

**PROJECT DESIGN FEATURES
AND
MITIGATION MONITORING AND REPORTING PROGRAM
FOR THE
MISSION TRAILS FRS II, PIPELINE TUNNEL,
AND VENT DEMOLITION PROJECT**

Prepared for

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August 2006

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1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that public agencies adopting Environmental Impact Reports (EIRs) 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 reporting and monitoring 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 EIR during project implementation (Public Resources Code, Section 20181.6(a)(1)).

This Mitigation Monitoring and Reporting Program (MMRP) will be used by the San Diego County Water Authority (Water Authority) as Lead Agency to ensure compliance with adopted mitigation measures and project design features associated with the development of the proposed Mission Trails Flow Regulatory Structure (FRS) II, Pipeline Tunnel, and Vent Demolition project (project) within Mission Trails Regional Park (MTRP). The Water Authority, as Lead Agency pursuant to the State CEQA Guidelines, will ensure that all design features and mitigation measures are carried out.

Implementation of project design features would lessen potential environmental impacts to below a level of significance for land use, aesthetics/visual resources, traffic/circulation, recreation, water resources, geology/soils, and utilities and public services. Implementation of project design features and mitigation measures would reduce significant impacts to biological resources, cultural resources, paleontological resources, and public safety/hazardous materials to below a level of significance. Implementation of project design features and mitigation measures would lessen potential impacts to noise and air quality, but would not fully mitigate project-level noise impacts or project-level and cumulative air quality impacts.

Section 2.0 of this document describes the approvals and permits that are not part of the MMRP, but are required to be implemented as part of the project to: (1) comply with government codes, ordinances, and regulations; and (2) reduce project effects.

The remainder of this MMRP consists of a checklist that identifies the project design features and mitigation measures by resource. The table identifies the mitigation monitoring and reporting requirements, including the person(s) responsible for verifying implementation of the design feature or mitigation measure, timing of verification (prior to, during or after construction) and responsible party. Space is provided for sign-off following completion/implementation of the design feature or mitigation measure.

2.0 APPROVALS AND PERMITS REQUIRED

The proposed project would be completed within MTRP, which is under the jurisdiction of the City of San Diego. As such, coordination with the City of San Diego Real Estate Assets, Parks and Recreation Department, MTRP Park Rangers, as well as federal and state agencies and other local authorities, is needed during the design and construction of the project. Because the proposed project would involve construction of a water infrastructure project by the Water Authority, it would be exempt from City of San Diego land use, grading, and building permits (California Government Code Section 53091).

The Water Authority, as the Lead Agency for the project, has the primary authority for approval of this environmental document and the proposed project. The project will be reviewed and considered for approval by the Board of Directors of the Water Authority.

A number of construction activities would require that the contractor acquire permits. These activities may include, but are not limited to: blasting, shoring, discharge of groundwater or storm water, off-site material storage, noise emissions, air pollution emissions, and oversized load/truck traffic/construction vehicle activities. The following table lists the permits and approvals anticipated to be required for the Mission Trails FRS II, Pipeline Tunnel, and Vent Demolition project.

**TABLE M-1
PRELIMINARY LIST OF POTENTIAL PERMITS AND APPROVALS
FOR DESIGN, CONSTRUCTION, AND OPERATION OF
THE PROJECT**

Entity	Permit/Approval/Plan	Comments	Permit/Approval Required
U.S. Fish and Wildlife Service	Formal Section 7 Consultation for Endangered Species	Quino checkerspot butterfly, least Bell's vireo, and coastal California gnatcatcher.	Biological Opinion
U.S. Army Corps of Engineers	Individual 404 Permit for Crossing of San Diego River; Impacts to Other Waters of the U.S.	San Diego River crossing and drainages in canyon bottoms	Individual 404 Permit
San Diego Regional Water Quality Control Board	401 Water Quality Certification or Waiver (in association with the 404 permit); NPDES Permit; Waste Discharge Permit for impacts to vernal pools; Compliance with General Permit for dewatering	San Diego River crossing and drainages in canyon bottoms. Vernal pools	Section 401 Water Quality Certification
California Department of Fish and Game	1602 Streambed Alteration Agreement; ESA Permit	San Diego River crossing	1602 Streambed Alteration Agreement
City of San Diego	Land Acquisition; Encroachment Permits	Acquisition of a strip of land between FRS II and Water Authority's ROW. Encroachment permits for construction access. Will not occur until after project approval	Required
San Diego Unified School District	Land Acquisition; Encroachment Permits	Acquisition of FRS II Parcel. Encroachment permit for construction access. Will not occur until after project approval	Required
San Diego Gas & Electric	Encroachment Permit	Plan review for utility conflicts	Required

