SOLANO COUNTY
DEPARTMENT OF RESOURCE MANAGEMENT
Planning Services Division

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MITIGATED NEGATIVE DECLARATION

PROJECT PROPONENT/APPLICANT:	**APPLICATION NO: U-23-03**	**APN:**
Westervelt Ecological Services, LLC	**PROJECT PLANNER: Matt Walsh**	**177-110-26** **177-150-01** **177-110-13**

PROJECT DESCRIPTION AND LOCATION:

The project consists of the development of the Cache Slough Mitigation Bank (Bank), a private commercial mitigation bank, at the southernmost reach of the Yolo Bypass. The project would include a low water crossing under State Route 84 and would restore over 300 acres of tidal freshwater wetland and floodplain-associated vegetation communities within the interior of the project site that will expand available juvenile rearing habitat and increase food web support for at-risk Delta fish species.. The property is located the southernmost reach of the Yolo Bypass, adjacent to the City of Rio Vista.

FINDINGS:

The Solano County Department of Resource Management has evaluated the Initial Study which was prepared with regards to the project. The County found that with the implementation of mitigation measures, no potentially significant adverse environmental impacts likely to occur. The County determined that the project qualifies for a Mitigated Negative Declaration. The Initial Study of Environmental Impact, including the project description, findings and disposition, is attached.

MITIGATION MEASURES INCORPORATED INTO PROJECT DESCRIPTION

See Attached Table of Mitigation Measures.

PREPARATION:

This Mitigated Negative Declaration was prepared by the Solano County Department of Resource Management. Copies may be obtained at the address listed below or at www.solanocounty.com under Departments, Resource Management, Documents, Environmental Impact Reports and Negative Declarations.

Allan Calder

Allan Calder, Planning Program Manager
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MITIGATION MEASURES
FOR THE CACHE SLOUGH MITIGATION BANK

