

## EXECUTIVE SUMMARY

This Draft Environmental Impact Report (EIR) addresses the proposed Mission Trails Flow Regulatory Structure II (FRS II), Pipeline Tunnel, and Vent Demolition Project (proposed project). The San Diego County Water Authority (Water Authority) proposes to construct an up to 18-million-gallon (mg) belowground flow regulatory structure, aboveground appurtenant structures, inlet and outlet tunnel pipelines and associated portals and air vacuum valves, and a stabilized crossing of the San Diego River. Two existing pipelines would be abandoned in place and up to ten vent structures would be removed or replaced by much smaller air vacuum valve structures. The inlet and outlet tunnel pipelines would total approximately 1 mile in length.

The Water Authority's largest customer, the City of San Diego, is currently undertaking several water treatment plant expansion projects to meet public demands and the Water Authority must increase delivery capabilities to match the increased water treatment capabilities. The City of San Diego anticipates completion of the Miramar and Alvarado water treatment plant expansions by 2009, and expansion of the Otay Water Treatment plant by 2030. The Sweetwater Authority plans to expand its Perdue Water Treatment Plant by 2030. The Water Authority prepared a Draft Regional Water Facilities Master Plan (Master Plan) in 2003 to meet these and other future water delivery and supply demands, and approved a Program EIR addressing the Master Plan in November 2003.

### ES.1 PROJECT OBJECTIVES

The primary objective of the proposed project is to provide additional regulatory storage and improved flow control and capacity in response to future increased untreated water demands in the south county area. The Water Authority transports water from Riverside County to the southern portion of San Diego County, near the Mexican border, in a series of large-diameter pipelines. The pipelines are in two north-south easement corridors, or easements, called the First and Second Aqueducts. Three water pipelines currently cross Mission Trails Regional Park (MTRP) within the Second Aqueduct easement, which is 130 feet wide. Pipelines 3 and 4 carry untreated ("raw") water and Pipeline 4B carries treated water. The proposed project is necessary at this time to allow for increased transmission capacity to downstream water treatment plants and to provide additional operating flexibility. The tunnel portion of the proposed project must be below the hydraulic grade line to provide increased flow through MTRP. The proposed FRS would provide flow control for a maximum of 18 million gallons.

A secondary project objective is protection from an anticipated higher frequency of service interruptions once the Second Aqueduct untreated water pipelines to the north are converted from a gravity system to a partially pumped system.

Associated project objectives are to remove unnecessary aboveground water facilities from MTRP and to construct a stabilized crossing of the San Diego River along the Water Authority's easement.

The specific project objectives are to:

- Eliminate hydraulic bottlenecks in Pipelines 3 and 4 for untreated water.
- Increase the water deliveries to water treatment plants under expansion.
- Improve pipeline operations by reducing spills.
- Provide short-term operational storage to meet unplanned outages.
- Remove most of the vents across MTRP; and,
- Stabilize existing crossing of San Diego River and improve surface of existing dirt roads to improve Water Authority, Park Ranger, Fire, Police, and Emergency vehicular access to MTRP, from south of the San Diego River to north of the San Diego River, to facilitate inspections and maintenance.

## **ES.2 PROJECT OVERVIEW**

The proposed project is an important component of the Water Authority's 2003 Master Plan, which recommends a number of projects for construction between 2005 and 2020. Projects were identified under the categories of Expansion of Internal System Capacity, Additional Water Treatment Capacity, Additional Seasonal/Carryover Storage, and New Conveyance and Supply. The proposed project involves an expansion of internal system capacity so that the Water Authority may deliver greater volumes of water south of MTRP. The elimination of a hydrologic bottleneck in MTRP and provision of a flow regulatory structure (FRS) would provide the needed increase in internal system capacity.

The Water Authority certified a Final Program EIR for the Draft Regional Water Facilities Master Plan in November 2003, which addressed the potential environmental impacts associated with these projects at a program level. Project-specific review was deferred to such time that a project was proposed for construction and engineering and design work had commenced. This Project EIR has been prepared to evaluate the proposed project in light of the Final Program EIR now that preliminary engineering design studies have been prepared.

