

Mitigation Monitoring and Reporting Program
for the Salt River Ecosystem Restoration Project EIR

Mitigation	Implementing Responsibility	Monitoring Responsibility	Mitigation Timing
3.1 Hydrology and Water Quality			
<p>Mitigation 3.1.1-2.1: Prepare and implement SWPPP</p> <p>Prior to construction of the Salt River Ecosystem Restoration Project, the Humboldt County Resource Conservation District shall obtain authorization from the North Coast RWQCB. As part of this application process, the applicant shall develop a SWPPP and identify Best Management Practices (BMPs) for controlling soil erosion and the discharge of construction-related contaminants. BMPs shall be monitored as specified in the SWPPP for successful implementation. This mitigation measure shall apply to all portions of the Salt River Ecosystem Restoration Project and related projects that involve construction activities.</p> <p>The SWPPP shall be prepared prior to any construction on any portion of the project, and implemented during construction. Individual SWPPPs may be prepared for various construction components or phases (e.g., demolition of existing site structures, grading of one parcel, dredging channels, etc.). The SWPPP would also specifically address:</p> <ul style="list-style-type: none"> ▪ Erosion control and maintenance of material stockpiles that remain during the duration of project construction as well as sediment reuse (possibly lasting multiple years). ▪ Erosion and sediment control measures to eliminate or minimize input to surface waters and generation of fugitive dust. ▪ Specify silt fencing or fiber rolls to trap sediments and erosion control blankets on graded slopes and channel banks. ▪ Avoid operating equipment in flowing water by using temporary cofferdams, sheet-piles and/or turbidity curtain and/or other suitable structures to divert flow around the channel and bank construction. <p>The SWPPP(s) shall be prepared according to requirements of the State's construction Activities Storm Water Permit (Construction Permit; State Board Order No. 99-08-DWQ, NPDES Permit CAS000002), following guidance contained in Section A of that permit, and it shall include all appropriate best management practices for minimizing stormwater runoff and the potential pollution it may cause. The SWPPP should also address protecting stockpiles left over winter wet seasons from erosion associated with rainfall and/or flooding. Coverage shall be obtained under the Construction Permit by filing a Notice of Intent and fee prior to construction of any project component.</p>	Construction Contractor	HCRCO Project Manager	Prior to initiation of Construction

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<p>Mitigation 3.1.1-2.2: Implement dewatering restrictions</p> <p>Ponded storm or groundwater in construction areas shall not be dewatered by project contractors directly into adjacent surface waters or to areas where they may flow to surface waters unless authorized by a permit from the North Coast RWQCB. In the absence of a discharge permit, ponded water (or other water removed for construction purposes), shall be pumped into baker tanks or other receptacles, characterized by water quality analysis, and remediated (e.g., filtered) and/or disposed of appropriately based on results of analysis. If determined to be of suitable quality, some of this water may be used on-site for dust control purposes.</p>	Construction contractor will conduct monitoring.	HCRCD Project Manager	Ongoing from start of construction until completion of construction
<p>Mitigation 3.1.1-2.3: Implement contractor training for protection of water quality</p> <p>All contractors that would be performing demolition, construction, grading, or other work that could cause increased water pollution conditions at the site (e.g., dispersal of soils) shall receive training regarding the environmental sensitivity of the site and need to minimize impacts. Contractors also shall be trained in implementation of stormwater BMPs for protection of water quality.</p>	Construction contractor will conduct training.	HCRCD Project Manager	Prior to start of construction
<p>Mitigation 3.1.1-2.4: Minimize potential pollution caused by inundation</p> <p>Sites shall not be inundated (connected to tidal water or upstream freshwater sources) until surface soil conditions have been stabilized, all construction debris removed, and all surface soils have been removed from the site.</p>	Construction contractor	HCRCD Project Manager	Prior to inundation of any sites

