APPENDICES

Appendix A: Mitigation Monitoring and Reporting Program



Introduction to the Mitigation Monitoring and Reporting Program

This environmental document is tiered off the Program Environmental Impact Report (PEIR) for the Los Cerritos Wetlands Restoration Plan. As previously stated, the mitigation measures from that PEIR applicable to this portion of the Program Area are included as part of the background for this Southern Los Cerritos Wetlands Restoration Project.

Pursuant to Public Resources Code (PRC) Section 21081.6 and CEQA Guidelines Section 15097, a lead agency is required to adopt a mitigation monitoring and reporting program (MMRP) for assessing and ensuring compliance with the required mitigation measures applied to a proposed project for which an EIR has been prepared. As stated in PRC Section 21081.6(a):

... the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.

Section 21081.6 provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, which were defined prior to PEIR certification. The lead agency, Los Cerritos Wetlands Authority, may delegate reporting or monitoring responsibilities to another public agency or a private entity that accepts such delegation. LCWA, however, remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the overall program and specifically for this project.

The Mitigation Monitoring and Reporting Program, lists mitigation measures and project design features that are required to reduce the significant effects of the proposed project. These measures correspond to those discussed in Draft EIR Sections 3.1 through 3.16, and those revised in this Final EIR (see Chapter 9, Draft EIR Revisions). To ensure that the mitigation measures are properly implemented, a monitoring program has been devised that identifies the timing and responsible entity for monitoring each measure. LCWA will have the responsibility for implementing the measures, and various public agencies will have the primary responsibility for enforcing, monitoring, and reporting the implementation of the mitigation measures.

The mitigation measures are included exactly as written in the PEIR. Please note that the overall restoration program area is located not only within the City of Seal Beach (Orange County) but extends into the City of Long Beach (Los Angeles County). For this project, no work will be completed within the City of Long Beach (or Los Angeles County), hence, mitigation will not extend into these jurisdictions.



MITIGATION MONITORING AND REPORTING PROGRAM

		Responsibility / Timing of	
Mitigation Measure	Method of Verification	Implementation	Enforcement Agency
Aesthetics			
Mitigation Measure AES-1: Lighting Plan. Prior to issuance of a grading permit for each individual site that requires construction, a Lighting Plan for the individual site shall be developed and implemented that requires all exterior lighting to be directed downward and focused away from adjacent sensitive uses and habitats to encourage wayfinding and provide security and safety for individuals walking to and from parking areas.	Written verification; visual inspection.	By LCWA prior to issuance of grading permit and continuously during construction.	City of Long Beach City of Seal Beach
Air Quality			
 Mitigation Measure AQ-1: Construction NO_x Reduction Measures. The Applicant for the proposed program shall be responsible for the implementation of the following construction-related NO_x reduction measures: Require all off-road diesel-powered construction equipment greater than 50 hp (e.g., excavators, graders, dozers, scrappers, tractors, loaders, etc.) to comply with EPA-Certified Tier IV emission controls where commercially available. Documentation of all off-road diesel equipment used for this proposed program including Tier IV certification, or lack of commercial availability if applicable, shall be maintained and made available by the contractor to the local permitting agency (City of Seal Beach and City of Long Beach) for inspection upon request. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB such as certified Level 3 Diesel Particulate Filter or equivalent. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. If Tier IV construction equipment, and/or limiting the number of individual construction subphases occurring simultaneously. The determination of commercial availability of Tier IV construction equipment shall be made by the City prior to issuance of grading or building permits based on applicant-provided evidence of the availability or unavailability of Tier IV equipment and/or evidence obtained by the City from expert sources such as construction contractors in the region. Require all main engines for tugboats to comply with EPA-Certified Tier IV emission controls. Eliminate the use of all portable generators. Require the use of electricity from power poles rather than temporary diesel or gasoline power generators. Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traff	Included in contractor's scope of work; written verification	By LCWA continuously during construction.	City of Long Beach City of Seal Beach California Coastal Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
Reroute construction trucks away from congested streets or sensitive receptor areas.			
 Prohibit the idling of on-road trucks and off-road equipment in excess of 5 continuous minutes, except for trucks and equipment where idling is a necessary function of the activity, such as concrete pour trucks. The Applicant or construction contractor(s) shall post signs at the entry/exit gate(s), storage/lay down areas, and at highly visible areas throughout the active portions of the construction site of the idling limit. 			
 On-road heavy-duty diesel haul trucks with a gross vehicle weight rating of 19,500 pounds or greater used to transport construction materials and soil to and from the program area shall be engine model year 2010 or later or shall comply with the USEPA 2007 on-road emissions standards. 			
Biological Resources			
Mitigation Measure BIO-1: Avoidance of Special-Status Plants. Prior to LCWA's approval of project plans or publication of subsequent CEQA documents, a qualified botanist/biologist shall conduct a habitat assessment to determine the presence or absence of suitable habitat for special-status plant species. If suitable habitat is determined to be present, focused plant surveys should be conducted in accordance with Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW, March 20, 2018).	Written verification.	Prior to LCWA's approval of project plans or publication of subsequent CEQA documents	City of Long Beach City of Seal Beach California Coastal Commission California Department of Fish and Wildlife
Consistent with the CDFW protocol, such focused special-status plant surveys will be conducted during the appropriate blooming period for these species, with May and June likely having the highest number of species in flower. The results of focused special-status plant species will be incorporated into restoration design plans. The locations of any special-status plants within 25 feet of proposed disturbance areas shall be identified and mapped. Individual plants shall be flagged for avoidance and an avoidance buffer of at least 10 feet shall be established around the plant(s).			
If special-status plants cannot be avoided, they shall be incorporated into the proposed program's restoration design at a minimum ratio of 1:1 (one plant planted for every one plant removed, or 1 square foot of absolute cover planted for every 1 square foot of absolute cover removed). For special- status plant species with small population numbers (less than 50 individuals), higher mitigation ratios up to 7:1 will be incorporated, where on-site seed sources are available.			
Higher mitigation ratios of up to 3:1 will be incorporated where suitable habitat area can support populations of large individual numbers. Special-status plants that cannot be avoided shall be salvaged prior to impacts using species- specific propagation methods, such as transplanting, seed and cuttings. Seed collection shall occur during the appropriate time of year for each species. Seeds shall be propagated by a qualified horticulturalist or in a local nursery, and shall be incorporated into habitat-specific seed mixes that will be used for revegetation of the restoration areas. Plant transplantation of perennial species is a potential mitigation technique but must be used sparingly and only when receiving site parameters are a suitable match from the donor location. Performance standard for the success of propagated or transplanted species will be achieved with the survival of the appropriate number of individuals meeting the mitigation ratio (1:1 for most species) after five years of growth and the establishment of a self-propagating population for annual			

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ntractor's scope of ork and agreements;	commencement of	City of Seal Beach California Coastal Commission California Department of Fish
ritten verification	Prior to LCWA's approval of project plans or publication of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission California Department of Fish and Wildlife
ritte	n verification	approval of project plans or publication of subsequent CEQA