The proposed project consists of the construction of the following water storage and delivery structures within MTRP:

- Up to 18-mg belowground storage facility;
- Aboveground control building;
- Inlet and outlet valve vaults for belowground storage facility;
- Inlet and outlet piping for belowground storage facility;
- Overflow pipe and energy dissipater;
- Inlet and outlet tunnel pipelines;
- North and south tunnel portals;
- Inlet and outlet tunnel shafts;

- Removal of existing vent structures and blowoff valves;
- Installation of air vacuum valves in place of vent structures;
- Abandonment of two existing pipelines and construction of new interconnections; and,
- Stabilized crossing of the San Diego River.

Project construction is anticipated to take approximately 2 years and would result in temporary closure of access points, roads, and trails within the West Fortuna Mountain area of MTRP. Closure of the Jackson Drive access road from Mission Gorge Road to the San Diego River would be required for a period of approximately 3 months. With one exception, existing park roads used by construction traffic would be graded to a width of 12 feet, where currently less than 12 feet, and existing erosion of the roadbeds would be repaired. The exception is that one approximately 2,000-foot stretch of road, between the SDG&E easement and the FRS II, would be widened to 20 feet to allow for two-way truck traffic. All areas widened in excess of 12 feet would be returned to a 12-foot width following construction. New roads would be limited to short unpaved service roads to the inlet and outlet valve vaults, a rerouted trail/road around the proposed FRS II control building, and a driveway to the proposed control building.

### **ES.3 PUBLIC OUTREACH PROGRAM**

The Water Authority is dedicated to communicating to communities and stakeholders potentially impacted by the proposed project throughout project design and construction. Project briefings have been provided to elected officials, the Mission Trails Task Force and Citizens' Advisory Committee (CAC), the Tierrasanta Town Council, and the Belsera Homeowners Association to keep these stakeholders updated on the project and to provide them with timely information. Other interested groups will be provided presentations as requested. In addition, notices have been, and will continue to be, distributed by mail or door-to-door. The project newsletter, the *Park Watermark*, is mailed to over 5,000 stakeholders and provides a general overview of the project's status. Stakeholders are also encouraged to call the toll-free project information hotline (877) 682-9283, ext. 7004 with questions and concerns. The call will be returned within one business day.

The Water Authority began the public outreach for the proposed project in mid-2003 with presentations to the CAC regarding the Master Plan and the Master Plan components within MTRP. Presentations continued through 2004, prior to the commencement of the environmental review process. The following is a chronological summary of the Water Authority's outreach efforts from March 16, 2005 through January 25, 2006. Outreach will continue throughout the life of the project.

<b>Date</b>	<b>Event/Action</b>	<b>Location</b>	<b>Time</b>
May 4, 2004	MTRP Task Force Project Briefing	MTRP Visitors Center	7:00 p.m.
June 16, 2004	Tierrasanta Community Council project introduction	Tierrasanta Recreation Center	7:00 p.m.
June 21, 2004	Navajo Community Planners, Inc. project introduction	Mission Valley Church of the Nazarene	7:00 p.m.

