

**MITIGATION MONITORING AND REPORTING PROGRAM
FOR THE
PIPELINE 4 RELINING PROJECT AT LAKE MURRAY
SAN DIEGO, CALIFORNIA**

Prepared for:

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The California Environmental Quality Act (CEQA) requires that public agencies adopting a Mitigated Negative Declaration (MND) take affirmative steps to determine that approved mitigation measures and project design features are implemented subsequent to project approval. The lead or responsible agency must adopt a monitoring and reporting program for the mitigation measures incorporated into a project or included as conditions of approval. The program must be designed to ensure compliance with the MND during project implementation (Public Resources Code, Section 20181.6; CEQA Guidelines, Section 15074(d)).

This Mitigation Monitoring and Reporting Program (MMRP) will be used by the San Diego County Water Authority (Water Authority) to ensure compliance with adopted mitigation measures and project design features associated with the implementation of the proposed Pipeline 4 Relining Project at Lake Murray (project). The Water Authority, as Lead Agency pursuant to CEQA, will ensure that all design features and mitigation measures identified for the project are carried out in accordance with the adopted MMRP.

This MMRP consists of a checklist (Table 1) that identifies the project design features and mitigation measures, organized by environmental impact category discussed in the MND. The table identifies the mitigation monitoring and reporting requirements, including the timing of verification (prior to, during, or after construction) and the party responsible for implementing the measure. Space is provided for sign-off following completion/implementation of the design feature or mitigation measure.

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**Table 1. Mitigation Monitoring and Reporting Program
Pipeline 4 Relining Project at Lake Murray, San Diego, California**

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments	Resp. Team Member	Spec Section or Dwg No.	Verified in Contract by	Comments
		Pre Const	During Const	Post Const		Initials	Date					
AESTHETICS / VISUAL QUALITY												
Design Feature 1	All areas cleared of vegetation for the construction and staging areas will be revegetated at the completion of the project. Areas currently used for agriculture will be returned to agriculture.			X	Water Authority Environmental Surveyor							
Design Feature 2	Any lighting used will be of the lowest illumination necessary to ensure safety of all construction personnel and security of the site, and will be shielded and directed away from adjacent habitat areas		X		Contractor							
AIR QUALITY												
Design Feature 1	All clearing and grading will be carried out with dust control measures adequate to prevent creation of a nuisance to persons or property.		X		Contractor							
Design Feature 2	Points of public street access will be cleaned daily of any "track-out" materials.		X		Contractor							
Design Feature 3	All paved access roads, parking areas, and staging areas at construction sites will be swept daily.		X		Contractor							
Design Feature 4	All unpaved access roads, parking areas, and staging areas at construction sites will be watered three times daily or treated with non-toxic soil stabilizers.		X		Contractor							
Design Feature 5	Gravel will be applied to all unpaved access roads prior to initiating construction activities.	X			Contractor							
Design Feature 6	Dirt storage piles will be stabilized by chemical binders, tarps, fencing, or other erosion control measures.		X		Contractor							
Design Feature 7	Soil stabilizers will be applied to inactive construction areas (disturbed areas inactive for 10 days or more).		X		Contractor							
Design Feature 8	Traffic speeds on unpaved roads will be limited to 15 miles per hour.		X		Contractor							
Design Feature 9	All trucks hauling soil, sand, and other loose materials will be covered or required to maintain at least 2 feet of freeboard.		X		Contractor							
BIOLOGICAL RESOURCES												
Mitigation Measure BIO-1	Minimize and manage effects from introduced ant species that may exclude the termite prey base during restoration efforts. All nursery stock plants will be checked for nonnative ants before installation at restoration sites. Nonnative ants that penetrate native habitats appear to be partially supported by artificial irrigation associated with landscaping. Therefore, runoff from mitigation sites in	X			Water Authority Environmental Surveyor							

