of hoses.

STREAM-5 (Design for Stream Channel Re-Routing, Widening, or Deepening): When an urban development Covered Activity alters a stream, creek, or drainage by re-routing, widening, or deepening a channel, the individual project design will include the following:

- The main channel of a re-routed channel will be free to migrate laterally over its active and terrace floodplain.
- Channel geometry (plan, profile, and cross-section) of the site will be appropriate for the watershed location and physical/hydrologic condition.
- Local, native materials will be used as fill material to the extent practicable.
- Bioengineering techniques will be used for construction and maintenance of bank stabilization. Bioengineered bank stabilization structures will use vegetation in combination with bank reshaping; biodegradable geotextile materials; and, in some cases, a minimal amount of rock or wood to the extent practicable to dissipate erosive energy. The Permit Applicant or their Third-Party Project Proponents will consult a professional engineer when considering using bioengineering techniques.
- All re-routed, widened, or deepened streams are required to establish Stream Setbacks with minimum widths required under STREAM-1, STREAM-2, or STREAM-3. All re-routed, widened, or deepened streams must re-establish/ establish and maintain native Woody Riparian land cover and/or native Grassland Riparian land cover in the entire Stream Setback.

Condition 9. Avoid and Minimize Impacts That Might Result From Removing or Breaching Levees to Establish or Re-establish Riparian Habitat

LEVEE-1 (Preparation of Hydrologic Analysis): Prior to approving a draft Preserve Management Plan that includes (1) modifying or breaching an existing levee, or (2) would place a potential impedance to high-water event flood-flows on the water side of an existing levee (including new riparian vegetation plantings or other new Preserve facilities), a hydrologic analysis will be conducted. The Preserve activity will only be implemented if the hydrologic analysis concludes that the activity will not result in a substantial increase in flood stage elevations or flood risk on lands outside the Preserve.

Condition 10. Avoid and Minimize Impacts That Might Result From

Potential Residual Contamination of Preserves and Related Exposure of People to Such Hazardous Materials

HAZARDOUS MATERIALS-1 (Preparation of Phase I Environmental Site Assessment): Prior to the acquisition of preserve site or implementation of a stream or riparian restoration individual project, a Phase I Environmental Site Assessment shall be conducted in general accordance with the American Society for Testing and Materials Standard Practice E1527-05. The purpose of this Environmental Site Assessment is to identify, to the extent feasible pursuant to the American Society for Testing and Materials Standard, recognized environmental conditions in connection with the potential site. The term "recognized environmental condition" means the presence or likely presence of hazardous substances or petroleum products on the property under conditions that may indicate an existing release, a past release, or a material threat of release of these substances to the property. If the Phase 1 Environmental Site Assessment indicates the presence of a recognized environmental condition, the Implementing Entity shall consider the following options.

- Determine that the acquisition/ individual project can proceed on the basis that the Habitat Plan goals and objectives can be met on the site even with the presence of a recognized environmental condition.
- Conduct a Phase II Environmental Site Assessment, including soil and groundwater testing, to further study the potential for contamination to limit the Implementing Entity's management activities.
- If the results of the Phase I (or Phase II) Environmental Site Assessment indicate that the Habitat Plan goals and objectives cannot be met on the site, the Implementing Entity should not acquire the site.

HAZARDOUS MATERIALS-2 (Contingency Plan): As part of each Preserve Management Plan or site restoration plan, a Contingency Plan shall be prepared to address the actions that would be taken during construction in the event that unexpected contaminated soil or groundwater is discovered. The Contingency Plan shall include health and safety considerations, handling and disposal of wastes, reporting requirements, and emergency procedures. The Contingency Plan shall include a requirement that if evidence of contaminated materials is encountered during construction, construction would cease immediately and applicable requirements of the Comprehensive Environmental Release Compensation and Liability Act and the California Code of Regulations Title 22 regarding the disposal of waste would be implemented.

- (2) Findings regarding mitigation measures which are the responsibility of another agency. (Public Resources Code, section 21081, subd. (a)(2); California Code of Regulations, Title 14, section 15091, subd.(a)(2).)

There are changes or alterations that are within the responsibility and jurisdiction of another public agency and not the jurisdiction of the Central

Valley Water Board. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

a.i. Potential Significant Impact: The Project may result in potentially significant impacts to biological resources.

a.ii. Facts in Support of Finding: In addition to the Avoidance and Minimization Measures listed below, from Attachment D of the SSHCP EIR and Chapter 5 of the SSHCP document, the Project will implement mitigation measures for impacts to biological resources listed in the Sacramento County General Plan of 2005 – 2030, Sacramento County Swainson’s Hawk Ordinance, Sacramento County Tree Ordinance and Tree Preservation Ordinance, 2030 Galt General Plan, Galt Tree Ordinances, and Rancho Cordova General Plan.

General Covered Species Take Avoidance and Minimization Measures

SPECIES-1 (Litter Removal Program): A litter control program will be instituted for the entire individual project site. All workers will ensure that their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. All garbage will be removed from the individual project site at the end of each work day, and construction personnel will not feed or otherwise attract wildlife to the area where construction activities are taking place.