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
Environmental Commitments (EC)					
EC-1: Project Permits and Authorizations A copy of all applicable agency permits and authorizations will be maintained by the construction foreman/manager on the project site for the duration of construction activities.	Building/Grading Plans shall be submitted by the Project Engineer to the Solan County Building Official Prior to and during construction	Throughout construction	County of Solano Resource Management Building Official and Project proponent		
EC-2: Construction Work Windows General and in-water construction work windows will be implemented in accordance with permits and authorizations and at minimum will be limited to the giant garter snake active period and non-rainy season (May 1 through October 1) when working in the Yolo Bypass floodway and within suitable giant garter snake aquatic and upland habitat (uplands within 200 feet of suitable aquatic habitat) and to the summer low-flow months (June 1 to November 1) when working in open water of Cache Slough and the Sacramento River. Vegetation clearing, grubbing, and installation of erosion control measures that occur within habitat containing burrows, cracks, or underground structures (i.e., culverts) that are located within 100 feet of suitable giant garter snake aquatic habitat will be limited to daytime hours between 11:00 a.m. and 6:00 p.m., when snakes are most likely to be above ground and active.	Prior to and during construction	May 1 to November 1	County of Solano Resource Management Department and Project proponent		
EC-3: Work during Daylight Hours Construction activities will generally be limited to daylight hours, to the extent practicable. If nighttime construction is necessary, including in tidally influenced waters where tides may limit daylight access and work schedules, all project lighting (e.g., staging areas, equipment storage sites,	During construction	Throughout construction	Solano County Planning Division and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
roadway, construction footprint) will be selectively placed and directed onto the roadway or construction site and away from sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats. If the work area is near surface waters, the lighting will be shielded so that it does not shine directly into the water.					
EC-4: Qualified Biologist and Agency-Approved Biologist Biological monitoring and construction oversight for the project will be provided by biologists at two different experience levels, depending on the species or activity. a. Qualified Biologist: The Qualified Biologist is required to meet certain qualifications, as confirmed by the Project Proponent. Résumé review by the regulatory agencies is not required for the Qualified Biologist. Minimum qualifications for the Qualified Biologist include a bachelor's degree in biological or environmental science, natural resources management, or related discipline; field experience in the habitat types that occur at the project site; familiarity with the species that may occur at the project site; and prior preconstruction survey, construction monitoring, or construction oversight experience. b. Agency-Approved Biologist: For some species (e.g., giant garter snake, northwestern pond turtle), additional qualifications may be required for the monitoring biologists. Résumé(s) for the Agency-Approved Biologist(s) with experience in the identification and ecology of the species for which coverage is requested will be submitted to the applicable wildlife agency for review and approval at least 30 days prior to any activity for which the protection measures indicate that an Agency-Approved Biologist is required.	Submittal of report to the Resource Management Department Prior to construction	30 days prior to construction	Resource Management Planning Division and Project proponent		
EC-5: Environmental Training Program Prior to beginning work on the site, all contractors involved in project construction will be provided with resource-specific protection measures to follow during implementation of the project. In addition, a Qualified Biologist (i.e., knowledgeable about species and resources present onsite) will provide the construction crew with environmental awareness training to cover the protected species potentially found in the project vicinity, the protection afforded the species by existing laws and regulations (i.e., ESA, California Endangered Species Act [CESA], California Fish and Game	Submittal of environmental awareness information to the Resource Management Department Prior to and during construction	Throughout construction	Solano County Planning Division and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
Code, and Migratory Bird Treaty Act) and guidance on those specific protection measures that must be implemented as part of the project, including procedures to follow if a protected species is encountered.					
EC-6: Clearance Surveys and Environmental Monitoring A Qualified Biologist will perform site clearance surveys prior to the start of daily earthmoving activities that occur in or immediately adjacent to protected species habitats (e.g., riparian, emergent marsh, open water). The Qualified Biologist will monitor all vegetation clearing and grubbing activities that occur within sensitive species habitats (i.e., within 200 feet of suitable aquatic habitat for giant garter snake and northwestern pond turtle). At minimum, the Qualified Biologist will conduct weekly site inspections to ensure that all applicable protection measures are implemented during construction. The Qualified Biologist will have the authority to stop work if they determine that any permit requirement is not fully implemented or if deemed necessary to protect sensitive species or resources. The Qualified Biologist will prepare and maintain a biological monitoring log of construction site conditions and observations, which will be kept on file. An Agency-Approved Biologist will be available on call during activities with potential to affect giant garter snake. No snakes will be handled, moved, or relocated without proper agency authorizations.	Submittal of report to Resource Management Department Prior to and during construction	Throughout construction	Solano County Planning Division and Project proponent		
EC-7: Work Area and Environmentally Sensitive Areas Prior to initiating construction activities (including staging), brightly colored fencing, flagging, or other practical means will be erected to demarcate the limits of permitted project activities, including the boundaries of designated staging areas; ingress and egress corridors; stockpile areas for spoils disposal, soil, and materials; and sensitive resource exclusion zones (i.e., active bird nests, elderberry shrubs). Flagging or fencing will be maintained in good repair for the duration of project activities. Where practicable, wildlife exclusion fencing will be installed around the perimeter of the active construction and suitable giant garter snake and northwestern pond turtle aquatic habitat that occurs within 200 feet of active construction to minimize the potential for these and other sensitive terrestrial species to enter the construction work area. The wildlife exclusion fencing will remain in place throughout the duration of	Prior to and during construction	Throughout construction	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
construction activities and will be inspected and maintained regularly by the Qualified Biologist until completion of the project. Repairs to the wildlife exclusion fencing will be made within 24 hours of discovery. When fencing is not practicable due to topography, soil, conflicts with construction activities, or other factors, monitoring by a Qualified Biologist during construction activities will be used in lieu of wildlife exclusion fencing.					
EC-8: Terrestrial Species Entrapment Prevention. To prevent the accidental entrapment of terrestrial wildlife species (including giant garter snake and northwestern pond turtle) during construction, all excavated, steep-walled holes or trenches will be covered with appropriate covers (e.g., plywood, thick metal sheets, or similar materials) at the end of each workday. Covers will be placed so that trench edges are fully sealed with rock bags, sand, or other appropriate material. Alternatively, one or more escape ramps (e.g., fill dirt, wood planking) will be installed at an angle no greater than 30 degrees, to allow wildlife to escape. Before holes or trenches are filled, sealed, or collapsed, the holes or trenches will be thoroughly inspected for trapped animals. If pipes are stored onsite or in associated staging areas, they will be capped when not in use or stored above ground level at an appropriate height to minimize species entrapment and will be inspected before being moved. Any animals discovered will be allowed to escape voluntarily or will be relocated, with appropriate agency authorization.	During construction	Throughout construction	Solano County Resource Management Department and Project Proponent		