Project Design Features, and Mitigation Monitoring and Reporting Program Checklist

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Person(s) to Verify	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const	During Const	Post Const		Initials	Date	
LAND USE									
	No project design features or mitigation measures required.								
AESTHETICS/VISUAL QUALITY									
<u>Design Feature 1</u>	The proposed project has been designed to be almost entirely belowground. All disturbed areas will be graded following construction to be compatible with the surrounding topography. Excess soil will be disposed of and the sites will be cleared of all construction debris. All areas disturbed by construction, not proposed for permanent roads or facilities, will then be revegetated with a native seed mix.	CM Engineer; Environmental Monitor		X	X	Water Authority			
<u>Design Feature 2</u>	Building colors will be of neutral color and design elements will be incorporated to complement the surrounding natural open space. Building design will feature free-form curved walls. Building will be recessed into earthen berm.	Civil Engineer	X			Water Authority			
<u>Design Feature 3</u>	Permanent lighting will be limited to use by Water Authority employees making repairs or conducting maintenance.	Water Authority O&M			X	Water Authority			
Mitigation Measures	No mitigation measure required.								

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			Pre Const	During Const	Post Const		Initials	Date	
TRAFFIC/CIRCULATION									
<u>Design Feature 1</u>	Prior to construction, the contractor will prepare the detailed Traffic Control Plan for review by the Water Authority and approval by the City of San Diego. 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.	CM Engineer	X			Water Authority			
<u>Design Feature 2</u>	Hours of operation for trucks associated with the project grading and construction, including hauling of excess materials out of MTRP and construction materials into MTRP, will be restricted to 7:00 a.m. to 7:00 p.m., Monday through Saturday.	CM Engineer		X		Water Authority			
<u>Design Feature 3</u>	Truck traffic on Rueda Drive and Calle de Vida will be limited to oversized trucks and equipment and will not exceed 40 trips/day. All other construction traffic will utilize the Clairemont Mesa Boulevard, Portobelo Drive or Mission Gorge Road (stabilized crossing of the San Diego River only) access points to MTRP.	CM Engineer		X		Water Authority			
Mitigation Measures	No mitigation measures required.								

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AIR QUALITY									
<u>Design Feature 1</u>	All clearing and grading will be carried out with dust control measures adequate to prevent creation of a nuisance to persons or public or private property. Clearing, grading, and construction plans will require that measures such as the following be undertaken to achieve this result: watering, application of surfactants, shrouding, control of vehicle speeds, or other technological measures to reduce dispersion of dust.	Civil Engineer; CM Engineer	X	X		Water Authority			
<u>Design Feature 2</u>	Specific source control Best Management Practices (BMPs) identified in the project design could include, but not be limited to, the following: - Multiple applications of water during grading between dozer/scrapper passes. - Chemical stabilization of internal roadways after completion of grading. - Use of sweepers or water trucks to remove “track-out” at any point of public street access. - Termination of grading if winds exceed 25 mph. - Stabilization of dirt storage piles by chemical binders, tarps, fencing or other erosion control.	Civil Engineer	X	X		Water Authority			

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Mitigation Measure AQ 1-1	Heavy-duty diesel equipment engines shall be properly tuned and maintained in compliance with State of California emissions regulations to ensure minimum emissions under normal operation. The Water Authority shall require its construction contractors to implement this measure to the extent practical.	CM Engineer		X		Water Authority			
Mitigation Measure AQ 2-1	Vehicles hauling dirt or fill shall be covered with a tarp or other means.	CM Engineer		X		Construction Contractor			
NOISE AND VIBRATION									
<u>Design Feature 1</u>	Grading and construction activities will be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday, with the exception of 24/7 tunneling activities at the South Portal and the 10-day pipeline connection phase of the project at the North Portal, South Portal, and Pipeline Interconnect Reconfiguration.	CM Engineer	X	X		Construction Contractor			
<u>Design Feature 2</u>	Temporary noise barriers will be provided between stationary equipment and the closest sensitive receptors at the North Portal and the Pipeline Interconnect Reconfiguration area north of the North Portal.	CM Engineer	X	X		Construction Contractor			