SPECIES-2 (No Pets in Construction Areas): To avoid harm and harassment of native species, workers and visitors will not bring pets onto a individual project site.

SPECIES-3 (Take Report): If accidental injury or death of any Covered Species occurs, workers will immediately inform the approved biologist or on-site monitor and site supervisor. The approved biologist or on-site monitor will phone the appropriate contact person at the Implementing Entity. The Implementing Entity will immediately contact the Wildlife Agencies by telephone. A memorandum will be provided to the Implementing Entity and Wildlife Agencies within 1 working day of the incident. The report will provide the date and location of the incident, number of individuals taken, the circumstances resulting in the take, and any corrective measures taken to prevent additional take.

SPECIES-4 (Post-Construction Compliance Report): A post-construction compliance report will be submitted to the Implementing Entity within 30 calendar days of completion of construction activities or within 30 calendar days of any break in construction activity that lasts more than 30 days. The report will detail the construction start and completion dates, any information about meeting or failing to meet species take Avoidance and Minimization Measures (AMM), effectiveness of each AMM that was applied at the individual project site, and any known individual project effects to Covered Species.

Rare Plants

PLANT-1 (Rare Plant Surveys): If a Covered Activity individual project site contains modeled habitat for Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downingia pusilla*), Legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii*), or Sanford's arrowhead (*Sagittaria sanfordii*), the Covered Activity individual project site will be surveyed for the rare plant by an approved biologist and following the CDFW rare plant survey protocols (CDFG 2009) or the most recent CDFW rare plant survey protocols. An approved biologist will conduct the field surveys and will identify and map plant species occurrences according to the protocols. See Chapter 10 of the SSHCP document for the process to submit survey information to the Permit Applicant and the Permitting Agencies.

PLANT-2 (Rare Plant Protection): If a rare plant listed in AMM PLANT-1 is detected within an area proposed to be disturbed by a Covered Activity or is detected within 250 feet of the area proposed to be disturbed by a Covered Activity, the Implementing Entity will assure one unprotected occurrence of the species is protected within a SSHCP Preserve before any ground disturbance occurs at the individual project site.

Sacramento and Slender Orcutt Grass

ORCUTT-1 (Orcutt Grass Surveys): If a Covered Activity individual project site is located within 1 mile of the Mather Core Recovery Area and contains the Vernal Pool land cover type, the individual project site will be surveyed for Sacramento and slender Orcutt grass by an approved biologist following CDFW rare plant survey protocols (CDFG 2009) or most recent CDFW guidelines to determine if Sacramento and/or slender Orcutt grass is present. An approved biologist will conduct the field investigation to identify and map occurrences. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

ORCUTT-2 (Orcutt Grass Protection): Where known or new Sacramento or slender Orcutt grass occurrences are found, they will be protected within an SSHCP Preserve that is at least 50 acres. The occurrence will be located interior to the Preserve at a distance of no less than 300 feet from the edge of the Preserve boundary. If a Third-Party Project Proponent encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass on a Covered Activity individual project site, the Third-Party Project Proponent will contact the Implementing Entity or Land Use Authority Permit Applicant with authority over the individual project, who will coordinate with the Wildlife Agencies for written concurrence of avoidance to ensure that the individual project does not cause take of the species.

California Tiger Salamander

CTS-1 (California Tiger Salamander Daily Construction Schedule): Ground-disturbing Covered Activities within California tiger salamander modeled habitat (Figure 3-16 of the SSHCP document) will occur outside the breeding and dispersal season (occur after July 31 and before October 15), to

the maximum extent practicable. If Covered Activities must be implemented in modeled habitat (Figure 3-16 of the SSHCP document) during the breeding and dispersal season (after October 15 and before July 31), construction activities will not start until 30 minutes after sunrise and must be complete 30 minutes prior to sunset.

CTS-2 (California Tiger Salamander Exclusion Fencing): If a Covered Activity must be implemented in modeled habitat (Figure 3-16 of the SSHCP document) during the breeding and dispersal season (after October 15 and before July 31), exclusion fencing will be installed around the individual project footprint before October 15. Temporary high-visibility construction fencing will be installed along the edge of work areas, and exclusion fencing will be installed immediately outside of the temporary high-visibility construction fencing to exclude California tiger salamanders from entering the construction area or becoming entangled in the construction fencing. Exclusion fencing will be at least 1 foot tall and be buried at least 6 inches below the ground to prevent salamanders from going under the fencing. Fencing will remain in place until all construction activities within the construction area are complete. No individual project activities will occur outside the delineated individual project footprint. An approved biologist must inspect the exclusion fencing and individual project site every morning before 7:00 a.m. for integrity and for any entrapped California tiger salamanders. If a California tiger salamander is encountered, refer to CTS-5, below. (However, the Implementing Entity may, with approval of the USFWS and CDFW, determine that it is appropriate for a Covered Activity individual project to not implement CTS-2 for certain long and linear roadway Covered Activity individual projects if it appears that the exclusion fencing will likely trap individuals or cause more take of California tiger salamander than it would prevent.)

