Mitigation, Monitoring, and Reporting Program

Crossover Pipeline
Interstate 15 Bypass Project

Mitigated Negative Declaration SCH No. 2023010203

MARCH 2023

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 track compliance with adopted mitigation measures and project design features associated with the implementation of the Crossover Pipeline Interstate 15 Bypass Project (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. The Water Authority will revise this MMRP prior to construction if needed to incorporate additional conditions that may be identified in permits obtained for the project's impacts on waters features.

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. The responsible parties listed in Table 1 include the Water Authority, the contractor who will be hired by the Water Authority to construct the project, and the environmental surveyor who will be assigned by the Water Authority to monitor compliance before and during project construction. These references in the table indicate the party responsible for implementing the respective measures, but the Water Authority will ultimately be responsible for verifying compliance with each measure listed in the table.

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Table 1. Mitigation Monitoring and Reporting Program

Design Feature or Mitigation Measure	Design Feature or Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
Aesthetics								
General Condition/ Design Feature 1	All areas cleared of vegetation for construction and staging will be revegetated at the completion of the project.			X	Contractor			
General Condition/ Design Feature 2	Any lighting used during project construction 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								
General Condition/ 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			
General Condition/ Design Feature 2	Points of public street access to construction work areas will be regularly cleared of dirt or rock material tracked out of the site by construction vehicles.		X		Contractor			
General Condition/ Design Feature 3	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			
General Condition/ Design Feature 4	Dirt stockpiles will be stabilized by soil binders, tarps, fencing, or other erosion-control measures.		X		Contractor			
General Condition/ Design Feature 5	Soil stabilizers will be applied to inactive construction areas (disturbed areas inactive for 14 days or more).		X		Contractor			
General Condition/ Design Feature 6	Traffic speeds on unpaved roads will be limited to 20 miles per hour.		X		Contractor			
General Condition/ Design Feature 7	All trucks hauling soil, sand, and other loose materials will be covered or required to maintain at least 2 feet of freeboard.		X		Contractor			
General Condition/ Design Feature 8	Blasting activities will be limited to a maximum of 6 tons of explosives used in a single day.		X		Contractor			
Biological Resources								
NCCP/HCP Gen. 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 Gen. 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	Contractor			

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NCCP/HCP Gen. 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		Contractor			
NCCP/HCP Gen. 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		Contractor			
NCCP/HCP Gen. Condition 5	Avoid driving or parking on sensitive and/or occupied habitat by keeping vehicles on roads and in designated staging areas.		X	X	Contractor Water Authority			
NCCP/HCP Gen. 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	Water Authority			
NCCP/HCP Gen. 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	Water Authority			
NCCP/HCP Gen. 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 areas would be protected from vehicular traffic, excessive foot traffic, or other activities that result in soil surface disturbance.		X		Contractor			
NCCP/HCP Gen. Condition 9	Control dust when working near Covered Species populations and/or habitat in accordance with applicable regulations.		X		Contractor			
NCCP/HCP Gen. 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	X	Contractor Water Authority			
NCCP/HCP Gen. 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		X	Water Authority			

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NCCP/HCP Gen. 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 (*Iridomyrmex humii*), fire ants (*Solenopsis invicta*), 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 into native habitat would be minimized and managed.		X		Environmental Surveyor			
NCCP/HCP Gen. 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			
NCCP/HCP Gen. 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 Gen. Condition 15	For new facilities adjacent to native habitat, minimize ornamental landscaping or irrigation not associated with native habitat restoration.			X	Water Authority			
NCCP/HCP Gen. Condition 16	Collection of covered plant and wildlife species by Water Authority personnel and contractors is prohibited.		X	X	Contractor Water Authority			
NCCP/HCP Gen. Condition 17	Maintain and manage dispersal/movement corridors within the Plan Area that contribute to long-term population viability.			X	Water Authority			
NCCP/HCP Gen. 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	X	Contractor Water Authority			
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			Environmental Surveyor 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			