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
Mitigation Measure BIO-4: Nesting Bird and Raptor Avoidance. A qualified biologist shall identify areas where nesting habitat for birds and raptors is present prior to LCWA's approval of project plans or publication of subsequent CEQA documents. To ensure the avoidance of impacts to nesting avian species, the following measures shall be implemented:	Written verification	Prior to LCWA's approval of project plans or subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission
 Construction and maintenance activities shall be limited to the non-breeding season (September 1 through December 31) to the extent feasible. If construction or maintenance activities will occur during the avian nesting season (January 1 through August 31), a qualified biologist shall conduct pre-construction nesting avian surveys within no more than 5 days prior to the initiation of construction activities to identify any active nests. If a lapse in work of 5 days or longer occurs, another survey shall be conducted to verify if any new nests have been constructed prior to work being reinitiated. 			
 If active nests are observed, an avoidance buffer shall be demarcated by a qualified biologist with exclusion fencing and shall be maintained until the biologist determines that the young have fledged and the nest is no longer active. 			
Mitigation Measure BIO-5: Habitat Assessment and Pre- Construction Surveys for Burrowing Owl. A qualified biologist shall conduct a pre-construction burrowing owl survey of each restoration area (including required survey buffer areas) prior to LCWA's approval of project plans or publication of subsequent CEQA documents. If burrowing owls are detected, the habitat will be avoided ad /or enhanced by the restoration design. In addition, a Burrowing Owl Management Plan shall be prepared and approved by CDFW, and implemented, prior to commencement of construction.	Written verification; submittal of Burrowing Owl Management Plan	Prior to LCWA's approval of project plans or publication of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission California Department of Fish and Wildlife
The Burrowing Owl Management Plan shall be prepared in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation and shall address specific minimization and avoidance measures for burrowing owls, such as avoidance of occupied habitat, translocation of individuals, and on site revegetation.			
Mitigation Measure BIO-6: Minimization of Light Spillage. A Program Lighting Plan shall be designed to minimize light trespass and glare into adjacent habitat areas prior to the commencement of activities within the program area. Nighttime lighting associated with the visitor center, parking lot, and trails shall be shielded downward and/or directed away from habitat areas to minimize impacts to nocturnal	Submittal of Program Lighting Plan	Prior to commencement of construction activities	City of Long Beach City of Seal Beach California Coastal Commission
species, including breeding birds.			
Mitigation Measure BIO-7: Pre-Construction Bat Surveys. A qualified biologist shall conduct a pre-construction bat survey of each restoration area prior to final approval of the area's restoration plan. If suitable bat roosting habitat is determined to be present, a presence/absence survey shall be conducted prior to commencement of construction activities. A qualified biologist shall conduct the preconstruction clearance survey of suitable bat roosting habitat, such as mature palm trees. If bats are determined to be roosting, the biologist will determine whether it is a day roost (non-breeding) or maternity roost (lactating females and dependent young). If a day roost is determined, the biologist shall ensure that direct mortality to roosting individuals will not occur by requiring that trees	Written verification; submittal of Bat Exclusion Plan (if needed)	Prior to final approval of the area's restoration plan.	City of Long Beach City of Seal Beach California Coastal Commission California Department of Fish and Wildlife



Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
with roosts are not directly impacted (e.g., removed) until after the roosting period. If a maternity roost is determined to be present, the biologist shall determine a suitable buffer distance between construction activities and the roosting site. If direct disturbance to the maternity roost could occur, a Bat Exclusion Plan shall be prepared and approved by CDFW, and implemented, prior to impacting the roost. At a minimum, the Plan shall include avoidance and minimization measures to reduce potential impacts to breeding bats during			
construction activities and prescribed methods to safely and humanely evict bats from the roost to avoid mortality. Mitigation Measure BIO-8: Focused Surveys for Special- Status Wildlife Species. Should suitable habitat occur for terrestrial or aquatic special-status species, a qualified	Written verification; submittal of Wildlife Avoidance Plan (if	Prior to LCWA's approval of the	City of Long Beach City of Seal Beach
biologist shall conduct focused habitat assessments and focused surveys to determine presence, absence and/or abundance for special-status wildlife species listed in Table 3.3- 5. Both habitat assessments and focused surveys shall occur prior to LCWA's approval of the project plans or the publication of subsequent CEQA documents for any project site that potentially contains special-status species. Agency-approved protocols shall be used for specific species where appropriate during the required or recommended time of year. For all other target (special-status) species, prior to initiating surveys, survey methods shall be verified and approved in writing by CDFW and USFWS or NMFS for all state- and/or federally-protected species, respectively. If special-status species are detected, the project- specific restoration plan should be designed to minimize impacts to special-status wildlife to the greatest extent feasible and a Wildlife Avoidance Plan shall be prepared and approved by CDFW and USFWS or NMFS prior to construction. The Wildlife Avoidance Plan shall include specific species minimization and avoidance measures, measures to minimize impacts to occupied habitat, such as avoidance and revegetation, as well as relocation/translocation protocols. The plan shall require that a qualified biological monitor approved by CDFW be onsite prior to and during ground and habitat disturbing activities to move special status species or other wildlife of low mobility out of harm's way that could be injured or killed by ground disturbing activities.	needed)	project plans or publication of subsequent CEQA documents.	California Coastal Commission California Department of Fish and Wildlife United States Fish and Wildlife Service National Marine Fisheries Service
If special-status species cannot be avoided, Incidental Take Permits from the National Marine Fisheries Service or United States Fish and Wildlife Service and California Department of Fish and Wildlife will be required. The amount of potential take shall be determined prior to design approval of each restoration area based on consultation with NMFS or USFWS and CDFW and take authorization shall be obtained prior to commencement of any ground disturbing activities. If an incidental take permit is being obtained, compensatory mitigation for the loss of occupied habitat shall be provided through purchase of credit from an existing mitigation bank, private purchase of mitigation lands, or on-site preservation, as approved by the resource agencies. Compensatory mitigation shall be provided at a minimum 1:1 ratio to reduce potential effects to less-thansignificant levels.			
Mitigation Measure BIO-9: Revegetation of Sensitive Natural Communities. Sensitive natural communities located on the program area include: Anemopsis californica – Helianthus nuttallii – Solidago spectabilis Herbaceous Alliance, Arthrocnemum subterminale Herbaceous Alliance, Baccharis salicina Provisional Shrubland Alliance, Cressa truxillensis – Distichlis spicata Herbaceous Alliance, Frankenia salina Herbaceous Alliance, Isocoma	Written verification; submittal of a Mitigation, Maintenance and Monitoring Program	Prior to LCWA's approval of project plans or publication of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission California Department of Fish

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
menziesii Shrubland Alliance, <i>Leymus cinereus – Leymus triticoides</i> Herbaceous Alliance, Salicornia pacifica Herbaceous Alliance, Salix gooddingii Woodland Alliance, Schoenoplectus californicus – Typha (angustifolia, domingensis, latifolia) Herbaceous Alliance and Spartina foliosa Herbaceous Alliance.			and Wildlife
Prior to LCWA's approval of project plans or publication of subsequent CEQA documents, the area(s) that will be impacted shall be delineated and quantified using current Global Information System (ArcGIS) mapping software.			
Sensitive Natural Communities that will be impacted by the proposed program shall be created within the program area at a minimum ratio of 1:1 (area created:area impacted). A mitigation ratio of a minimum 2:1 for natural communities with a rarity ranking of S3 or higher will be incorporated into the restoration designs. Restored Sensitive Natural Communities shall consist of a minimum 60 percent absolute vegetation cover and shall include community-specific growing conditions, such as, similar slope, aspect, elevation, soil, and salinity. Moreover, soils within mudflat areas shall be salvaged (where feasible) for areas that are proposed for activities such as grading, and reintroduced in new mudflat and/or wetland areas that will be created. A Mitigation, Maintenance and Monitoring Program shall be prepared and approved by CDFW prior to implementation. The Program shall be implemented by a qualified restoration ecologist, and at a minimum, shall include success criteria and performance standards for measuring the establishment of Sensitive Natural Communities, responsible parties, maintenance techniques and schedule, 5-year monitoring and reporting schedule, adaptive management strategies, and contingencies.			
Mitigation Measure BIO-10: Jurisdictional Resources Permitting. Prior to LCWA's approval of project plans or publication of subsequent CEQA documents, a jurisdictional delineation report shall be prepared that describes these jurisdictional resources and the extent of jurisdiction under the USACE, RWQCB, CDFW, and CCC. If it is determined during final siting that jurisdictional resources cannot be avoided, the project applicant shall be subject to provisions as identified below:	Written verification	Prior to LCWA's approval of project plans or publication of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission California Department of Fish and Wildlife
 If avoidance is not feasible, prior to ground disturbance activities that could impact these aquatic features, the project applicant shall file the required documentation and receive the following. 			United States Army Corps of Engineers Regional Water Quality Control
a. Nationwide Permit or equivalent permit issued from USACE;			Board
 b. Water Quality Certification issued from the Los Angeles RWQCB; 			
c. Streambed Alteration Agreement issued from CDFW; and			
d. Coastal Development Permit issued from CCC.			
Compensatory mitigation for impacts to jurisdictional resources is not anticipated as the proposed program's goal is the restoration and expansion of coastal salt marsh within the proposed program.			
The project proponent shall comply with the mitigation measures detailed in permits issued from the USACE, RWQCB, CDFW, and CCC.			
Mitigation Measure BIO-11: Monitoring and Adaptive Management Plan. In conjunction with Section 3.8, <i>Hydrology and Water Quality</i> , a Monitoring and Adaptive Management Plan (MAMP) shall be prepared and implemented prior to commencement of construction	Written verification; submittal of Monitoring and Adaptive	Prior to commencement of construction activities	City of Long Beach City of Seal Beach