CTS-3 (California Tiger Salamander Monitoring): If Covered Activities must be implemented in modeled habitat (Figure 3-16 of the SSHCP document), an approved biologist experienced with California tiger salamander identification and behavior will monitor the individual project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the individual project site for California tiger salamander every morning before 7:00 a.m., or prior to construction activities. As required by AMM BMP-8 (Training of Construction Staff), the approved biologist will also train construction personnel on the required California tiger salamander avoidance procedures, exclusion fencing, and correct protocols in the event that a California tiger salamander enters an active construction zone. If a California tiger salamander is encountered, refer to CTS-5, below.

CTS-4 (Avoid California Tiger Salamander Entrapment): If Covered Activities must be implemented in modeled habitat, all excavated steep-walled holes or trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to

sunset, whichever occurs first. All steep-walled holes or trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within California tiger salamander modeled habitat will be inspected for California tiger salamanders by the approved biologist prior to being moved. If a California tiger salamander is encountered, refer to CTS-5, below.

CTS-5 (California Tiger Salamander Encounter Protocol): If a California tiger salamander is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately (CDFW and USFWS). Construction activities will be suspended in a 100-foot radius of the animal until the animal is relocated by an approved biologist with appropriate handling permits from the Wildlife Agencies. Prior to relocation, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the salamander, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to USFWS and CDFW immediately. Any worker who inadvertently injures or kills a California tiger salamander or who finds dead, injured, or entrapped California tiger salamander(s) must immediately report the incident to the approved biologist.

CTS-6 (Erosion Control Materials in California Tiger Salamander Habitat): If erosion control (BMP-2) is implemented within California tiger salamander modeled habitat (Figure 3-16 of the SSHCP document), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that salamanders are not trapped (no monofilament). Coconut coir matting and fiber rolls with burlap are examples of acceptable erosion control materials. This limitation will be communicated to the contractor through use of special provisions included in the bid solicitation package.

CTS-7 (Rodent Control): CTS-7 only applies to individual projects that are within California tiger salamander modeled habitat (Figure 3-16 of the SSHCP document) and on Covered Activities. Rodent control will be allowed only in developed portions of a Covered Activity individual project site. Where rodent control is allowed, the method of rodent control will comply with the methods of rodent control discussed in the 4(d) Rule published in the USFWS's (2004) final listing rule for tiger salamander.

Western Spadefoot

WS-1 (Western Spadefoot Work Window): Ground-disturbing Covered Activities within western spadefoot modeled habitat (Figure 3-17 of the SSHCP document) will occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable.

WS-2 (Western Spadefoot Exclusion Fencing): If Covered Activities must be implemented in modeled habitat (Figure 3-17 of the SSHCP document) after

October 15 and before May 15, exclusion fencing will be installed around the individual project footprint before October 15, and the individual project site must be monitored by an approved biologist following rain events. Temporary high-visibility construction fencing will be installed along the edge of work areas, and silt fencing will be installed immediately behind the temporary high-visibility construction fencing to exclude western spadefoot from entering the construction area. Fencing will remain in place until all construction activities within the construction area are completed. No individual project activities will occur outside the delineated individual project footprint. If a western spadefoot is encountered, refer to WS-6, below.

WS-3 (Western Spadefoot Monitoring): If Covered Activities must be implemented in modeled habitat (Figure 3-17 of the SSHCP document) in the breeding and dispersal season (after October 15 and before May 15), an approved biologist experienced with western spadefoot identification and behavior will monitor the individual project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the individual project site daily for western spadefoot prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western spadefoot enters an active construction zone (i.e., outside the buffer zone). If a western spadefoot is encountered, refer to WS-6, below.

WS-4 (Avoid Western Spadefoot Entrapment): If a Covered Activity occurs in western spadefoot modeled habitat (Figure 3-17 of the SSHCP document), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western spadefoot modeled habitat will be inspected for western spadefoot by the approved biologist prior to being moved. If a western spadefoot is encountered, refer to WS-6, below.

WS-5 (Erosion Control Materials in Western Spadefoot Habitat): If erosion control (BMP-2) is implemented within western spadefoot modeled habitat (Figure 3-17 of the SSHCP document), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that western spadefoots are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

WS-6 (Western Spadefoot Encounter Protocol): If Covered Activities must be implemented in modeled habitat (Figure 3-17 of the SSHCP document)

during the breeding and dispersal season (after October 15 and before May 15), and a western spadefoot is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the individual project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the western spadefoot within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the USFWS and CDFW immediately. Any worker who inadvertently injures or kills a western spadefoot or who finds dead, injured, or entrapped western spadefoot(s) must immediately report the incident to the approved biologist.