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<p>Mitigation 3.1.1-2.5: In-stream erosion and water quality control measures during channel dredging</p> <p>In instances where excavation and/or dredging occurs in an effort to widen/deepen the existing Salt River Channel, in-stream erosion and turbidity control measures shall be implemented. These measures include installation and maintenance of in-stream turbidity curtains and silt-fence along channel banks as specified in project designs, specifications and erosion control plans.</p>	Construction contractor	HCRCD Project Manager	Prior to any excavation
<p>Mitigation 3.1.1-3: Implement water quality monitoring and maintenance plan</p> <p>The long-term monitoring plan shall routinely screen project water quality and source areas leading to degraded water quality. Maintenance and adaptive management strategies shall be designed and implemented under the plan to modify the morphology of poor water quality source areas.</p>	HCRCD Project Manager	HCRCD Project Manager	Ongoing as specified in Water Quality Monitoring Plan
<p>Mitigation 3.1.1-7: Implement erosion monitoring and maintenance plan</p> <p>To ensure no long-term adverse impacts, the project includes a long-term monitoring and maintenance plan that would monitor for excessive erosion and sediment accumulation and prescribe remedies in the form of channel adjustments and sediment excavation on an "as-needed" basis. Monitoring shall be conducted pursuant to the long-term monitoring and maintenance plan. Specific criteria will be developed and stipulated in the plan that will trigger the need for adaptive management and/or maintenance activities. If erosion is so great that it causes water quality impairments, improvements such as channel armoring shall be implemented to manage and reduce erosion.</p>	HCRCD Project Manager	HCRCD Project Manager	Ongoing and post-construction as specified in Water Quality Monitoring Plan
<p>Mitigation 3.1.1-9.1: Armor berms and wetland fringe</p> <p>Restoration design shall account for wind-wave erosion control measures in project design that shall include bioengineering and/or hard-bank stabilization measures. Bioengineering methods may include the planting of specific vegetation species that thrive in anticipated environments (accounting for inundation depth-duration-frequency) such as tules or willows and/or installation of large-wood structures such as bank revetments. Hard-bank stabilization measures pertain to the placement of rock and or rip-rap (or other suitable materials) to effectively protect shoreline banks from erosion.</p>	Project design engineers	HCRCD Project Manager	Prior to approval of final design

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<p>Mitigation 3.1.1-9.2: Implement erosion monitoring and maintenance plan</p> <p>The Monitoring and Mitigation Plan shall include measures to identify and evaluate erosion problems that evolve in response to wind-waves. Similar to the other erosion monitoring and mitigation components, the Plan shall include wind-wave erosion criteria and thresholds that, if exceeded, will trigger maintenance and/or adaptive management measures to repair and eliminate erosional problems.</p>	Project construction contractor and HCRCD Project Manager	HCRCD Project Manager	Ongoing during construction and post-construction
3.3 Biological Resources: Terrestrial/Upland/ Riparian			
<p>Mitigation Measure 3.3.1-2: Preconstruction surveys and possible installation of nest boxes</p> <p>Before riparian areas are cleared, a count of mature trees with available cavities shall be taken to roughly estimate the number of cavities being lost. If the survey and an analysis by a qualified individual demonstrates that the project would result in inadequate habitat remaining for cavity nesters, nest boxes shall be erected to match, as closely as possible, the lost value. Should the findings of the surveys result in the conclusion that nest boxes are not necessary, this mitigation measure would not be required.</p>	Qualified biologist	HCRCD Project Manager	Prior to clearing of any riparian areas
<p>Mitigation Measure 3.3.1-3: Minimizing construction-related disturbance to sensitive habitats</p> <ul style="list-style-type: none"> ▪ The locations of any sensitive habitats to be avoided shall be clearly identified in the contract documents (plans and specifications). ▪ Before clearing and grubbing commences; construction and staging areas shall be flagged to clearly define the limits of the work area. These areas shall be clearly identified on the contract documents (plans and specifications). ▪ Contractors awarded contract packages shall sign a document stating that they have read, agree to, and understand the required resource avoidance measures, and shall have construction crews participate in a training session on sensitive area resources. ▪ A qualified biologist shall be on-site to observe construction activities as appropriate when construction in or adjacent to sensitive habitat such as wetlands or special status species locations occurs. ▪ Site disturbance shall be minimized to the greatest extent possible by using existing disturbed areas for access roads and staging areas, and concentrating the area of disturbance associated with restoration actions to the minimum necessary to complete the project. Where feasible, temporary measures for access or construction, such as the use of temporary tracks or pads, shall be used to minimize impacts. 	Contracting officer or Construction Manager and qualified biologist, as specified in the mitigation measures	HCRCD Project Manager	Contract specification shall be developed prior to signing of contract; biological monitoring as specified in the measure (prior to clearing and during construction)