<b>Date</b>	<b>Event/Action</b>	<b>Location</b>	<b>Time</b>
June 2004	MTRP tour for five members of Tierrasanta Community Council	Mission Trails Regional Park	9:00 a.m.
July 7, 2004	San Carlos Area Council project introduction	San Carlos Library	7:00 p.m.
November 9, 2004	MTRP Citizens' Advisory Committee meeting	MTRP Visitors Center	7:00 p.m.
December 1, 2004	Sent email to Eric Germain and John Barone (former MTRP Senior Park Ranger)	N/A	N/A
December 10, 2004	Met with John Barone (former MTRP Senior Park Ranger)	MTRP Visitors Center	10:00 a.m.
February 9, 2005	Project Team met with new Senior Park Ranger (Tracey Walker)	MTRP Visitors Center	9:00 a.m.
March 1, 2005	MTRP Citizens' Advisory Committee meeting	MTRP Visitors Center	7:00 p.m.
March 2, 2005	San Carlos Area Council project update	San Carlos Library	7:00 p.m.
March 16, 2005	MTRP Task Force project briefing	San Diego City Hall	Noon
March 16, 2005	Tierrasanta Community Council project briefing	Tierrasanta Recreation Center	7:00 p.m.
March 18, 2005	Mailed introduction letter to community members, elected Officials, and stakeholders	N/A	N/A
March 21, 2005	Navajo Community Planners, Inc. project briefing	Mission Valley Church of the Nazarene	7:00 p.m.
April 5, 2005	Mailed Environmental Impact Report Notice of Preparation	N/A	N/A
April 19, 2005	Scoping meeting	Water Authority	6:30 p.m.
May 4, 2005	Mailed postcard regarding 1 <sup>st</sup> phase geotechnical work	N/A	N/A
May 5, 2005	Scoping period ends	N/A	N/A
May 17, 2005	Belsera Homeowners Association Board project briefing	Tierrasanta Recreation Center	7:00 p.m.
May 19, 2005	1 <sup>st</sup> Mission Trails Working Group Meeting	Water Authority	6:00 p.m.
May 20, 2005	Mailed 1 <sup>st</sup> Mission Trails Newsletter	N/A	N/A
May 21, 2005	Information booth staffed at Explore Mission Trails Day	Mission Trails Visitor Center	All Day
June 4, 2005	MT Working Group tour	Project Site	10:00 a.m.
June 9, 2005	2 <sup>nd</sup> Mission Trails Working Group meeting	Water Authority	6:00 p.m.

<b>Date</b>	<b>Event/Action</b>	<b>Location</b>	<b>Time</b>
July 9, 2005	MTRP Citizens' Advisory Committee project site tour	Project Site	10:00 a.m.
August 4, 2005	3 <sup>rd</sup> Mission Trails Working Group meeting	SDCWA	6 :00 p.m.
August 30, 2005	MTRP Citizens' Advisory Committee meeting	Mission Trails Visitor Center	7:00 p.m.
October 2005	Mailed postcard regarding 2 <sup>nd</sup> phase geotechnical work	N/A	N/A
October 4, 2005	MTRP Citizens' Advisory Committee meeting	Mission Trails Visitor Center	7:00 p.m.
January 3, 2006	MTRP Citizens' Advisory Committee meeting	Mission Trails Visitor Center	7:00 p.m.
January 11, 2006	Mailed out invitation for Tierrasanta Community open house	N/A	N/A
January 20, 2005	Distributed door hanger invitations to Tierrasanta Community open house	N/A	N/A
Jan. 25, 2006	Tierrasanta open house event	Tierrasanta Home Owners Association 10690 Escobar Lane	7:00 p.m.
March 2, 2006	4 <sup>th</sup> Mission Trails Working Group meeting	Water Authority Headquarters	6:00 p.m.
March 7, 2006	MTRP Citizens' Advisory Committee meeting	Mission Trails Visitor Center	7:00 p.m.
March 15, 2006	MTRP Task Force meeting	San Diego City Hall	12:00 p.m.

## **ES.4 AREAS OF CONTROVERSY**

The Water Authority has conducted an extensive public outreach program for the proposed project and has received public comments from neighboring communities and individuals concerned with MTRP. The Water Authority has also met with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers (Corps), and San Diego Regional Water Quality Control Board (RWQCB). This public outreach is intended to provide the greatest benefit to the regional water delivery infrastructure, MTRP, and adjacent communities while resulting in the least negative impacts to residents, park users, park facilities and the environment. The following areas of concern have been raised in response to the Notice of Preparation (NOP) and during public outreach meetings:

- Temporary traffic impacts within the Tierrasanta community during construction and the selection of the most appropriate truck routes;
- Temporary noise impacts associated with construction activities at the North Portal, near the Belsera neighborhood;
- Temporary noise impacts associated with the Pipeline Interconnect Reconfiguration, immediately adjacent to the northeast corner of the Belsera neighborhood;

- Temporary closure of access points, roads, and trails within MTRP;
- Temporary potential impacts to the federally endangered Quino checkerspot butterfly, California gnatcatcher, and least Bell's vireo;
- Short-term visual and biological impacts associated with the temporary loss of natural vegetation within MTRP;
- Long-term visual impacts associated with the FRS II control building;
- Long-term biology and hydrology impacts to the San Diego River associated with the stabilized river crossing.