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	native habitat would be minimized and managed.											
Mitigation Measure BIO-2	If construction activities must commence during the upland avian breeding season (February 15 through August 15), minimize impacts through conducting nest surveys within 300 feet of all proposed activities. If active nests are encountered, no Covered Activities shall be implemented within a minimum distance of 100 feet of the nest. A greater setback (up to 300 feet) may be required, as determined by the Environmental Surveyor, based on the site-specific considerations, phase of the nesting cycle, and species or other biological considerations.		X		Water Authority Environmental Surveyor							
Mitigation Measure BIO-3	For temporary impacts to occupied California gnatcatcher habitat, the Water Authority will return the work site to preexisting contours, where feasible, and revegetate the site with appropriate locally native species.			X	Contractor							
Design Feature 1	An Environmental Surveyor will conduct pre-activity surveys within suitable habitat to ensure that NCCP/HCP Covered Species are adequately addressed by impact avoidance, minimization, and mitigation measures. Surveys will be conducted during the appropriate field conditions for detection prior to any proposed impacts in the NCCP/HCP Plan Area. If a covered plant species is observed, then an appropriate buffer would be established if feasible. If establishment of a buffer is not feasible, the plants to be impacted will be salvaged and transplanted to, or an equivalent quantity of locally sourced container stock will be planted in, adjacent suitable habitat.	X			Environmental Surveyor							
Design Feature 2	The Environmental Surveyor will prepare a Pre-activity Survey Form (PSF) within 30 days prior to project ground disturbance. The Environmental Surveyor shall confirm location of sensitive biological resources and that the project Mitigation Monitoring and Reporting Program (MMRP) addresses current project conditions. The PSF shall include a description of any significant change compared to the biological resources documented in this IS/Mitigated Negative Declaration (MND). Also, the PSF shall include a conclusion that the measures in the MMRP will achieve NCCP/HCP compliance and, if not, what NCCP/HCP measures need to be added to achieve compliance.	X			Environmental Surveyor							
Design Feature 3	All equipment used in or near drainages within an approved construction zone will be clean and free of leaks and grease. Emergency provisions to contain and clean up unintentional fuel or oil spills will be in place prior to construction.		X		Contractor							
Design Feature 4	Fueling of equipment will occur in designated fueling zones		X		Contractor							

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	located at least 100 feet from drainages and wetland habitat.											
Design Feature 5	Construction personnel will park private vehicles in clearly marked areas, outside areas supporting sensitive habitat. Drivers of construction-related vehicles on unpaved roads in native habitats will not exceed a speed of 15 miles per hour in order to avoid injury to animals and minimize dust generation.		X		Contractor							
Design Feature 6	During construction, a Water Pollution Control Plan (WPCP) will be implemented to prevent erosion and siltation into sensitive habitats and natural drainages outside designated disturbance limits. The WPCP will identify erosion- and sediment-control best management practices (BMPs) tailored to specific site conditions including, but not limited to, silt fences, gravel bags, detention basins, and any other appropriate and effective measures.	X	X		Water Authority Environmental Surveyor							
Design Feature 7	Prior to the commencement of construction, including grubbing and clearing, the boundaries of approved construction zones adjacent to sensitive habitats will be clearly delineated with temporary flagging and/or fencing, and checked by the Environmental Surveyor. The Water Authority will confirm that fencing is in place prior to initiating any construction or clearing activity. In addition, implementation of water quality/erosion control measures (as described under Geology and Soils, below) will prevent sedimentation within areas of potential ponding.	X			Contractor Environmental Surveyor							
Design Feature 8	Initial clearing, grubbing, and construction of any sound walls as mitigation within or near areas with potential to support least Bell's vireo, coastal California gnatcatcher, and other sensitive avian species will be conducted outside the riparian breeding season (March 15 through September 15) and upland breeding season (February 15 through August 15), as applicable. Areas restricted from noisy activities will be staked or fenced under the supervision of the Environmental Surveyor.	X			Water Authority Environmental Surveyor							
Design Feature 9	A pre-construction meeting will be held wherein the Environmental Surveyor will provide information about sensitive resources. The Environmental Surveyor will brief the Water Authority Contractor on location of construction zone boundaries, the presence of sensitive species, and other required biological mitigation measures.	X			Environmental Surveyor							
Design Feature 10	Pre- and post-construction surveys will be completed by the Environmental Surveyor to determine the actual amount of sensitive habitat impacted by construction activities. If these surveys show that additional impacts to habitat have occurred, the additional impacts will be added to mitigation requirements.	X		X	Environmental Surveyor							