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
or restoration activities. The MAMP shall provide a framework for monitoring site conditions in response to the proposed program implementation. The MAMP shall include provisions for conducting a pre-construction survey to collect baseline data for existing wetland function. The MAMP shall require that monitoring focus on the functional wetland values as well as sediment quality in areas subject to the greatest deposition from storm events and that are also not subject to regular tidal flushing, (e.g., the southwestern corner of the Long Beach Property site). The MAMP shall identify habitat functions, such as biotic structure and hydrology, that shall be monitored as part of the proposed program's monitoring and reporting requirements. The MAMP shall identify sediment quality monitoring requirements that shall be performed at a frequency that would capture the potential build-up of contaminants in the deposited sediment before concentration are reached that would impact benthic macro-invertebrates and other sensitive species. The MAMP shall require that the findings of the monitoring efforts be used to identify any source of functional loss of wetlands and water quality impairment, and if discovered, provide measures to improve wetland function and for remediation of the sediment source area(s). Upon completion of restoration activities, the proposed program shall demonstrate a no net loss of aquatic resource functions and demonstrate an increase in wetland functions and values throughout the entire site. The MAMP shall be submitted for review and approval to responsible permitting agencies prior to commencement of construction or restoration activities.	Management Plan		California Coastal Commission
Cultural Resources			
Mitigation Measure CUL-1: Cultural Resources Personnel Professional Qualifications Standards. Cultural resources consulting staff shall meet, or be under the direct supervision of an individual meeting, the minimum professional qualifications standards (PQS) set forth by the Secretary of the Interior (SOI) (codified in 36 Code of Federal Regulations [CFR] Part 61; 48 FR 44738-44739).	Included in construction contractor's scope of work and agreements; written verification	By LCWA prior to the commencement of construction.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL-2: Historic Resources Assessment. For each near-term, mid- term, and long-term project, LCWA shall retain an SOI-qualified architectural historian (Qualified Architectural Historian) to conduct a historic resources assessment including: a records search at the South Central Coastal Information Center; a review of pertinent archives and sources; a pedestrian field survey; recordation of all identified historic resources on California Department of Parks and Recreation 523 forms; and preparation of a technical report documenting the methods and results of the assessment. The report(s) shall be submitted to LCWA for review and approval prior to LCWA's approval of project plans or publication of subsequent CEQA documents. The Qualified Architectural Historian shall file a copy of the final report(s) with the South Central Coastal Information Center within 30 days of its completion. A Historic Resources Assessment shall not be required for any project site that has already undergone the same or similar assessment as part of the program as long as the assessment is deemed adequate by the Qualified Architectural Historian for the purposes of the project currently under consideration.	Written verification, submittal of assessment	By LCWA prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL-3: Historic Resources Evaluation. Prior to LCWA's approval of project plans or the publication of subsequent CEQA documents for any project site containing unevaluated historic resources, a Qualified Architectural Historian shall	Written verification, submittal of evaluation	By the LCWA prior to approval of project plans or preparation	City of Long Beach City of Seal Beach California Coastal Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
determine if the project has the potential to result in adverse impacts to identified historic resources. For any historic resource that may be adversely impacted, the Qualified Architectural Historian shall evaluate the resource for listing in the California Register under Criteria 1-4 in order to determine if the resource qualifies as a historical resource. If a historic resource is found eligible, the Qualified Architectural Historian shall determine if the project would cause a substantial adverse change in the significance of the resource. If a substantial adverse change would occur (i.e., the project would demolish the resource or materially alter it in an adverse manner), the Qualified Architectural Historian shall develop appropriate mitigation measures to be incorporated into subsequent CEQA documents. These measures may include, but would not be limited to, relocation, HABS/HAER/HALS documentation, development and implementation of an interpretative and commemorative program, or development and implementation of a salvage plan. All evaluations and resulting technical reports shall be completed and approved by LWCA prior to LCWA's approval of project plans or publication of subsequent CEQA documents. The Qualified Architectural Historian shall file a copy of the final report(s) with the South Central Coastal Information Center within 30 days of its acceptance by LCWA.		of subsequent CEQA documents.	
Mitigation Measure CUL-4: Archaeological Resources Assessment. For each near- term, mid-term, and long-term project that involves ground disturbance, LCWA shall retain an SOI-qualified archaeologist (Qualified Archaeologist) to conduct an archaeological resources assessment including: a records search at the South Central Coastal Information Center; a Sacred Lands File search at the Native American Heritage Commission; updated geoarchaeological review incorporating previously unavailable data (such as geotechnical studies); a pedestrian field survey; recordation of all identified archaeological resources on California Department of Parks and Recreation 523 forms; and preparation of a technical report. The technical report shall: document the methods and results of the study; provide an assessment of the project's potential to encounter subsurface archaeological resources and human remains based on a review of the project plans, depth of proposed ground disturbance, and available project-specific geotechnical reports; and provide recommendations as to whether additional studies are warranted (i.e., Extended Phase I presence/absence testing or resource boundary delineation, Phase II testing and evaluation). The report(s) shall be submitted to LCWA for review and approval prior to approval of project plans or publication of subsequent CEQA documents. The Qualified Archaeologist shall file a copy of the final report(s) with the South Central Coastal Information Center within 30 days of its completion. An Archaeological Resources Assessment shall not be required for any project site that has already undergone the same or similar assessment as part of the program as long as the assessment is deemed adequate by the Qualified Archaeologist for the purposes of the project currently under consideration.	Written verification, submittal of report	By LCWA, prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL-5: Extended Phase I Archaeological Investigation. Prior to LCWA's approval of project plans or the publication of subsequent CEQA documents for any project with a high potential to encounter subsurface archaeological resources as determined by the project-specific archaeological resources assessment conducted under Mitigation Measure CUL-4: Archaeological Resources Assessment, a Qualified Archaeologist shall conduct an Extended Phase I investigation to identify the presence/absence of subsurface archaeological resources. Prior to the initiation of field	Written verification, submittal of report	By LCWA, prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
work for any Extended Phase I investigation, the Qualified Archaeologist shall prepare a work plan outlining the investigation's objectives, goals, and methodology (e.g., field and lab procedures, collection protocols, curation and reporting requirements, Native American input/monitoring, schedule, security measures). For investigations related to Native American archaeological resources, monitoring shall be required in accordance with Mitigation Measures CUL-13: Native American Monitoring. All work plans shall outline the protocols and procedures to be followed in the event that human remains and associated funerary objects or grave goods (i.e., artifacts associated with human remains) are encountered in accordance with Mitigation Measure CUL-18: Human Remains Discoveries. Disposition of archaeological materials recovered during Extended Phase I investigations shall be in accordance with Mitigation Measure CUL-15: Curation and Disposition of Cultural Materials. Disposition of human remains and any associated funerary objects or grave goods shall be in accordance with Mitigation Measure CUL-18: Human Remains Discoveries. Discoveries. Projects occurring within the same timeframe may be covered by one overarching work plan. All investigations and resulting technical reports shall be completed and approved by LCWA prior to LCWA's approval of project plans or publication of subsequent CEQA documents. The Qualified Archaeologist shall file a copy of the final report(s) with the South Central Coastal Information Center within 30 days of its acceptance by LCWA. An Extended Phase I investigation shall not be required for any project site or resource that has already undergone the same or similar investigation as part of the program as long as the investigation is deemed adequate by the Qualified Archaeologist for the purposes of the project currently under consideration.			
Mitigation Measure CUL-6: Phase II Archaeological Investigation. Prior to LCWA's approval of project plans or the publication of subsequent CEQA documents for any project site containing known unevaluated archaeological resources as identified by the project-specific archaeological resources assessment conducted under Mitigation Measure CUL-4: Archaeological Resources Assessment, a Qualified Archaeologist shall determine if the project has the potential to result in adverse impacts to identified archaeological resources (this may include initial Extended Phase I testing to identify the boundaries of resources, if necessary to properly assess potential impacts, following the procedures outlined under Mitigation Measure CUL-5: Extended Phase I Archaeological Investigation). For any archaeological resource that may be adversely impacted, the Qualified Archaeologist shall conduct Phase II testing and shall evaluate the resource for listing in the California Register under Criteria 1-4 in order to determine if the resource does not qualify as a historical resource. LCWA shall consider the significance of the resource does not qualify as a historical resource. Native American or prehistoric archaeological resources shall also be considered as contributors to the tribal landscape to determine if they contribute to the significance of the landscape. Prior to the initiation of field work for any Phase II investigation, the Qualified Archaeologist shall prepare a work plan outlining the investigation's objectives, goals, and methodology (e.g., research design, field and lab procedures, collection protocols, data requirements/thresholds, evaluation criteria, curation and reporting requirements, Native American input/monitoring, schedule, security measures). The Qualified Archaeologist and LCWA shall coordinate with participating Native American Tribes during preparation of Phase II work plans related to Native American archaeologist to ensure cultural	Written verification, submittal of report	By LCWA, prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
values ascribed to the resources, beyond those that are scientifically important, are considered in the evaluation, including those related to the tribal cultural landscape. For investigations related to Native American archaeological resources, Native American Tribal coordination and monitoring shall be required in accordance with Mitigation Measures CUL-12: Native American Coordination and CUL-13: Native American Monitoring. All work plans shall outline the protocols and procedures to be followed in the event that human remains and associated funerary objects or grave goods (i.e., artifacts associated with human remains) are encountered in accordance with Mitigation Measure CUL-18: Human Remains Discoveries.			
Disposition of archaeological materials recovered during Extended Phase I or Phase II investigations shall be in accordance with Mitigation Measure CUL-15: Curation and Disposition of Cultural Materials. Disposition of human remains and any associated funerary objects or grave goods shall be in accordance with Mitigation Measure CUL-18: Human Remains Discoveries. Projects occurring within the same timeframe may be covered by one overarching work plan. All investigations and resulting technical reports shall be completed and approved by LWCA prior to LCWA's approval of project plans or publication of subsequent CEQA documents. The Qualified Archaeologist shall file a copy of the final report(s) with the South Central Coastal Information Center within 30 days of its acceptance by LCWA.			
Mitigation Measure CUL-7: Avoidance and Preservation in Place of Archaeological Resources. In the event historical resources or unique archaeological resources or resources that contribute to the significance of the tribal cultural landscape are identified, avoidance and preservation in place shall be the preferred manner of mitigating impacts to such resources. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. If avoidance is determined by the LCWA to be infeasible in light of factors such as the nature of the find, proposed project design, costs, and other considerations, then that resources shall be subject to Mitigation Measure CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan. If avoidance and preservation in place of a resource is determined by LCWA to be feasible, then that resource shall be subject to Mitigation Measure CUL-9: Archaeological Resources Monitoring and Mitigation Plan.	Field verification, written report	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission
 Mitigation Measure CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan. A Qualified Archaeologist shall prepare a Phase III Archaeological Resources Data Recovery and Treatment Plan for significant archaeological resources (i.e., resources that qualify as historical resources or unique archaeological resources or that contribute to the significance of the tribal cultural landscape) that will be adversely impacted by a project. Consistent with CEQA Guidelines Section 15126.4, data recovery shall not be required for a historical resource if LCWA determines that testing or studies already completed have adequately recovered the scientifically consequential information for resources eligible under California Register Criterion 4. The Qualified Archaeologist and LCWA shall consult 	Written verification, submittal of plan	By LCWA, prior to the start of field work for data recovery efforts for resources that are eligible under California Register Criterion 4 (data potential).	City of Long Beach City of Seal Beach California Coastal Commission