## **ES.5 ISSUES TO BE RESOLVED**

CEQA Guidelines Section 15123 requires a summary to identify issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. The Water Authority must select between the proposed project and project alternatives to achieve the greatest benefit to the regional water supply system while minimizing impacts to MTRP and the adjacent community in a cost-effective manner. Project alternatives to be considered consist of:

- Selection of either an aboveground control building (proposed project) or vent structures with controls in the existing FRS I access/control building;
- Selection of a preferred method of tunnel construction from a separate inlet and outlet tunnel (proposed project), a single tunnel from the South Portal only, or an inlet tunnel and an outlet trenched pipeline.

As noted, the aboveground control building and the separate inlet tunnel and outlet tunnel are analyzed in detail in the EIR as the proposed project. The other project alternatives are summarized in the following section and are discussed in Section 7.0.

## **ES.6 ALTERNATIVES TO THE PROJECT**

Several alternatives to the proposed project that can reduce or avoid significant environmental effects have been identified that would achieve the goals and objectives of the proposed project. Other project alternatives, including the No Project Alternative, have been dismissed from consideration because they do not meet the goals and objectives of the proposed project. The feasible alternatives include the elimination of the control building and the construction of two vent structures instead, and several options for tunnel construction. The tunnel construction alternatives consist of constructing a single tunnel entirely from the South Portal; and constructing an inlet tunnel from the North Portal simultaneously with a trenched outlet pipeline, thus eliminating the need for an outlet tunnel.

### **ES.6.1 Two-Vent Structures to Replace Access/Control Building Alternative**

Under this alternative, the proposed access/control building on the FRS II site would be replaced by two vent structures, reducing visual impacts to the park users. The instrumentation and controls for the valve vaults and water storage basins would be housed inside the existing FRS I access/control building. The vent structures would allow air to exhaust or enter each water storage basin as the water levels in the basin fluctuate. The vent structure alternative would include access hatches into the water storage basins for maintenance personnel to inspect the interior of each basin. Eight-foot-high security fencing would be installed around the access hatches and vent structures.

### **ES.6.2 Combined Inlet/Outlet Tunnel Pipeline from South Portal Alternative**

The Combined Inlet/Outlet Tunnel Pipeline Alternative from the South Portal would result in an increased volume of export material as compared to the proposed project, and therefore an increase in the number of truck trips out of MTRP. This alternative would, however, avoid the need to export materials from the North Portal. Construction noise, dust, and traffic would all be substantially reduced or avoided at the North Portal location. North Portal construction would still be necessary, as would a 10-day, 24/7, connection of the tunnel pipeline to the existing pipelines at the North Portal. Additional construction activities would be necessary between 7:00 a.m. and 7:00 p.m. Monday through Saturday for mobilization, grading, excavation, shoring, backfill, and demobilization.

### **ES.6.3 Inlet Tunnel/Trenched Outlet Pipeline Alternative**

The Inlet Tunnel/Trenched Outlet Pipeline Alternative would reduce truck trips out of MTRP by replacing the outlet tunnel with a cut and cover trenched pipeline. This alternative would, however, increase impacts to biological and visual resources.

## **ES.7 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Table ES-1 provides a summary of the potential environmental impacts, mitigation measures, and level of significance after mitigation for each issue that was analyzed in this EIR.