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Design Feature or Mitigation Measure	Design Feature or Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
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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 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.	X			Environmental Surveyor			
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			

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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	X	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 Minimization Measure 12	If the Environmental Surveyor determines that the Covered 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.		X		Environmental Surveyor Water Authority			
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	Environmental Surveyor Water Authority			
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			Water Authority			

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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 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.	X	X		Environmental Surveyor Contractor Water Authority			
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			

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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 Measure 26	Field personnel will be prohibited from pushing or dumping soil and brush into sensitive habitats.		X		Contractor			
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			
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	Projects will be designed to avoid and minimize impacts to biological resources, to the extent feasible.		X		Contractor			
NCCP/HCP Minimization Measure 32	Construction and operation activities will be designed and implemented to avoid and minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from sedimentation.		X		Contractor			

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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		Environmental Surveyor			
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 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.	X			Contractor Environmental Surveyor			
NCCP/HCP Minimization Measure 35	Projects will be refined, where possible, during the engineering and construction phases to further avoid and minimize impacts to Covered Species or their habitat through seasonal timing of work, minor realignments, and narrowing of construction limits.	X	X		Contractor			
NCCP/HCP Minimization Measure 36	Clearing and grubbing will be performed within the construction areas only as necessary for safe vehicle movement and construction activities.		X		Contractor			
NCCP/HCP Minimization Measure 37	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			Contractor			

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NCCP/HCP Minimization Measure 38	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			
NCCP/HCP Habitat-Based Mitigation Condition 1	The Water Authority will debit the appropriate types and amounts of off-site mitigation credits from available banking credits at Water Authority Habitat Management Areas. Based on impacts and mitigation assumptions available for the project Initial Study/Mitigated Negative Declaration, off-site mitigation will include 0.15 acres of coastal sage scrub (Diegan). Mitigation acreage will be calculated in the project's final monitoring report based on as-built impacts recorded in the field.			X	Water Authority			
NCCP/HCP Wildlife Species Condition 1	Avoid or minimize impacts to Belding's orange-throated whiptail habitat at all study areas through project design and placement.	X	X		Water Authority			
NCCP/HCP Wildlife Species Condition 2	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.		X	X	Contractor Water Authority			
NCCP/HCP Wildlife Species Condition 3	Non-native ants that penetrate native habitats appear to be partially supported by artificial irrigation associated with landscaping (Suarez et al. 1998). Therefore, runoff from mitigation sites in native habitat would be minimized and managed.		X	X	Water Authority			
NCCP/HCP Wildlife Species Condition 4	Avoid or minimize impacts to coastal whiptail and red diamond rattlesnake habitat at study areas 1, 3, 4, 5, 6, and 7 through project design and placement.	X	X		Water Authority Contractor			
NCCP/HCP Wildlife Species Condition 5	If a northern red diamond rattlesnake is observed in the construction area, the snake should be moved by an Environmental Surveyor to the closest safe, suitable habitat in the area. Exclusionary fences may be used to keep snakes out of construction areas. These fences would be placed and monitored daily.	X	X		Water Authority Contractor Environmental Surveyor			