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Mitigation Measure N 1-1	No motor driven semi-stationary equipment shall be operated continuously under load within 500 feet of any residences at night (7:00 pm – 7:00 a.m.) unless a temporary noise propagation barrier is erected, and/or enhanced mufflers are used to reduce noise exposure at any adjacent building facade to 45 dB L _{eq} .	CM Engineer		X		Construction Contractor			
Mitigation Measure N 1-2	The contractor shall use portable noise screens or enclosures to provide shielding for high noise activities or equipment as necessary. The effectiveness of a barrier depends upon factors such as the relative height of the barrier relative to the line-of-sight from the source to the receiver, the distance from the barrier to the source and to the receiver and the reflections of sound. To be effective, a barrier must block the line-of-sight from the source to the receiver. A properly designed noise barrier can reduce noise as much as 20 dBA.	CM Engineer		X		Construction Contractor; Water Authority			
Mitigation Measure N 1-3	The Water Authority shall monitor noise levels during construction to ensure compliance with the noise thresholds.	CM Engineer		X		Water Authority			
Mitigation Measure N 2-1	Prior to start of construction, the Water Authority shall construct a temporary sound wall along the western boundary of the North Portal staging area and the Pipeline Interconnect Reconfiguration site to reduce construction noise levels at the Belsera property line. A properly designed noise barrier can reduce noise as much as 20 dBA.	CM Engineer		X		Construction Contractor; Water Authority			

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Mitigation Measure N 2-2	The Water Authority shall monitor noise levels during construction to ensure compliance with the noise thresholds.	CM Engineer		X		Water Authority			
Mitigation Measure N 3-1	The Water Authority shall monitor all blasting activities to confirm that they are consistent with the Water Authority’s General Conditions and Standard Specifications, Section 02229, including: - Blasting shall only be conducted during construction when other practicable excavation methods are not available. - Advanced written notification of the date and time of any blasting activities shall be provided to all residents and businesses within 400 feet of the blast area. - A Blast Plan will be developed and approved by the local regulatory authority in the event that blasting is necessary.	CM Engineer		X		Water Authority			
Mitigation Measure N 3-2	Blast monitoring shall be required for all blasting operations within the City, including monitoring of ground motions, peak particle velocity, and air blast levels.	CM Engineer		X		Water Authority			
Mitigation Measure N 3-3	The hours of blasting shall be determined by site specific requirements and blasting shall be limited to daytime hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday.	Blasting Contractor; CM Engineer		X		Blasting Contractor			

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Mitigation Measure N 3-4	If the blasting results in vibration or blast levels with a PPV in excess of 2.0 inches/second, modifications to the procedures shall be implemented, such as using different delay patterns, reduction in size of the individual blasts, shorter and/or smaller diameter blast holes, closer spacing of blast holes, reduction of explosives, blast mats, sound walls, or a combination. A properly designed noise barrier can reduce noise as much as 20 dBA.	Blasting Contractor; CM Engineer		X		Blasting Contractor			
Mitigation Measure N 3-5	A public outreach program shall be implemented to alert the public to the potential for vibrations and noise associated with blasting.	Water Authority Public Relations		X		Water Authority			
RECREATION									
<u>Design Feature 1</u>	Roads and trails within MTRP that are within the area affected by the proposed project will be closed for the duration of construction to avoid potential conflicts between construction activities and recreational activities. All road and trail closures will be well marked and alternative routes will be identified.	Water Authority Public Relations	X	X		Water Authority			
<u>Design Feature 2</u>	All roads and trails within the area affected by the proposed project will be restored to existing conditions, or better, following construction.	CM Engineer		X	X	Construction Contractor			
<u>Design Feature 3</u>	The surface of the park will be revegetated with a native seed mix and returned to natural open space available for passive recreation.	CM Engineer; Environmental Monitor		X	X	Construction Contractor			

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<u>Design Feature 4</u>	Most of the existing Elliott Vents #1 - #5 will be removed and replaced with smaller facilities.	Civil Engineer	X			Water Authority			
Mitigation Measures	No mitigation measures required								
WATER RESOURCES									
<u>Design Feature 1</u>	Prior to the start of ground disturbing activities, the Water Authority will prepare a SWPPP to reduce or eliminate pollutants during and after construction is complete. The plan 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.	Civil Engineer	X	X	X	Water Authority			
<u>Design Feature 2</u>	Detailed BMPs to prevent hazardous materials impacts to water quality will be included in the project SWPPP.	Civil Engineer	X	X		Water Authority			