EC-9: Minimize Vegetation Disturbance Disturbance to native vegetation will be limited to the construction area and necessary access routes and staging areas. Existing native vegetation will be retained as practicable, emphasizing the retention of shade-producing and bank-stabilizing trees and brush with greater than 6-inch-diameter branches or trunks along existing riparian habitats and streambanks.	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		
EC-10: Revegetation Methods All temporarily disturbed areas will be decompacted and seeded/planted with an assemblage of native riparian, wetland, and/or upland plant species suitable for the area. Plants for revegetation will come primarily from active seeding and planting, or from natural recruitment (e.g., in tidal and managed wetlands and working landscapes where disturbed areas	During and post construction	Throughout construction	Solano County Resource Management Department		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
typically revegetate more quickly through natural recruitment than through seeding). Nursery stock and seed will be sourced from the ecoregion, when practical. Only native plants will be used for restoration efforts. Certified weed-free native mixes and mulch will be used for any restoration planting or seeding. Revegetation activities in and adjacent to waterbodies and other aquatic habitat will commence after construction activities at the site are complete. Areas that will be intertidal and subtidal will be planted with tule at appropriate elevations and densities, but otherwise intertidal areas will not be planted or seeded. To prevent colonization or recolonization by nonnative invasive species, any area barren of vegetation as a result of project implementation will be mulched, seeded, or planted with native trees, shrubs, willow stakes, native grass seed mixes, or herbaceous plant species, following completion of project construction and prior to November 15 of the project year, or later depending on rainfall. All exclusion netting/caging placed around plantings will be removed after 2 years or sooner. Irrigation may also be required to ensure survival of containerized shrubs or trees or other vegetation, depending on rainfall.			and Project proponent		
EC-11: Minimize Spread of Invasive Species The spread or introduction of nonnative invasive plants (e.g., those rated as invasive by the California Invasive Plant Council [Cal-IPC], or local problem species) and animal species will be avoided to the extent possible. When practicable, nonnative invasive plants in the project area will be removed and properly disposed of in a manner that will not promote their spread. Invasive plant material will be destroyed using approved protocols and disposed of at an appropriate upland disposal site. Stockpiling of invasive plant materials is prohibited during the flood season (typically November to April). To avoid spreading pathogens or nonnative invasive species, construction equipment will be cleaned of any sediment or vegetation at designated offsite wash stations before entering or leaving the project area. Isolated infestations of nonnative invasive species identified in the project area will be treated with weed management methods at an appropriate time to prevent further formation of seed and destroy viable plant parts and seed.	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Compliance Verification Date
Upland areas will use rice straw or weed-free local slash/mulch for erosion control; the remainder of the project area will use certified, weed-free erosion control materials. Invasive species BMPs will follow guidelines in the California Department of Fish and Wildlife's (CDFW's) *California Aquatic Invasive Species Management Plan* (California Department of Fish and Game 2008) and *Aquatic Invasive Species Decontamination Protocols* (California Department of Fish and Wildlife 2022). Onsite construction personnel will be educated on weed identification and the importance of controlling and preventing the spread of invasive weeds.					
EC-12: Staging Areas Staging areas will be established for equipment storage and maintenance, construction materials, fuels, lubricants, solvents, and other possible contaminants. Fluids will be stored in appropriate containers with covers and will be properly recycled or disposed of offsite. Machinery stored onsite will have pans or absorbent mats placed underneath potential leak areas. Staging areas will have a stabilized entrance and exit and will be at least 100 feet from bodies of water, unless site-specific circumstances do not allow such a setback; in such cases, the maximum setback possible will be used. Where feasible, staging will occur on access roads or other previously disturbed upland areas to avoid sensitive habitats and limit disturbance to surrounding habitats. If sensitive species are potentially present within the proposed staging area, the Qualified Biologist will survey the selected site to verify that no sensitive resources would be disturbed by staging activities.	Prior to and during construction	Throughout construction	Solano County Building Official and Project proponent		
EC-13: Equipment Maintenance All construction equipment will be in good working condition, showing no signs of fuel or oil leaks. Prior to construction, all mechanical equipment will be thoroughly inspected and evaluated for the potential of fluid leakage. All mechanical equipment will be inspected on a daily basis to ensure there is no motor oil, transmission fluid, hydraulic fluid, or coolant leaks. All leaks will be repaired in the equipment staging area or other suitable location prior to resumption of construction activity. Equipment stored for a lengthy period of time (more than 1 week onsite) will have drip and leak pans placed underneath potential leak areas to contain accidental drips.	During construction	Throughout construction	Solano County Building Official and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
EC-14: Speed Limits and Fugitive Dust Reduction To reduce dust, construction vehicle speeds will be limited to 20 miles per hour when traveling on unpaved surfaces. Speed limits within 200 feet of suitable giant garter snake aquatic habitat on unpaved surfaces will be limited to 15 miles per hour. Drivers will stop for snakes encountered when driving onsite and wait for the snake to leave on its own or drive around, completely avoiding the snake. Stockpiled materials susceptible to wind-blown dispersal will be covered with plastic sheeting or other suitable material to prevent movement of the material. During construction, water (e.g., trucks, portable pumps with hoses) or other approved methods will be used to control fugitive dust. Dust suppression activities must not result in a discharge to waterbodies.	Specifications shall be submitted by the Project Engineer to the Solano County Public Works Division. During construction	Throughout construction	Solano County Public Works Division and Project proponent		
EC-15: Wildfire Prevention With the exception of vegetation-clearing equipment, no vehicles or construction equipment will be operated in areas of tall, dry vegetation. A fire prevention and suppression plan will be developed and implemented for all maintenance and repair activities that require welding or otherwise have a risk of starting a wildfire.	Prior to and during construction	Throughout construction	Solano County Resource Management Department and Project proponent		
EC-16: Trash Removal During project activities all trash, especially food-related refuse that may attract potential predators or scavengers, will be properly contained in sealed containers, removed from the work site, and disposed of weekly, at minimum.	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		
EC-17: Post-Construction Cleanup Work pads, temporary falsework, and other construction items and debris will be removed from the 100-year floodplain by the end of the construction window and deposited at an appropriate disposal or storage site. Removal of materials must not result in discharge to waterbodies.	Post construction	Following completion of construction activities	Solano County Resource Management Department and Project proponent		
EC-18: Erosion Control Materials Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion.	Specifications shall be submitted by the Project Engineer to the	Throughout construction	Solano County Resource Management		