**Table ES-1  
Summary of Environmental Impacts and Mitigation Measures**

<b>Environmental Topic</b>	<b>Potential Impacts</b>	<b>Mitigation Measures</b>	<b>Level of Significance Following Mitigation</b>
Land Use	Impacts to land use would be less than significant.	No mitigation measures are required.	No residual impacts would occur.
Aesthetics/ Visual Quality	Short-term visual impacts due to construction in the park would be adverse but less than significant for various key observation points.  Long-term visual impacts associated with the aboveground features of the project would be less than significant.  Other aesthetic/visual impacts, including light or glare, would be less than significant.	No mitigation measures are required.	No residual impacts would occur.
Traffic/ Circulation	Impacts of construction and operation traffic would be less than significant.	No mitigation measures are required.	No residual impacts would occur.
Air Quality	Impacts of emissions of NO <sub>x</sub> would be significant for a duration of more than 1 year during construction ( <b>AQ 1</b> ).  Impacts of emissions of PM <sub>10</sub> would be significant for a duration of more than 1 year during construction ( <b>AQ 2</b> )  Other construction emissions would be less than significant.  Operational emissions would be less than significant.  Cumulative impacts to air quality during construction would be significant. However, the proposed project's contribution to cumulative air quality impacts would cease upon completion of construction.	To reduce significant NO <sub>x</sub> impacts caused by emissions generated by construction equipment during construction, the Water Authority shall implement the following mitigation measure:  <b>AQ 1-1</b> 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.  To reduce significant fugitive dust and PM <sub>10</sub> emissions generated during construction, the Water Authority shall implement the following mitigation measures:  <b>AQ 2-1</b> Vehicles hauling dirt or fill shall be covered with a tarp or other means.	Implementation of the recommended mitigation measures would reduce short-term impacts to air quality, but the impacts would not be expected to be reduced to below a level of significance by the mitigation measures. In addition, the estimates incorporated a 51 percent reduction in fugitive dust from watering as part of PM <sub>10</sub> modeling. Therefore, the impact of peak emissions would remain significant during the approximately 14 months when the construction of individual components would cause NO <sub>x</sub> and PM <sub>10</sub> thresholds to be exceeded. A Statement of Overriding Considerations for direct and cumulative air quality impacts would be necessary for project approval. Significant air quality impacts would be temporary because they would cease upon the completion of construction.

Table ES-1. Continued

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
Noise and Vibration	<p>Construction would result in a substantial temporary increase in the ambient noise levels where average daily noise levels at the adjacent residential properties, particularly at the North Portal and Pipeline Interconnect Reconfiguration site, may exceed 75 dBA. This would be a significant impact. (N 1)</p> <p>Nighttime construction would occur at the North Portal and at the Pipeline Interconnect Reconfiguration site for 10 consecutive days during the connection of the new pipeline tunnel to the existing pipeline, and the South Portal for approximately 1 year. Noise impacts between 7:00 p.m. and 7:00 a.m. Monday through Saturday, and all day Sunday, would be significant. (N 2)</p> <p>Impacts from traffic noise during construction and permanent noise impacts would be less than significant.</p> <p>Due to the close proximity of the residences near the North Portal site, groundborne vibration from the blasting would be significant. (N 3)</p>	<p>To mitigate significant construction noise impacts associated with substantial increases of noise levels above ambient that may exceed 75 dBA, the Water Authority shall implement the following mitigation measures:</p> <p><b>N 1-1</b> 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 <math>L_{eq}</math>.</p> <p><b>N 1-2</b> 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.</p> <p><b>N 1-3</b> The Water Authority shall monitor noise levels during construction to ensure compliance with the noise thresholds.</p> <p>To mitigate significant noise impacts during night construction at the North Portal and Pipeline Interconnect Reconfiguration, the Water Authority shall implement the following mitigation measure:</p> <p><b>N 2-1</b> 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.</p> <p><b>N2-2</b> The Water Authority shall monitor noise levels during construction to ensure compliance with the noise thresholds.</p> <p>To mitigate the potential vibration impacts associated with blasting, the Water Authority shall implement the following mitigation measures:</p> <p><b>N 3-1</b> 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:</p>	<p>Implementation of the recommended mitigation measures would reduce short-term impacts due to construction noise by 20 dBA, but these impacts would not be expected to be reduced to below a level of significance by the mitigation measures. Therefore, the impacts due to construction noise would remain significant during the construction period. A Statement of Overriding Considerations would be necessary for project approval. This significant noise impact would be temporary because it would cease upon the completion of construction.</p> <p>No residual impacts would remain after implementation of the proposed mitigation measures for potential vibration impacts associated with blasting.</p>