		Responsibility /	
Mitigation Measure	Method of Verification	Timing of Implementation	Enforcement Agency
with interested Native American Tribes for recovery/treatment of Native American archaeological resources during preparation of the plan(s) to ensure cultural values ascribed to the resources, beyond those that are scientifically important, are considered in assessing treatment, including those related to the tribal cultural landscape. Projects occurring within the same timeframe may be covered by one overarching plan. The plan(s) shall be submitted to LCWA for review and approval prior to the start of field work for data recovery efforts for resources that are eligible under California Register Criterion 4 (data potential). Data recovery field work shall be completed prior to the start of any project- related ground disturbance. Treatment for archaeological resources that are eligible under California Register Criterion 1 (events), Criterion 2 (persons), or Criterion 3 (design/workmanship) shall be completed within 3 years of completion of the project. Each plan shall include:			
a. <i>Research Design.</i> The plan shall outline the applicable cultural context(s) for the region, identify research goals and questions that are applicable to each resource or class of resources, and list the data needs (types, quantities, quality) required to answer each research question. The research design shall address all four California Register Criteria (1–4) and identify the methods that will be required to inform treatment, such as subsurface investigation, documentary/archival research, and/or oral history, depending on the nature of the resource. The research design shall also include consideration of Native American or prehistoric archaeological resources as contributors to the tribal cultural landscape.			
b. Data Recovery for Resources Eligible under Criterion 4. The plan shall outline the field and laboratory methods to be employed, and any specialized studies that will be conducted, as part of the data recovery effort for resources that are eligible under California Register Criterion 4 (data potential). If a resource is eligible under additional criteria, treatment beyond data recovery shall be implemented (see CUL-6c).			
c. Treatment for Resources Eligible under Criteria 1, 2, or 3. In the event a resource is eligible under California Register Criterion 1 (events), Criterion 2 (persons), or Criterion 3 (design/workmanship), then resource-specific treatment shall be developed to mitigate project-related impacts to the degree feasible. This could include forms of documentation, interpretation, public outreach, ethnographic and language studies, publications, and educational programs, depending on the nature of the resource, and may require the retention of additional technical specialists. Treatment measures shall be generally outlined in the plan based on existing information on the resource. Once data recovery is completed and the results are available to better inform resource-specific treatment, the treatment measures shall be formalized and implemented. Treatment shall be developed by the Qualified Archaeologist in consultation with LCWA and Native American Tribal representatives for resources that are Native American in origin, including those related to the tribal cultural landscape.			
d. Security Measures. The plan shall include recommended security measures to protect archaeological resources from vandalism, looting, and non-intentionally damaging activities during field work.			
e. Procedures for Discovery of Human Remains and Associated Funerary Objects or Grave Goods. The plan shall outline the protocols and procedures to be followed in the event that human remains and associated funerary objects or grave goods are			