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To prevent terrestrial wildlife from becoming entangled, trapped, or injured, plastic or synthetic monofilament erosion-control netting or similar material containing netting will not be used at the project site. Acceptable substitutes include natural fibers such as jute, coconut, twine, or tackified hydroseeding compounds	Solano County Public Works Division. During and post construction		Department and Project proponent		
EC-19: Stormwater Pollution Prevention Plan The project is required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Order for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Order). A site-specific stormwater pollution prevention plan (SWPPP) will be prepared and implemented for the project, as required by the Construction General Order. The SWPPP will include site-appropriate BMPs to control erosion and reduce the potential release of water quality pollutants to receiving waters.	The SWPPP shall be submitted by the Project Engineer to the Solano County Public Works Division. Prior to, during, and post construction	Throughout construction	Solano County Resource Management Department and Project proponent		
EC-20: Hazardous Materials Management Plan Prior to the construction mobilization, a hazardous materials management plan (HMMP) will be developed and implemented by the construction contractor. The HMMP will provide detailed information on the types of hazardous materials that could be used or stored onsite; phone numbers of applicable city, county, state, and federal emergency response agencies; primary, secondary, and final cleanup procedures; emergency-response procedures in case of a spill; and other applicable information. The HMMP will include appropriate practices to reduce the likelihood of a spill of toxic chemicals and other hazardous materials during construction. Any hazardous materials retained onsite will be stored within the designated staging area(s) with an impermeable membrane between the ground and hazardous material, designed to prevent the discharge of pollutants to groundwater and runoff water.	The HMMP will be submitted by the Project Engineer to the Solano County Public Works Division Prior to and during construction	Throughout construction	Solano County Resource Management Department and Project proponent		
EC-21: Spill Prevention, Containment, and Countermeasure Plan Prior to the construction mobilization, a spill prevention, containment, and countermeasure plan (SPCCP) will be developed and implemented by the construction contractor to minimize effects from spills of oil or oil-containing products during project construction. The SPCCP will be developed in accordance with the regulatory requirements of Title 40 of	P The SPCCP will be submitted by the Project Engineer to the Solano County Public Works Division prior to	Throughout construction	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
the Code of Federal Regulations (CFR), Part 112, or the Spill Prevention, Control, and Countermeasure Rule under the Oil Pollution Act of 1990, which includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters of the United States and adjoining shorelines. The SPCCP will address actions used to prevent spills in addition to specifying actions that will be taken should any spills occur, including emergency notification procedures.	and during construction				
EC-22: Concrete Use Poured concrete will be excluded from contact with surface water or groundwater during initial curing, ideally for 30 days after it is poured. During that time, runoff from the concrete will not be allowed to enter surface or groundwater. If this is not feasible due to expected flows and site conditions, commercial sealants that are appropriate for use near water may be applied before the sealant comes into contact with flowing water. If sealant is used, water will be excluded from the site until the sealant is dry and fully cured, according to the manufacturer's specifications. Concrete is considered to be cured when water poured over the surface of concrete consistently has a pH of less than 8.5. Prior to use, all equipment will be cleaned to remove external oil, grease, dirt, or mud. Wash sites will be situated so wash water does not flow into a stream channel or adjacent wetlands. All construction equipment will be in good working condition, showing no signs of fuel or oil leaks. Prior to construction, all mechanical equipment will be thoroughly inspected and evaluated for the potential of fluid leakage. All mechanical equipment will be inspected on a daily basis to ensure there are no motor oil, transmission fluid, hydraulic fluid, or coolant leaks. All leaks will be repaired in the equipment staging area or other suitable location prior to resumption of construction activity. Equipment stored for a lengthy period of time (more than 1 week onsite) will have drip and leak pans placed underneath potential leak areas to contain accidental drips.	During construction	When concrete is poured	Solano County Resource Management Department and Project proponent		
EC-23: In-Water Material Use Selection and use of gravels, cobbles, boulders, and instream woody materials may be used during restoration activities within created stream beds. Gravels imported from a commercial source will be clean-washed and of appropriate size. As necessary to protect sensitive species,	During construction	When materials are placed in an active stream channel	Solano County Resource Management Department		

