

MITIGATION MONITORING AND REPORTING PROGRAM OCEAN RANCH RESTORATION PROJECT

To avoid, reduce or mitigate significant effects resulting from the proposed Project, Public Resources Code Section 21081.6 requires that monitoring and reporting procedures take place through implementation of a Mitigation Monitoring and Reporting Program (MMRP). [Table 1](#) provides the MMRP for the proposed Project in accordance with those guidelines.

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM

3.3 Air Quality

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
<p>AQ-1 Dust Control Measures During Construction</p> <p>The contractor shall implement the following measures during construction:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, active graded areas, excavations, and unpaved access roads) shall be watered two times per day in areas of active construction. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph), unless the unpaved road surface has been treated for dust suppression with water, rock, wood chip mulch, or other dust prevention measures. • All surfaces to be paved shall be paved as soon as possible. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. Clear signage regarding the same shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications. • A publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints shall be 	<p>Applicant’s contractor</p>	<p>CDFW and construction manager</p>	<p>Prior to and during Project construction</p>

¹ Monitoring and Reporting actions will be funded through the state and federal implementation grants secured for the Project.

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posted. This person shall respond and take corrective action within 48 hours. The North Coast Unified Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.			

3.4 Biological Resources

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
<p>BIO-1a Avoidance and Minimization Measures for Fish and other Aquatic Species.</p> <ul style="list-style-type: none"> The in-water work window for construction, invasive plant management and maintenance activities will be limited to the dry-season (between June 15 and October 15) to avoid or minimize impacts to Tidewater Goby, juvenile salmonids, and Longfin Smelt. Dredging and filling activities should be conducted as late into the construction work window as feasible, to minimize impacts to Goby burrows and because temperatures in the Project Area where dredging is likely to occur tend to be too warm for rearing salmonids after July. Project construction would be phased to allow Tidewater Goby, juvenile salmonids, Longfin Smelt and Pacific Lamprey to move on their own or be relocated to sites outside of where active ground disturbance is occurring. Before potential dewatering or other in-water Project activities begin, a qualified biologist shall ensure that native aquatic vertebrates, and large native invertebrates (if feasible), are relocated out of the construction footprint into a flowing tidal channel segment. Where dewatering needs to occur, all pump intakes will be screened in accordance with National Marine Fisheries Service (NMFS) and CDFW fish screening criteria. In deeper or larger areas, water levels shall 	Applicant's contractor	CDFW and construction manager	During Project construction, invasive plant management, and in-water maintenance

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<p>first be lowered to manageable levels using methods to ensure no adverse impacts to fisheries and other special-status aquatic species occur. The qualified biologist shall then perform appropriate seining or other trapping procedures to a point at which the qualified biologist is assured that almost all individuals within the construction area have been caught. These individuals shall be kept in buckets with aerators and relocated to an appropriate flowing tidal channel segment or other appropriate habitat as identified by the qualified biologist in consultation with NMFS, U.S. Fish and Wildlife Service (USFWS) and CDFW.</p> <ul style="list-style-type: none"> • A pre-construction fish screening shall take place before any in-water Project activities take place in channels that are not dewatered, or are partially dewatered in areas where Tidewater Goby and other native aquatic species have been known to occur (based on previous surveys) or are expected to occur. The pre-construction fish screening shall include both relocation (i.e., seining) and in-water movement in the proposed work area in order to scare fish species away from the work area. • Amphibious vehicles, or other low ground pressure equipment, will not be allowed to contact the channel substrate where special-status fish species may be present. The vehicles will be operated in such a manner that they avoid causing erosion into the channels, to the extent possible. • To minimize erosion effects, silt fencing (or a similar best management practice [BMP]) may be installed along the edge of the work area when adjacent to a waterway (as feasible and where determined effective) and in locations where native aquatic species typically occur (based upon previous surveys). If used, silt fencing will be installed when using methods that are most likely to cause erosion such as grinding, tilling, disking and digging/excavating. Silt fencing does not need to be considered 			