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uncovered. Protocols and procedures shall be in accordance with Mitigation Measure CUL-18: Human Remains Discoveries.			
f. <i>Reporting Requirements.</i> Upon completion of data recovery for resources eligible under Criterion 4, the Qualified Archaeologist shall document the findings in an Archaeological Data Recovery Report. The draft Archaeological Data Recovery Report shall be submitted to the LCWA within 360 days after completion of data recovery, and the final Archaeological Data Recovery Report shall be submitted to LCWA within 60 days after the receipt of LCWA comments. The Qualified Archaeologist shall submit the final Archaeological Data Recovery Report to the South Central Coastal Information Center within 30 days of its acceptance by LCWA.			
Upon completion of all other treatment for resources eligible under Criteria 1, 2, or 3, the Qualified Archaeologist shall document the resource-specific treatment that was implemented for each resource and verification that treatment has been completed in a technical document (report or memorandum). The document shall be provided to LCWA within 30 days after completion of treatment.			
g. Curation or Disposition of Cultural Materials. The plan shall outline the requirements for final disposition of all cultural materials collected during data recovery.			
Disposition of all archaeological materials shall be in accordance with Mitigation Measure CUL-15: Curation and Disposition of Cultural Materials. Disposition of human remains and any associated funerary objects or grave goods shall be in accordance with Mitigation Measure CUL-18: Human Remains Discoveries.			
h. Protocols for Native American Coordination and Monitoring. The plan shall outline the role and responsibilities of Native American Tribal representatives in accordance with Mitigation Measure CUL-12: Native American Coordination. It shall outline communication protocols, timelines for review of archaeological resources documents, and provisions for Native American monitoring. The plan shall include provisions for full-time Native American monitoring of all data recovery field work for resources that are Native American in origin, including those related to the tribal cultural landscape, in accordance with Mitigation Measure CUL-13: Native American Monitoring.			
Mitigation Measure CUL-9: Archaeological Resources Monitoring and Mitigation Plan. For each near-term, mid- term, and long-term project that involves ground disturbance, a Qualified Archaeologist shall prepare an Archaeological Resources Mitigation and Monitoring Plan taking into account the final LCWA-approved project design plans, depths/locations of ground disturbance, proximity to known archaeological resources, and potential to encounter subsurface archaeological resources. Projects occurring within the same timeframe may be covered by one overarching plan. The Qualified Archaeologist and LCWA shall coordinate with participating Native American Tribes during preparation of the plan(s). Each plan shall include:	Written verification, submittal of plan	By the LCWA, prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission
a. Establishment of Environmentally Sensitive Areas. The plan shall outline areas that will be designated Environmentally Sensitive Areas (including maps), if needed. Significant or unevaluated archaeological resources that are being avoided and are within 50 feet of the construction zone shall be designated as Environmentally Sensitive Areas. The resources shall be delineated with exclusion markers to ensure avoidance. These			

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areas shall not be marked as archaeological resources, but shall be designated as "exclusion zones" on project plans and protective fencing in order to discourage unauthorized disturbance or collection of artifacts.			
b. Provisions for Archaeological Monitoring. The plan shall outline requirements for archaeological monitoring and the archaeological monitor(s) role and responsibilities in accordance with Mitigation Measure CUL-11: Archaeological Resources Monitoring. Ground disturbance in locations/depths that have been previously monitored as part of the program shall not be subject to additional monitoring.			
 c. Procedures for Discovery of Archaeological Resources. Procedures to be implemented in the event of an archaeological discovery shall be fully defined in the plan and shall be in accordance with Mitigation Measure CUL- 14: Archaeological Resources Discoveries. Procedures outlined shall include stop-work and protective measures, notification protocols, procedures for significance assessments, and appropriate treatment measures. The plan shall state avoidance or preservation in place is the preferred manner of mitigating impacts to historical resources, unique archaeological resources, and contributors to the significance of the tribal cultural landscape, but shall provide procedures to follow should avoidance be infeasible in light of factors such as the nature of the find, project design, costs, and other considerations. If, based on the recommendation of a Qualified Archaeologist, it is determined that a discovered archaeological resource constitutes a historical resource or unique archaeological resource or is a contributor to the significance of the tribal cultural <i>landscape</i>, then <i>avoidance</i> and preservation in place shall be the preferred manner of mitigating impacts to such a resource in accordance with Mitigation Measure CUL-7: Avoidance and Preservation in Place of Archaeological Resources Data Recovery and Treatment Plan shall be prepared and implemented following the procedures outlined in Mitigation Measure CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan shall be prepared and implemented following the procedures outlined in Mitigation Measure CUL-8: Phase III Archaeological Resources nat Recovery and Treatment Plan shall be prepared and implemented following the procedures outlined in Mitigation Measure CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan shall be prepared and implemented following the procedures outlined in Mitigation Measure CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan shall			
 considered, including those related to the tribal cultural landscape. d. Procedures for Discovery of Human Remains and Associated Funerary Objects or Grave Goods. The plan shall outline the protocols and procedures to be followed in the event that human remains and associated funerary objects or grave goods are uncovered. Protocols and procedures shall be in accordance with Mitigation Measure CUL-18: Human Remains Discoveries. 			
e. <i>Reporting Requirements.</i> The plan shall outline provisions for weekly and final reporting. The Qualified Archaeologist shall prepare weekly status reports detailing activities and locations observed (including maps) and summarizing any discoveries for the duration of monitoring to be submitted to LCWA via email for each week in which monitoring activities occur. The Qualified Archaeologist shall prepare a draft Archaeological Resources Monitoring Report and submit it to LCWA within 180 days after completion of the monitoring program or treatment for significant discoveries should treatment extend			



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Mitigation Measure beyond the cessation of monitoring. The final Archaeological Resources Monitoring Report shall be submitted to LCWA within 60 days after receipt of LCWA comments. The Qualified Archaeologist shall also submit the final Archaeological Resources Monitoring Report to the South Central Coastal Information Center. f. Curation or Disposition of Cultural Materials. The plan shall outline the requirements for final disposition of all cultural materials collected during data recovery. Disposition of all archaeological materials shall be in accordance with Mitigation Measure CUL-15:	Method of Verification	Implementation	Enforcement Agency
Curation and Disposition of Cultural Materials. Disposition of human remains and any associated funerary objects or grave goods shall be in accordance with Mitigation Measure CUL-18: Human Remains Discoveries.			
g. Protocols for Native American Coordination and Monitoring. The plan shall outline requirements for Native American coordination and monitoring, and the Native American monitor(s) role and responsibilities in accordance with Mitigation Measures CUL-12: Native American Coordination and CUL-13: Native American Monitoring.			
Mitigation Measure CUL-10: Construction Worker Cultural Resources Sensitivity Training. For each near- term, mid-term, and long-term project that involves ground disturbance, LCWA shall retain a Qualified Archaeologist to implement a cultural resources sensitivity training program. The Qualified Archaeologist, or their designee, and a Native American representative shall instruct all construction personnel of the importance and significance of the area as a tribal cultural landscape, the types of archaeological resources that may be encountered, the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains, confidentiality of discoveries, and safety precautions to be taken when working with cultural resources monitors. In the event that construction crews are phased, additional trainings shall be conducted for new construction personnel. LCWA or their contractors shall ensure construction personnel are made available for and attend the training. LCWA shall retain documentation demonstrating attendance.	Included in construction contractor's scope of work; written verification	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL-11: Archaeological Resources Monitoring. For each near- term, mid-term, and long-term project, full-time archaeological monitoring of ground disturbance (i.e., demolition, pavement removal, pot-holing or auguring, boring, drilling, grubbing, vegetation removal, brush clearance, weed abatement, grading, excavation, trenching, or any other activity that has potential to disturb soil) shall be conducted in areas and at depths where there is a potential to encounter archaeological materials or human remains, including excavations into existing artificial fill and native soils, based on the project-specific archaeological resources assessment prepared under Mitigation Measure CUL-4: Archaeological Resources Assessment. Ground disturbance in locations/depths that have been previously monitored as part of the program shall not be subject to additional monitoring. The archaeological monitor(s) shall be familiar with the types of resources that could be encountered and shall work under the direct supervision of a Qualified Archaeologist. The number of archaeological monitors required to be on site during ground-disturbing activities is dependent on the construction scenario, specifically the number of pieces of equipment operating at the same time, the distance between these pieces of equipment, and the pace at which equipment is working, with the goal of monitors being able to effectively observe soils as they are exposed.	Field verification	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission