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Design Feature 11	Monitoring by an Environmental Surveyor shall be provided by the Water Authority to ensure that avoidance, minimization, and mitigation measures are carried out and to ensure that inadvertent construction activities do not occur in sensitive areas outside the approved impact footprint. The Environmental Surveyor shall conduct random weekly inspections to ensure that mitigation measures are carried out.		X		Water Authority							
Design Feature 12	Disturbed areas that previously supported natural vegetation will be re-seeded with a native plant mix following completion of construction.			X	Water Authority							
Design Feature 13	The use of fertilizers and pesticides for revegetation efforts in the vicinity of wetland habitats will be limited to the maximum extent practicable.		X		Contractor							
NCCP/HCP General Condition 1	Conduct pre-activity surveys within suitable habitat to ensure that Covered Species are adequately addressed by impact avoidance, minimization, and mitigation. Surveys must be conducted by an Environmental Surveyor during the appropriate field conditions for detection prior to any proposed impacts in the Plan Area.	X			Environmental Surveyor							
NCCP/HCP General Condition 2	Avoid and minimize impacts to occupied Covered Species habitat or potential migration and/or dispersal corridors for all new facilities and O&M Activities of existing facilities through project design considerations.	X			Water Authority							
NCCP/HCP General Condition 3	Establish a habitat buffer when appropriate and feasible around covered plant species populations to support the natural suite of pollinators unless a biologically appropriate mitigation approach is agreed to with the Wildlife Agencies at the time of project-specific environmental review.	X			Water Authority							
NCCP/HCP General Condition 4	Fence and/or flag Covered Species populations and sensitive habitat in or adjacent to work areas. Where necessary, install signage to prohibit access and/or flag areas being restored or protected for their biological value.	X			Water Authority Environmental Surveyor							
NCCP/HCP General Condition 5	Avoid driving or parking on sensitive and/or occupied habitat by keeping vehicles on roads and in designated staging areas.		X		Contractor Environmental Surveyor							
NCCP/HCP General Condition 6	Deter unauthorized activities (such as trampling and off-road vehicle use) and perform litter abatement, including proper disposal of illegally dumped materials, as part of routine patrol of access roads.		X		Contractor Environmental Surveyor							
NCCP/HCP General Condition 7	Monitor encroachment of non-native and invasive species into Covered Species populations and perform weed abatement as needed to improve the habitat.		X		Environmental Surveyor							
NCCP/HCP General Condition 8	Stabilize work areas to control erosion or sedimentation problems when working near Covered Species populations within the Plan Area. Populations within or adjacent to work	X	X		Contractor							

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	areas would be protected from vehicular traffic, excessive foot traffic, or other activities that result in soil surface disturbance.											
NCCP/HCP General Condition 9	Control dust when working near Covered Species populations and/or habitat in accordance with applicable regulations.		X		Contractor Environmental Surveyor							
NCCP/HCP General Condition 10	All identified populations of Covered Species within rights-of-ways must be managed to control edge effects to the maximum extent possible.		X		Environmental Surveyor							
NCCP/HCP General Condition 11	Any restoration and monitoring program prepared as a component of the mitigation plan for impacts to a Covered Species shall include, but not be limited to, species propagation ratios, restoration site selection and assessment, site preparation, implementation strategies, weed control procedures, required management and monitoring in perpetuity, funding commitment, and reporting procedures. The program would be prepared in advance of project impacts and approved by the Wildlife Agencies.			X	Water Authority							
NCCP/HCP General Condition 12	Any planting stock used shall be inspected by an Environmental Surveyor to ensure that it is free of pest species that may invade natural areas, including, but not limited to, Argentine ants (<i>Iridomyrmex humii</i>), fire ants (<i>Solenopsis invicta</i>), and other pests. Any planting stock that is infested would not be allowed within restoration areas or within 300 feet of native areas unless documentation is provided to the Wildlife Agencies that these pests already occur in the native areas around the project site. The stock would be quarantined, treated, or disposed of according to best management principles by qualified experts in a manner that precludes invasions into native habitat. Runoff from mitigation sites in native habitat would be minimized and managed.		X	X	Contractor Environmental Surveyor							
NCCP/HCP General Condition 13	To the maximum extent possible, conduct Covered Activities occurring within wetland habitats during the dry season when flows are at their lowest or nonexistent to minimize impacts to aquatic species and/or habitats.		X		Contractor Environmental Surveyor							
NCCP/HCP General Condition 14	Reseed temporary impact areas with an appropriate native seed mix and allow for natural recolonization of the area by adjacent populations.			X	Contractor							
NCCP/HCP General Condition 15	For new facilities adjacent to native habitat, minimize ornamental landscaping or irrigation not associated with native habitat restoration.	X		X	Water Authority Contractor							
NCCP/HCP General Condition 16	Collection of covered plant and wildlife species by Water Authority personnel and contractors is prohibited.		X		Water Authority							