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<p>if conducting construction, invasive plant management or maintenance activities by hand, or if the Project activity does not involve soil disturbance (such as top mowing, herbicide application or smothering).</p>			
<p>HHM-2 Accidents Associated with Release of Chemicals and Motor Fuel</p> <p>Contractors and equipment operators on site during Project activities will be required to have emergency spill clean-up kits immediately accessible. If fuel storage containers are utilized exceeding a single tank capacity of 660 gallons or cumulative storage greater than 1,320 gallons, a Hazardous Materials Spill Prevention Control and Countermeasure Plan (HMSPCCP) would be required and approved by the North Coast Regional Water Quality Control Board (NCRWQCB). The HMSPCCP regulations are not applicable for chemicals other than petroleum products; therefore, the contractor shall prepare a spill prevention and response plan for the specific chemicals utilized during Project activities. This mitigation is intended to be carried out in conjunction with Mitigation WQ-2</p>	Applicant's contractor	CDFW and construction manager	Prior to Project construction, or use of heavy equipment
<p>HHM-4 Avoid Health Effects to the Public and Environment from Herbicide</p> <p>For areas targeted for application of herbicide that are within 500 feet (152 meters) of human sensitive receptors (i.e., houses, schools, hospitals), prepare and implement a herbicide drift management plan to reduce the possibility of chemical drift into populated areas. The Plan shall include the elements listed below. To minimize risks to the public, mitigation measures for herbicide application methods related to timing of herbicide use, area of treatment, and public notification, shall be implemented by entities engaging in treatment activities as identified below:</p>	Applicant's contractor	CDFW and construction manager	Prior to use of herbicide under the Project

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<ul style="list-style-type: none"> • Herbicide will be applied in accordance with the manufacturer’s label. • CDFW will coordinate with the County Agricultural Commissioner to identify and avoid impacts to any nearby sensitive areas (e.g., schools, hospitals) that require notification prior to herbicide applications. • CDFW will identify nearby sensitive habitat and, where feasible, establish buffer zones to avoid affecting sensitive receptors. • Herbicide will be applied using the coarsest droplet size possible that maintains sufficient plant coverage while minimizing drift into adjacent areas. • Herbicide shall not be applied when winds exceed 10 mph or when inversion conditions exist (consistent with the herbicide label); or when wind could carry spray drift into inhabited areas. • Public access to treatment sites will be restricted during treatment windows. • No surfactants containing nonylphenol ethoxylate will be used. 			
<p>WQ-1 Managed Herbicide Control</p> <p>Herbicide shall be applied directly to plants and at low or receding tide to minimize the potential application of herbicide directly on the water surface, as well as to ensure proper dry times before tidal inundation. Herbicide shall be applied by a certified applicator or under the direct supervision of trained, certified or licensed applicators, and in accordance with application guidelines and the manufacturer label. The Project shall obtain coverage under the current statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Residual Aquatic Pesticide Discharges to Waters of the U.S. from Algae and Aquatic Weed Control Applications.</p>	Applicant’s contractor	CDFW and construction manager	During Project construction, and Invasive plant management

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<p>WQ-2 Minimize Herbicide Spill Risks</p> <p>Herbicide shall be applied by or under the direct supervision of trained, certified or licensed applicators. Herbicide mixtures shall be prepared by, or under the direct supervision of trained, certified or licensed applicators. Storage of herbicide and surfactants on or near the Project Area shall be allowed only in accordance with a Spill Prevention and Control Plan approved by the NCRWQCB; on-site mixing and filling operations shall be confined to areas appropriately bermed or otherwise protected to minimize spread or dispersion of spilled herbicide or surfactants into surface waters. This mitigation is intended to be implemented in conjunction with Mitigation Measure HMM-2.</p>	<p>Applicant's contractor</p>	<p>CDFW and construction manager</p>	<p>Prior to herbicide use under the Project</p>
<p>BIO-1b Conduct Pre-construction Nest Surveys for Ground Nesting Special-status and Migratory Avian Species</p> <p>The following measures will be implemented prior to and during construction and invasive plant management activities to avoid and minimize impacts to nesting birds. Maintenance activities that include ground disturbance are also subject to this mitigation measure.</p> <ul style="list-style-type: none"> • CDFW shall attempt to conduct all Project construction and invasive plant management activities in areas where nesting could occur during the period outside the bird nesting season (generally August 1 to March 15). If Project activities are proposed to occur outside the bird nesting season, no further mitigation is necessary. If activities are proposed in the bird nesting season (generally considered between March 16 and July 31), a qualified biologist shall conduct pre-construction surveys within the vicinity of the impact area to check for nesting activity and to evaluate the site for nesting bird species. The qualified biologist shall conduct a minimum of one pre-construction survey within the seven-day period prior to Project 	<p>Applicant or Applicant's contractor</p>	<p>CDFW and construction manager</p>	<p>During pre-construction and pre-invasive plant management.</p>