Giant Garter Snake

GG-1 (Giant Garter Snake Surveys): If the SSHCP giant garter snake modeled habitat maps (Figure 3-18 of the SSHCP document) show that modeled habitat for giant garter snake is present within a Covered Activity's individual project footprint or within 300 feet of a individual project footprint, then an approved biologist will conduct a field investigation to delineate giant garter snake aquatic habitat within the individual project footprint and adjacent areas within 300 feet of the individual project footprint. In addition to the SSHCP land cover types shown in Figure 3-18 of the SSHCP document, giant garter snake aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, agricultural ditches, and rice fields. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. The Third-Party Project Proponent will map all existing or potential sites and provide these maps to the Local Land Use Permit Applicants and the Implementing Entity. Locations of delineated giant garter snake habitat must also be noted on plans that are submitted to a Local Land Use Permit Applicant. The applicant will use this information to finalize individual project design. Covered Activities may occur throughout the year as long as giant garter snake habitat is identified and fully avoided. Otherwise, Covered Activities must comply with GG-2 through GG-8, below. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

GG-2 (Giant Garter Snake Work Window): Covered Activities that do not fully avoid giant garter snake modeled habitat (Figure 3-18 of the SSHCP document) will be conducted during the snake's active season. Construction and ground-disturbing activities will be initiated after May 1 and will end prior to September 15. If it appears that construction activities may go beyond September 15, the Local Land Use Permit Applicant or their Third-Party Project Proponent will contact the Implementing Entity as soon as possible, but not later than September 1. The Local Land Use Permit Applicant and the Implementing Entity will discuss with the Wildlife Agencies additional measures necessary to minimize take.

GG-3 (Giant Garter Snake Monitoring): If a Covered Activity is occurring in giant garter snake modeled habitat (Figure 3-18 of the SSHCP document), an approved biologist experienced with giant garter snake identification and behavior will monitor the individual project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the individual project site daily for giant garter snake prior to construction activities. If a giant garter snake is encountered, refer to GG-7. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a giant garter snake enters an active construction zone (i.e., outside the buffer zone).

GG-4 (Giant Garter Snake Habitat Dewatering and Exclusion): If construction activities will occur in giant garter snake aquatic habitat, aquatic habitat will be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to giant garter snake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing will be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Giant garter snake habitat outside construction fencing will be avoided by all construction personnel. The fencing and the work area will be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing will be maintained by the contractor until completion of the individual project. If giant garter snake is encountered, refer to GG-7, below.

GG-5 (Avoid Giant Garter Snake Entrapment): If a Covered Activity occurs in giant garter snake modeled habitat (Figure 3-18 of the SSHCP document), all excavated steepwalled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant garter snake modeled habitat will be inspected for giant garter snake by the approved biologist prior to being moved. If a giant garter snake is encountered, refer to GG-7.

GG-6 (Erosion Control Materials in Giant Garter Snake Habitat): If erosion control (BMP-2) is implemented within giant garter snake modeled habitat (Figure 3-18 of the SSHCP document), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

GG-7 (Giant Garter Snake Encounter Protocol): If a giant garter snake is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the individual project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the giant garter snake within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the USFWS immediately. Any worker who inadvertently injures or kills a giant garter snake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.

GG-8 (Giant Garter Snake Post-Construction Restoration): After completion of ground-disturbing Covered Activities, the applicant will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation. Refer to the USFWS Guidelines for the Restoration and/or Replacement of Giant Garter Snake Habitat (USFWS 1997), or the most current USFWS guidelines at the time of the activity. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration.

Western Pond Turtle

WPT-1 (Western Pond Turtle Surveys): If the SSHCP western pond turtle modeled habitat maps (Figure 3-19 of the SSHCP document) show that modeled habitat for western pond turtle is present within a Covered Activity's individual project footprint or within 300 feet of an individual project footprint, then an approved biologist will conduct a field investigation to delineate western pond turtle aquatic habitat within the individual project footprint and within 300 feet of the individual project footprint. In addition to the SSHCP land cover types shown in Figure 3-19 of the SSHCP document, western pond turtle aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, and rice fields. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are

visible from authorized areas. The Third-Party Project Proponent will map all existing or potential sites and provide those maps to the Local Land Use Permit Applicants and the Implementing Entity. Locations of delineated western pond turtle habitat must also be noted on plans that are submitted to a Local Land Use Permit Applicant. The applicant will use this information to finalize design. Covered Activities may occur throughout the year as long as western pond turtle habitat is identified and fully avoided. Otherwise, Covered Activities must comply with WPT-2 through WPT-9. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

WPT-2 (Western Pond Turtle Work Window): Maintenance and improvements to existing structures may occur throughout the year as long as western pond turtle habitat is identified and avoided, and movement of equipment is confined to existing roads. Otherwise, construction and ground-disturbing Covered Activities must be conducted outside of western pond turtle's active season. Construction and ground-disturbing activities will be initiated after May 1 and will commence prior to September 15. If it appears that construction activities may go beyond September 15, the appropriate Permit Applicant will contact the Local Land Use Permit Applicant and the Implementing Entity as soon as possible, but not later than September 1, to determine if additional measures are necessary to minimize take.