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					Contractor Environmental Surveyor							
NCCP/HCP General Condition 17	Maintain and manage dispersal/movement corridors within the Plan Area that contribute to long-term population viability.	X			Water Authority							
NCCP/HCP General Condition 18	The use of outdoor lighting within or adjacent to potential Covered Species habitat will be discouraged. If lighting must be used for reasons of safety and security, light sources would be shielded away from habitat and only low pressure sodium lighting would be used.		X		Contractor Environmental Surveyor							
NCCP/HCP Minimization Measure 1	The Water Authority will identify an Environmental Surveyor for the project to oversee pre-project evaluations/needs of Covered Activities and work with the project engineer and contractors to ensure implementation compliance of Covered Activities with Plan commitments.	X			Water Authority							
NCCP/HCP Minimization Measure 2	If the Environmental Surveyor discovers that the Water Authority is out of compliance with the permits associated with this Plan, he/she will report the noncompliance to the Water Authority within one working day and to the Wildlife Agencies within five working days so that the Water Authority and Wildlife Agencies can determine how to put the Plan back into compliance.		X		Environmental Surveyor							
NCCP/HCP Minimization Measure 3	Before any clearing and/or construction activities are performed in habitat areas that may support Covered Species, the Environmental Surveyor will review the site, identify any sensitive plant and animal species, and identify requirements pursuant to the Plan for impact avoidance and minimization. A standard PSF will be prepared for each project and submitted to the Water Authority for review and tracking purposes.	X			Environmental Surveyor							
NCCP/HCP Minimization Measure 4	The Environmental Surveyor will determine the extent of potential Covered Species habitat and will flag the sensitive resources to be avoided. If a Covered Species is present, the Environmental Surveyor will refer to Appendix B of the NCCP/HCP for species-specific conservation measures. In the case of unavoidable impacts to a Covered Species, the Environmental Surveyor will determine the extent of impact, the appropriate mitigation measures, and recommend to the project engineer additional measures to minimize impacts in accordance with Appendix B of the NCCP/HCP.	X			Environmental Surveyor							
NCCP/HCP Minimization Measure 5	The Environmental Surveyor will work with the project engineer to identify and mark areas appropriate for staging and temporary equipment storage, placement of heavy machinery, as well as vehicle turn around and access, that	X			Environmental Surveyor							

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	will result in the least amount of impact to sensitive vegetation and/or Covered Species. The Environmental Surveyor will verify that all areas specified on the plans to be avoided are marked with flagging in the field prior to construction start.											
NCCP/HCP Minimization Measure 6	The Environmental Surveyor will attend pre-construction meetings for projects in sensitive areas. The Environmental Surveyor will provide brief presentations to field staff, as needed, to familiarize field personnel with the natural resources to be protected and avoid on project sites and outline environmental expectations. The Environmental Surveyor will also be available to answer questions and address any last-minute construction changes.	X			Environmental Surveyor							
NCCP/HCP Minimization Measure 7	The Environmental Surveyor will be present during clearing, topsoil salvage, and construction activities located within sensitive habitat. The frequency and duration of required monitoring will be specified in the PSF that is completed by the Environmental Surveyor and submitted to the Water Authority on a project-by-project basis prior to the start of construction.		X		Environmental Surveyor							
NCCP/HCP Minimization Measure 8	The Environmental Surveyor will advise the construction manager during construction to ensure compliance with all avoidance, minimization, and mitigation measures.		X		Environmental Surveyor							
NCCP/HCP Minimization Measure 9	The Environmental Surveyor will conduct (and document) monitoring as required by the PSF. At the completion of the Covered Activity, the Environmental Surveyor will prepare a brief report to verify compliance with the avoidance and minimization recommendations in the PSF. This report will include documentation that the flagged areas were avoided and that minimization measures were properly implemented. The Environmental Surveyor will be responsible for the identification and monitoring of any Covered Species that are found on the project site prior to and during construction activities. Monitoring activities will be in accordance with the species-specific measures (see Appendix B of the NCCP/HCP).	X			Environmental Surveyor							
NCCP/HCP Minimization Measure 10	If any previously unidentified Covered Species or otherwise sensitive species, nests, dens, or burrows are located on a project site during construction activities, the Environmental Surveyor will provide guidance, through the construction manager, as to how best to minimize or avoid impacting the resource(s).		X		Environmental Surveyor							
NCCP/HCP Minimization Measure 11	The Environmental Surveyor will be on-call (via phone) to respond within 24 hours for potential emergency deployment to assess and monitor potentially critical biological issues.		X		Environmental Surveyor							
NCCP/HCP	If the Environmental Surveyor determines that the Covered		X		Environmental							

