

**FINAL
ENVIRONMENTAL IMPACT REPORT /
ENVIRONMENTAL IMPACT STATEMENT**

for the

**CARRYOVER STORAGE AND
SAN VICENTE DAM RAISE PROJECT**

**Mitigation Monitoring and
Reporting Program**

SCH No. 2006101044



**San Diego County Water Authority
4677 Overland Avenue
San Diego, California 92123**

April 2008

Introduction

The California Environmental Quality Act (CEQA) requires that public agencies adopting EIRs take affirmative steps to determine that project design features and approved mitigation measures are implemented subsequent to project approval. The Lead Agency must adopt a reporting and monitoring program for the project design features and 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; CEQA Guidelines, Section 15074(d)).

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 project design features and approved mitigation measures associated with the Proposed Action for the Carryover Storage and San Vicente Dam Raise Project (CSP). The Water Authority, as Lead Agency pursuant to the State CEQA Guidelines, will ensure that all project design features and approved mitigation measures for the Proposed Action are carried out in accordance with the adopted MMRP.

Implementation of project design features and/or mitigation measures will reduce significant impacts to aesthetics/visual quality, air quality, biological resources, cultural resources, geology and soils, land use and planning, noise and vibration, paleontological resources, public safety and hazards, public services and utilities, recreation, traffic/circulation, and water resources.

This MMRP consists of a checklist (Table 1) 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.

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**Table 1. Carryover Storage and San Vicente Dam Raise EIR/EIS
Project Design Features and Mitigation Monitoring and Reporting Program**

Design Feature or Mitigation No.	Design Feature or Mitigation Measure	Person(s) to Verify	Timing of Verification			Responsible Party	Completed		Comments	Resp. Team Member	Spec Section or Dwg No.	Verified in Contract by	Comments
			Pre Const	During Const	Post Const		Initials	Date					
Aesthetics/Visual Quality													
Design Feature 1	Vegetation removal will occur as late in the construction process as possible to minimize the amount of time between removal of the vegetation and refilling of the reservoir.	Construction Superintendent		X		Contractor							
Design Feature 2	Rock outcrops will be preserved whenever practicable. It is anticipated that irregular surfaces between the dam and the adjacent slopes will be created by the construction blasting process.	Construction Superintendent		X		Contractor							
Design Feature 3	All temporarily disturbed areas will be graded to be compatible with the surrounding topography, where practicable.	Construction Superintendent		X		Contractor							
Design Feature 4	All areas temporarily cleared of vegetation for the construction zone and staging area (e.g., not future inundation areas above 650 AMSL) will be revegetated at the completion of the project. The selection of plant materials will be compatible with the character of the viewshed. A landscape architect or restoration ecologist, experienced in southern California landscapes, will be consulted during preliminary design to recommend appropriate plant and fencing materials in the areas to be revegetated.	SDCWA	X		X	Landscape Architect (landscape design)/ Restoration Ecologist (revegetation installation)							
Design Feature 5	Lighting will consist of low-sodium or similar lighting equipped with shields to focus light downward on the appropriate subject.	Construction Superintendent		X		Contractor							
Air Quality													
Design Feature 1	Multiple applications of water during grading between dozer/scrapper passes.	Construction Superintendent		X		Contractor							
Design Feature 2	Use of sweepers to remove "track-out" at any point of public street access.	Construction Superintendent		X		Contractor							
Design Feature 3	Termination of earthwork if sustained winds exceed 25 mph for more than 30 minutes.	Construction Superintendent		X		Contractor							
Design Feature 4	Stabilization of dirt storage piles by chemical binders, shrouding or other erosion control methods.	Construction Superintendent		X		Contractor							
Design Feature 5	Hydroseeding on manufactured slopes.	Construction Superintendent		X		Contractor							