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<ul style="list-style-type: none"> Restoration activities to restore ecological function and integrity to disturbed habitats, such as revegetation, shall take place as rapidly as possible following habitat disturbance. 			
<p>Mitigation Measure 3.3.1-5.1: Pre-construction removal of dense-flowered cordgrass</p> <p>In order to reduce the likelihood of dense-flowered cordgrass colonizing restored tidal marsh at Riverside Ranch, existing populations in and adjacent to the project area shall be controlled prior to construction using manual, mechanical, and/or approved chemical methods.</p>	HCRCD Project Manager and designees	HCRCD Project Manager	Prior to start of construction
<p>Mitigation Measure 3.3.1-5.2: Monitoring and removal of noxious weeds in restored habitats in the project area</p> <p>Levels of noxious weeds in restored riparian and tidal marsh habitats shall be monitored after project implementation. Noxious weed removal shall be conducted as part of project maintenance over the lifetime of the project. Noxious weed removal techniques shall be described in the management plans for the Salt River and Riverside Ranch, which shall be prepared in consultation with DFG, FWS, and NMFS.</p>	Project biologist	HCRCD Project Manager	Ongoing post-construction as specified in management plans
<p>Mitigation 3.3.1-6: Minimize, avoid, and compensate for impacts to sensitive plants</p> <p>Mitigation for special status plant species is addressed collectively for all species, with modifications noted for individual species. Significant impacts to special-status plant species present or likely to be present onsite shall be minimized, avoided, and contingently compensated by complying with the following:</p> <ul style="list-style-type: none"> Pre-construction surveys: Potential habitat for special-status plant species shall be surveyed in appropriate seasons for optimal species-specific detection prior to project excavation/dredging, fill, drainage, or flooding activities associated with project construction. Survey methods shall comply with CNPS/CDFG rare plant survey protocols, and shall be performed by qualified field botanists. Surveys shall be modified to include detection of juvenile (pre-flowering) colonies of perennial species when necessary. Any populations of special status plant species that are detected shall be mapped. Populations shall be flagged if avoidance is feasible and population is located adjacent to construction areas. Special Status plant surveys were conducted between May and August 2010 in the project area for channel restoration and Riverside Ranch restoration. These surveys documented populations of Lyngbye's sedge and Humboldt Bay owl's clover described above. Special status 	Qualified biologist to conduct surveys; HCRCD contracting officer or Construction Manager to incorporate avoidance information and language into construction contracts	HCRCD Project Manager	Surveys and contract language prior to contracting; avoidance to be implemented throughout construction

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<p>plant surveys would be conducted in the project area for upslope sediment reduction components of the project where work would be conducted in suitable habitat. For example, maple-leaved checkerbloom (<i>Sidalcea malachroides</i>) may occur in broadleaved upland forest or North Coast coniferous forest, often in disturbed areas, and Howell's montia (<i>Montia howellii</i>) has been documented on roadsides in North Coast coniferous forest in the Wildcat Mountains and may occur in upslope sediment reduction areas. Surveys for these and other special status plant surveys with potential to occur in the upslope sediment reduction areas listed in Table 3.3-3 shall be conducted prior to upslope sediment reduction project implementation.</p> <ul style="list-style-type: none"> ▪ The locations of any special status plant populations to be avoided shall be clearly identified in the contract documents (plans and specifications). ▪ If special-status plant populations are detected where construction would have unavoidable impacts, a compensatory mitigation plan shall be prepared and implemented in coordination with USFWS or DFG. Such plans may include salvage, propagation, on-site reintroduction in restored habitats, and monitoring. Plans have been developed for Lyngbye's sedge, Humboldt Bay owl's clover, and eelgrass. These plans are available from the HCRCD, and will be further revised in consultation with regulatory agencies. The plans include the following measures: <ul style="list-style-type: none"> ▫ Impacts to these species shall be avoided or minimized to the extent feasible. If feasible, impacts to these species will be minimized by restricting channel excavation in the portions of the lower Salt River where they are found to a single bank of the channel (e.g. only the east bank). It should be noted that populations of owl's clover can fluctuate dramatically between years (Pickart 2001), making the number of individuals impacted difficult to predict. ▫ Humboldt Bay owl's clover: A qualified botanist shall collect and conserve seed from local populations of Humboldt Bay owl's clover. These seeds shall be used to replant a population of this species to mitigate for the population lost to construction impacts. The project area shall be monitored for five years and compared with a reference population to determine whether replanting and natural recruitment have resulted in population numbers equal to or greater than those present before project implementation. If the population does not appear to have reestablished during the five year period, seed shall be collected from elsewhere and additional attempts shall be made to reestablish the population. ▫ Lyngbye's sedge: Seed shall be collected from Lyngbye's sedge in the project area to be used for replanting in the event that natural recruitment does not result in a post-project population size equal to or greater than the pre-project population size. Monitoring and adaptive management will be conducted for a ten year period to determine whether the area and approximate number of Lyngbye's sedge in the project area is similar to the area of sedge before the project. Additional planting efforts (from seed or from rootstock of mature plants) shall be undertaken if the population size is declining below pre-project size during the monitoring period. ▫ Eelgrass: The extent and density of eelgrass cover within areas of project impact shall be mapped prior to construction. Natural recruitment shall be monitored for 3 years to determine whether eelgrass is naturally recruiting in newly created channels adequately to replace the area of eelgrass lost due to project impacts. If eelgrass does not establish in an area equal to or greater than that lost due to project impacts in the first 3 years, eelgrass shall be actively planted using the most current scientific methods. 			