**Table ES-1. Continued**

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
<i>Noise and Vibration continued</i>		<ul style="list-style-type: none"> <li>▪ Blasting shall only be conducted during construction when other practicable excavation methods are not available.</li> <li>▪ 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.</li> <li>▪ A Blast Plan will be developed and approved by the local regulatory authority in the event that blasting is necessary.</li> </ul> <p><b>N 3-2</b> Blast monitoring shall be required for all blasting operations within the City, including monitoring of ground motions, peak particle velocity, and air blast levels.</p> <p><b>N 3-3</b> 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.</p> <p><b>N 3-4</b> 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.</p> <p><b>N 3-5</b> A public outreach program shall be implemented to alert the public to the potential for vibrations and noise associated with blasting.</p>	
Recreation	The closure of some park access points, roads, and trails in the western portion of MTRP for a period of up to 2 years would result in an adverse but less than significant short-term impact. Permanent impacts to recreation would not occur.	No mitigation measures are required.	No residual impacts would occur.
Water Resources	Impacts of the project on water resources would be less than significant.	No mitigation measures are required.	No residual impacts would occur.

Table ES-1. Continued

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
Biological Resources	<p>Impacts of project construction on the following biological resources would be significant</p> <ul style="list-style-type: none"> <li>▪ Diegan coastal sage scrub (<b>BR 1</b>)</li> <li>▪ Coastal sage-chaparral scrub (<b>BR 2</b>)</li> <li>▪ Valley needlegrass grassland (<b>BR 3</b>)</li> <li>▪ Vernal pools (<b>BR 4</b>)</li> <li>▪ Southern willow scrub (<b>BR 5</b>)</li> <li>▪ Southern cottonwood-willow riparian forest (<b>BR 6</b>)</li> <li>▪ Mule-fat scrub (<b>BR 7</b>)</li> <li>▪ Open water (<b>BR 8</b>)</li> <li>▪ Quino checkerspot butterfly (<b>BR 9</b>)</li> <li>▪ California gnatcatcher (<b>BR 10</b>)</li> <li>▪ least Bell's vireo (<b>BR 11</b>)</li> </ul>	<p>To mitigate significant impacts to biological resources, the Water Authority shall implement the following mitigation measures:</p> <p><b>BR 1-1, 2-1, 3-1</b> 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.</p> <p><b>BR 4-1</b> 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. The created vernal pools shall be protected through the use of fencing, education, signage and enforcement to keep park visitors away from the 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> <p><b>BR 5-1</b> 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> <p><b>BR 6-1</b> 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.</p> <p><b>BR 7-1</b> 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.</p>	No residual impacts would remain after implementation of the proposed mitigation measures.

Table ES-1. Continued

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
<i>Biological Resources continued</i>		<p><b>BR 8-1</b> 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.</p> <p><b>BR 9-1</b> 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.</p> <p><b>BR 10-1</b> 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 enroute to construction sites in unoccupied areas.</p> <p><b>BR 11-1</b> 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 <b>BR 5-1</b>).</p> <p><b>BR 11-2</b> 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.</p>	

**Table ES-1. Continued**

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
<p>Cultural Resources</p>	<p>Four cultural resource sites are located near the project area (CA-SDI-5518, CA-SDI-5656, CA-SDI-5657 and CA-SDI-12018). Direct impacts to extant cultural resources within the project area could result from brushing and vegetation removal, grading, and other ground disturbing activities during construction. These impacts would be significant. <b>(CR 1)</b></p> <p>Implementation of the proposed project could uncover significant cultural resources that have not been previously documented. The impact of discovering unexpected cultural resources would be significant. <b>(CR 2)</b></p>	<p>To mitigate significant impacts to cultural resources during project construction, the Water Authority shall implement the following mitigation measures:</p> <p><b>CR 1-1</b> 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.</p> <p><b>CR 2-1</b> 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.</p> <p><b>CR 2-2</b> 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.</p>	<p>No residual impacts would remain after implementation of the proposed mitigation measures.</p>