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<u>Design Feature 3</u>	The grading/construction contractor will conform to applicable NPDES General Groundwater Extraction and Waste Discharge Permit criteria prior to disposal of extracted groundwater.	CM Engineer		X		Construction Contractor			
Mitigation Measures	No mitigation measures required.								
BIOLOGICAL RESOURCES									
<u>Design Feature 1</u>	Native vegetation disturbance will be limited to the construction zones as indicated by flagging.	CM Engineer; Environmental Monitor	X	X		Water Authority			
<u>Design Feature 2</u>	Equipment staging and refueling areas will be located away from sensitive habitat and natural drainages.	CM Engineer; Environmental Monitor	X	X		Water Authority			
<u>Design Feature 3</u>	Prior to the commencement of construction, the limits of grading will be clearly delineated by a survey crew prior to brushing, clearing, or grading. The biological monitor will check the grading limits before initiation of construction grading. The contractor(s) will be responsible to mitigate impacts to sensitive biological resources beyond those identified in this report or any subsequent reports that occur as a result of construction activities.	CM Engineer; Environmental Monitor	X	X	X	Water Authority			

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<u>Design Feature 4</u>	Activities will be prohibited within drainages (other than those that may occur within an approved construction zone), including staging areas, equipment access, and disposal or temporary placement of excess fill.	CM Engineer; Environmental Monitor	X	X		Water Authority			
<u>Design Feature 5</u>	Construction in or adjacent to sensitive areas or potentially affecting sensitive species will be appropriately scheduled to avoid sensitive and/or breeding seasons and to minimize potential impacts to biological resources.	CM Engineer; Environmental Monitor	X	X		Water Authority			
<u>Design Feature 6</u>	Erosion and siltation into off site areas during construction will be minimized. The contractor will prepare an erosion control plan. The construction supervisor will be responsible for ensuring that the erosion control plan is developed and implemented.	CM Engineer	X	X		Construction Contractor; Water Authority			
<u>Design Feature 7</u>	Appropriate post-construction fencing and signage will be installed to prohibit access and avoid potential impacts to sensitive resources adjacent to the site.	CM Engineer; Environmental Monitor			X	Water Authority			
<u>Design Feature 8</u>	Lighting will be directed away from any native habitat and will consist of low-sodium or similar lighting equipped with shields to focus light downward on the appropriate subject.	Civil Engineer; CM Engineer; Environmental Monitor	X	X		Water Authority			

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<u>Design Feature 9</u>	If staging areas outside the construction footprint are used, they will be surveyed for biological resources prior to use.	CM Engineer; Environmental Monitor	X	X		Water Authority			
<u>Design Feature 10</u>	During clearing, grading, earth moving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems will be used when necessary to prevent dust from leaving the site.	CM Engineer		X		Construction Contractor			
<u>Design Feature 11</u>	During construction, water trucks or sprinkler systems will be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this will include wetting down such areas in the morning and after work is completed for the day.	CM Engineer		X		Construction Contractor			
<u>Design Feature 12</u>	A tunnel has been proposed for construction of approximately 5,000 feet of pipeline beneath MTRP to minimize surface disturbance in the park. The FRS II has been designed to be belowground. An existing staging area, constructed for the FRS I project, has been selected for the proposed project. Existing roads within MTRP have been selected for ingress and egress to the construction sites. Impacts have been limited to the Water Authority's existing right-of-way wherever possible. An existing crossing of the San Diego River has been selected for the proposed stabilized crossing.	CM Engineer	X						

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<u>Design Feature 13</u>	The removal of vegetation from MTRP will be limited to the non-breeding season for nesting migratory birds (September 15 through March 15). Such a restriction will also avoid direct impacts to birds afforded the federal species of concern and/or the California species of special concern status.	CM Engineer; Environmental Monitor		X		Water Authority			
<u>Design Feature 14</u>	If it would not be possible to limit clearing of vegetation to only during the non-breeding season, nesting surveys will be conducted prior to the removal of vegetation, active nest areas will be avoided, and a 500-foot buffer will be maintained around the nest, until the young birds have fledged.	CM Engineer; Environmental Monitor		X		Water Authority			
<u>Design Feature 15</u>	If removal of mature trees is proposed during the raptor breeding season, a survey for active raptor nests will be conducted, and similar measures will be followed if active nests are found.	CM Engineer; Environmental Monitor		X		Water Authority			
Mitigation Measure BR 1-1 BR 2-1 BR 3-1	Temporary impacts to Diegan coastal sage scrub, coastal sage scrub-chaparral scrub, and valley needlegrass shall be mitigated through revegetation with a coastal sage scrub seed mix that includes valley needlegrass seed. Permanent impacts to Diegan coastal sage scrub, coastal sage scrub-chaparral scrub, and valley needlegrass shall be mitigated off site using mitigation credits from the Water Authority's Crestridge Habitat Management Area.	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			