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Minimization Measure 12	Activity is out of compliance with the requirements of the Plan, the Environmental Surveyor will report it to the Water Authority. The Water Authority will be responsible for bringing the project back into compliance and determine the appropriate remedial action, if necessary, through coordination with the Wildlife Agencies.				Surveyor							
NCCP/HCP Minimization Measure 13	The Environmental Surveyor or construction manager will be responsible for ensuring the removal of all habitat flagging from the construction site at completion of work.			X	Contractor Environmental Surveyor							
NCCP/HCP Minimization Measure 14	If included in the PSF, the Environmental Surveyor will direct the relocation of Covered Species that can be moved from harm's way in coordination with the species-specific Conditions of Coverage in Appendix B of the NCCP/HCP (in non-emergency situations) with notification to the Wildlife Agencies.		X		Environmental Surveyor							
NCCP/HCP Minimization Measure 15	The PSF will include avoidance, minimization, and mitigation requirements based on the general measures outlined in this section and the species-specific conditions in Appendix B of the NCCP/HCP. USFWS biological survey protocols performed by qualified and appropriately authorized personnel will be conducted where appropriate and required.	X			Environmental Surveyor							
NCCP/HCP Minimization Measure 16	The pre-activity survey will be valid for 30 days unless the project is scheduled to begin during the avian breeding season, in which case the nesting bird clearance must be conducted within five days of project implementation. If ground disturbance activities have not commenced within 30 days after the survey is completed, the Environmental Surveyor will conduct a verification survey to confirm that biological conditions have not significantly changed that would alter the specified avoidance, minimization and mitigation commitments prior to construction.	X			Environmental Surveyor							
NCCP/HCP Minimization Measure 17	Field personnel working within sensitive habitat areas, including both Water Authority employees and contractors, will participate in an education training program at the start of each project. The program will be conducted on-site by an Environmental Surveyor under the direction of the Water Authority. The training will include: an overview of Covered Species identification and the legal protections afforded to each species; a brief discussion of their biology; habitat requirements; status under ESA and CESA; conservation measures being taken by the project for the protection of the Covered Species and their habitats under this Plan; and penalties for non-compliance. The training program will also educate field personnel in the identification of invasive	X			Water Authority Contractor Environmental Surveyor							

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	species that may be removed, as well as desirable seeded and planted species, to ensure that native species are not affected by invasive species control. A fact sheet conveying this information will also be available to all personnel working in the project area. The Water Authority, either directly or through the services of the Environmental Surveyor, will be responsible for the education and training for new field personnel coming on-site after the start of a project.											
NCCP/HCP Minimization Measure 18	Contractors or other project personnel will not collect plants or wildlife, unless specifically authorized and directed by the Environmental Surveyor. Only qualified and appropriately authorized personnel will handle or collect plants or wildlife as required by species-specific measures.		X		Contractor							
NCCP/HCP Minimization Measure 19	Field personnel will not intentionally harm or harass wildlife or damage nests, burrows, rock outcrops, or other habitat components.		X		Contractor							
NCCP/HCP Minimization Measure 20	Drivers on unpaved roads in native habitats will not exceed a speed of 20 miles per hour in order to avoid injury to animals and minimize dust generation.		X		Contractor							
NCCP/HCP Minimization Measure 21	Impacts to adjacent native vegetation that would be significantly affected by excessive fugitive dust will be avoided and minimized through watering of access roads (except in areas with vernal pools) or other appropriate measures, such as reducing the number or speed of vehicles or adding inert materials that reduce dust. Projects with the potential for excessive dust generation include those that involve more than occasional use of roads in dust-prone soils (i.e., more than three to five vehicle roundtrips per day) or require multiple vehicles to transport heavy equipment and supplies.		X		Contractor							
NCCP/HCP Minimization Measure 22	Vehicles will not park in areas where catalytic converters may ignite vegetation. Construction vehicles will be equipped with shovels and fire extinguishers in order to reduce the risk of wildfires.		X		Contractor							
NCCP/HCP Minimization Measure 23	Littering will be strictly prohibited. All trash will be deposited in secured, closed containers or hauled out daily by field personnel.		X		Contractor							
NCCP/HCP Minimization Measure 24	No pets will be allowed on any construction site.		X		Contractor							
NCCP/HCP Minimization Measure 25	No firearms or other weapons will be allowed on any construction site except as carried by governmental law enforcement, or as authorized in writing by Water Authority staff.		X		Contractor							
NCCP/HCP Minimization	Field personnel will be prohibited from pushing or dumping soil and brush into sensitive habitats.		X		Contractor							