WPT-3 (Western Pond Turtle Monitoring): If a Covered Activity is occurring in western pond turtle modeled habitat (Figure 3-19 of the SSHCP document), an approved biologist experienced with western pond turtle identification and behavior will monitor the individual project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the individual project site daily for western pond turtle prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western pond turtle enters an active construction zone (i.e., outside the buffer zone).

WPT-4 (Western Pond Turtle Habitat Dewatering and Exclusion): If construction activities will occur in western pond turtle aquatic habitat, aquatic habitat for the turtle will be dewatered and then remain dry and absent of aquatic prey (e.g., crustaceans and other aquatic invertebrates) for 15 days prior to the initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to western pond turtle. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent turtles from attempting to burrow or move under the fence into the construction area. In addition, high-visibility fencing will be erected to identify construction limits and to protect adjacent

habitat from encroachment of personnel and equipment. Western pond turtle habitat outside construction fencing will be avoided by all construction personnel. The fencing and work area will be inspected by the approved biologist to ensure that the fencing is intact and that no turtles have entered the work area before the start of each work day. Fencing will be maintained by the contractor until completion of the individual project. If, after exclusion fencing and dewatering, western pond turtles are found within the individual project footprint or within 300 feet of the individual project footprint, the Third-Party Project Proponent will discuss the next best steps with the Implementing Entity and Wildlife Agencies.

WPT-5 (Avoid Western Pond Turtle Entrapment): If a Covered Activity occurs within western pond turtle modeled habitat (Figure 3-19 of the SSHCP document), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western pond turtle modeled habitat will be inspected for western pond turtle by the approved biologist prior to being moved.

WPT-6 (Erosion Control Materials in Western Pond Turtle Habitat): If erosion control (BMP-2) is implemented within western pond turtle modeled habitat (Figure 3-19 of the SSHCP document), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that turtles are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

WPT-7 (Western Pond Turtle Modeled Habitat Speed Limit): Covered Activity construction and maintenance vehicles will observe a 20-mile-per-hour speed limit within western pond turtle modeled upland habitat (Figure 3-19 of the SSHCP document).

WPT-8 (Western Pond Turtle Encounter Protocol): If a western pond turtle is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the individual project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the turtle, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the USFWS immediately. Any worker who inadvertently

injures or kills a western pond turtle or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.

WPT-9 (Western Pond Turtle Post-Construction Restoration): After completion of ground-disturbing Covered Activities, the applicant will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation and placing appropriate artificial or natural basking areas in waterways and wetlands. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration.

Tricolored Blackbird

TCB-1 (Tricolored Blackbird Surveys): If modeled habitat for tricolored blackbird is present within a Covered Activity's individual project footprint or within 500 feet of a individual project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting or foraging sites are present within the individual project footprint and adjacent areas within 500 feet of the individual project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Within the SSHCP boundary, potential tricolor blackbird nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow, blackberry, wild rose, thistle, and other thorny vegetation. Tricolored blackbirds are also known to nest in crops associated with dairy farms. Foraging habitat is associated with annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. The Third-Party Project Proponent will map all existing or potential nesting or foraging sites and provide these maps to the Local Land Use Permit Applicants and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permit Applicant. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

TCB-2 (Tricolored Blackbird Pre-Construction Surveys): Pre-construction surveys will be required to determine if active nests are present within an individual project footprint or within 500 feet of an individual project footprint if existing or potential nest sites were found during design surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct preconstruction surveys within 30 days and within 3 days of ground-disturbing activities, and within the proposed individual project footprint and 500 feet of the proposed individual project footprint to determine the presence of nesting tricolored blackbird.

Preconstruction surveys will be conducted during the breeding season (March 1 through August 31). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities. If a nest is present, then TCB-3 and TCB-4 will be implemented. The approved biologist will inform the Land Use Authority Permit Applicant and the Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

TCB-3 (Tricolored Blackbird Nest Buffer): If active nests are found within the individual project footprint or within 500 feet of any project-related Covered Activity, the Third-Party Project Proponent will establish a 500-foot temporary buffer around the active nest until the young have fledged.

TCB-4 (Tricolored Blackbird Nest Buffer Monitoring): If nesting tricolored blackbirds are present within the individual project footprint or within 500 feet of any project-related Covered Activity, then an approved biologist experienced with tricolored blackbird behavior will be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the approved biologist determines that tricolored blackbirds are exhibiting agitated behavior, construction will cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the nesting tricolored blackbirds. If the biologist determines that the colonies are at risk, a meeting with the Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will be held to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone).

TCB-5 (Timing of Pesticide Use and Harvest Timing on Agricultural Preserves): On SSHCP Farmland/Agricultural Preserves, pesticides (including herbicides) will not be applied from January 1 through July 15.