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Mitigation Measure BR 4-1	<p>Permanent impacts to San Diego claypan vernal pool habitat shall be mitigated at a 2:1 ratio by the creation of replacement vernal pool habitat. The Water Authority shall request enrollment under the RWQCB <i>General Waste Discharge Requirements (WDR) for Dredged of Fill Discharges to Waters Deemed by the U.S. ACOE to be Outside of Federal Jurisdiction</i> (Order No. 2004-0004-DWQ).</p> <p>The site selected for the creation of claypan vernal pool habitat shall have the appropriate topography and soil type for vernal pool creation and shall ideally be disturbed. The vernal pool creation effort shall not have an adverse effect on existing vernal pools.</p> <p>Two sites that are potentially suitable for vernal pool mitigation have been identified within MTRP. The final vernal pool creation program shall be prepared to the mutual satisfaction of the Water Authority, MTRP staff, and the RWQCB.</p>	Environmental Monitor; RWQCB	X	X	X	Water Authority			
Mitigation Measure BR 5-1	<p>Mitigation for temporary and permanent impacts southern willow scrub at the stabilized crossing of the San Diego River shall be mitigated through the revegetation of disturbed areas adjacent to the San Diego River with southern willow scrub species.</p>	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			

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Mitigation Measure BR 6-1	Mitigation for temporary and permanent impacts to southern cottonwood-willow riparian forest shall be mitigated through the planting of southern cottonwood-willow riparian forest container stock within disturbed areas adjacent to the San Diego River.	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			
Mitigation Measure BR 7-1	Mitigation for temporary impacts to mule-fat scrub shall be mitigated through the planting of mule fat scrub within disturbed areas adjacent to the San Diego River.	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			
Mitigation Measure BR 8-1	Mitigation for permanent impacts to waters of the U.S. shall be mitigated through the creation of wetlands along the San Diego River in MTRP and the restoration/enhancement of an adjacent area.	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			
Mitigation Measure BR 9-1	A qualified biologist shall conduct a pre-construction survey for the Quino checkerspot butterfly during the flight season prior to the commencement of project construction. Should Quino checkerspot butterflies be present, the Water Authority shall provide mitigation in the form of habitat preservation, enhancement, or creation to the mutual satisfaction of the USFWS and the Water Authority.	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			

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Mitigation Measure BR 10-1	All on-site grading and construction activities adjacent to Diegan coastal sage scrub shall occur outside the gnatcatcher breeding season (March 1 through August 15). It is possible that construction activities could overlap the gnatcatcher breeding season and, therefore, indirect impacts to gnatcatchers could occur. If grading or construction is planned to commence during the breeding season, a pre-construction survey shall be conducted to determine the presence or absence of gnatcatchers within areas affected by noise. If no nesting birds occur within this area, development would be allowed to proceed. However, if nesting birds are observed within this area, development shall be postponed until all nesting activity has ceased or until after August 15. Work that has commenced prior to the breeding season shall be allowed to continue without interruption. Traffic shall continue to traverse occupied habitat in route to construction sites in unoccupied areas	CM Engineer; Environmental Monitor; Wildlife Agencies	X	X		Water Authority			
Mitigation Measure BR 11-1	Indirect impacts to least Bell's vireos resulting from loss of habitat at the proposed stabilized San Diego River crossing shall be mitigated by the planting of southern willow scrub (Mitigation Measure BR 5-1).	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			