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<p>construction or invasive plant management activities. If Project activities lapse for seven days or longer during the nesting season, a qualified biologist shall conduct a supplemental avian survey before Project work is reinitiated.</p> <ul style="list-style-type: none"> If an active nest is found, the qualified biologist shall determine the size of an appropriate construction-avoidance buffer zone to be established around the nest and/or operational restrictions in consultation with the CDFW and USFWS (if Federally-listed). Buffer zones shall be delineated with flagging and maintained until the nestlings have fledged and are independent of the nest. Buffer sizes shall take into account factors such as (1) noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity; (2) distance and amount of vegetation or other screening between the construction site and the nest in order to reduce visual stress; (3) sensitivity of nesting species and behavior of the nesting birds; (4) location of the nest in relation to areas to be treated with herbicide. 			
<p>BIO-1c Avoid and Minimize Potential Impacts to Western Snowy Plover</p> <p>Suitable nesting habitat for Western Snowy Plover includes areas of open sand, or sparsely vegetated dunes, above the high tide line (NAVD88). This measure applies to all Project activities that occur within 50 feet (15 meters) of suitable Western Snowy Plover habitat. For the purposes of this measure, Project activities include construction; construction-related access; and all invasive plant management activities targeting removal of European beachgrass (including prescribed burning, herbicide application, manual or mechanical removal, or movement of equipment through European beachgrass).</p> <ul style="list-style-type: none"> Project activities in Western Snowy Plover nesting habitat shall occur if feasible between September 16 and March 15, outside 	Applicant's contractor	CDFW and construction manager	Potentially pre-construction, project construction and invasive plant management.

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<p>of the generally accepted Western Snowy Plover nesting season, unless CDFW and USFWS approve a wider season treatment based on survey data and site-specific conditions.</p> <ul style="list-style-type: none"> • If any proposed Project activities occur in suitable habitat in the dunes within the Western Snowy Plover nesting season (generally between March 16 and September 15), a qualified biologist shall conduct pre-construction surveys within the vicinity of the impact area to check for nesting activity. The qualified biologist shall conduct a minimum of one pre-construction survey within the seven-day period prior to Project activities. If Project activities lapse for seven days or longer during the nesting season, a qualified biologist shall conduct a supplemental avian survey before Project work is reinitiated. • If an active Western Snowy Plover nest is found, the qualified biologist shall establish a 300-foot avoidance buffer zone around the nest and/or implement operational restrictions in consultation with CDFW and the USFWS. No herbicide application will occur within this buffer zone during the Western Snowy Plover nesting period unless approved by CDFW and the USFWS. Buffer zones shall be delineated with flagging and maintained until the chicks have fledged, or nesting activity has ceased. Buffer zones may exceed 300 feet (91 meters) upon taking into account factors such as (1) noise and human disturbance levels at the Project site at the time of the survey and the noise and disturbance expected during the Project activity; (2) distance and amount of vegetation or other screening between the Project activity site and the nest in order to reduce visual stress; (3) sensitivity of individual nesting species and behaviors of the nesting birds; (4) location of the nest in relation to areas to be treated with herbicide. 			

