APPENDIX E

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

Colusa Subreach Wildlife Habitat Restoration Project

CEQA Authority and Requirements

The California Environmental Quality Act (CEQA) (Section 21081.6) and the CEQA Guidelines (Section 15097) require a lead agency to adopt a mitigation monitoring or reporting program when it has approved a project with changes or conditions that are adopted in order to mitigate or avoid significant effects on the environment. This Mitigation Monitoring and Reporting Program (MMRP) has been prepared Colusa Subreach Wildlife Habitat Restoration Project (Project).

Mitigation measures provided in this MMRP were identified in the Initial Study and Mitigated Negative Declaration for the Project as feasible and effective in mitigating project-related environmental impacts, and have been adopted by the Department as part of the overall project approval.

Role of Lead Agency

The California Department of Fish and Game, Region 2 (Department) has reviewed the Project under CEQA as the lead agency. The Department has found the mitigation measures identified in the Initial Study[1] and Mitigated Negative Declaration to be feasible and effective for mitigating project-related environmental impacts. These measures have been adopted by the Department as part of the overall project approval.

The Department has primary responsibility for the execution and proper implementation of the MMRP. In some cases, the Department may delegate that responsibility to the project engineer or construction contractor, another public agency, or a private nonprofit corporation in the implementation of specific mitigation measures prior to and/or during construction. Subject to this delegation, any of these entities may function as the Responsible Party for specific mitigation measures. The Department will continue to monitor mitigation measures required during operation of the Project.

Monitoring Plan

The purpose of the MMRP is to document the monitoring and reporting requirements for the Project to ensure compliance during project implementation. The MMRP is intended to be used by the Department, participating agencies, and contractors during implementation of the Project.

The monitoring timing, frequency, and responsible parties for implementing the Project mitigation measures are summarized in Table 1, Summary Mitigation Monitoring Requirements.

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[1] *Evaluation of Environmental Effects Associated with Wildlife Habitat Restoration on Seven Tracts along the Sacramento River between Colusa and Princeton – CEQA Initial Study for the Colusa Subreach Wildlife Habitat Restoration Project.* Prepared by North State Resources, Inc. for the California Department of Fish and Game and The Nature Conservancy. May 2008.

TABLE 1. SUMMARY OF MITIGATION MONITORING OR REPORTING REQUIREMENTS

Mitigation Measure	Implementation Phase	Monitoring Frequency / Timing	Responsible Parties	Verification (date and initials)
BIOLOGICAL RESOURCES				
Mitigation Measure #1–Valley Elderberry Longhorn Beetle (VELB)				
▪ Surveys shall be conducted at each of the seven tracts prior to implementation of restoration activities to identify, and mark for protection, elderberry shrubs potentially affected by activities.	Pre-construction	During review and development of final design package	Department / Project Engineer / Project Contractor	
▪ Prior to restoration at each tract, a Worker Environmental Awareness Program for restoration workers shall be conducted by a qualified biologist. The program shall provide all workers with information on their responsibilities with regard to sensitive biological resources, including the federally listed VELB and the need to protect its elderberry host plant.	Pre-construction / Construction	Once prior to initiating construction; as required during construction phase	Department / Project Engineer / Project Contractor	
▪ Measures to protect buffer areas shall be instituted prior to construction and will include fencing and signs. The distance of the buffer area from the drip line of elderberry shrubs with one or more stems measuring 1.0 inch or greater in diameter at ground level shall be set at the greatest distance practicable without compromising the goal of planting native vegetation. The distance of the buffer area shall extend at least 20 feet from the drip line of the elderberry plant.	Pre-construction / Construction	During review of final design package, prior to initiating construction; as needed during construction phase	Department / Project Engineer / Project Contractor	
▪ No insecticides, herbicides, fertilizers, or other chemicals associated with the proposed project that might harm the beetle or its host plant shall be used within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.	Pre-construction	During review of final design package, and if some removal is required it should occur outside of the nesting season	Department / Project Engineer / Project Contractor	
▪ Any damage to the buffer area during construction shall be restored following construction primarily using re-vegetation with native riparian plants as appropriate.	Pre-construction	During review of final design package, and if some removal is required it should occur outside of the nesting season	Department / Project Engineer / Project Contractor	