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placement of stream bed materials will be overseen by a Qualified Biologist. Imported gravel from outside the project watershed will not be from a source known to contain historical hydraulic gold mine tailings, dredger tailings, or mercury mine waste or tailings. Materials that may foul or degrade spawning gravels (e.g., sand or soil eroding from sandbag or earthen dams) will be managed to avoid release and exposure in salmonid streams. Oyster shells or other substrates for stream bed restoration will be cured and inspected to be free of pathogens and nonnative species.			and Project proponent		
EC-23: In-Water Work Access If work requires that construction equipment enter wetlands or below the banks of a water of the United States, equipment with low ground pressure will be used to minimize soil compaction. Low-ground-pressure heavy equipment mats will be used, if needed, to lessen soil compaction. Hydraulic fluids in mechanical equipment working in waters of the United States or any other sensitive species aquatic habitat will not contain organophosphate esters. The amount of time this equipment is stationed, working, or traveling in waters of the United States or other sensitive species aquatic habitat will be minimized. All equipment will be removed from the aquatic feature during nonwork hours or returned to the staging area.	During construction	When equipment is used in and around aquatic resources	Solano County Resource Management Department and Project proponent		
EC-24: In-Water Placement of Materials, Structures, and Operation of Equipment Material used for bank stabilization or in-water restoration will minimize the discharge of sediment or other forms of waste to waters of the United States or other sensitive species aquatic habitat. Construction will occur from the top of the stream bank, on a ground protection mat underlain with filter fabric, or a barge. All materials placed in streams, rivers, or other waters will be nontoxic. Any combination of wood, plastic, cured concrete, steel pilings, or other materials used for in-channel structures will not contain coatings or treatments, or consist of substances toxic to aquatic organisms (e.g., zinc, arsenic, creosote, copper, other metals, pesticides, petroleum-based products) that may leach into the surrounding environment in amounts harmful to aquatic organisms. Except for the following conditions, equipment will not be operated in standing or flowing	During construction	When construction activities are occurring in or around aquatic resources	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
waters without site-specific approval from the appropriate permitting agencies. All construction activities must be effectively isolated from water flows, to minimize the potential for runoff. This may be accomplished by working in the dry season or dewatering the work area in the wet season. When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be removed until all disturbed areas are cleaned and stabilized. The diverted water flow must not be contaminated by construction activities. All open-flow temporary diversion channels must be lined with filter fabric or other appropriate liner material to prevent erosion. Structures used to isolate the in-water work area and/or divert the water flow (e.g., cofferdam, geotextile silt curtain) must not be removed until all disturbed areas are stabilized.					
IV. Biological Resources					
BIO-1: Preconstruction Surveys for Special-Status Plant Species A qualified botanist will conduct preconstruction surveys for special-status plant species in suitable habitat subject to ground-disturbing activities. The surveys will coincide with the identification period of special-status species with potential to occur onsite and will be conducted no more than one year prior to the start of construction.	The survey results shall be submitted to the Resource Management Department. Prior to construction	No more than 1 year prior to the start of construction	Solano County Resource Management Department and Project proponent		
BIO-2: Avoid and Minimize Impacts on Special-Status Plants To the extent possible, the location of access roads, staging areas, and restoration activities will be adjusted to avoid impacts on any documented special-status plant populations that are discovered during the preconstruction surveys or during construction. Prior to ground-disturbing activities, the extent of special-status plant observations identified during preconstruction surveys will be demarcated using flagging or fencing, as site appropriate. Where special-status plants cannot be avoided during construction, impacts will be minimized by reducing the work area to the smallest area necessary to complete the work. Where temporary disturbance is	Prior to and during construction	Throughout construction in areas that support special-status plant population(s)	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
necessary, project activities and necessary ground disturbance will be conducted in a manner that is consistent with the successful reestablishment of the species to the extent possible.					
BIO-3: Restore Habitat for Special-Status Plants Disturbed during Construction If impacts on special-status plants are unavoidable, revegetation material will be salvaged prior to disturbance and used during revegetation following restoration activities. Seed, propagules, and/or rhizomes of impacted special-status plant species shall be collected, as appropriate, under the direction of the qualified botanist from at least 50 percent of plants impacted. Harvested plant seeds or other material shall be stored in a manner suited to the species. Following restoration activities, the collected seeds and propagules shall be planted into suitable habitat within the conserved project footprint.	During and post-construction	Throughout construction in areas that support special-status plant population(s)	Solano County Resource Management Department and Project proponent		
BIO-4: Dewatering Habitat for Giant Garter Snake Where appropriate to protect giant garter snake, suitable aquatic habitat suitable will be dewatered prior to ground disturbance and will remain dewatered and absent of aquatic prey for 48 hours prior to the initiation of construction activities. This approach may be most appropriate where habitats to be dewatered are relatively small compared to adjacent habitats or where the work areas will be isolated from nearby aquatic habitat. If complete dewatering is not possible due to groundwater intrusion, the water feature will be thoroughly inspected by a Qualified Biologist prior to the commencement of construction to ensure that no snakes are present. Engineering controls will be instituted as appropriate to prevent snakes from being entrained by the suction of large pumps used in dewatering. Such controls may include installation of a wire cage to create an area of separation between the water body and the intake. A Qualified Biologist will be present during the initial dewatering activities and will periodically inspect the aquatic habitat being dewatered to confirm that it remains dry and incapable of supporting aquatic giant garter snake prey.	Prior to construction	48 hours prior to construction in suitable giant garter snake aquatic habitat	Solano County Resource Management Department and Project proponent		
BIO-5: Preconstruction Giant Garter Snake and Northwestern Pond Turtle Survey	The survey results shall be submitted to the Resource	72 hours before ground	Solano County Resource		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
A Qualified Biologist will conduct preconstruction surveys for giant garter snake and northwestern pond turtle within 72 hours prior to any initial ground disturbance in all suitable habitat in or adjacent to the project site within accessible habitat to identify locations where the species may be present, evaluate current activity status in the project area, and protect the species and its habitat from avoidable construction-related disturbance. The intent of the survey is to assess current species' habitat and use locations in the project area immediately prior to construction. The preconstruction survey is not intended to be a presence/absence or protocol-level survey. Preconstruction surveys may be phased across a project site to correspond to areas with active construction. Only areas where disturbance is imminent need to be surveyed. The project area will be reinspected by a Qualified Biologist whenever a lapse in construction activity of 5 days or more has occurred.	Management Department. Prior to and during construction	disturbance within suitable giant garter snake and western pond turtle habitat	Management Department and Project proponent		
BIO-6: Giant Garter Snake and Northwestern Pond Turtle Avoidance If a giant garter snake or northwestern pond turtle is encountered in the project area, all activities that have the potential to result in the harm, injury, or death of the individual will cease within 50 feet of the snake or turtle. An Agency-Approved Biologist will be notified immediately and will assess the situation to select the course of action that will minimize adverse effects on the individual and avoid take. If a giant garter snake or northwestern pond turtle is encountered in the project area and is not moving or is in a burrow or other refugia then the animal will be left undisturbed, and the occupied area will be marked for avoidance by construction equipment. The snake or turtle will be monitored by an Agency-Approved Biologist to ensure avoidance until the animal moves out of the construction area on its own.	During construction	Throughout construction	Solano County Resource Management Department and Project Proponent		
BIO-7: Preconstruction Nesting Bird Surveys A Qualified Biologist will conduct nesting bird surveys prior to the start of construction activities, including grubbing, that occur between March 1 and August 31. A minimum of two separate surveys will be conducted to look for active nests of migratory birds, including raptors within and adjacent to the construction area. Surveys will include a search of all trees, shrubs, and ground vegetation within the project footprint. In addition, a 0.25-mile area from the project will be surveyed for nesting raptors to identify raptor	The survey results shall be submitted to the Resource Management Department. Prior to and during construction	One survey no more than 14 days and one survey no more than 48 hours prior to construction within nesting	Solano County Resource Management Department and Project proponent		