Swainson's Hawk

SWHA-1 (Swainson's Hawk Surveys): If modeled habitat for Swainson's hawk (Figure 3-25 of the SSHCP document) is present within a Covered Activity's individual project footprint or within 0.25 mile of a individual project footprint, then an approved biologist will conduct a survey to determine if existing or potential nesting sites are present within the individual project footprint and adjacent areas within 0.25 mile of the individual project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Nest sites are often associated with Riparian land cover, but also include lone trees in fields, trees along roadways, and trees around structures. Nest trees may include, but are not limited to, Fremont's cottonwood (*Populus fremontii*), oaks (*Quercus*

spp.), willows (*Salix* spp.), walnuts (*Juglans* spp.), eucalyptus (*Eucalyptus* spp.), pines (*Pinus* spp.), and Deodar cedar (*Cedrus deodara*). The Third-Party Project Proponent will map all existing and potential nesting sites and provide these maps to the Local Land Use Permit Applicants and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permit Applicant. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

SWHA-2 (Swainson's Hawk Pre-Construction Surveys): Pre-construction surveys will be required to determine if active nests are present within a individual project footprint or within 0.25 mile of an individual project footprint if existing or potential nest sites were found during initial surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities to determine presence of nesting Swainson's hawk. Pre-construction surveys will be conducted during the breeding season (March 1 through September 15). If a nest is present, then SWHA-3 and SWHA-4 will be implemented. The approved biologist will inform the Land Use Authority Permit Applicant and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

SWHA-3 (Swainson's Hawk Nest Buffer): If active nests are found within the individual project footprint or within 0.25 mile of any project-related Covered Activity, the Third-Party Project Proponent will establish a 0.25 mile disturbance buffer around the active nest until the young have fledged, with concurrence from the Wildlife Agencies.

SWHA-4 (Swainson's Hawk Nest Buffer Monitoring): If nesting Swainson's hawks are present within the individual project footprint or within 0.25 mile of any project-related Covered Activity, then an approved biologist experienced with Swainson's hawk behavior will be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place within the buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into an active construction zone (i.e., outside the buffer zone).

Greater Sandhill Crane

GSC-1 (Greater Sandhill Crane Surveys): If modeled habitat for greater sandhill crane (Figure 3- 22 of the SSHCP document) is present within a Covered Activity's individual project footprint or within 0.5 mile of an individual project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential roosting sites are present within the individual project footprint and adjacent areas within 0.5 mile of the individual project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Roosting sites within the SSHCP boundary are often associated with flooded fields, seasonal wetlands, and freshwater marsh. The Third-Party Project Proponent will map all existing or potential roosting sites and provide these maps to the Local Land Use Permit Applicants and Implementing Entity. Roosting sites must also be noted on plans that are submitted to a Local Land Use Permit Applicant. See Chapter 10 for the process to conduct and submit survey information.

GSC-2 (Greater Sandhill Crane Pre-Construction Surveys): Pre-construction surveys will be required to determine if active roosting sites are present within a individual project footprint or within 0.5 mile of an individual project footprint if existing or potential roosting sites were found during initial surveys and construction activities will occur when wintering flocks are present within the SSHCP boundary (September 1 through March 15). An approved biologist will conduct pre-construction surveys within 15 days of ground-disturbing activities, and within 0.5 mile of an individual project footprint, to determine presence of roosting greater sandhill cranes. Pre-construction surveys will be conducted September 1 through March 15, when wintering flocks are present within the SSHCP boundary. If birds are present, then GSC-3, GSC-4, and GSC-5 will be implemented. The approved biologist will inform the Land Use Authority Permit Applicant and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

GSC-3 (Greater Sandhill Crane Roosting Buffer): If active roosting sites are found within the individual project footprint or within 0.5 mile of any project-related Covered Activity, the Third-Party Project Proponent will establish a 0.5 mile temporary roosting disturbance buffer around the roosting site until the cranes have left.

GSC-4 (Greater Sandhill Crane Visual Barrier): Greater sandhill cranes have low tolerance for human disturbance, and such disturbance has caused cranes to abandon foraging and roosting sites. Repeat disturbance affects their ability to feed and store energy needed for survival. If project-related activities occur within 0.5 mile of a known roosting site as identified by surveys conducted during implementation of GSC-1 or GSC-2, a visual barrier will be constructed.

GSC-5 (Greater Sandhill Crane Roosting Buffer Monitoring): If roosting sites are found within the individual project footprint or within 0.50 mile of any project-related Covered Activity, an approved biologist experienced with greater sandhill crane behavior will be retained by the Third-Party Project Proponent to

monitor the roosting site throughout the roosting season and to determine when the birds have left. The approved biologist will be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary disturbance buffer can only occur with the written permission of the Implementing Entity and Wildlife Agencies. If greater sandhill cranes are abandoning their roosting and/or forage sites, the approved biologist will have the authority to shut down construction activities. If roost abandonment occurs, the approved biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid harm and harassment of individuals. The approved biologist will also train construction personnel on the avoidance procedures, buffer zones, and protocols in the event that greater sandhill cranes move into an active construction zone (i.e., outside the buffer zone).