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Measure 26												
NCCP/HCP Minimization Measure 27	All vehicles, tools, and machinery will be restricted to access roads, approved staging areas, or within designated construction zones.		X		Contractor							
NCCP/HCP Minimization Measure 28	If any field personnel identify a previously unnoticed Covered Species on a construction site, work activities will cease in order to immediately notify the Water Authority's construction manager, project engineer, and the Environmental Surveyor. In conjunction with Water Authority environmental staff, the Environmental Surveyor will determine what actions would be taken to avoid or minimize impacts to the species according to the species-specific conditions outlined in Appendix B of the NCCP/HCP.		X		Contractor Environmental Surveyor							
NCCP/HCP Minimization Measure 29	Field personnel will notify the project engineer/environmental staff of any sick, injured, or dead wildlife found on site.		X		Contractor							
NCCP/HCP Minimization Measure 30	Parking or driving underneath oak trees, except in established traffic areas, will not be allowed in order to protect root structures.		X		Contractor							
NCCP/HCP Minimization Measure 31	Project construction will be initiated outside the Covered Species breeding seasons, including vegetation removal or other habitat modifications. If construction must occur during the breeding season (e.g., due to water system operational constraints, amount of pipeline to be relined, and pipeline condition), a pre-construction nesting survey will be conducted to assess the potential for direct impacts to nests/breeding sites and/or indirect noise effects.		X		Water Authority Contractor Environmental Surveyor							
NCCP/HCP Minimization Measure 32	If Covered Activities need to occur during the breeding season, an Environmental Surveyor will evaluate the need for noise walls or other feasible noise reduction measures to reduce construction noise levels. The PSF will specify the appropriate noise minimization requirements. The PSF will specify the appropriate sound minimization techniques, possibly including activity setbacks/buffers, temporary noise barriers, limited hours of work, etc.		X		Water Authority Environmental Surveyor							
NCCP/HCP Minimization Measure 33	Storage and staging areas will be located in disturbed areas or within the least biologically sensitive areas established by the Environmental Surveyor. No filling, excavating, trenching, or stockpiling of materials will be permitted outside of the approved construction footprint, unless the area to be used is already disturbed and does not support habitat for Covered Species.		X		Contractor							
NCCP/HCP Minimization Measure 34	Construction footprints will be delineated in the construction documents. In addition, if the construction footprint is located within or near sensitive habitat, the project footprint will be	X			Water Authority Contractor							

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	fenced or continuously flagged with streamers or a boundary rope barrier to ensure that habitat is not removed beyond the limits of work. These barriers will be established prior to any grading, grubbing, or clearing, and will be monitored by the Environmental Surveyor.				Environmental Surveyor							
NCCP/HCP Minimization Measure 35	Prior to the start of ground disturbing activities, the Water Authority or their consultants will prepare a Storm Water Pollution Prevention Plan (SWPPP) to reduce or eliminate pollutants during and after construction. The most current and applicable Best Management Practices (BMPs) will be implemented at all construction sites in or adjacent to native habitat in accordance with the project specifications. In addition to the approved manual, BMPs listed in the most recent National Pollutant Discharge Elimination System (NPDES) General Permit and the BMP Fact Sheet located in State Water Resources Control Board (SWRCB) General Permit for Small Linear Underground/Overhead Projects will apply. The fact sheet is attached as an Appendix G and the SWRCB or RWQCB will be contacted for the latest requirements.	X			Water Authority Contractor							
NCCP/HCP Minimization Measure 36	Refuse and trash will be regularly removed from activity sites and disposed of in a lawful manner. Timing of refuse and trash removal will be determined by the Environmental Surveyor and comply with the project specifications that require debris to be removed as work is completed. Petroleum products, including gasoline, diesel, and hydraulic fluid, will be used during construction in accordance with all federal, state, and local laws, regulations, and permitting requirements. In the event that hazardous materials are encountered or generated during construction, contractors certified by the responsible regulatory agency will conduct all recovery operations and dispose of hazardous waste in accordance with existing regulations and required permits. As required, petroleum products, trash, and other materials will be taken to a disposal facility authorized to accept such materials.		X		Contractor Environmental Surveyor							
NCCP/HCP Adjacency Guideline 1	Prepare site-specific fire management plans. Include local fire department contacts and guidelines for pre-fire prevention activities, fire suppression, and post-fire restoration.	X			Contractor							
NCCP/HCP Adjacency Guideline 2	Loose trash and debris will be removed on an as-found or reported basis.		X		Contractor							
NCCP/HCP Adjacency Guideline 3	Eliminate lighting in or adjacent to conserved habitat except where essential for roadway use, facility use, safety, or security purposes.		X		Contractor							