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species that could be affected by construction disturbances, particularly special-status raptors (i.e., Swainson's hawk). In areas where access is not permitted, the biologist will use binoculars and spotting scopes to inspect any potential nest trees, particularly large trees and snags. One survey will occur within 48 hours prior to the start of construction. Additional surveys may be required as the location of active construction moves to different areas of the project site. If no active nests are detected during these surveys, no additional protection measures are required.		bird habitat, March 1 to August 31			
BIO-8: No-Disturbance Buffers for Active Bird Nests If an active nest is found in the preconstruction nesting bird survey area, a no-disturbance buffer would be established to avoid disturbance or destruction of the nest site until the end of the breeding season (August 31) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the construction area (this date varies by species). The extent of these buffers would be determined by the qualified wildlife biologist in coordination with any applicable agencies (as determined by species) and would depend on the level of noise or construction disturbance taking place, line of sight between the nest and the disturbance, ambient levels of noise and other non-project disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species; however, a minimum of 50 feet for songbirds and 300 feet for raptors is typical.	Prior to construction	Throughout construction, March 1 to August 31	Solano County Resource Management Department and Project proponent		
BIO-9: Dewatering for Aquatic Species If dewatering is required to perform project activities within a waterway supporting fish, a dewatering plan will be prepared and implemented and will include a description of the proposed dewatering structures and appropriate BMPs for the installation, operation, maintenance, and removal of those structures. The period of dewatering will extend only for the minimum amount of time needed to perform the restoration activity and to allow sensitive species time to leave on their own before final clearance surveys and construction can begin. Dewatering will occur via gravity-driven systems, where feasible and except as specified below. Dewatering will be designed to avoid direct and preventable indirect mortality of fish and other aquatic species. If sensitive fish species may be present in the area to be dewatered, a fish capture and relocation plan will	During construction	During in-water work requiring dewatering	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Compliance Verification Date
be developed and implemented for review and approval by the appropriate wildlife agencies (i.e., NMFS, USFWS, and CDFW). When gravity-fed dewatering is not feasible and pumping is necessary to dewater the work site, a temporary siltation basin and/or silt bags may be required to prevent sediment from reentering the wetted channel. Silt fences or mechanisms to avoid sediment input to the flowing channel will be installed adjacent to flowing water. Water pumped or removed from dewatered areas will be conducted in a manner that does not contribute turbidity to nearby receiving waters. Pumps will be refueled in an area well away from the stream channel. Fuel-absorbent mats will be placed under the pumps while refueling. Equipment working in the stream channel or within 25 feet of a wetted channel will have a double (i.e., primary, and secondary) containment system for diesel and oil fluids. All dewatering work will comply with the California Department of Fish and Game Fish Screening Criteria (California Department of Fish and Game 2002) or NMFS Fish Screening Criteria for Anadromous Salmonids (National Marine Fisheries Service 2022). Pump intakes will be covered with mesh, in accordance with the requirements of current fish screening criteria, to prevent potential entrainment of fish or other aquatic species that could not be removed from the area to be dewatered. The pump intake will be checked periodically for impingement of fish or other aquatic species. Diverted flows must be of sufficient quality and quantity, and of appropriate temperature, to support existing fish and other aquatic life both above and below the diversion.					
BIO-10: In-Water Pile Driving Plan for Sound Exposure If in-water pile driving is determined to be necessary and authorized by the applicable wildlife agencies (i.e., USFWS, NMFS, CDFW), pile driving activities will be designed to minimize acoustic impacts on fish and other aquatic wildlife species. A pile driving plan will be developed and submitted to the appropriate wildlife agencies (i.e., USFWS, NMFS, CDFW) for review prior to the start of in-water project activities that would require pile driving. The pile driving plan will include measures that will be implemented to minimize underwater sound pressure to levels below fish thresholds for peak pressure and accumulated sound exposure levels. Threshold levels will follow guidance provided in the Fisheries Hydroacoustic Working Group's Agreement in Principle for Interim Criteria	Prior to and during construction	During in-water pile-driving activities	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
for Injury to Fish from Pile Driving Activities (Fisheries Hydroacoustic Working Group 2008). The pile driving plan will describe the method that is least impactful to aquatic organisms, and will identify the number, type, and size of piles; estimated sound levels caused by the driving; number of piles driven each day; qualifications requirements for monitors; any other relevant details on the nature of the pile-driving activity; and the actions that will be taken to ensure that a project stays within the required sound exposure thresholds.					
BIO-11: In-Water Pile Driving Methods If in-water pile driving is determined to be necessary and authorized by the applicable wildlife agencies (i.e., USFWS, NMFS, CDFW), pile driving will occur during approved work windows for sensitive fish species (June 1 to November 1), with reduced currents, and only during daylight hours. Pile driving will be conducted with vibratory or low/nonimpact methods (i.e., hydraulic) that result in sound pressures below threshold levels. Applied energy and frequency will be gradually increased until necessary full force and frequency are achieved. If it is determined that impact hammers are required and/or underwater sound monitoring demonstrates that thresholds are being exceeded, the contractor will implement sound dampening or attenuation devices to minimize sound levels; these may include: • A cushioning block used between the hammer and pile. • A confined or unconfined air bubble curtain. • If site conditions allow, pile driving in the dry area (dewatered) behind the cofferdam. Pile driving will follow the criteria outlined in the most recent version of the Caltrans Technical Guidance for Assessment of Hydroacoustic Effects of Pile Driving on Fish (California Department of Transportation 2020).	During Construction	During in-water pile-driving activities	Solano County Resource Management Department and Project proponent		
BIO-12: Sediment Containment During In-Water Pile Driving If in-water pile driving is determined to be necessary and authorized by the applicable wildlife agencies (i.e., USFWS, NMFS, CDFW), a continuous length of silt curtain, fully surrounding the pile-driving area will be used to protect aquatic resources and provide sediment containment while	During Construction	During in-water pile-driving activities	Solano County Resource Management Department		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
construction activities are occurring if working in a wetted channel. The silt curtain will prevent the release of a turbidity plume and trap sediment that may become suspended as a result of the pile driving. The bottom of the silt curtains must be weighted (e.g., with ballast weights or rods affixed to the base of the fabric) to resist the natural buoyancy of the silt curtain fabric and lessen its tendency to move in response to currents. Floating silt curtains will be anchored and deployed from the surface of the water to just above the substrate. The silt curtain will be monitored for damage, dislocation, or gaps and will be immediately repaired where it is no longer continuous or where it has loosened. The silt curtain must restrict the surface visible turbidity plume to the area of pile construction and must control and contain the migration of resuspended sediments at the water surface and at depth.			and Project proponent		
BIO-13: Pile-Driving Monitoring If necessary, a Qualified Biologist will be onsite during pile-driving activities to minimize effects on sensitive fish species. If any stranding, injury, or mortality to a state- or federally listed fish related to pile driving is observed, the appropriate wildlife agency(ies) (i.e., USFWS, NMFS, CDFW) will be notified in writing (e.g., via email) within 24 hours and in-water pile driving will cease until the appropriate agencies with jurisdiction over affected species provide guidance on how to proceed.	During construction	During in-water pile-driving activities	Solano County Resource Management Department and Project proponent		
V. Cultural Resources					