Western Burrowing Owl

WBO-1 (Western Burrowing Owl Surveys): Surveys within modeled habitat are required for both the breeding and non-breeding season. If the individual project site falls within modeled habitat, an approved biologist will survey the individual project site and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, egg shell fragments, pellets, prey remains, and/or excrement. Surveying and mapping will be conducted by the approved biologist while walking transects throughout the entire individual project site plus all accessible areas within a 250-foot radius from the individual project site. The centerline of these transects will be no more than 50 feet apart and will vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects will be closer together, and in open areas with little vegetation, they can be 50 feet apart. This methodology is consistent with current survey protocols for this species (California Burrowing Owl Consortium 1993). Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. If suitable habitat is identified during the initial survey, and if the individual project does not fully avoid the habitat, pre-construction surveys will be required. Burrowing owl habitat is fully avoided if project-related activities do not impinge on a 250-foot buffer established by the approved biologist around suitable burrows. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

WBO-2 (Western Burrowing Owl Pre-Construction Surveys): Prior to any Covered Activity ground disturbance, an approved biologist will conduct pre-construction surveys in all areas that were identified as suitable habitat during the initial surveys. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls on the individual project site, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey will last a minimum of 3 hours. The survey will begin 1 hour before sunrise and continue until 2 hours

after sunrise (3 hours total), or begin 2 hours before sunset and continue until 1 hour after sunset. Additional time may be required for large individual project sites. A minimum of two pre-construction surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their location will be mapped. Surveys will conclude no more than 2 calendar days prior to construction. Therefore, the Third-Party Project Proponent must begin surveys no more than 4 days prior to construction (2 days of surveying plus up to 2 days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, the Third-Party Project Proponent may also conduct a preliminary survey up to 15 days before construction. This preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than 2 calendar days in advance of construction.

WBO-3 (Burrowing Owl Avoidance): If western burrowing owl or evidence of western burrowing owl is observed on the individual project site or within 250 feet of the individual project site during pre-construction surveys, then the following will occur:

During Breeding Season: If the approved biologist finds evidence of western burrowing owls within an individual project site during the breeding season (February 1 through August 31), all project-related activities will avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 250-foot buffer zone around nests. Construction and other project-related activities may occur outside of the 250-foot buffer zone. Construction and other project-related activities may be allowed inside of the 250-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and the Third-Party Project Proponent develops an avoidance, minimization, and monitoring plan that is approved by the Implementing Entity and Wildlife Agencies prior to individual project construction based on the following criteria:

- The Implementing Entity and Wildlife Agencies approve of the avoidance and minimization plan provided by the Enrollee.
- An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).
- The same approved biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.

If there is any change in owl nesting and foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer. Construction cannot resume within the 250-

foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from the Wildlife Agencies.

If monitoring by the approved biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by the Wildlife Agencies. The approved biologist will excavate the burrow in accordance with the latest CDFW guidelines for burrowing owl to prevent reoccupation after receiving approval from the Wildlife Agencies.

The Implementing Entity and Wildlife Agencies will respond to a request from the Third-Party Project Proponent to review the proposed construction monitoring plan within 21 days.

During Non-Breeding Season: During the non-breeding season (September 1 through January 31), the approved biologist will establish a minimum 250-foot non-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer will be allowed. Construction activities within the non-disturbance buffer will be allowed if the following criteria are met to prevent owls from abandoning over-wintering sites:

- An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
- The same approved biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.
- If there is any change in owl foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer.
- If the owls are gone for at least 1 week, the Third-Party Project Proponent may request approval from the Implementing Entity and Wildlife Agencies that an approved biologist excavate usable burrows and install one-way exclusionary devices to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue.

Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.

WBO-4 (Burrowing Owl Construction Monitoring): During construction of Covered Activities, 250-foot construction buffer zones will be established and maintained around any occupied burrow. An approved biologist will monitor the site to ensure that buffers are enforced and owls are not disturbed. The approved biologist will also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into an active construction zone.

WBO-5 (Burrowing Owl Passive Relocation): Passive relocation is not allowed without the express written approval of the Wildlife Agencies. Passive owl relocation may be allowed on a case-by-case basis on individual project sites during the non-breeding season (September 1 through January 31) with the written approval of the Wildlife Agencies if the other measures described in this condition preclude work from continuing. Passive relocation must be done in accordance with the latest CDFW guidelines for burrowing owl. Passive relocation will only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of a Covered Activity. If passive relocation is approved by the Wildlife Agencies, an approved biologist can passively exclude birds from their burrows during the non-breeding season by installing one-way doors in burrow entrances. These doors will be in place for 48 hours to ensure that owls have left the burrow, and then the biologist will excavate the burrow to prevent reoccupation. Burrows will be excavated using hand tools only. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow and trap owls inside. Other methods of passive relocation, based on best available science, may be approved by the Wildlife Agencies over the SSHCP Permit Term.