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<ul style="list-style-type: none"> If USFWS or DFG require propagation or transplantation, scientifically sound genetic management guidelines and protocols for rare plants shall be applied to propagation and transplant plans, possibly including the following: <ul style="list-style-type: none"> maintain some reserve clonal stock of perennial special-status plant populations during the monitoring period to offset the risk of failure in establishing populations in the wild, set aside surplus reserve seed of annual special-status plants from impacted populations conduct long-term monitoring to determine the fate of managed special-status plant populations. <p>No special-status plant species shall be introduced to the site beyond their known historic geographic range unless such introduction is recommended in a final recovery plan or conservation plan prepared and adopted by the USFWS or the CDFG, in formal consultation with the USFWS.</p>			
<p>Mitigation 3.3.1-7: Minimize and avoid impact to nesting special status or migratory birds</p> <p>Construction activities would occur during the breeding and nesting season (March 1-August 15) only following pre-construction site-specific surveys by a qualified biologist. Nesting surveys shall be conducted no more than one week prior to the initiation of site preparation. If surveys identify active nests belonging to common migratory bird species, a 100-foot exclusion zone shall be established around each nest to minimize disturbance-related impacts on nesting birds. If surveys identify active nests belonging to special status birds, an interim no-activity zone of 300 feet shall be established around the nest. If surveys identify active nests belonging to raptors, an interim no-activity zone of 500 feet shall be established around the nest. The radius of the no-activity zone may be modified after consultation with DFG, and the duration of the exclusion shall be determined in consultation with DFG. In order to avoid take of willow flycatchers and western yellow-billed cuckoos during Project activities, in areas where the vegetation is dense and unfeasible to adequately survey, riparian vegetation removal will occur between August 15 and November 30 to avoid the nesting season for these species. For areas with less dense riparian vegetation that can be adequately surveyed, which will be determined in consultation with CDFG, riparian vegetation removal may occur between 1 July and 15 August after surveys for nesting willow flycatchers and presence/absence surveys for other nesting birds are conducted by a qualified biologist prior to the start of vegetation removal. Surveys for willow flycatchers would occur in June and presence/absence surveys for other birds and would occur no more than one week prior to the initiation of site preparation. If active nests belonging to willow flycatchers or western yellow-billed cuckoos are detected during surveys, a 300-foot exclusion zone will be established around each nest in which no construction activities will occur until nesting is completed. The duration of the no-activity exclusion area(s) will be determined in consultation with CDFG.</p>	Project biologist in consultation with CDFG	HCRCD Project Manager	<p>Surveys to be conducted No more than one week prior to initiation of site preparation</p> <p>Development of exclusion zones prior to site disturbance</p>
Mitigation Measure 3.3.1-12: Limit construction access routes and equipment staging areas and	Project construction	HCRCD Project Manager	Ongoing during