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Mitigation Measure	Method of Verification	Timing of Implementation	Enforcement Agency
Generally, work areas more than 500 feet from one another will require additional monitors. The archaeological monitor(s) shall keep daily logs detailing the types of activities and soils observed, and any discoveries. Archaeological monitor(s) shall have the authority to halt and re-direct ground disturbing activities in the event of a discovery until it has been assessed for significance and treatment implemented, if necessary, based on the recommendations of the Qualified Archaeologist in coordination with LCWA, and the Native American representatives in the event the resource is Native American in origin, and in accordance with the protocols and procedures outlined in Mitigation Measure CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan. Reporting of archaeological monitoring shall be conducted in accordance with the provisions outlined in Mitigation Plan.			
Mitigation Measure CUL-12: Native American Coordination. LCWA shall seek input from participating Native American Tribes during the preparation of documents required under Mitigation Measures CUL-5: Extended Phase I Archaeological Investigation, CUL-6: Phase II Archaeological Investigation, CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan, Mitigation Measure CUL 9: Archaeological Resources Monitoring and Mitigation Plan, and CUL-14: Archaeological Resources Discoveries, including but not limited to work plans, research designs, treatment plans, and associated technical reports. LCWA shall provide participating Native American Tribes with electronic copies of draft documents and afford them 30 days from receipt of a document to review and comment on the document. Native American comments will be provided in writing for consideration by LCWA. LCWA shall document comments and how the comments were/were not addressed in a tracking log.	Written verification	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL-13: Native American Monitoring. For each near-term, mid- term, and long-term project, full-time Native American monitoring of ground disturbance (i.e., demolition, pavement removal, pot-holing or auguring, boring, drilling, grubbing, vegetation removal, brush clearance, weed abatement, grading, excavation, trenching, or any other activity that has potential to disturb soil) shall be conducted in areas and at depths where there is a potential to encounter archaeological materials or human remains, including excavations into existing artificial fill and native soils, based on the project-specific study prepared under Mitigation Measure CUL-4: Archaeological Resources Assessment. LCWA shall retain a Native American monitor(s) from a California Native American Tribe that is culturally and geographically affiliated with the program area (according to the California Native American Heritage Commission) to conduct the monitoring. If more than one Tribe is interested in monitoring, LCWA shall contract with each Tribe that expresses interest and prepare a monitoring rotation schedule. LCWA shall rotate monitors on an equal and regular basis to ensure that each Tribal group has the same opportunity to participate in the monitoring program. If a Tribe cannot participate when their rotation comes up, they shall forfeit that rotation unless LCWA can make other arrangements to accommodate their schedule. The number of Native American monitors required to be on site during ground disturbing activities is dependent on the construction scenario, specifically the number of pieces of equipment operating at the same time, the distance between these pieces of equipment, and the pace at which equipment is working, with the goal of monitors being able to effectively observe soils as they are exposed. Generally, work areas more than 500 feet from one another require additional monitors. Native	Written verification, field verification	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
American monitors shall have the authority to halt and re-direct ground disturbing activities in the event of a discovery until it has been assessed for significance.			
The Native American monitor(s) shall also monitor all ground disturbance related to subsurface investigations and data recovery efforts conducted under Mitigation Measures CUL-5: Extended Phase I Archaeological Investigation, CUL-6: Phase II Archaeological Investigation, and CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan for any resources that are Native American in origin, according to the rotation schedule, including those related to the tribal cultural landscape.			
Mitigation Measure CUL-14: Archaeological Resources Discoveries. In the event archaeological resources are encountered during construction of the proposed program, all activity in the vicinity of the find shall cease (within 100 feet), and the protocols and procedures for discoveries outlined in Mitigation Measure CUL-9: Archaeological Resources Monitoring and Mitigation Plan shall be implemented. The discovery shall be evaluated for potential significance by the Qualified Archaeologist. If the Qualified Archaeologist determines that the resource may be significant (i.e., meets the definition for historical resource in <i>CEQA Guidelines</i> subdivision 15064.5(a) or for unique archaeological resource in PRC subdivision 21083.2(g) or is a contributor to the tribal cultural landscape), the Qualified Archaeological Resources Data Recovery and Treatment Plan for the resource following the procedures outlined in Mitigation Measure CUL-8: Phase III Archaeological Resources Data Recovery and Treatment Plan. When assessing significance and developing treatment for resources that are Native American in origin, including those related to the tribal cultural landscape, the Qualified Archaeologist and LCWA shall consult with the appropriate Native American representatives. The Qualified Archaeologist shall also determine if work may proceed in other parts of the project site while data recovery and treatment is being carried out. LCWA shall consult with the State Lands Commission Staff Attorney regarding any cultural resources discoveries on state lands.	Field verification	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL 15: Curation and Disposition of Cultural Materials. LCWA shall curate all Native American archaeological materials, with the exception of funerary objects or grave goods (i.e., artifacts associated with Native American human remains). LCWA shall consult with Native American representatives regarding the final disposition of Native American archaeological materials and on the selection of the curation facility, with preference given to tribal museums. LCWA shall first consider repositories that are accredited by the American Association of Museums and that meet the standards outlined in 36 CFR 79.9. If a suitable accredited repository is not identified, then LCWA shall consider non-accredited repositories as long as they meet the minimum standards set forth by 36 CFR 79.9. If a suitable non-accredited repository is not identified, then LCWA shall donate the collection to a local California Native American Tribe(s) (Gabrielino or Juañeno) for educational purposes.	Written verification, submittal of curation agreement	By LCWA prior to the start of each project	City of Long Beach City of Seal Beach California Coastal Commission California State Lands Commission

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LCWA may curate it at a non-accredited repository as long as it meets the minimum standards set forth by 36 CFR 79.9. If neither an accredited nor a non-accredited repository accepts the collection, then LCWA shall offer the collection to a public, non-profit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes. If no institution, school, or historical society accepts the collection, LCWA may retain it for on-site display as part of its interpretation and educational elements.			
The final disposition of cultural resources recovered on state lands under the jurisdiction of the California State Lands Commission must be approved by the Commission.			
Prior to start of each project, LCWA shall obtain a curation agreement and shall be responsible for payment of fees associated with curation for the duration of the program.			
Mitigation Measure CUL16: Future Native American Input. LCWA shall consult with participating California Native American Tribes, to the extent that they wish to participate, during future design of project-level components, plant and native plant selections or palettes, and development of content for educational and interpretative elements, such as signage and Visitors Center displays.	Written verification	By LCWA prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL17: Tribal Access Plan. Prior to the start of construction, LCWA shall develop a written access plan to preserve and enhance tribal members' access to, and use of, the restoration project area for religious, spiritual, or other cultural purposes. This plan will allow access to the extent LCWA has the authority to facilitate such access, and be consistent with existing laws, regulations, and agreements governing property within the program area. The access plan may place restrictions on access into certain areas, such as oil operations and other exclusive easements the LCWA does not have access rights to. This access plan shall be developed in coordination with participating California Native American Tribes, to the extent that they wish to participate.	Written verification, submittal of access plan	By LCWA prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure CUL-18: Human Remains Discoveries: If human remains are encountered, then LCWA or its contractor shall halt work in the vicinity (within 100 feet) of the discovery and contact the appropriate County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, which requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the County Coroner determines the remains are Native American, then the Coroner will notify the California Native American Heritage Commission (NAHC) within 24 hours in accordance with Health and Safety Code subdivision 7050.5(c), and Public Resources Code Section 5097.98. The California Native American Heritage Commission shall then identify the person(s) thought to be the Most Likely Descendant (MLD). The MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the landowner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and confer with the MLD	Field verification; written verification	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
on all reasonable options regarding the MLD's preferences for treatment.			
Until LCWA and the landowner have conferred with the MLD, the contractor shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity and is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.			
If the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance.			
Geology and Soils	·		
Mitigation Measure GEO-1: Retention of a Qualified Professional Paleontologist. Prior to the start of construction of any near-term, mid-term, or long-term project, LCWA shall retain a Qualified Professional Paleontologist as defined by the Society of Vertebrate Paleontology to carry out all mitigation related to paleontological resources including: project-level review (Mitigation Measure GEO-2); paleontological resources sensitivity training (GEO-3); oversight of paleontological resources monitoring (Mitigation Measure GEO-4); and recovery, treatment, analysis, curation, and reporting (Mitigation Measures GEO-5, GEO-6, and GEO-7).	Included in construction contractor's scope of work; written verification	By LCWA prior to the commencement of construction.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure GEO-2: Project-Level Paleontological Resources Review and Monitoring Recommendations. Prior to LCWA approval of any near-term, mid-term, and long- term project, the Qualified Professional Paleontologist shall review the <i>Los Cerritos Wetlands Program</i> <i>Paleontological Resources Assessment</i> (ESA, 2019), grading plans, and any available geotechnical reports/data to determine the potential for ground disturbance to occur within older alluvium and old shallow marine deposits. If available data is sufficient to accurately determine the depth of older alluvium and old shallow marine deposits within a project site, monitoring shall be required beginning at or just above that depth. If available data is insufficient to determine the depth of older alluvium and old shallow marine deposits, monitoring shall be required beginning at 5 feet below surface (consistent with the accepted depth at which high sensitivity sediments could occur based on regional evidence). The results of the reviews shall be documented in technical memoranda to be submitted to LCWA prior to the start of ground disturbance, along with recommendations specifying the locations, depths, duration, and timing of any required monitoring. The technical memoranda shall include map figures that outline where monitoring is required and at what depths, and shall stipulate whether screen washing is necessary to recover small specimens. Any required screen washing shall follow SVP Guidelines.	Written verification, submittal of technical memoranda	By LCWA, prior to approval of project plans or preparation of subsequent CEQA documents.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure GEO-3: Paleontological Resources Sensitivity Training. Prior to the start of ground disturbance for any near-term, mid-term, or long-term project, the Qualified Professional Paleontologist shall conduct paleontological resources sensitivity	Written verification	By LCWA prior to commencement of ground disturbance	City of Long Beach City of Seal Beach and/or