WBO-6 (Burrowing Owl Timing of Maintenance Activities): All activities adjacent to existing or planned SSHCP Preserves, Preserve Setbacks, or Stream Setback areas will be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows.

WBO-7 (Rodent Control): Rodent control will be allowed only in developed portions of a Covered Activity individual project site within western burrowing owl modeled habitat. Where rodent control is allowed, the method of rodent control will comply with the methods of rodent control discussed in the 4(d) Rule published in the USFWS's (2004) final listing rule for tiger salamander.

Covered Raptor Species

RAPTOR-1 (Raptor Surveys): If modeled habitat for a covered raptor species (Figures 3-20, 3- 23, 3-24, or 3-28 of the SSHCP document) is present within a Covered Activity's individual project footprint or within 0.25 mile of a individual project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting sites are present within the individual project footprint and adjacent areas within 0.25 mile of the individual project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. The Third-Party Project Proponent will map all existing or potential nesting sites and provide these maps to the Local Land Use Permit Applicants and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permit Applicant. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

RAPTOR-2 (Raptor Pre-Construction Surveys): Pre-construction surveys will be required to determine if active nests are present with an individual project

footprint or within 0.25 mile of an individual project footprint if existing or potential nest sites are found during initial surveys and construction activities will occur during the raptor breeding season. An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities within the proposed individual project footprint and within 0.25 mile of the proposed individual project footprint to determine presence of nesting covered raptor species. Pre-construction surveys will be conducted during the raptor breeding season. If a nest is present, then RAPTOR-3 and RAPTOR-4 will be implemented. The approved biologist will inform the Land Use Authority Permit Applicant and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

RAPTOR-3 (Raptor Nest/Roost Buffer): If active nests are found within the individual project footprint or within 0.25 mile of any project-related Covered Activity, the Third-Party Project Proponent will establish a 0.25 mile temporary nest disturbance buffer around the active nest until the young have fledged.

RAPTOR-4 (Raptor Nest/Roost Buffer Monitoring): If project-related Covered Activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then an approved biologist experienced with raptor behavior will be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting raptors begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist/monitor will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, the Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a covered raptor species flies into an active construction zone (i.e., outside the buffer zone).

Western Red Bat

BAT-1 (Winter Hibernaculum Surveys): If modeled habitat (Figure 3-30 of the SSHCP document) for western red bat is present within 300 feet of a Covered Activity's individual project footprint, then an approved biologist will conduct a field investigation of the individual project footprint and adjacent areas within 300 feet of a individual project footprint to determine if a potential winter hibernaculum is present, and to identify and map potential hibernaculum sites. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. If potential hibernaculum sites are found, the Third-Party Project Proponent will note their

locations on individual project designs and will design the individual project to avoid all areas within a 300-foot buffer around the potential hibernaculum sites. Winter hibernaculum habitat is fully avoided if project-related activities do not impinge on a 300-foot buffer established by the approved biologist around an existing or potential winter hibernaculum site. See Chapter 10 of the SSHCP document for the process to conduct and submit survey information.

BAT-2 (Winter Hibernaculum Pre-Construction Surveys): If the Third-Party Project Proponent elects not to avoid potential winter hibernaculum sites within the individual project footprint plus a 300-foot buffer, additional surveys are required. Prior to any ground disturbance related to Covered Activities, an approved biologist will conduct a pre-construction survey within 3 days of ground-disturbing activities within the individual project footprint and 300 feet of the individual project footprint to determine the presence of winter hibernaculum sites. Pre-construction surveys will be conducted during the winter hibernaculum season (November 1 through March 31). If a winter hibernaculum is present, then BAT-3 and BAT-4 will be implemented. The approved biologist will inform the Land Use Authority Permit Applicant and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

BAT-3 (Winter Hibernaculum Buffer): If active winter hibernaculum sites are found within the individual project footprint or within 300 feet of the individual project footprint, the Third-Party Project Proponent will establish a 300-foot temporary disturbance buffer around the active winter hibernaculum site until bats have vacated the hibernaculum and the Implementing Entity and Wildlife Agencies concur.

BAT-4 (Bat Eviction Methods): An approved biologist will determine if non-maternity and non-hibernaculum day and night roosts are present on the individual project site. If necessary, an approved biologist will use safe eviction methods to remove bats if direct impacts to non-maternity and non-hibernaculum day and night roosts cannot be avoided. If a winter hibernaculum site is present, Covered Activities will not occur until the hibernaculum is vacated, or, if necessary, safely evicted using methods acceptable to the Wildlife Agencies.

D. Determination

The Central Valley Water Board has determined that the Project, when implemented in accordance with the MMRP and the conditions in this Order, will not result in any significant adverse water quality or supply impacts. (California Code of Regulations, Title 14, section 15096, subd. (h).) The Central Valley Water Board will file a NOD with the SCH within five (5) working days from the issuance of this Order. (California Code of Regulations, Title 14, section 15096, subd. (i).