Mitigation Measure	Implementation Phase	Monitoring Frequency / Timing	Responsible Parties	Verification (date and initials)
Mitigation Measure #2–Nesting Raptors and Other Nesting Birds				
▪ The removal of orchard trees and native trees at the Womble, Stegemen and Colusa-North tracts, shall be conducted outside of the nesting season (nesting season is February 15 to August 30) to the maximum extent practicable.	Pre-construction	During review of final design package and, if required, prior to initiating construction	Department / Project Engineer / Project Contractor	
▪ For all proposed Project activities conducted during the nesting season that have a potential to disrupt nesting birds, pre-construction surveys shall be conducted. Pre-construction surveys for nesting raptors and migratory birds, including but not necessarily limited to, yellow-billed cuckoo, California warbler, yellow-breasted chat, and loggerhead shrike, shall be conducted by a qualified biologist. A minimum of one survey must be conducted no more than 14 days prior to the initiation of Project activities. If an active nest is found in close proximity to (i.e., within 250 feet) an active restoration area that will be disturbed by proposed Project activities, a qualified biologist shall determine the extent of a construction-free buffer zone to be established around the nest.	Pre-construction	If required, prior to initiating construction	Department / Project Engineer / Project Contractor	
Mitigation Measure #3–Bats				
▪ In the event that native trees greater than or equal to 12 inches in diameter at 4.5 feet above grade within the Colusa-North Tract would be removed, a pre-construction survey for roosting bats shall be conducted prior to removal. No activities that would result in disturbance to active roosts of special-status bat species shall proceed prior to the completed survey. If no active roosts are found, then no further mitigation is needed. Because bats are known to abandon young when disturbed, if a maternity roost is located, a qualified biologist will determine the extent of a construction-free zone to be established around the roost; access and time limits shall also be identified. If either a maternity roost or hibernaculum (i.e., a location used for hibernation) is present, the following measures shall also be implemented. CDFG shall also be notified of any active nurseries or hibernacula identified in the survey. ▪ If active maternity roosts or hibernacula are found, the Colusa-North temporary access road will be relocated to avoid the loss of the tree occupied by the roost, if feasible. ▪ If an active nursery roost is located and the access road can not be relocated to avoid removal of the occupied tree or structure, demolition of that tree or structure should commence before maternity colonies form (i.e., prior to	Pre-construction / Construction	During review of final design package and, if required, during construction phase	Department / Project Engineer / Project Contractor	

Mitigation Measure	Implementation Phase	Monitoring Frequency / Timing	Responsible Parties	Verification (date and initials)
March 1) or after young are volant (flying) (i.e., after July 31) and the disturbance-free buffer zones described above shall be observed during the maternity roost season (March 1 to July 31). ▪ If a non-breeding bat roost or hibernacula is found in a structure or tree scheduled to be removed, the individuals shall be safely evicted, under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG), by opening the roosting area to allow air flow through the cavity. Demolition shall then follow no sooner than the following day (i.e., there will be no less than one night between initial disturbance for airflow and the demolition). This action should allow bats to leave during dark hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.				
Mitigation Measure #4–Riparian Habitat at Colusa North Tract				
▪ If a temporary access road is constructed at Colusa-North, the impact to existing habitat shall be minimized by implementing the following measures: ▪ The access road shall be designed with the minimum width needed for tractors and other equipment and the minimum length needed from the existing levee road to the site. ▪ Upon completion of Project activities at the Colusa-North Tract, the land surface affected by the access road shall be restored as closely as practicable to preconstruction contours and revegetated with native riparian species.	Pre-construction / Construction	During review of final design package and, if required, during construction phase	Department / Project Engineer / Project Contractor	