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Biological Resources													
Design Feature 1	A qualified/certified biologist will conduct pre-construction sensitive species surveys as required by permit conditions. In compliance with the federal Endangered Species Act (FESA), surveys will be conducted for State Species of Special Concern that are federally listed and have been determined to potentially occur on site. For the Quino checkerspot butterfly, within one year of water levels exceeding the pre-project elevation (OHWM of 650 feet AMSL), a habitat assessment will be conducted within the inundation area during refilling of the reservoir (after completion of the dam raise construction) to determine whether potentially suitable habitat occurs within the SV 100K footprint. If suitable habitat is found within the inundation area, then protocol-level surveys will be conducted for this species and appropriate mitigation will be developed in coordination with the U.S. Fish and Wildlife Service (USFWS).	SDCWA	X	X		Biologist							
Design Feature 2	Specific areas at San Vicente Reservoir are excluded from the Cornerstone Lands Multi-Habitat Planning Area (MHPA) Preserve for the Emergency Storage Program (ESP) and future reservoir expansion. These exclusions were based on negotiations between the City of San Diego and the regulatory agencies identifying the San Vicente Dam and Reservoir expansion (under both ESP and CSP) as a "hard-line" project in the Multiple Species Conservation Program (MSCP) Subarea Plan. In recognition of these negotiations, the Water Authority will debit upland credits from its Crestridge Habitat Management Area, San Miguel Conservation Bank, and/or Rancho Cañada property at a ratio of 0.5:1 to offset permanent impacts to chaparral and non-native grassland vegetation communities resulting from the Proposed Action.	SDCWA	X			SDCWA							
Design Feature 3	Prior to construction, a qualified biologist will oversee installation of appropriate fencing and/or flagging to delineate the approved construction limits for protection of identified sensitive resources outside the approved construction zone.	Biologist	X			Contractor							
Design Feature 4	A qualified biologist will hold pre-construction meetings to provide information about sensitive resources, the locations of the approved construction limits, and other required biological mitigation measures.	SDCWA	X			Biologist							

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Design Feature 5	The width of construction corridors extending through sensitive habitats (e.g., oak woodlands, coastal sage scrub, and wetlands) will be minimized to the extent practicable. Where construction corridors cross drainage features, appropriate drainage facilities will be installed to avoid interruption of downstream flows.	Biologist/ Construction Superintendent	X	X		Contractor							
Design Feature 6	Wherever practicable, access/construction roads and staging areas will be located a minimum of 100 feet from areas supporting sensitive habitats or species to minimize the potential for unauthorized impacts.	Biologist/ Construction Superintendent	X	X		Contractor							
Design Feature 7	During construction, a qualified biologist will monitor areas supporting sensitive habitats or species adjacent to the approved construction limits at least weekly. The biological monitor will: (1) document all activities pertaining to biological resources; (2) provide regular updates to the Water Authority; (3) notify the Water Authority immediately if unauthorized impacts to biological resources occur; and (4) advise the contractor(s), as needed, to ensure effective and appropriate implementation of biological mitigation measures for specific site conditions.	SDCWA		X		Biologist							
Design Feature 8	If the removal of native vegetation and/or mature trees within the approved construction limits is proposed during the California gnatcatcher breeding season (February 15 through August 31) or during the raptor breeding season (generally between January 1 and July 30), a survey for active nests will be conducted prior to vegetation/tree removal; active nests will be avoided; and a temporary construction fence will be installed to maintain the following buffer distances around the nests, until the young birds have fledged: up to 500 feet for raptors, 300 feet for California gnatcatcher, and 100 feet for all other sensitive breeding bird species.	Biologist/ Construction Superintendent	X	X		Contractor (vegetation removal, install temporary construction fence)/ Biologist (sensitive bird surveys)							
Design Feature 9	Vegetation outside the approved construction limits will not be cut or sprayed with herbicide.	Biologist/ Construction Superintendent	X	X		Contractor							
Design Feature 10	Construction night lighting will be directed away from adjacent native habitats and will consist of low-sodium or similar lighting equipped with shields to focus light downward.	Biologist/ Construction Superintendent		X		Contractor							

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Design Feature 11	Fueling of equipment will occur in designated fueling zones within the approved construction limits and located at least 100 feet from drainages and wetlands. All equipment used within the approved construction limits will be maintained to minimize and control fluid and grease leaks. Provisions to contain and clean up unintentional fluid and grease leaks and fuel or oil spills will be in place prior to construction.	Construction Superintendent		X		Contractor							
Design Feature 12	Construction personnel will park private vehicles in designated areas within the approved construction limits.	Construction Superintendent		X		Contractor							
Design Feature 13	During clearing, grading, excavation, construction, or hauling of excavated materials, water trucks or sprinkler systems will be used as necessary to reduce airborne dust.	Construction Superintendent		X		Contractor							
Design Feature 14	During construction, the contractor(s) will implement a Storm Water Pollution Prevention Plan (SWPPP) to minimize erosion of, and siltation into, sensitive habitats and natural drainages outside the approved construction limits. The SWPPP will identify erosion- and sediment-control Best Management Practices (BMPs) tailored to specific site conditions including, but not limited to, silt fences, gravel bags, sandbag dikes, diversion ditches, stream bank stabilization, detention basins, and any other appropriate and effective measures. These measures will be in place prior to initiation of clearing/grubbing, vegetation removal and construction activities within the approved construction limits.	Biologist/ Construction Superintendent	X	X		Contractor							
Design Feature 15	During construction, the contractor(s) will implement invasive exotic plant control programs at the boundaries of approved construction limits adjacent to sensitive habitats. Invasive plant removal methods will be developed in consultation between the Water Authority, City of San Diego, and regulatory agencies.	Biologist		X		Contractor							