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NCCP/HCP Wildlife Species Condition 6	Minimize impacts through timing of work in suitable habitat to avoid the nesting season for upland avian species (February 15 to August 15) whenever possible, or ensure that habitat is removed prior to the initiation of the upland avian breeding season. If construction activities must commence during the upland avian breeding season, minimize impacts through conducting nest surveys within 300 feet of all proposed activities (see Section 2.3 of the NCCP/HCP). 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 (see Section 2.4 of the NCCP/HCP). Direct take of individuals and destruction of nests within an active territory is not allowed.	X	X		Water Authority Contractor			
NCCP/HCP Wildlife Species Condition 7	Conduct USFWS protocol surveys for the California gnatcatcher under favorable conditions in areas of potential foraging or breeding habitat for all new facilities and O&M Activities, or assume occupancy of potential habitat, to ensure that this species is adequately addressed by impact avoidance, minimization, and mitigation. A permitted Environmental Surveyor would conduct surveys.	X	X		Contractor Environmental Surveyor			
NCCP/HCP Wildlife Species Condition 9	Direct take of California gnatcatcher individuals and destruction of nests within an active territory are not allowed.	X	X		Contractor Environmental Surveyor			
NCCP/HCP Wildlife Species Condition 10	For temporary impacts to occupied California gnatcatcher habitat, the work site would be returned to preexisting contours, where feasible, and revegetation with appropriate locally native species. All revegetation plans would require written concurrence of the Wildlife Agencies. Also, see Section 6.4, Plan Minimization Measures, of the NCCP/HCP.		X		Water Authority Contractor			
NCCP/HCP Lake Stream and River Condition 1	CDFW employees are authorized to conduct on-site inspections relevant to San Diego County Water Authority NCCP/HCP Section 6.6.1.1, upon reasonable notice		X		Water Authority Contractor			
NCCP/HCP Lake Stream and River Condition 2	Silty/turbid water shall not be discharged into the stream. Such water shall be settled, filtered, or otherwise treated prior to discharge. The Crew's/Contractor's ability to minimize turbidity/siltation shall be the subject of pre-construction planning and design feature implementation.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 3	Preparation shall be made so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.	X	X		Contractor			

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NCCP/HCP Lake Stream and River Condition 4	Water containing mud, silt, or other pollutants from equipment washing or other activities shall not be allowed to enter a lake or flowing stream or placed in locations that may be subjected to high storm flows.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 5	If off-stream siltation pond(s) is/are used to control sediment, pond(s) shall be constructed in a location, or shall be designed, such that potential spills into the stream/lake during periods of high water levels/flow are precluded.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 6	If silt catchment basin(s) is/are used, the basin(s) shall be constructed across the stream immediately downstream of the project site. Catchment basins shall be constructed of materials that are free from mud and silt. Upon completion of the project, all basin materials along with the trapped sediments shall be removed from the stream in such a manner that said removal shall not introduced sediment to the stream.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 7	Silt settling basins shall be located away from the stream or lake to prevent discolored, silt-bearing water from reaching the stream or lake during any flow regime.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 8	Notwithstanding the use of silt catchment basins, upon CDFW determination that turbidity/siltation levels resulting from project related activities constitute a significant threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective CDFW approved control devices are installed or abatement procedures are initiated.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 9	Precautions to minimize turbidity/siltation shall be taken into account during project planning and shall be installed prior to construction. This may require that the work site be isolated and that water be diverted around the work area by means of a barrier, temporary culvert, new channel, or other means approved by CDFW. Precautions may also include placement of silt fencing, straw bales, sand bags, and/or the construction of silt catchment basins so that silt or other deleterious materials are not allowed to pass to downstream reaches. The method used to prevent siltation shall be monitored and cleaned/repaired weekly, or more frequently if warranted by local conditions. CDFW shall provide any determinations or approvals in writing within 14 days of receiving from the Water Authority or its agents a written request which includes a plan sheet or diagram indicating how the work site will be isolated.	X	X		Contractor			
NCCP/HCP Lake Stream and River Condition 10	No equipment shall be operated in ponded or flowing areas except as otherwise addressed in Water Authority project's Notification of Lake or Streambed Alteration application, contract specifications, and any applicable regulatory permits.		X		Contractor			