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NCCP/HCP Adjacency Guideline 4	Dispose of all exotic plant materials that are removed from Preserve Areas at a landfill or on-site at a secure, designated location to avoid the spread of nonnative plant species through seeds or propagules. Exotic vegetation shall be chipped and staged in a designated mulch site. All exotic plant materials will be covered during transport and the compost pile will be periodically spot-treated with herbicide to kill any resprouting plants. Exotic plant material will be removed off-site to a green waste recycling facility, or otherwise legally disposed of, as necessary.		X		Contractor							
NCCP/HCP Adjacency Guideline 5	Ensure that all ornamental landscaping and native habitat restoration materials do not contain invasive ant or other species by inspecting all container stock before it enters Preserve Areas.		X		Contractor							
CULTURAL RESOURCES												
Mitigation Measure CUL-1	The Water Authority will develop and implement a cultural resources monitoring plan that will specify the roles of qualified archaeological monitors for the portal-excavation component of the project, and identify procedures for addressing discovery of artifacts and other tribal cultural resources.	X			Water Authority Environmental Surveyor							
Design Feature 1	Based on the extent of previous disturbance of the project area (encompassing the entire ROW and proposed temporary easement areas), all excavation would occur in previously excavated, backfilled materials. As a result, no significant cultural resources are anticipated within the project disturbance area. As standard Water Authority procedure, in the event that buried cultural resources are encountered during any phase of construction, project activities in the vicinity of the resources will be temporarily halted, and the Water Authority will consult a qualified archaeologist to assess the significance of the resource and to provide proper management recommendations.		X		Environmental Surveyor							
Design Feature 2	In the event of an unexpected discovery of human remains during any phase of construction, project activities in the vicinity of the discovery will be temporarily halted and the San Diego County Coroner contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendent, as identified by the Native American Heritage Commission, will be contacted to determine proper treatment and disposition of the remains.		X		Environmental Surveyor							
GEOLOGY AND SOILS												
Design Feature 1	Project construction activities will comply with existing regulatory requirements related to geology and soils,	X	X		Contractor							

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments	Resp. Team Member	Spec Section or Dwg No.	Verified in Contract by	Comments
		Pre Const	During Const	Post Const		Initials	Date					
	<p>including applicable NPDES requirements. The Water Authority will implement a WPCP (including associated sedimentation BMPs) for the construction activities that are specific for project type, location, and characteristics. Typical control measures that may be implemented as part of the project WPCP include:</p> <p>a) Preparation and implementation of a “weather triggered” action plan during the rainy season to provide enhanced erosion or sediment control measures prior to predicted storm events (i.e., 40% or greater chance of rain).</p> <p>b) Use of erosion control/stabilizing measures in appropriate areas (including disturbed areas and graded slopes with grades of 3:1 [horizontal to vertical] or steeper), such as geotextiles, mats, fiber rolls, soil binders, or temporary hydroseeding established prior to October 1.</p> <p>c) Use of sediment controls to protect the site perimeter and prevent off-site sediment transport, including measures such as filtration devices (e.g., temporary inlet filters), silt fences, fiber rolls, gravel bags, temporary sediment basins, check dams, street sweeping, energy dissipaters, stabilizing construction access points (e.g., with temporary gravel or pavement) and sediment stockpiles (e.g., with silt fences and tarps), and use of properly fitted covers for sediment transport vehicles.</p> <p>d) Storage of BMP materials in applicable on-site areas to provide “standby” capacity adequate to provide complete protection of exposed areas and prevent off-site sediment transport.</p> <p>e) Provision of training by certified personnel (i.e., either a Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer [QSD] or Qualified SWPPP Practitioner [QSP]) for the personnel responsible for BMP installation and maintenance.</p> <p>f) Installation of permanent native vegetation as soon as feasible after grading or construction.</p> <p>g) Implementation of appropriate monitoring and maintenance efforts (e.g., prior to and after storm events) to ensure proper BMP function and efficiency.</p>											