Mitigation Measure	Implementation Phase	Monitoring Frequency / Timing	Responsible Parties	Verification (date and initials)
Mitigation Measure #5–Wetlands				
▪ Prior to the initiation of any ground-disturbing activities at the Womble and Colusa-North tracts, a qualified biologist shall identify all features that may exhibit wetland characteristics (i.e., suspected of meeting wetland criteria, including waters subject to USACE jurisdiction, as well as other waters not subject to USACE jurisdiction but subject to the jurisdiction of the Regional Water Quality Control Board (RWQCB)). These features plus an appropriate protective buffer shall be flagged or fenced prior to the start of start of site preparation, irrigation system installation, or other ground disturbance.	Pre-construction / Construction	During review of final design package and, if required, during construction phase	Department / Project Engineer / Project Contractor	
▪ Mechanized equipment operation in and within 100 feet of identified features shall be avoided to the extent practicable. If avoidance of discharge of dredged or fill material is not practicable, the following measures shall be implemented. ▪ Conduct a wetland delineation pursuant to USACE requirements to determine the nature and extent of "waters of the United States" that are subject to restoration activies within the Womble and Colusa-North tracts. ▪ Prior to any discharge of dredged or fill material into "waters of the United States," including wetlands, authorization under a Nationwide Permit or Individual Permit shall be obtained from the USACE. For fill requiring a USACE permit, water quality certification shall be obtained from the RWQCB prior to discharge of dredged or fill material. ▪ Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any intermittent or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFG, and, if required, a Streambed Alteration Agreement shall be obtained. ▪ Construction activities that would have an impact on "waters of the United States" shall be conducted during the dry season to the extent practicable to minimize erosion. ▪ All measures contained in permits or associated with agency approvals shall be implemented.	Pre-construction / Construction	During review of final design package and, if required, during construction phase	Department / Project Engineer / Project Contractor	

Mitigation Measure	Implementation Phase	Monitoring Frequency / Timing	Responsible Parties	Verification (date and initials)
CULTURAL RESOURCES				
Mitigation Measure #6–Construction Worker Training and Inadvertent Discoveries Prior to initiation of construction or ground-disturbing activities, TNC shall provide worker awareness training and informational materials to all construction workers regarding the possibility of discovering prehistoric or historic cultural resource materials. Personnel shall be instructed that if materials are encountered that may represent archaeological material, work within 50 feet of the find shall be halted and a professional archaeologist shall be consulted. Once the find has been identified, TNC's project archaeologist will make the necessary plans for treatment of the cultural resources and for the evaluation and resolution of any adverse effect to such properties pursuant to the NHPA and CEQA. Work may continue on other parts of the proposed Project while mitigation for historical or unique archaeological resources takes place.	Project Design / Pre-Construction / Construction	As required during the construction phase	Department / Project Engineer / Project Contractor	
Mitigation Measure #7–Protection of Known Cultural Sites A professional archaeologist shall be present during ground-disturbing activities on the one tract (identified in the confidential cultural resources investigation) where cultural materials are suspected. The archaeologist shall have authority to stop work if needed. If potentially significant cultural materials are detected, all work shall halt within a 100-foot radius of the find until clearance is provided by the archaeologist. CDFG, in consultation with TNC's project archaeologist, shall determine the need for additional cultural resources monitoring in areas removed from the identified feature.	Project Design / Pre-Construction / Construction	As required during the construction phase	Department / Project Engineer / Project Contractor	
Mitigation Measure #8–Monitor for Known Cultural Site An experienced Native American monitor, representing a local group such as the Cortina Band of Indians (Cortina Indian Rancheria, Wintun Tribe) shall be present during ground-breaking activities on the one tract (identified in the confidential cultural resources investigation). In the event of the inadvertent discovery of human remains, the monitor will facilitate Native American consultation, but will not replace the required protocol outlined in Mitigation Measure 9, below. CDFG, in consultation with TNC's project archaeologist, shall determine the need for additional cultural resources monitoring in areas removed from the identified feature.	Project Design / Pre-Construction / Construction	As required during the construction phase	Department / Project Engineer / Project Contractor	

Mitigation Measure	Implementation Phase	Monitoring Frequency / Timing	Responsible Parties	Verification (date and initials)
Mitigation Measure #9–Inadvertent Discovery of Remains If human remains are encountered during construction, work in the affected portion of the Project shall stop and the County Coroner's Office shall be immediately contacted. If the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by Public Resources Code, Section 5097. The NAHC will notify designated Most Likely Descendants, who will provide recommendations for the treatment of the remains within 24 hours. The NAHC will mediate any disputes regarding treatment of remains.	Project Design / Pre-Construction / Construction	As required during the construction phase	Department / Project Engineer / Project Contractor	