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NCCP/HCP Lake Stream and River Condition 11	Rock, gravel, and/or other materials shall not be imported to, taken from, or moved within the bed or banks of the stream except as otherwise specifically identified in the project's Notification of Lake or Streambed Alteration application.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 12	Temporary fills shall be constructed of nonerodible materials and shall be removed immediately upon work completion.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 13	If operations require moving equipment across a flowing stream, such operations shall be conducted without substantially increasing stream turbidity. Where repeated crossings could result in a substantial increase in stream turbidly, the Water Authority shall install a permanent or temporary bridge, culvert, or rock-fill crossing as approved by the Water Authority Project Engineer.		X	X	Water Authority			
NCCP/HCP Lake Stream and River Condition 14	If a stream channel and/or gradient have been temporarily altered during construction, it shall be returned as nearly as possible to pre-project conditions without creating a possible future bank erosion problem. If a lake margin has been altered, it shall be returned as nearly as possible to pre-project conditions without creating a future bank erosion problem.			X	Contractor			
NCCP/HCP Lake Stream and River Condition 15	Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 16	Spoil sites shall not be located within a stream/lake, or where spoil shall be washed back into a stream/lake, or where it will cover aquatic or riparian vegetation, unless the site is specifically identified in the project's Notification of Lake or Streambed Alteration application.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 17	Staging/storage areas for equipment and materials shall be located outside of the stream, unless the area is specifically identified in the project's Notification of Lake or Streambed Alteration application.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 18	Access to the work site shall be via existing roads and access ramps when legally available to the Water Authority and its contractors for such use.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 19	No equipment maintenance shall be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 20	No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction, or associated activity of whatever nature shall be allowed to enter into or placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake.		X		Contractor			

Table 1. Mitigation Monitoring and Reporting Program

Design Feature or Mitigation Measure	Design Feature or Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
NCCP/HCP Lake Stream and River Condition 21	The Water Authority and its contractors, subcontractors, and employees shall comply with all litter and pollution laws. It is the responsibility of the Water Authority to ensure compliance.		X		Water Authority Contractor			
NCCP/HCP Lake Stream and River Condition 22	Any equipment or vehicles driven and/or operated within or adjacent to the stream/lake shall be checked and maintained daily to prevent leaks of materials that if introduced to water could be deleterious to aquatic life.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 23	Stationary equipment such as motors, pumps, generators, and welders located within or adjacent to the stream/lake shall be positioned over drip pans or confined within berms capable of containing any spills.		X		Contractor			
NCCP/HCP Lake Stream and River Condition 24	The clean-up of all spills shall begin immediately. CDFW shall be notified immediately by the Water Authority of any spills that affect aquatic habitat, and shall be consulted regarding clean-up procedures.		X		Water Authority			
NCCP/HCP Lake Stream and River Condition 25	Any materials placed in seasonally dry portions of a stream or lake that could be washed downstream or could be deleterious to aquatic life shall be removed from the project site prior to inundation by high flows.		X	X	Contractor			
NCCP/HCP Lake Stream and River Condition 26	Installation of bridges, culverts, or other structures shall be such that water flow is not impaired. Bottoms of temporary culverts shall be placed at or below stream channel grade, and bottoms of permanent culverts shall be placed below stream channel grade. Excavation of the streambed and banks shall be limited to the extent necessary, as determined by the Water Authority Project Engineer, to install bottoms of culverts below stream grade. Temporary culverts placed on existing streambed grade shall be done so with minimal disturbance.		X		Contractor Water Authority			
NCCP/HCP Lake Stream and River Condition 27	The inlet and outlet of all permanent culverts shall be protected by the placement of head walls that shall be constructed of rock riprap, gabions, concrete, or other suitable nonerodible material as determined by the Water Authority project engineer. To prevent undercutting, the head walls shall be keyed in place. To prevent erosion, energy dissipaters will be installed.		X		Contractor Water Authority			
NCCP/HCP Lake Stream and River Condition 28	Culverts shall be long enough to extend completely beyond the toe of the fill (unless both the up and downstream sides of the fill are adequately protected to the maximum high-water mark).		X		Contractor			
NCCP/HCP Lake Stream and River Condition 29	All in-stream structures shall be designed so that no sudden change in stream velocity shall occur above, below, or in the structure. If a sudden change in stream velocities occurs upon installation of the structure, the structure shall be removed immediately.	X	X		Contractor			
NCCP/HCP Lake Stream and River Condition 30	If any wildlife is encountered in the stream or lake zone during the course of construction, said wildlife shall be allowed to leave the construction area unharmed.		X		Contractor			