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	<p>h) Implementation of sampling/analysis, monitoring/reporting, and post-construction management programs per NPDES requirements.</p> <p>i) Implementation of additional BMPs as necessary (and required by appropriate regulatory agencies) to ensure adequate erosion and sediment control.</p>											
Design Feature 2	Actual BMPs for the proposed project will be determined during the WPCP development process, with such measures taking priority over the typical industry standard measures listed above.	X	X		Contractor							
HAZARDS AND HAZARDOUS MATERIALS												
Design Feature 1	<p>Standard BMPs will be implemented to prevent impacts to the public through the transport, use, or disposal of any hazardous materials. Standard industry measures include, but are not limited to:</p> <p>a) Hazardous materials used or stored on-site will be restricted to areas at least 50 feet from storm drains and watercourses.</p> <p>b) All hazardous materials will be covered or kept in enclosed facilities.</p> <p>c) A written inventory will be kept of all hazardous materials used or stored on-site.</p> <p>d) To prevent discharge in the event of a spill, berms, ditches, and/or impervious liners (or other applicable methods) will be provided in material storage and vehicle/equipment storage areas to provide a containment volume of 1.5 times the volume of the stored/used materials.</p> <p>e) Agency telephone numbers and a summary guide of cleanup procedures will be posted in a conspicuous location at or near the job site trailer.</p>		X		Contractor							
Design Feature 2	Prior to authorization to proceed, the Water Authority will prepare a Fire Prevention and Response Plan. All construction crewmembers will be trained in the requirements of the plan. Fire safety information will be disseminated to construction crews during regular project safety meetings. Fire management techniques will be applied during project construction as deemed necessary, and depending on the on-site vegetation and the vegetation of		X		Contractor							

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		Pre Const	During Const	Post Const		Initials	Date					
	surrounding areas											
HYDROLOGY / WATER QUALITY												
Design Feature 1	A WPCP will be implemented to reduce or eliminate pollutants during construction of the proposed project. The WPCP will identify all pollutant sources, including sources of sediment, that may affect the quality of storm water discharges associated with construction activity (storm water discharges from the construction site); identify non-storm water discharges; identify structural and/or treatment control BMPs that are to be implemented in accordance with a time schedule to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction; and develop a maintenance schedule for permanent or post-construction BMPs that will “to the maximum extent possible” reduce or eliminate pollutants after construction is completed. Detailed BMPs to prevent impacts to water quality will be included in the WPCP.	X	X		Contractor							
NOISE												
Mitigation Measure NOI-1	The Water Authority will require construction of a 16-foot-high noise barrier along the northern, southern, and eastern boundary of Portal 2. Noise barriers will be constructed of material with a minimum weight of 2 pounds per square foot with no gaps or perforations. Noise barriers may be constructed of, but are not limited to, 18-gauge steel, 5/8 inch plywood, 5/8 inch oriented strand board, or hay bales.	X			Contractor							
Design Feature 1	The contractor will comply with the noise thresholds the Water Authority has established for this project. Noise levels associated with construction activities are not to exceed an average sound level of 75 decibels over an eight-hour period, between 7 a.m. and 7 p.m., and 45 decibels over a one-hour period between 7 p.m. to 7 a.m. at or beyond the property lines on any occupied property where the noise is being received.		X		Contractor							
Design Feature 2	All noise-producing project equipment and vehicles using internal combustion engines will be equipped with mufflers; air-inlet silencers, where appropriate; and any other shrouds, shields, or noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed package equipment (e.g., arc-welders, air compressors) will be equipped with shrouds and noise control features that are readily available for that type of equipment.		X		Contractor							
Design Feature 3	All mobile or fixed noise-producing equipment used on the project that is regulated for noise output by a local, state, or		X		Contractor							

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	federal agency will comply with such regulation while in the course of project activity.											
Design Feature 4	Electrically powered equipment will be used instead of pneumatic or internal combustion-powered equipment, where feasible.		X		Contractor							
Design Feature 5	Construction site and access road speed limits will be established and enforced during the construction period; speeds on unpaved roads will not exceed 15 miles per hour.		X		Contractor							
Design Feature 6	The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.		X		Contractor							
Design Feature 7	No project-related public address or music system will be audible at any adjacent noise-sensitive receptor.		X		Contractor							
TRAFFIC												
Design Feature 1	To minimize disruption to communities from construction traffic, the Water Authority will prepare and implement a traffic control plan. The plan will be prepared in accordance with the latest edition of the Federal Highway Administration Manual of Uniform Traffic Control Devices, as modified by the most recent California Supplement.	X	X		Contractor							
Design Feature 2	The project will not unreasonably restrict access to any private property.		X		Contractor							
UTILITIES AND SERVICE SYSTEMS												
Design Feature 1	The Water Authority will notify and coordinate with all other utility providers that own easements, ROWs, or facilities within or adjacent to the area affected by the proposed project. Any need to connect with or relocate utilities will be presented to the appropriate utility provider prior to commencement of construction.	X	X		Water Authority							