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<p>BIO-1d Avoid, and Minimize Potential Impacts to Northern Red-legged Frog and Northwestern Pond Turtles</p> <p>The following measures will be incorporated into the Project to avoid and minimize impacts to Northern Red-legged Frog and Northwestern Pond Turtles during construction, invasive plant management, and maintenance activities within 50 feet (15 meters) of suitable habitat. Suitable habitat is located in the northern extent of Areas C and E; therefore, this Mitigation Measure applies to construction, invasive plant management, or maintenance activities within 50 feet (15 meters) of the northern extents of Areas C and E.</p> <ul style="list-style-type: none"> • Project construction, invasive plant management, or maintenance activities shall be limited to the period of the year between July 1 and October 30 to avoid disturbance to breeding Northern Red-legged Frogs, as feasible. • If work is proposed during the breeding season (generally December to February), a qualified biologist shall conduct two surveys in proposed work areas within suitable habitat as defined above. Any Northern Red-legged Frog egg masses located shall be relocated to suitable aquatic habitat outside of proposed work areas. • Throughout areas of suitable habitat, any juvenile or adult Northern Red-legged Frog or Northwestern Pond Turtle encountered during construction, invasive plant management or maintenance activities will be safely relocated by a qualified biologist to suitable habitat out of harm's way. 	Applicant or Applicant's contractor	CDFW and construction manager	During Project construction, invasive plant management, and maintenance
<p>BIO-1e Minimize Impacts to Special-Status Plant Species</p> <ul style="list-style-type: none"> • A qualified biologist shall stake out locations of special-status plant populations prior to construction. Staking efforts shall target consolidated populations (i.e., more than 10 plants in a grouping), and shall only identify annual species if work is 	Applicant or Applicant's contractor	CDFW and construction manager	During pre-construction

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<p>proposed during their blooming period. The qualified biologist shall also provide training to construction or plant management crews to ensure that they avoid and minimize impacts to these plants.</p> <ul style="list-style-type: none"> No heavy equipment shall be used to carry out invasive plant management within 10 feet (3 meters) of dune mat habitat. Project-related access routes located in the dunes shall be marked, shall stay within the pre-existing sand road footprint, and shall avoid dune mat habitat. 			
<p>BIO-1f Avoid and Minimize Impacts to Special-status Plant Species during Prescribed Burns</p> <p>In order to minimize potential impacts to special-status plant species during a prescribed burn, the following measures will be implemented:</p> <ul style="list-style-type: none"> Prescribed burns will occur between August 1 and March 15 (i.e., outside the nesting bird window,) which is after the primary blooming period for annual species known to the dunes. All prescribed burn treatments will be conducted in accordance with an approved burn plan coordinated with the California Department of Forestry and Fire Protection (CAL FIRE). 	Applicant or Applicant's contractor	CDFW and construction manager	Prior to prescribed burns during invasive plant management.
<p>BIO-3 Mitigate Temporary and Short-term Impacts to Aquatic Resources Through Construction Minimization and Avoidance Measures</p> <p>The following measures will be implemented to avoid and minimize impacts to aquatic resources during construction, or when heavy equipment is proposed for use in aquatic resources:</p> <ul style="list-style-type: none"> With the exception of Area A (which is fully tidal), work areas will be isolated prior to ground disturbance to avoid delivery of sediment to downstream waters. To the extent possible, construction will occur when the work area has been dry or dewatered. Within Area A, adverse impacts on water quality will 	Applicant's biologist	CDFW and construction manager	During Project construction, or whenever heavy equipment is proposed for use

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<p>be minimized by installing restoration elements at low tide and using amphibious or low ground pressure equipment in fully tidal areas.</p> <ul style="list-style-type: none"> • Site disturbance shall be minimized to the greatest extent feasible by using existing disturbed areas for access and staging and concentrating the area of disturbance associated with restoration actions within the minimum space(s) 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. • Contractors shall sign a document stating that they have read, understand, and agree to the required resource avoidance measures, and shall have construction/invasive plant management crews participate in a training session on avoiding and minimizing impacts to wetlands. 			