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<p>minimize excavation in existing aquatic habitat when eggs and tadpoles are expected to be present and conduct preconstruction surveys for RLF in all suitable habitat that would be disturbed by construction.</p> <p>Construction access routes and equipment staging areas shall be limited within the study area to the extent feasible. Excavation in existing aquatic habitat shall only occur when egg masses and tadpoles are not expected (August 15–October 31) for further protection of frogs. If disturbance in aquatic habitats is necessary prior to August 15, the area shall be cleared of and any tadpoles relocated to suitable habitat.</p>	contractor under direction of project biologist		construction
3.4 Biological Resources: Aquatic			
<p>Mitigation 3.4.1-1.2: Limit initial construction to an extended dry weather season (April – November)</p> <p>Initial project construction activities involving earth moving on any of the sites in an area where material may enter or be transferred to a slough shall be limited to the April 1-November 30 dry season. This would reduce the amount of sediment and contaminants washed into the Salt River and Eel Estuary from the Salt River Ecosystem Restoration Project and related project site by rains. Maintenance activities involving earth moving on any of the sites in an area where material may enter or be transferred to a slough shall be limited to the April 15 1-November 1 dry season. This would reduce the amount of sediment and contaminants washed into the Salt River and Eel Estuary from Salt River Ecosystem Restoration Project maintenance activities.</p>	HCRCD to include as contract provision; contractor to implement	HCRCD Project Manager	Upon initiation of project construction
<p>Mitigation 3.4.1-1.3: Adhere to site-specific construction plans</p> <p>Conduct construction work in accordance with site-specific construction plans that minimize the potential for increased delivery of sediment to surface waters.</p>	Construction contractor	HCRCD Project Manager	Ongoing during project construction
<p>Mitigation 3.4.1-1.5: Minimize removal of and damage to native vegetation</p> <p>During excavation of the main channel, a significant amount of native vegetation must be removed. Where possible, the contractor will use heavy equipment to excavate plants and shrubs with root-wads, and replant these at areas designated by the re-vegetation plan. Native vegetation that is removed or damaged at access ways and within the construction areas shall be replaced under the re-vegetation plan at a 3:1 ratio.</p>	Construction contractor	HCRCD Project Manager	During excavation of main Salt River channel

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<p>Mitigation 3.4.1-1.6: Install temporary construction fencing to identify work areas</p> <p>The project contractors shall install temporary construction fencing to identify areas that require clearing, grading, revegetation, or recontouring, and minimize the extent of areas of areas to be cleared, graded, recontoured, or otherwise disturbed.</p>	Construction contractor	HCRCD Project Manager	Prior to start of grading or clearing
<p>Mitigation 3.4.1-1.9: Fish relocation</p> <p>Before any potential de-watering activities begin in any creeks or channels within the project area, the RCD shall ensure that native aquatic vertebrates and larger invertebrates are relocated out of the construction area into a flowing channel segment by a qualified fisheries biologist. In deeper or larger areas, water levels shall first be lowered to manageable levels using methods to ensure no impacts to fisheries and other special status aquatic species. A qualified fisheries biologist or aquatic ecologist shall then perform appropriate seining or other trapping procedures to a point at which the biologist is assured that almost all individuals within the construction area have been caught. These individuals shall be kept in buckets with aerators to ensure survival. They shall then be relocated to an appropriate flowing channel segment or other appropriate habitat as identified by the RCD in consultation with the NMFS and the DFG. Construction activities shall be prohibited from unnecessarily disturbing aquatic habitat. Federally threatened or endangered aquatic species that occur within the project area either as residents or non-residents are Coho salmon, steelhead, Chinook salmon, green sturgeon, and tidewater goby. Introduced species, particularly Sacramento pikeminnow shall be documented and euthanized, as discussed under Mitigation 3.4.1-4, below.</p>	Project biologist	HCRCD Project Manager	Prior to any dewatering activities
<p>Mitigation 3.4.1-1.10: Tidewater Goby Measures</p> <p>Specific measures designed to avoid or mitigate for impacts to tidewater goby include the following stepwise approach, described in detail in the Draft Biological Assessment for Tidewater Goby under preparation for submittal to the United States Fish and Wildlife Service for consultation. These measures are:</p> <ol style="list-style-type: none"> 1. Prior to commencement of construction, tidewater goby surveys shall be conducted in May at all previously identified tidewater goby survey sites. Tissue samples will be collected for genetic analysis; 2. Construction plans shall ensure avoidance of disturbance to existing tidewater goby habitat at "Site #6" (see Biological Assessment) a possible relocation site for tidewater gobies found prior to dewatering of the Salt River channel; 	Project biologist	HCRCD Project Manager	