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		Pre Const	During Const	Post Const		Initials	Date	
NCCP/HCP Lake Stream and River Condition 31	All diversion channels shall be designed to maintain velocities at levels acceptable to all native and recreational fish species determined to be in the project impact area and adjacent upstream and downstream reaches.	X	X		Contractor			
Cultural Resources								
General Condition/ Design Feature 1	The Water Authority will develop and implement a cultural resources monitoring plan (CRMP) with the affiliated consulting Tribe(s) for project-related ground-disturbing activities associated with surface clearing, trenching, and excavation of tunneling pits and new access structures. The CRMP will specify the roles of Native American monitors and qualified archaeological monitors and identify procedures for addressing the potential discovery of artifacts and other tribal cultural resources. The CRMP will be developed at least 60 days prior the start of any ground disturbing activities. The CRMP will be prepared in consultation with and review from interested Tribal organizations, and will include a project schedule, discuss any specific avoidance or preservation requirements, address monitoring protocol and methodology, and shall include a treatment plan should any cultural resources be identified. The CRMP shall be finalized and distributed to the Water Authority, its contractor, and all interested Tribal organizations prior to initiating any ground disturbing activities.	X	X	X	Water Authority			
General Condition/ Design Feature 2	In the event that any Tribal cultural resources (including sacred items, burial good, and all Tribal cultural artifacts) are identified during construction activities, the Water Authority shall relinquish ownership to affiliated consulting tribe(s) for proper treatment and disposition as outlined in the CRPM. Cultural resources that are determined to be historic-era resources and not Tribal cultural resources will be relinquished to a San Diego County curation facility.		X		Contractor Water Authority			
General Condition/ Design Feature 3	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 accordance with Section 7050.5 of the California Health and Safety Code. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, will be contacted to determine proper treatment and disposition of the remains.		X		Contractor Water Authority			

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Design Feature or Mitigation Measure	Design Feature or Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
Geology and Soils								
Mitigation Measure GEO-1a	Prior to the commencement of construction, a qualified paleontologist shall be retained by the Water Authority. The paleontologist will create a Worker's Environmental Awareness Program (WEAP) pamphlet that will be provided as training to construction personnel to understand regulatory requirements for the protection of paleontological resources. This training shall include examples of paleontological resources to look for and protocols to follow if discoveries are made. The paleontologist shall develop the training and any supplemental materials necessary to execute said training.	X			Water Authority Environmental Surveyor			
Mitigation Measure GEO-1b	The Water Authority will identify in the project's final construction drawings and/or specifications the locations where earthwork will occur in Pleistocene age sediments and will secure the services of a qualified paleontological monitor to be present during these activities. The monitor will meet the 2010 Society for Vertebrate Paleontology standards, and will work under the supervision of a qualified Lead Paleontologist.	X	X		Water Authority Environmental Surveyor			
Mitigation Measure GEO-1c	In the event that paleontological resources are encountered when a monitor is not on site, all construction shall cease within at least 50 feet of the discovery and the Lead Paleontologist must be notified immediately. The paleontological monitor and the Lead Paleontologist shall have the authority to temporarily divert the construction equipment around the find to allow for formal evaluation. All significant fossils collected during project construction will be prepared for curation in a properly equipped paleontology laboratory. All fossils collected during project construction shall be donated to a public, non-profit institution with a research interest in the materials within San Diego County or other local repository. Accompanying notes, maps, and photographs shall also be filed at the repository.		X	X	Contractor Environmental Surveyor			
Mitigation Measure GEO-1d	A final report shall be prepared describing the results of the paleontological monitoring efforts associated with the project. The report will include a summary of the field and laboratory methods, an overview of the geology and paleontology in the project vicinity, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. A copy of the report shall be submitted to the Water Authority and the designated museum repository.			X	Contractor Environmental Surveyor			