3.5 Cultural Resources

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
<p>CR-1 Environmental Awareness Training</p> <p>Prior to the initiation of any construction work, an archaeologist who meets the U.S. Secretary of Interior’s professional standards shall conduct environmental awareness training for construction crews and other relevant Project personnel. At a minimum, the training will cover the kinds of cultural materials that may be present in the Project Area and the protocols to be followed should any such materials be uncovered during construction. Training shall be required at the onset of each year of construction and maintenance activities to educate new construction personnel.</p>	<p>Applicant or Applicant’s contractor</p>	<p>CDFW and construction manager</p>	<p>During pre-construction</p>

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<p>Prehistoric archaeological site indicators include: obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones, and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps).</p>			
<p>CR-2 Protection of the Welapl Site</p> <p>Prior to initial ground disturbing work in the vicinity of the Welapl site, an archaeologist who meets the U.S. Secretary of Interior’s professional standards shall re-survey the area for the presence of surficial cultural resource deposits. The archaeologist shall also excavate 4-5 auger borings in the vicinity of the site to assess subsurface conditions.</p> <p>If historical or archaeological resources are found in the vicinity of the site, CDFW shall implement measures to protect the integrity of the resource and ensure that no additional resources are impacted, as provided in Mitigation Measure CR-4. If no historical or archaeological resources are identified during the surface inspection or subsurface exploration, Project activities may commence without monitoring by an archaeologist.</p> <p>Subsequent invasive plant management activities in the vicinity of the Welapl site would not be subject to the surface and subsurface assessment requirements provided above, unless otherwise required by CDFW and/or the State Historic Preservation Officer (SHPO) in accordance with Mitigation Measure CR-4.</p>	<p>Applicant’s contractor</p>	<p>CDFW and construction manager</p>	<p>During pre-construction</p>

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<p>CR-3 Protection of the 1929 USC&GS Complex</p> <p>Prior to initial ground disturbing work in the vicinity of the 1929 USC&GS Complex, an archaeologist who meets the U.S. Secretary of Interior’s professional standards shall re-survey the area for the presence of surficial cultural resource deposits. The archaeologist shall also employ a metal detector and excavate 4-5 auger borings in the vicinity of the site to assess subsurface conditions.</p> <p>Due to the lack of clear map evidence of where structures may have been located at this site, an archaeological monitor shall be present during initial ground disturbing activities to identify resources that may have escaped detection during the surface and subsurface investigations. If historical or archaeological resources are found in the vicinity of the site, CDFW shall implement measures to protect the integrity of the resource and ensure that no additional resources are impacted, as provided in Mitigation Measure CR-4.</p> <p>Subsequent invasive plant management activities in the vicinity of the 1929 USC&GS Complex would not be subject to the surface and subsurface assessments or archaeological monitoring described above, unless otherwise required by CDFW and/or SHPO in accordance with Mitigation Measures CR-4.</p>	Applicant’s contractor	CDFW and construction manager	During pre-construction
<p>CR-4 Protect Archaeological Resources During Construction</p> <p>If potential archaeological resources are uncovered during construction, the Project contractor shall halt work within 100 feet (30 meters) of the discovery, and CDFW shall be immediately notified. Should any cultural resources be discovered during construction on lands under the jurisdiction of the California State Lands Commission (SLC), CDFW shall consult with the SLC. Workers shall avoid altering the materials and their context, and shall not collect cultural materials.</p> <p>A qualified archaeologist shall be retained to investigate the find. If the find potentially qualifies as a historic resource or unique</p>	Applicant’s contractor	CDFW and construction manager and potentially the SLC	During Project construction

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<p>archaeological resource under CEQA, all work must remain stopped in the immediate vicinity to allow the archaeologist to evaluate any materials and recommend appropriate treatment. If the resources are Native American in origin, representatives of the appropriate culturally affiliated tribes shall also be enlisted to help evaluate the find and suggest appropriate treatment. The final disposition of archaeological and historical resources recovered on state lands under the jurisdiction of the SLC must be approved by the SLC.</p> <p>The preferred treatment of a resource is protection and preservation. Protection and preservation can be achieved by avoidance (not disturbing areas within the boundaries of an archaeological site). In considering any recommended measures proposed by the archaeologist, CDFW shall determine whether avoidance is feasible in light of factors such as the nature of the find, Project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures as recommended by the archaeologist (e.g., data recovery or protection in place) shall be instituted. Work may proceed on other parts of the Project while mitigation for these resources is being carried out.</p> <p>If data recovery is performed, it must be conducted by qualified archaeologists using standard archaeological techniques. Data recovery must include processing and analysis of recovered cultural materials using appropriate archaeological methods, and preparation of the recovered materials for permanent disposition (e.g., re-burial in a part of the Project Area that would be protected in perpetuity).</p>			
<p>CR-5 Protect Human Remains if Encountered during Construction</p> <p>If human remains, associated grave goods, or items of cultural patrimony are encountered during construction, work shall halt in the vicinity of the find and the County Coroner and CDFW shall be notified immediately. The following procedures shall be followed as</p>	Applicant's contractor	CDFW, construction manager and potentially the SLC	During Project construction