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<p>3. Immediately prior to construction season, a tidewater goby survey shall be conducted in May at all sites and Connick to collect tissue samples for genetic analysis;</p> <p>4. For any necessary relocation of tidewater goby, or other aquatic species, seining shall be conducted prior to dewatering of the Salt River channel;</p> <p>5. Captured goby, or other listed species, shall be appropriately relocated as follows:</p> <ul style="list-style-type: none"> a. Relocation of tidewater goby to Connick Ranch, providing genetic analysis so directs; b. Relocation of tidewater goby to "Site #6" (as identified in the Draft Biological Assessment) providing genetic analysis so directs and landowner permission is provided; c. Retention of existing Riverside Ranch habitat at two suitable sites (see Biological Assessment) and relocate tidewater goby to those sites <p>6. Most importantly, many acres of habitat suitable for tidewater goby shall be restored at Riverside Ranch as part of the project description;</p>			
<p>Mitigation 3.4.1-2: Biological monitoring program and adaptive management</p> <p>The RCD shall conduct reviews of the Riverside Ranch property on three occasions to determine the functionality of the newly constructed breach points and tidal habitat. These reviews shall take place at the time of breaching, three months following breaching, and one year following breaching. If at any time entrainment of fish is occurring, the RCD shall retain a hydrologist to review the performance of the project, and to recommend corrective measures.</p>	Project biologist	HCRC Project Manager	At the time of breaching, three months following breaching, and one year following breaching.
3.5 Air Quality			
<p>Mitigation Measure 3.5.1-1.1: Utilize Best Management Practices to minimize fugitive dust generation and assure compliance with North Coast Air Quality Management District rules for particulates</p>	Construction contractor	HCRC Project Manager	Ongoing during-construction

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<p>In order to minimize the generation of fugitive dust, the following best management practices shall be implemented during project construction.</p> <ul style="list-style-type: none"> All active construction areas shall be watered at a rate sufficient to keep soil moist and prevent formation of wind-blown dust. All trucks hauling soil, sand, and other loose materials shall be covered, or all trucks shall be required to maintain at least 2 feet of freeboard. All unpaved access roads, parking areas, and construction staging areas shall be paved, watered daily, or treated with non-toxic soil stabilizers during construction. All paved access roads, parking areas, and construction staging areas shall be cleaned daily with water sweepers during construction. If visible soil is carried out onto adjacent streets, the area shall be washed with water or by a water sweeper truck. Hydroseeding or non-toxic soil stabilizers shall be applied to inactive construction areas (previously graded areas inactive for ten days or more). Exposed stockpiles of dirt, sand, and similar material shall be enclosed, covered, watered daily, or treated with non-toxic soil binders. Traffic speeds on unpaved roads shall be limited to 10 miles per hour. Sandbags, hay bales, or other erosion control measures shall be installed to prevent silt runoff to public roadways. Vegetation in disturbed areas shall be replanted as quickly as possible. Outdoor dust-producing activities shall be suspended when high winds (>15 mph) create visible dust plumes in spite of control measures. Reasonable precautions shall be taken to prevent the entry of unauthorized vehicles onto the site during non-work hours. <p>Construction activities associated with the Project shall comply with AQMD Rule 420 (Particulate Matter) and Rule 430 (Fugitive Dust Emissions), or succeeding AQMD rules that carry out the AQMD's management program for particulate matter. Many of the Best Management Practices listed above are also cited in Rule 430.</p>			
<p>Mitigation Measure 3.5.1-1.2: Minimize construction machinery emissions</p> <p>Contractors shall be required to: 1) minimize idling time to 5 minutes for all trucks; and 2) maintain properly tuned equipment.</p>	Construction contractor to implement; HCRCD to include in contract specifications	HCRCD Project Manager	Ongoing during construction
3.6 Noise			
<p>Mitigation 3.6.1-1: Noise from earthmoving and hauling of soils</p> <p>a) Hours of construction for outdoor activities exceeding 50 dBA shall be limited to Monday through Friday 7:00 a.m.</p>	Construction contractor to implement; HCRCD to	HCRCD Project Manager	During construction