Table 1. Mitigation Monitoring and Reporting Program

Design Feature or Mitigation Measure	Design Feature or Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
General Condition/ Design Feature 1	Project construction activities will comply with existing regulatory requirements related to geology and soils, including applicable NPDES requirements. The Water Authority will implement a Storm Water Pollution Prevention Plan (SWPPP) (including associated sedimentation best management practices [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 SWPPP include: 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). 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. 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. 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. E. Provision of training by certified personnel (i.e., either a Qualified SWPPP Developer [QSD] or Qualified SWPPP Practitioner [QSP]) for the personnel responsible for BMP installation and maintenance. F. Installation of permanent native vegetation as soon as feasible after grading or construction. G. Implementation of appropriate monitoring and maintenance efforts (e.g., prior to and after storm events) to ensure proper BMP function and efficiency. H. Implementation of sampling/analysis, monitoring/reporting, and post-construction management programs per NPDES requirements. I. Implementation of additional BMPs as necessary (and required by appropriate regulatory agencies) to ensure adequate erosion and sediment control.	X	X		Water Authority Contractor			

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General Condition/ Design Feature 2	Actual BMPs for the proposed project will be determined during the SWPPP development process, with such measures taking priority over the typical industry standard measures listed above.	X	X		Water Authority Contractor			
Hazards and Hazardous Materials								
General Condition/ Design Feature 1	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: A. Hazardous materials used or stored on-site will be restricted to areas at least 50 feet from storm drains and watercourses. B. All hazardous materials will be covered or kept in enclosed facilities. C. A written inventory will be kept of all hazardous materials used or stored on-site. 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. 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.		X	X	Water Authority Contractor			
General Condition/ Design Feature 2	Prior to authorization to proceed, the Water Authority will require their construction contractor to 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 surrounding areas.	X	X		Water Authority Contractor			
Hydrology and Water Quality								
General Condition/ Design Feature 1	A SWPPP will be implemented to reduce or eliminate pollutants during construction of the proposed project. The SWPPP will identify all pollutant sources, including sources of sediment, that may affect the quality of stormwater 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 SWPPP.		X		Water Authority Contractor			

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Noise								
Mitigation Measure NOI-1	**Temporary Construction Noise Barriers.** Prior to the start of nighttime (7:00 p.m. to 7:00 a.m.) or Sunday construction activity at Work Area 1/Northern Tie-In, the Water Authority's contractor shall erect noise barriers between the active work areas and the nearby residence. The noise barriers may be portable barriers, but if portable barriers are used they shall be left in place during all construction activity occurring at night and on Sundays. The barrier shall be composed of materials with a sound transmission class value of 25. The noise barrier design requirement shall be included on the construction specifications.	X	X		Contractor			
Mitigation Measure NOI-2	**Rock Crusher Siting.** The Water Authority shall require the contractor to site the rock crushing facility at least 180 feet from the nearest residence. This requirement shall be included on the construction plans.		X		Contractor			
General Condition/ 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 A-weighted decibels (dBA) over an 8-hour period, between 7:00 a.m. and 7:00 p.m., and 66 dBA over a 1-hour period between 7:00 p.m. to 7:00 a.m. at or beyond the property lines on any occupied property where the noise is being received.		X		Contractor			
General Condition/ 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			
General Condition/ 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 federal agency will comply with such regulation while in the course of project activity.		X		Contractor			
General Condition/ Design Feature 4	Electrically powered equipment will be used instead of pneumatic or internal combustion-powered equipment, where feasible.		X		Contractor			
General Condition/ 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 20 miles per hour.		X		Contractor			
General Condition/ Design Feature 6	The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.		X		Contractor			
General Condition/ Design Feature 7	No project-related public address or music system will be audible at any adjacent noise-sensitive receptor.		X		Contractor			

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Transportation								
General Condition/ 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 (FHWA 2009), as modified by the most recent California Supplement (Caltrans 2021).	X	X		Water Authority Contractor			
General Condition/ Design Feature 2	The project will not unreasonably restrict access to any private property.		X	X	Contractor			
Utilities and Service Systems								
General Condition/ 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			Water Authority			

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