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<p>required by PRC Section 5097.9 and HSC Section 7050.5. The final disposition of archaeological, and historical resources recovered on state lands under the jurisdiction of the SLC must be approved by the SLC. If the human remains are determined to be of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of the determination. The Native American Heritage Commission shall then notify the most likely decedent (MLD), who has 48 hours to make recommendations to the landowner for the disposition of the remains. A qualified archaeologist, CDFW, SLC (if appropriate) and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects. The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, and final disposition of the human remains and associated or unassociated funerary objects.</p>			

3.6 Geology and Soils

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
<p>HWQ-1 Implement Best Management Practices to Protect Water Quality</p> <p>The following representative BMPs will be implemented to protect water quality during construction:</p> <ul style="list-style-type: none"> Contractors will be responsible for minimizing erosion and preventing the transport of sediment to sensitive habitats/wetlands. Accordingly, all contractors that would be performing demolition, construction, grading, operations or other work that could cause increased water pollution conditions at the site (e.g., dispersal of soils) shall receive training regarding the 	Applicant's contractor	CDFW and construction manager	Prior to and during Project construction

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<p>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> <ul style="list-style-type: none"> • The following BMPs from the current California Stormwater Quality Associations' California Stormwater BMP Handbook for Construction will be implemented by the Contractor: <ul style="list-style-type: none"> - EC-1: Scheduling - EC-2: Preservation of Existing Vegetation - NS-2: Dewatering Operations - NS-9: Vehicle Equipment and Fuelling - NS-10: Vehicle and Equipment Maintenance - WM-2: Material Use; and - WM-4: Spill Prevention and Control • Sufficient erosion control supplies will be maintained on site at all times, available for prompt use in areas susceptible to erosion during rain events; • Disturbance of existing vegetation will be minimized to only that necessary to complete the work; • The contractor will make adequate preparations, including training and providing equipment, to contain oil and/or other hazardous materials spills; • Dewatering operations will be conducted where needed, with water disposed of appropriately (e.g., allowed to settle in an isolated area, or discharged to an upland location where is won't discharge back to surface waters); • Vehicle and equipment maintenance should be performed off-site whenever practical; 			

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<ul style="list-style-type: none"> The contractor shall ensure that the site is prepared with BMPs prior to the onset of any storm predicted to receive 0.5 inch (1.27 centimeters) or more of rain over 24 hours; and All erosion and sediment control measures shall be maintained until disturbed areas are stabilized. 			
<p>HWQ-2 Erosion and Water Quality Control Measures During Channel Excavation and Ground Disturbance</p> <p>Erosion and turbidity control measures shall be implemented in areas where excavation or ground disturbance would occur and could deliver sediment to an adjacent surface water (e.g., construction of Project tidal channels, installation of ditch blocks and large wood, levee lowering and removal, and installation of public access components). Depending on site conditions, these measures could include installation and maintenance of in-stream turbidity curtains, cofferdams and/or silt-fence along channel banks, as specified in Project designs, specifications and erosion control plans. Whenever feasible, construction will be scheduled to coincide with low tides to avoid increases in turbidity or potential impacts to aquatic habitats. Where possible, channel excavation or dredging will be isolated and hydrologically disconnected from surface waters.</p>	Applicant's contractor	CDFW and construction manager	During Project construction
<p>WQ-6 Designate Ingress/Egress Routes</p> <p>Temporary ground disturbance associated with site ingress/egress, staging, stockpiling, and equipment storage areas could occur in areas outside and adjoining work areas. Where areas adjacent to staging and stockpile areas are erosion prone, the extent of staging and stockpile shall be minimized by flagging their boundaries. An erosion/sediment control plan shall be developed for erosion prone areas outside the work area where greater than 0.25 acre (0.1 hectare) of ground disturbance may occur as a result of</p>	Applicant's contractor	CDFW and construction manager	During Project construction