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<p>to 7:00 p.m. and weekends and holidays from 9:00 a.m. to 6:00 p.m. Movement and hauling of material, and associated activities such as re-fueling or maintenance, shall be limited to normal working hours for the area, as specified above.</p> <p>b) All equipment shall operate with factory-equipped mufflers, and staging areas shall be located as far from residential uses as is practical. These conditions shall be incorporated into project contract specifications.</p> <p>c) To the degree feasible, haul trucks shall use haul routes along the existing channel excavation path, or along roadways distant from sensitive receptors. The contractor shall determine the feasibility of developing haul roads along the channel excavation path. Design considerations shall include a minimum of three separate work sites (to minimize travel on County roads). Haul road construction shall be designed to minimize impacts; haul road designs shall include, but not be limited to the placement of geotextile fabric under the haul road for facilitated re-excavation and removal of bedload materials following project completion.</p> <p>d) A haul-truck route plan shall be developed. Hauling shall minimize passing any substantial collection of noise-sensitive land uses (i.e. occupied houses, schools, hospitals), and shall be limited to less than 200 loads per day on any given road.</p> <p>e) Larger capacity belly and end-dump trucks as well as double-trailers shall be utilized whenever feasible.</p>	include in contract specifications		
3.11 Cultural Resources			
<p>Mitigation Measure 3.11.1-1: Cease work and conduct assessment</p> <p>Inadvertent Discovery of Cultural Resources</p> <p>If cultural resources, such as chipped or ground stone, historic debris, building foundations, or bone are discovered during ground-disturbance activities, work shall be stopped within 20 meters (66 feet) of the discovery, per the requirements of CEQA (January 1999 Revised Guidelines, Title 14 CCR 15064.5 (f)) and 36 CFR § 800.13 (a-b). Work near the archaeological finds shall not resume until a professional archaeologist, who meets the Secretary of the Interior's Standards and Guidelines, has evaluated the materials and offered recommendations for further action. Prehistoric materials that could be encountered include: obsidian and chert flakes or chipped stone tools, grinding implements, (e.g., pestles, handstones, mortars, slabs), bedrock outcrops and boulders with mortar cups, locally darkened midden, deposits of shell, dietary bone, and human burials. Historic materials that could be encountered include: ceramics/pottery, glass, metal, can and bottle dumps, cut bone, barbed wire fences, building pads, structures, trails/roads, railroad rails and ties, trestles, etc.</p> <p>Inadvertent Discovery of Human Remains</p> <p>If human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Public Resources Code, Section 7050.5). The Humboldt County coroner will be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with</p>	Construction contractor to report finds; HCRCD construction supervisor to contact archaeologist; qualified archaeologist to conduct evaluations/recommendations	HCRCD Project Manager	Ongoing During construction

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<p>state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Public Resources Code, Section 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98. Work may resume if NAHC is unable to identify a descendant or the descendant failed to make a recommendation.</p> <p>The following text details procedures for treatment of an inadvertent discovery of Human Remains:</p> <ul style="list-style-type: none"> ▪ Immediately following discovery of known or potential human remains all ground-disturbing activities at the point of discovery shall be halted, ▪ No material remains shall be removed from the discovery site, a reasonable exclusion zone shall be cordoned off, ▪ The Project Manager shall be notified and the Project Manager shall contact the county coroner. ▪ It is highly recommended the services of a professional archaeologist be retained to immediately examine the find and assist the process. ▪ All ground-disturbing construction activities in the discovery site exclusion area shall be suspended. ▪ The discovery site shall be secured to protect the remains from desecration or disturbance, with 24-hour surveillance, if prudent. ▪ Discovery of Native American remains is a very sensitive issue, and all project personnel shall hold any information about such a discovery in confidence and divulge it only on a need-to-know basis. ▪ The Coroner has two working days to examine the remains after being notified. If the remains are Native American, the Coroner has 24 hours to notify the Native American Heritage Council (NAHC) in Sacramento (telephone (916) 653-4082). The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) of the deceased Native American. ▪ Within 24 hours of their notification by the NAHC, the MLD shall be granted permission by the landowner's authorized representative to inspect the discovery site, if they so choose. ▪ Within 24 hours of their notification by the NAHC, the MLD shall recommend to the landowner and Project Manager means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The Recommendation may include the scientific removal and nondestructive or destructive analysis of human remains and items associated with Native American burials. ▪ Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his/her authorized representative rejects the recommendation of the MLD and mediation between the parties by the NAHC fails to provide measures acceptable to the landowner, the landowner or his/her authorized representatives shall re-inter the human remains and associated grave offerings with appropriate dignity on the property in a location not subject to further subsurface disturbance. ▪ Following final treatment measures, the Project Manager or professional archaeologist shall ensure that a report is prepared that describes the circumstances, nature and location of the discovery, its treatment, including results of analysis (if permitted), and final disposition, including a confidential map showing the reburial location. Appended to the report shall be a formal record about the discovery site prepared to current California standards on DPR 523 form(s). Report copies will be distributed to the NCIC, NAHC and MLD. 			