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
training. The training shall focus on the recognition of the types of paleontological resources that could be encountered within the program area, the procedures to be followed if they are found, confidentiality of discoveries, and safety precautions to be taken when working with paleontological monitors. LCWA shall ensure that construction personnel are made available for and attend the training, and retain documentation demonstrating attendance. The training should be repeated as necessary for incoming construction personnel.		and continuously during construction.	California Coastal Commission
 Mitigation Measure GEO-4: Paleontological Resources Monitoring. A qualified paleontological monitor, as defined by the Society of Vertebrate Paleontology, shall monitor all ground-disturbing activities occurring in the older alluvium and old shallow marine deposits for each near term, mid-term, or long-term project. Monitoring shall be implemented consistent with the locations, depths, duration, and timing recommendations specified in the technical memorandum for the project. Monitors shall work under the direction of the Qualified Professional Paleontologist. The number of monitors required to be on site during ground-disturbing activities shall be determined by the Qualified Professional Paleontologist and shall be based on the construction scenario – specifically the number of pieces of equipment operating at the same time, the distance between these pieces of equipment, and the pace at which equipment is working – with the goal of monitors being able to effectively observe sediments as they are exposed. Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens, and to request assistance from construction equipment operators to recover samples for screen washing as necessary. Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The Qualified Professional Paleontologist, in consultation with LCWA, shall have the ability to modify (i.e., increase, reduce, or discontinue) monitoring requirements based on observations of soil types and frequency of discoveries. Requests for modifications shall be submitted in writing to LCWA for approval prior to implementation. 	Written verification	By LCWA, prior to the commencement of ground disturbing activities and continuously during construction.	City of Long Beach City of Seal Beach California Coastal Commission
Mitigation Measure GEO-5: Paleontological Discoveries. If any potential fossils are discovered by paleontological resources monitors or construction personnel, all work shall cease at that location (within 100 feet) until the Qualified Professional Paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. The paleontological resources monitor (if one is present) or construction personnel (if a monitor is not present) shall flag the fossiliferous area for avoidance until the Qualified Professional Paleontologist can evaluate the discovery and develop plans for avoidance or removal/salvage of the specimen(s), if deemed significant. Significant discoveries shall be salvaged following SVP Guidelines. LCWA shall consult with the State Lands Commission Staff Attorney regarding any paleontological resources discoveries on state lands.	Field verification; written verification	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission California State Lands Commission
Mitigation Measure GEO-6: Preparation, Identification, Cataloging, and Curation Requirements. All significant fossil discoveries shall be prepared to the point of identification to the lowest taxonomic level possible, cataloged, and curated into a certified repository with retrievable storage (such as a museum or university). All GPS data, field notes, photographs, locality forms, stratigraphic sections, and other data associated with the recovery of the specimens shall be deposited with the institution receiving the	Field verification; written verification, signed curation agreement	By LCWA continuously throughout construction	City of Long Beach City of Seal Beach California Coastal Commission California State Lands Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
specimens. The Qualified Professional Paleontologist shall be responsible for obtaining a signed curation agreement from a certified repository in southern California prior to the start of the program. Given the length of the program, multiple agreements may be necessary due to changing capacities of repositories. The final disposition of paleontological resources recovered on state lands under the jurisdiction of the California State Lands Commission must be approved by the Commission.			
Mitigation Measure GEO-7: Reporting Requirements. The Qualified Professional Paleontologist shall prepare weekly status reports detailing activities and locations observed (with maps) and summarizing any discoveries to be submitted to LCWA via email for each week in which monitoring activities occur. Monthly progress reports summarizing monitoring efforts shall be prepared and submitted to LCWA for the duration of monitored ground disturbance. Reports detailing the results of monitoring for any near-term, mid-term, or long- term project and treatment of significant discoveries shall be submitted to LCWA within 120 days of completion of treatment, or within 30 days of completion of monitoring if no significant discoveries occurred. If significant fossils are recovered, the Qualified Professional Paleontologist shall file the final report with the Natural History Museum of Los Angeles County and the certified repository.	Written verification, submittal of weekly reports	By LCWA throughout the construction period in which monitoring is required.	City of Long Beach City of Seal Beach California Coastal Commission
Hazards and Hazardous Materials	·		
Mitigation Measure HAZ-1: Health and Safety Plan. The contractor(s) shall prepare and implement site-specific Health and Safety Plans as required by and in accordance with 29 CFR 1910.120 to protect construction workers and the public during all excavation and grading activities. This Plan shall be submitted to LCWA, the Orange County Environmental Health Division (the CUPA for the City of Seal Beach area), or Long Beach/Signal Hill Joint Powers Authority (the CUPA for the Long Beach area), for review prior to commencement of construction. The Health and Safety Plans shall include, but are not limited to, the following elements:	Written verification, submittal of plans.	Prior to the issuance of a grading permit	City of Long Beach City of Seal Beach Orange County Environmental Health Division Long Beach/Signal Hill Joint Powers Authority
 Designation of a trained, experienced site safety and health supervisor who has the responsibility and authority to develop and implement the site Health and Safety Plan; 			
 A summary of all potential risks to construction workers and maximum exposure limits for all known and reasonably foreseeable site chemicals; 			
 Specified personal protective equipment and decontamination procedures, if needed; 			
Emergency procedures, including route to the nearest hospital; and			
Procedures to be followed in the event that evidence of potential soil or groundwater contamination (such as soil staining, noxious odors, debris or buried storage containers) is encountered. These procedures shall be in accordance with hazardous waste operations regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release, notifying the LCWA, and the Orange County Environmental Health Division (the CUPA for the City of Seal Beach area), or the Long Beach/Signal Hill Joint Powers Authority (the CUPA for the			