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<p>ingress/egress, access roads, staging and stockpile areas. The erosion/sediment control plan shall be developed by a qualified professional and identify BMPs for controlling soil erosion and discharge for Project-related contaminants. The erosion/sediment control plan shall be prepared prior to any ground disturbing activities, and implemented during construction (H.T. Harvey & Associates and GHD 2013, page 128).</p>			
<p>GEO-1 Protect Paleontological Resources during Construction Activities</p> <p>If fossils are encountered during construction (i.e., bones, teeth, or unusually abundant and well-preserved invertebrates or plants), construction activities within 50 feet (15 meters) of the find shall be stopped. CDFW shall be immediately notified, and a professional palaeontologist shall be retained to evaluate the potential resource, assess the nature and importance of the find, and document the discovery as needed. Based on the scientific value or uniqueness of the find, CDFW may allow work to continue after the palaeontologist has recorded the find, or may recommend salvage and recovery of the material if it is determined that the find should, but cannot, be avoided. The palaeontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices. CDFW will work with a qualified palaeontologist to determine the appropriate final disposition for any fossils found onsite. The final disposition of any paleontological resources recovered on state lands under the jurisdiction of the SLC must be approved by the SLC.</p>	Applicant's contractor	CDFW, construction manager and potentially the SLC	During Project construction

3.8 Hazards and Hazardous Materials

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
<p>HHM-1 Worker Injury from Accidents Associated with Use of Manual and Mechanical Equipment</p> <p>A health and safety plan shall be developed to identify and educate workers engaged in activities that involve heavy equipment associated with construction or invasive plant management activities under the Project. Appropriate safety procedures and equipment, including hearing, eye, hand and foot protection, and proper attire, shall be used by workers to minimize risks associated with use of heavy equipment. Workers shall receive safety training appropriate to their responsibilities prior to engaging in such work.</p>	Applicant's contractor	CDFW and construction manager	Prior to Project construction
<p>HHM-2 Accidents Associated with Release of Chemicals and Motor Fuel</p> <p>See Section 3.04 of this MMRP for Mitigation Measure text.</p>	Applicant's contractor	CDFW and construction manager	Prior to Project construction, or use of heavy equipment
<p>HHM-3 Worker Health Effects from Herbicide Application</p> <p>Appropriate health and safety procedures and equipment, as described on the herbicide or surfactant label, including personal protective equipment (PPE) as required, shall be used by workers to minimize risks associated with herbicide application methods. Mixing and applying herbicide will be done in accordance with label directions and shall be conducted or supervised by certified or licensed herbicide applicators.</p>	Applicant or Applicant's contractor	CDFW and construction manager	Prior to invasive plant management
<p>HHM-4 Avoid Health Effects to the Public and Environment from Herbicide</p> <p>See Section 3.4 of this MMRP for Mitigation Measure text.</p>	Applicant's contractor	CDFW and construction manager	Prior to use of herbicide under the Project

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Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
<p>HMM-5 Health Effects to Workers, the Public and the Environment Due to Accidents Associated with Use of Hazardous Materials.</p> <p>Appropriate health and safety procedures and equipment shall be used to minimize risks associated with use of hazardous materials under the Project, including exposure to or spills of fuels, petroleum products, and lubricants. These shall include the preparation of a health and safety plan, a spill contingency plan, and if threshold onsite storage values are exceeded, an HMSPCCP.</p>	Applicant's contractor	CDFW and construction manager	During Project construction and use of heavy equipment
<p>WQ-2 Minimize Herbicide Spill Risks</p> <p>See Section 3.4 of this MMRP for Mitigation Measure text.</p>	Applicant's contractor	CDFW and construction manager	Prior to herbicide use under the Project