Mitigation	Implementing Responsibility	Monitoring Responsibility	Mitigation Timing
<p>Port Kenyon Culturally Sensitive Area</p> <p>It is recommended that pre-project archeological testing be conducted at this location to determine presence or absence of cultural materials within the proposed area of potential effects for this project. It appears that this location contains substantial overburden of flood soils, capping the historic ground surface. Deep auger boring or backhoe trenching is recommended to determine presence or absence of cultural materials within this sensitive area prior to any project related excavations.</p>			
3.12 Transportation			
<p>Mitigation 3.12.1.1: Traffic Control Plan</p> <p>As part of the final construction documents, the contractor shall be required to submit a Traffic Control Plan corresponding to a Work Sequencing Schedule for review and approval by the construction manager prior to commencement of work. The Traffic Control Plan shall provide a narrative supported with figures depicting the haul routes anticipated to be utilized throughout the construction period and shall be developed in accordance to the California Manual on Uniform Traffic Control Devices (MUTCD) and applicable County of Humboldt encroachment permit conditions. The Traffic Control Plan shall detail the desired haul routes, public notification, required signage/flagging, potential lane/road closers, detour routes, provisions for providing temporary pedestrian access (if applicable) and provisions for maintaining access to all parcels. The use of Port Kenyon Road would be important for the transport of material and therefore the crossing replacement shall be scheduled for a time period when haul trucks would be using that portion of the road less frequently. The Traffic Control Plan shall be periodically updated throughout the course of the project.</p>	Construction contractor	HCRCD Project Manager / Construction Manager	To be included in final construction documents
3.14 Hazards and Hazardous Materials			
<p>Mitigation 3.14.1-2.1: Adapt and apply regional best management practices for managed marshes</p> <p>BMPs are habitat-based strategies that can be implemented when needed for mosquito control in managed wetlands. These strategies represent a range of practices that wetland managers can incorporate into existing habitat management plans or in the design of new wetland restoration or enhancement projects. Ideally, BMPs can be used to decrease the production of mosquitoes and reduce the need for chemical treatment without significantly disrupting the ecological character, habitat function, or wildlife use in managed wetlands. Not all BMPs would be appropriate for a given wetland location or set of circumstances.</p> <p>Timing of Managed Marsh Flooding and Drawdown (Nontidal Managed Open Water Options)</p> <p>Timing of flooding and drawdown shall be coordinated with County Department of Public Health, adapted to current-</p>	Project engineers to develop BMP's; construction contractor to implement.	HCRCD Project Manager	During design and construction phases, and post-construction

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<p>year temperature, rainfall patterns, and mosquito vector risks, to minimize mosquito production and vector risks.</p> <p>Rapid Flooding and Drawdown of Managed Marsh</p> <p>Marshes shall be flooded and drawn down (emerged bed) as quickly as operational controls allow.</p> <p>Water Control</p> <p>Once wetlands have been flooded, water surface elevations shall minimally fluctuate prior to drawdown, except during winter periods of low mosquito production. Minimal fluctuation is based on the need to circulate water (maximize turnover). In managed wetland areas, marsh submergence depths shall be managed to maximize areas with minimal initial flooding depths of two feet.</p> <p>Wetland Design Features to Reduce Mosquito Production</p> <p>Managed wetland edges shall be constructed to enable efficient access by vector control field crews for monitoring and treatment. Edge slopes of managed nontidal marsh areas shall be steeper than to 4:1 (horizontal to vertical). Open water areas with sufficient fetch and wind-wave turbulence to minimize mosquito production shall be interspersed within managed marsh, at least 20 percent of total area. Floating aquatic vegetation shall be actively suppressed in open water areas within managed marsh.</p>			