CUL-1: Cultural Resources Awareness Training Before any ground-disturbing and/or construction activities, a qualified archaeologist, defined as an archaeologist meeting or under the supervision of one meeting the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, will conduct a training program for all construction and field personnel involved in ground disturbance. The program will be developed and administered in coordination with California Native American Tribes culturally and geographically associated with the project area. Onsite personnel will attend a mandatory pre-project training that will outline the general archaeological sensitivity of the area and the procedures to follow in the event an archaeological resource and/or	Prior to and during construction	Throughout construction	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
human remains are inadvertently discovered, as well as the significance of the project area and vicinity to California Native American Tribes.					
CUL-2: Inadvertent Discovery of Cultural Resources **I**f archaeological resources are encountered during project implementation, all construction activities within 100 feet will halt, and a qualified archaeologist, defined as an archaeologist meeting or under the supervision of one meeting the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, will inspect the find within 24 hours of discovery and notify the County of their initial assessment. Indigenous archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse. If the County (as the CEQA lead agency) determines, based on recommendations from a qualified archaeologist and a California Native American Tribe representative (if the resource is indigenous), that the resource may qualify as a historical resource, as defined in CEQA Guidelines Section 15064.5, a unique archaeological resource, as defined in PRC Section 21083.2(g), or a tribal cultural resource, as defined in PRC Section 21080.3, the resource will be avoided, if feasible. Consistent with CEQA Guidelines Section 15126.4(b)(3), this may be accomplished through: planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; and/or deeding the site into a permanent conservation easement. If avoidance is not feasible, the County will consult with California Native American Tribes that are culturally and geographically associated with the project area (if the resource is indigenous), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts on the resource pursuant to PRC Section 21083.2 and CEQA Guidelines Section 15126.4. This will include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Compliance Verification Date
treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3). If, during project implementation, the County determines that portions of the project area may be sensitive for archaeological resources or tribal cultural resources, the County may authorize construction monitoring of these locations by an archaeologist and representative from a California Native American Tribe that is culturally and geographically associated with the project area. Any monitoring by a Tribal Monitor will be done under agreements between the County and culturally affiliated California Native American Tribes.					
CUL-3: Inadvertent Discovery of Human Remains In the event of discovery or recognition of any human remains during construction activities, such activities within 100 feet of the find will cease until the Solano County Coroner has been contacted to determine that no investigation of the cause of death is required. The NAHC will be contacted within 24 hours if it is determined that the remains are Native American. The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the lead agency for the appropriate means of treating the human remains and any grave goods. Per PRC Section 5097.98, the County will ensure that the immediate vicinity of the location of the human remains is not damaged or disturbed by further development activity until the County has discussed and conferred with the most likely descendant regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		
IX. Hazards and Hazardous Material					
HAZ-1: Design Habitat Features that Minimize Bird Attractants The following measures will be incorporated into the final habitat design and planting plan to reduce vegetation characteristics that promote large congregations of birds that pose the greatest hazard to aircraft. 1. Develop a planting plan that conforms to the following guidelines:	Prior to construction	During preparation of final site plans	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Compliance Verification Date
a. Tree planting will be limited to a minimum average of 20 feet on-center to promote an open tree canopy and reduce overlapping branches. b. Riparian plantings will favor tree species that provide limited forage for birds, such as alders, cottonwoods, and willows. c. Planted fruit and nut-bearing trees and shrubs such as elderberry, blackberry, dogwood, and walnut will be avoided. d. Willow and dogwood plantings will be limited to no more than 10 percent of restoration area to minimize dense vegetation thickets that can be inhabited by large groups of songbirds. 2. Subtidal channels will be designed to a depth of 7 feet or greater at high tide to discourage the growth of emergent vegetation within open water portions of the project site, limiting habitat for dense-nesting birds such as blackbirds. 3. Aquatic features on the tidal marsh plain will be designed to drain to the subtidal channels on low tide to prevent the establishment of persistent ponds or basins. 4. Avoid installing infrastructure that is designed to attract birds or other wildlife (e.g., nesting boxes) in the project area.					
HAZ-2: Dewater the Restoration Area Prior to and during Construction Prior to initiating restoration activities, existing managed water levels onsite will be reduced to the extent practicable to minimize areas of standing water that could attract birds. Groundwater encountered during construction will be managed to avoid large areas of prolonged ponding.	Prior to and during construction	Throughout habitat restoration activities	Solano County Resource Management Department and Project proponent		
HAZ-3: Conduct Periodic Biological Monitoring during Construction During construction, if a biological monitor is not already required by project permits, a qualified biologist will conduct site visits on a minimum bi-weekly basis to evaluate site conditions, identify potential attractants, and advise on wildlife management methods as needed. Areas of concern (i.e., ongoing construction activities or conditions attracting large flocks of birds for extended periods) will be brought to the attention of the construction manager and the Rio Vista Airport Land Use Commission	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
representative and appropriate actions to address bird attractants will be implemented according to Mitigation Measures HAZ-4 and HAZ-5.					
HAZ-4: Implement Construction Best Management Practices to Maintain a Clean Work Area Follow standard construction BMPs such as properly disposing of trash to avoid attracting wildlife to the construction site. At minimum, food-related trash will be placed in closed containers and removed from the project site at the end of each work week.	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		
HAZ-5: Deter Bird Use of Disturbed Areas during and Immediately Following Construction If large flocks of birds are attracted to the project site during grading or grubbing activities, a means of harassment (e.g., lasers, pyrotechnics) will be used to disperse birds. Ultrasonic bird deterrents may be used in active construction areas where preconstruction bird surveys have confirmed the absence of nearby nesting activity. After initial seeding and outside of the nesting season, deploy deterrents (e.g., propane cannons, lasers, pyrotechnics, or other agency-approved methods) to haze birds such as geese, who may be attracted to new plant growth. The use of bird deterrents will comply with all relevant state and federal laws. As applicable, preconstruction bird surveys will be performed prior to use of deterrents when performed during the breeding season (generally March 1 through August 31) to ensure that suitable buffers are established to prevent adverse effects on nesting birds.	During and post construction	As needed throughout construction and during initial seeding activities post construction	Solano County Resource Management Department and Project proponent		
HAZ-6: Develop and Implement Adaptive Management Strategies to Address Wildlife Hazards Incorporate an adaptive management strategy for wildlife hazards in the mitigation bank's long-term management plan. Management actions would be implemented on an as-needed basis to address observed wildlife hazards and may include, but are not limited to, vegetation management actions such as pruning mature trees to maintain an open canopy, removing snags, and use of bird deterrents as described under Mitigation Measure HAZ-5. The need for and type of adaptive management actions would be coordinated between the mitigation bank land manager, the Rio Vista Municipal Airport, and the Conservation Easement holder for the mitigation bank. Wildlife hazard concerns identified by the Rio Vista Airport	Prior to construction	Prior to agency approval of mitigation bank long-term management plan	Solano County Resource Management Department and Project proponent		