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Mitigation Measure	Method of Verification	Timing of Implementation	Enforcement Agency
Long Beach area), the LARWQCB, or CalGEM, as appropriate, and retaining a qualified environmental firm to perform sampling and remediation.			
Mitigation Measure HAZ-2: Soil, Landfill Materials, and Groundwater Management Plan. In support of the Health and Safety Plan described in Mitigation Measure HAZ-1, the contractor(s) shall develop and implement a Soil, Landfilled Materials, and Groundwater Management Plan that includes a materials disposal plan specifying how the contractor will remove, handle, transport, and dispose of all excavated material in a safe, appropriate, and lawful manner. The Plan shall identify protocols for soil and landfilled materials testing and disposal, identify the approved disposal site, and include written documentation that the disposal site can accept the waste. Contract specifications shall mandate full compliance with all applicable federal, state, and local regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil, landfilled materials, or dewatering effluent.	Written verification, submittal of report	By the LCWA prior to the issuance of a grading permit	City of Long Beach City of Seal Beach Orange County Environmental Health Division Long Beach/Signal Hill Joint Powers Authority
As part of the Soil, Landfill Materials, and Groundwater Management Plan, the contractor shall develop a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate and lawful manner. The Plan shall identify the locations at which groundwater dewatering is likely to be required, the test methods to analyze groundwater for hazardous materials, the appropriate treatment and/or disposal methods, and approved disposal site(s), including written documentation that the disposal site can accept the waste. The contractor may also discharge the effluent under an approved permit to a publicly owned treatment works, in accordance with any requirements the treatment works may have. This Plan shall be submitted to the LCWA, and the Orange County Environmental Health Division (the CUPA for the Long Beach area), or the Orange County Environmental Health Division (the CUPA for the LONG Beach area) for review and approval prior to commencement of construction.			
Hydrology and Water Quality			
Mitigation Measure HYD-1: A Monitoring and Adaptive Management Plan (MAMP) shall be prepared and implemented prior to commencement of construction or restoration activities. The MAMP shall provide a framework for monitoring site conditions in response to the program implementation. The monitoring shall focus on sediment quality in areas subject to the greatest deposition from storm events and that are also not subject to regular tidal flushing, (e.g., the southwestern corner of the Long Beach Property site). The sediment quality monitoring shall be performed at a frequency that would capture the potential build-up of contaminants in the deposited sediment before concentration are reached that would impact benthic macro-invertebrates and other sensitive species. The findings of the monitoring efforts shall be used to identify any source of impairment, and if discovered, provide measures for remediation of the sediment source area(s). The MAMP shall be submitted for review and approval to permitting agencies prior to commencement of construction or restoration activities.	Written verification, submittal of report	By the LCWA prior to the commencement of construction	City of Long Beach City of Seal Beach California Coastal Commission

Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
Noise			
Noise Reduction Measure NOISE-1: Staging Areas and Mufflers. Staging areas for construction shall be located away from existing off-site residences. All construction equipment shall use properly operating mufflers. These requirements shall be included in construction contracts.	Included in construction contractor's agreements	By the LCWA prior to the commencement of construction	City of Long Beach City of Seal Beach California Coastal Commission
Noise Reduction Measure NOISE-2: Limit Grading. All grading activities shall be conducted outside of the nesting season for sensitive bird species. The nesting season has been identified as extending from March 1 to August 15. (Refer to Section 3.3 Biological Resources for more information on potential impacts to bird species and the corresponding mitigation).	Included in construction contractor's agreements	By the LCWA prior to the commencement of construction	City of Long Beach City of Seal Beach California Coastal Commission
Noise Reduction Measure NOISE-3: Noise Barriers. Where feasible, grading plans and specifications shall include temporary noise barriers for all grading, hauling, and other heavy equipment operations that would occur within 300 feet of sensitive off-site receptors and occur for more than 20 working days. The noise barriers shall be 12-feet high, but may be shorter if the top of the barrier is at least one foot above the line of sight between the equipment and the receptors. The barriers shall be solid from the ground to the top of the barrier, and have a weight of at least 2.5 pounds per square foot, which is equivalent to ³ / ₄ inch thick plywood. The barrier design shall optimize the following requirements: (1) the barrier shall be located to maximize the interruption of line-of-sight between the equipment and the receptor, which is normally at the top-of- slope when the grading area and receptor are at different elevations. However, a top-of-slope location may not be feasible if the top-of-slope is not on the project site; (2) the length and height of the barrier shall be selected to block the line-of-sight between the grading area, a barrier is least effective when it is at the midpoint between noise source and receptor.	Written verification, submittal of plans	By the LCWA prior to the issuance of a grading permit.	City of Long Beach City of Seal Beach California Coastal Commission
Public Services			
Mitigation Measure PS-1: Fire Prevention and Protection Training. Prior to the start of construction activities, the Applicant shall prepare and conduct a fire prevention and protection training for all construction personnel associated with the proposed program. Topics shall include general fire prevention practices such as avoiding smoking on the program area as well as specific preventative measures pertaining to high-fire-risk activities including handling of oil and welding and cutting. Personal protection measures including the locations of fire extinguishers on the program area and site exit routes should also be disclosed to ensure construction worker safety in the event of a fire. The material for the training shall be obtained in consultation with the Orange County Fire Authority and the Long Beach Fire Department.	Written verification	By the LCWA prior to the commencement of construction activities.	City of Long Beach City of Seal Beach California Coastal Commission
Transportation			
Mitigation Measure TRA-1: Prior to the start of construction of the program component(s) that require a full or partial roadway closure, LCWA shall require the construction contractor(s) to prepare a traffic control plan. The traffic control plan will show all signage, striping, delineated detours, flagging operations and any other devices that will be used	Written verification, submittal of plan	By the LCWA construction contractor prior to the commencement of	City of Long Beach City of Seal Beach California Coastal Commission



Mitigation Measure	Method of Verification	Responsibility / Timing of Implementation	Enforcement Agency
during construction to guide motorists, bicyclists, and pedestrians safely through the construction area and allow for adequate access and circulation to the satisfaction of the cities of Seal Beach and Long Beach and Orange and Los Angeles Counties, as applicable. The traffic control plan shall be prepared in accordance with the applicable jurisdiction's traffic control guidelines and will be prepared to ensure that access will be maintained to individual properties, and that emergency access will not be restricted. Additionally, the traffic control plan will ensure that congestion and traffic delays are not substantially increased as a result of the construction activities. Furthermore, the traffic control plan will include detours or alternative routes for bicyclists using on- street bicycle lanes as well as for pedestrians using adjacent sidewalks. LCWA shall provide written notice at least two weeks prior to the start of construction to owners/occupants along streets to be affected during construction.		construction.	
During construction, LCWA will maintain continuous vehicular and pedestrian access to any affected residential driveways from the public street to the private property line, except where necessary construction precludes such continuous access for reasonable periods of time. Access will be reestablished at the end of the workday. If a driveway needs to be closed or interfered with as described above, LCWA shall notify the owner or occupant of the closure of the driveway at least five working days prior to the closure. The traffic control plan shall include provisions to ensure that the construction of the proposed program does not interfere unnecessarily with the work of other agencies such as mail delivery, school buses, and municipal waste services.			
LCWA shall also notify local emergency responders of any planned partial or full lane closures or blocked access to roadways or driveways required for program construction. Emergency responders include fire departments, police departments, and ambulances that have jurisdiction within the program area. Written notification and disclosure of lane closure location must be provided at least 30 days prior to the planned closure to allow emergency response providers adequate time to prepare for lane closures.			
Utilities and Service Systems			
Mitigation Measure UTL-1: Water Will Serve Letter. Prior to issuance of a certificate of occupancy of the visitor center, a will serve letter will be obtained to verify that the water mains surrounding the program boundary have the capacity to serve the visitor center.	Written verification.	By the LCWA prior to issuance of a certificate of occupancy.	City of Seal Beach
Mitigation Measure UTL-2: Sewer Capacity Study. Prior to issuance of a certificate of occupancy of the visitor center, a sewer capacity study will be performed to verify that the sewer lines surrounding the program boundary have the capacity to serve the visitor center.	Written verification.	By the LCWA prior to issuance of a certificate of occupancy.	City of Seal Beach