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Mitigation Measure BR 11-2	If feasible, indirect impacts to least Bell's vireos resulting from construction noise at the San Diego River shall be mitigated by prohibiting construction of the San Diego River stabilized crossing during the breeding season (March 15- September 15). If not feasible, the Water Authority shall consult with the USFWS and implement any required mitigation measures.	Environmental Monitor; Wildlife Agencies	X	X	X	Water Authority			
CULTURAL RESOURCES									
Mitigation Measure CR 1-1	Prior to construction, a qualified archaeologist shall flag the construction zone, including a 10-foot buffer zone, so that impacts occur entirely outside the boundaries of CA-SDI-5518, CA-SDI-5656, CA-SDI-5657, and CA-SDI-12018.	Environmental Monitor	X	X		Water Authority			
Mitigation Measure CR 1-2	The Water Authority shall provide a qualified archaeological monitor to be present during ground disturbing activities in prescribed areas.	Environmental Monitor		X		Water Authority			
Mitigation Measure CR 2-1	In the event that unanticipated cultural resources are encountered during project construction, all earthmoving activities shall cease until the qualified archaeologist examines the findings, assesses their significance, and offers recommendations for procedures deemed appropriate to either further investigate or mitigate adverse impacts to those cultural resources that have been encountered (e.g., excavate the significant resource). These additional measures shall be implemented.	CM Engineer; Environmental Monitor		X	X	Water Authority			

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Mitigation Measure CR 2-2	If human bone or bones of unknown origin are found during project construction, all work shall stop in the vicinity of the find and the County Coroner and the Water Authority shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person it believes to be the most likely descendant. The most likely descendant shall work with the Water Authority to develop a program for reinternment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been completed. Any collection of artifacts resulting from the surveys and monitoring, as well as the associated records, shall be curated at an appropriate institution in San Diego County that meets the standards of the State of California Guidelines for the Curation of Archaeological Collections.	CM Engineer; Environmental Monitor		X	X	Water Authority			
GEOLOGY AND SOILS									
<u>Design Feature 1</u>	Project plans will be reviewed to ensure compatibility with geotechnical conclusions.	Geo-technical Engineer; Civil Engineer	X			Water Authority			

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<u>Design Feature 2</u>	Applicable field activities (e.g. manufactured slope conditions, excavations and fill placement) will be reviewed and appropriately modified by the geotechnical engineer.	Geo-technical Engineer; Civil Engineer	X			Water Authority			
<u>Design Feature 3</u>	Project design and construction elements, including seismic loading, excavation and grading, fill parameters (e.g., composition and moisture content), foundations and footings, manufactured slopes, and pipelines, will be in conformance with appropriate regulatory guidelines and industry standards.	Geo-technical Engineer; Civil Engineer	X			Water Authority			
<u>Design Feature 4</u>	Project construction activities will comply with existing regulatory requirements related to geology and soils, including applicable elements of the NPDES General Construction Permit, such as implementing a SWPPP and associated sedimentation BMPs. Actual BMPs for the proposed project will be determined during the NPDES permitting and SWPPP process, with such measures taking priority over the typical industry standard measures.	Civil Engineer; CM Engineer	X	X		Construction Contractor			
<u>Design Feature 5</u>	The project will include design features to minimize or avoid instability of manufactured slopes and retaining walls.	Geo-technical Engineer; Civil Engineer	X			Water Authority			
<u>Design Feature 6</u>	The project will include design features to minimize or avoid differential compression or settlement of on-site soils.	Geo-technical Engineer; Civil Engineer	X			Water Authority			

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<u>Design Feature 7</u>	Project development will conform to applicable industry standards (e.g., the UBC and/or Greenbook) regarding corrosive soils. A site-specific investigation of potential corrosion hazards will be conducted in areas deemed appropriate by a qualified corrosion engineer for the proposed project. The results of this analysis will be checked against the final project design, as appropriate, to address potential corrosion impacts.	Geo-technical Engineer; Civil Engineer	X			Water Authority			
Mitigation Measures	No mitigation measures required.								
PALEONTOLOGICAL RESOURCES									
Mitigation Measure PR 1-1	The following measures shall be carried out by a qualified professional paleontologist: - Existing bedrock outcrops and (possibly) excavation of test trenches shall be inspected for fossil remains. - Surface collection of discovered fossil remains shall be conducted via simple excavation of exposed specimens and possibly plaster-jacketing of large and/or fragile specimens or more elaborate quarry excavations of richly fossiliferous deposits.	Environmental Monitor		X	X	Water Authority			