3.9 Hydrology and Water Quality

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
<p>HWQ-1 Implement Best Management Practices to Protect Water Quality</p> <p>See Section 3.6 of this MMRP for Mitigation Measure text.</p>	Applicant's contractor	CDFW and construction manager	Prior to Project construction
<p>HWQ-2 Erosion and Water Quality Control Measures During Channel Excavation and Ground Disturbance</p> <p>See Section 3.6 of this MMRP for Mitigation Measure text.</p>	Applicant's contractor	CDFW and construction manager	During Project construction
<p>HWQ-3 Removal of Wrack</p> <p>Tidal flushing is anticipated to alleviate wracking throughout the Project Area. During site specific planning, tidal circulation will be visually assessed. In areas with relatively low tidal circulation, it will either be assumed that dissolved oxygen levels are depressed or monitoring will be conducted to determine if dissolved oxygen levels are depressed. In treatment areas located within or adjacent to</p>	Applicant's contractor	CDFW and construction manager	During invasive plant management

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
waters known or expected to have depressed dissolved oxygen, if wrack greater than ¼ acre is generated during Project implementation, the wrack shall be removed from the treatment areas subject to tidal inundation or mulched finely and left in place.			
WQ-2 Minimize Herbicide Spill Risks See Section 3.4 of this MMRP for Mitigation Measure text.	Applicant's contractor	CDFW and construction manager	Prior to herbicide use
WQ-6 Designate Ingress/Egress Routes See Section 3.6 of this MMRP for Mitigation Measure text.	Applicant's contractor	CDFW and construction manager	During Project construction
HHM-2 Accidents Associated with Release of Chemicals and Motor Fuel See Section 3.4 of this MMRP for Mitigation Measure text.	Applicant's contractor	CDFW and construction manager	Prior to Project construction, or use of heavy equipment
HHM-4 Avoid Health Effects to the Public and Environment from Herbicide See Section 3.4 of this MMRP for Mitigation Measure text.	Applicant's contractor	CDFW and construction manager	Prior to use of herbicide

3.15 Tribal Cultural Resources

Mitigation Measure	Monitoring and Reporting Action ¹	Responsible Party	Monitoring Schedule
TCR-1 Protect Unknown Tribal Cultural Resources If potential tribal cultural resources are uncovered during construction, the Project contractor shall halt work within 100 feet (30 meters) of the discovery, and CDFW shall be immediately notified. Should any tribal cultural resources be discovered during construction on lands under the jurisdiction of SLC, CDFW shall	Applicant's contractor	CDFW, construction manager and potentially the SLC	During Project construction

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Monitoring and Reporting Action¹	Responsible Party	Monitoring Schedule
<p>consult with SLC. Workers shall avoid altering the materials and their context, and shall not collect cultural materials. CDFW shall notify California Native American tribes culturally affiliated with the study area. If, after coordination with the Tribe(s), a qualified archaeologist, and the SLC, CDFW determines that the find potentially qualifies as a tribal cultural resource for purposes of CEQA (per CEQA Statute 21084.3), all work must remain stopped in the immediate vicinity to allow evaluation of any materials and recommendation of appropriate treatment. Avoidance of impacts to the tribal cultural resource is preferable. In considering any suggested measures to mitigate impacts to tribal cultural resources, CDFW shall determine whether avoidance is feasible in light of factors such as the nature of the find, Project design, and other considerations. If avoidance is infeasible, other appropriate measures as recommended by the Tribe (i.e., preservation in place; reburial onsite; moved to an appropriate location) shall be instituted. Work may proceed on other parts of the Project while mitigation for tribal cultural resources is being carried out. The final disposition of tribal cultural resources recovered on state lands under the jurisdiction of SLC must be approved by the SLC.</p>			
<p>CR-1 Environmental Awareness Training See Section 3.5 of this MMRP for Mitigation Measure text.</p>	Applicant or Applicant's contractor	CDFW and construction manager	During Pre-construction
<p>CR-2 Protection of the Welapl Site See Section 3.5 of this MMRP for Mitigation Measure text.</p>	Applicant's contractor	CDFW and construction manager	During pre-construction