Mitigation Measure/Environmental Commitment	Implementation Phase	Timing	Responsible For Verification	Compliance Verification Initials	Date
would be communicated to the land manager through a through a memorandum of understanding, as described under Mitigation Measure HAZ-7**.**					
HAZ-7: Develop and Implement a Public Safety Memorandum of Understanding Establish a chain of communication between the mitigation bank land manager and the Rio Vista Municipal Airport related to public safety concerns. A communication protocol will be outlined in a memorandum of understanding between the mitigation bank land manager and the city of Rio Vista. The MOU will identify primary contacts, preferred methods and frequency of communication between mitigation bank land manager and the Rio Vista Airport, and timelines for responses and remediation. At minimum, the land manager will coordinate with the Rio Vista Airport at least once annually to discuss current concerns and outcome of any adaptive management activities implemented in accordance with Mitigation Measure HAZ-6.	Prior to construction	Prior to the start of construction	Solano County Resource Management Department and Project proponent		
Mitigation Measure HAZ-8: Fire Prevention Measures. The following fire prevention measures will be implemented. 1. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. 2. Work crews will have appropriate fire suppression equipment available at the work site. 3. On high fire danger days a burn permit is required (as issued by YSAQMD), flammable materials will be kept at least 10 feet away from any equipment that could produce a spark, fire, or flame.	During construction	Throughout construction	Solano County Resource Management Department and Project proponent		