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Person(s) to Verify	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const	During Const	Post Const		Initials	Date	
Mitigation Measure PR 1-1 (cont'd)	<ul style="list-style-type: none"> - Stratigraphic and geologic data shall be recovered to provide context for recovered fossil remains. These data will typically include a description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the setting. - Laboratory preparation of collected fossil remains shall be conducted for potentially significant or unique finds. - Prepared significant or unique fossil remains shall be cataloged and identified. - Cataloged fossil remains shall be transferred for storage to an accredited institution. - A final report summarizing the findings from the laboratory and field, stratigraphic units inspected, types of fossils discovered, and the significance of the curated collection shall be prepared. 	Environmental Monitor		X	X	Water Authority			
PUBLIC SAFETY AND HAZARDOUS MATERIALS									
<u>Design Feature 1</u>	Prior to authorization to proceed or issuance of permits, the Water Authority will prepare a Fire Prevention and Response Plan. All construction crewmembers will be trained in the requirements of the plan. The plan will outline the responsibilities for the prevention, pre-suppression, and suppression activities associated with fire within MTRP.	Civil Engineer	X			Water Authority			

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			Pre Const	During Const	Post Const		Initials	Date	
<u>Design Feature 2</u>	Fire safety information will be disseminated to construction crews during regular safety meetings. Fire management techniques will be applied during project construction and deemed necessary by the Water Authority and depending on the on-site vegetation and vegetation of surrounding areas.	CM Engineer		X		Water Authority			
<u>Design Feature 3</u>	The Contractor will be required to conduct ongoing worker training for all levels of construction personnel, including weekly safety meetings.	CM Engineer		X		Construction Contractor			
Mitigation Measure PS 1-1	Before completion of final design plans and specifications, all proposed project construction areas shall be investigated to determine if there is a record of hazardous materials contamination (Phase I Environmental Site Assessment). If so, the Water Authority shall characterize the site(s) according to the nature and extent of soil contamination, and determine the need for further investigation and/or remediation of the soils conditions on the contaminated site.	Geo-technical Engineer; Civil Engineer	X			Water Authority			

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Person(s) to Verify	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const	During Const	Post Const		Initials	Date	
Mitigation Measure PS 1-2	If warranted, a Phase II investigation shall be conducted. The Phase II investigation shall, at a minimum, involve soil sampling. Should further investigation reveal high levels of hazardous materials in the site soils, mitigate health and safety risks according to County Department of Environmental Health and Regional Water Quality Control Board regulations. This will include site-specific health and safety plans prepared prior to construction.	Geo-technical Engineer; Civil Engineer	X			Water Authority			
Mitigation Measure PS 1-3	Prior to the start of construction, a qualified contractor shall survey all project construction sites, including access roads in MTRP, for the presence of unexploded ordnance. The survey shall include identification of potential unexploded ordnance locations and a determination of the presence or absence of unexploded ordnance in the area. Once the survey is completed, a qualified contractor shall arrange for the removal of any unexploded ordnance found. In addition, the unexploded ordnance contractor shall provide training, as needed, to construction contractors related to the identification of unexploded ordnance.	UXO Specialists	X	X		Water Authority			

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Person(s) to Verify	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const	During Const	Post Const		Initials	Date	
Mitigation Measure PS 2-1	Prior to approval of final design plans and specifications, a Fire Prevention Program shall be developed in consultation with the City of San Diego Fire Marshal for each component of the proposed project. The program shall address fire prevention for the construction period and for long-term maintenance activities.	Civil Engineer	X			Water Authority			
Mitigation Measure PS 2-2	Prior to completion of construction, an Emergency Response Plan (ERP) shall be developed by the Water Authority (facility operator) in coordination with the City of San Diego Fire Department, County Office of Emergency Services, the County Environmental Health Department, and the appropriate Fire Protection District.	Water Authority O&M		X	X	Water Authority			
UTILITIES AND PUBLIC SERVICES									
<u>Design Feature 1</u>	The Water Authority will notify and coordinate with all other utility providers with easements, rights-of-way, 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.	Civil Engineer	X			Water Authority			
<u>Design Feature 2</u>	Any work requiring the shutdown of an aqueduct will be limited to a period not to exceed 10 days.	CM Engineer		X		Construction Contractor; Water Authority			

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Person(s) to Verify	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const	During Const	Post Const		Initials	Date	
<u>Design Feature 3</u>	The proposed project will require connection of the pipeline tunnel to the existing aqueducts at the North and South Portals. A pipeline interconnect reconfiguration may also be needed north of the North Portal. The connections and reconfigurations will all be completed during a 10-day shutdown of the raw water aqueducts.	CM Engineer		X		Construction Contractor; Water Authority			
Mitigation Measures	No mitigation measures required.								