Table ES-1. Continued

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
Geology and Soils	<p>The project would involve extensive grading, including widening of unpaved access trails within MTRP that are on soils with severe erodibility and high runoff potential. Therefore, the potential for substantial soil erosion or the loss of topsoil is high. However, this impact would be avoided by implementation of the standard specifications and project features described in Section 2.6, including erosion control BMPs developed for the SWPPP. The impact of potential erosion and loss of topsoil would be less than significant.</p> <p>Impacts of the project in relation to surface fault rupture, earthquake ground shaking, liquefaction, subsidence, expansive soils, mass wasting, tsunami, seiche, landslide, lateral spreading, and subsidence would be less than significant.</p>	No mitigation measures are required.	No residual impacts would occur.
Paleontological Resources	<p>The proposed project would involve grading and excavation in formations considered to have moderate and high sensitivity for fossil remains. The project would also involve construction in close proximity to areas documented to contain fossil remains. Therefore, grading associated with the proposed project has the potential to result in impacts to paleontological resources. This impact would be significant. <b>(PR 1)</b></p>	<p>To mitigate potentially significant impacts to paleontological resources, the Water Authority shall implement the following mitigation measures:</p> <p><b>PR 1-1</b> The following measures shall be carried out by a qualified professional paleontologist:</p> <ul style="list-style-type: none"> <li>▪ Existing bedrock outcrops and (possibly) excavation of test trenches shall be inspected for fossil remains.</li> <li>▪ 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.</li> <li>▪ 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.</li> </ul>	No residual impacts would remain after implementation of the proposed mitigation measures.

Table ES-1. Continued

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
<i>Paleontological Resources continued</i>		<ul style="list-style-type: none"> <li>▪ Laboratory preparation of collected fossil remains shall be conducted for potentially significant or unique finds.</li> <li>▪ Prepared significant or unique fossil remains shall be cataloged and identified.</li> <li>▪ Cataloged fossil remains shall be transferred for storage to an accredited institution.</li> <li>▪ 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.</li> </ul>	
Public Safety and Hazardous Materials	<p>MTRP was once part of Camp Elliott, a military training area, and has been identified as potentially having unexploded ordnance from the historic military use. Therefore, the impact of potential exposure of construction and maintenance workers to hazardous materials in the soil and/or unexploded ordnance would be significant. <b>(Impact PS 1)</b></p> <p>The potential for people or structures to be exposed to risk of loss, injury or death involving wildland fires due to the project would be significant. <b>(Impact PS 2)</b></p>	<p>To mitigate the impacts of potential soil contamination and unexploded ordnance to construction workers, the Water Authority shall implement the following mitigation measures:</p> <p><b>PS 1-1</b> 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.</p> <p><b>PS 1-2</b> 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.</p> <p><b>PS 1-3</b> 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.</p>	No residual impacts would remain after implementation of the proposed mitigation measures.

Table ES-1. Continued

Environmental Topic	Potential Impacts	Mitigation Measures	Level of Significance Following Mitigation
<i>Public Safety and Hazardous Materials continued</i>		<p>To mitigate the potential wildland fire risk, the Water Authority shall implement the following mitigation measures:</p> <p><b>PS 2-1</b> Prior to approval of final design plans and specifications, a Fire Prevention Program shall be developed in consultation with the 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.</p> <p><b>PS 2-2</b> Prior to completion of construction, an Emergency Response Plan (ERP) shall be developed by the Water Authority (facility operator) in coordination with the County Office of Emergency Services, the County Environmental Health Department, and the appropriate Fire Protection District.</p>	
Utilities and Public Services	Impacts on public utilities and services would be less than significant.	No mitigation measures would be required.	No residual impacts would occur.