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Design Feature 16	Where practicable, disturbed areas will be recontoured to be compatible with the surrounding topography, and these areas will be restored and revegetated at the completion of construction. A landscape architect or restoration ecologist, experienced in southern California landscapes, will be consulted to recommend appropriate seed mixes and/or plant materials in the areas to be revegetated. Only native wetland plant species indigenous to the area will be used for revegetation of wetlands. To the extent feasible, plant materials used for revegetation will be propagated from material collected in the vicinity of where they are to be planted. Insect pest control measures will be implemented for any planting stock brought into the revegetated areas on site. The use of fertilizers and pesticides for revegetation efforts in and adjacent to wetlands will be limited to the maximum extent practicable. The use of non-native and invasive plant species in revegetation efforts will be prohibited. All temporary irrigation in revegetated areas will be for the shortest duration possible, and no permanent irrigation will be used for on- or off-site habitat creation/restoration/enhancement.	Construction Superintendent (re-contouring)/ Biologist (revegetation)			X	Contractor (re-contouring)/ Landscape Architect or Restoration Ecologist (revegetation plans, native plant propagation, revegetation installation, pest control)							
Design Feature 17	The exotic plant control programs initiated during construction will be continued in revegetated areas until it can be demonstrated that native vegetation can sustain itself without active weed eradication.	Biologist		X	X	Restoration Ecologist							
Mitigation Measure SV/BR 1-1	Permanent Impacts to Riparian and Wetland Communities and Unvegetated Waters of the State (Impact SV/BR 1). Direct permanent impacts to California Department of Fish and Game (CDFG)-defined riparian and wetlands habitats and unvegetated waters of the State, including wetlands under the CDFG regulatory authority that would require a Streambed Alteration Agreement, will be mitigated through a combination of off-site wetland creation in the Tijuana River Valley and preservation and management of high quality wetlands and riparian habitat within and along San Vicente Creek. The Tijuana River Valley Wetland Mitigation Banking site is located within the City of San Diego, south of the Tijuana River and west of the Smugglers Gulch Channel. Approximately 45 acres of wetlands and	SDCWA	X			SDCWA							

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	<p>transitional wetlands are proposed to be created at this site, of which a minimum of 32 acres are planned to be available to the Water Authority as mitigation credits. The County of San Diego owns the property, and there is an agreement between the Water Authority and the County that allows the Water Authority to implement a wetland mitigation-banking project on the property, and that identifies the County (through its Parks and Recreation Department) as the long-term site manager. Implementation of this wetland mitigation-banking project would be consistent with the MSCP and Section 10 of the FESA.</p> <p>The San Vicente Creek mitigation site is located at a 390-acre property known as Rancho Cañada. The Water Authority provided the purchase funds in September 2007, and CDFG acquired title to the property in December 2007. Per an agreement with CDFG, the Water Authority provides CDFG the property's wildlife management funds and retains the rights to use the property for mitigation purposes. The property is bisected by San Vicente Creek, and its southerly property corner is approximately three miles upstream from San Vicente Reservoir. The property contains 4.07 acres of freshwater marsh and 34.63 acres of southern coast live oak riparian forest/cottonwood-willow riparian forest.</p> <p>The Water Authority is proposing to mitigate wetland impacts to coastal/valley freshwater marsh and mulefat scrub at a ratio of 2:1, and southern coast live oak riparian forest, southern cottonwood-willow riparian forest, and southern willow scrub at a ratio of 3:1. The wetland creation component of the mitigation is proposed to consist of a willow dominated vegetation community at the Tijuana River Valley Wetland Mitigation Banking site at a ratio of 1:1, as created wetlands will be in place prior to the actual impacts occurring; the remaining mitigation obligation is to consist of preservation and management within and along San Vicente Creek at Rancho Cañada.</p>												

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	Mitigation through the creation, preservation and management of wetlands habitat at a ratio of 1:1 or greater to avoid the net-loss of wetlands will occur through negotiations with the agencies. Detailed mitigation requirements will be identified in the final resource agency permits. Use of mitigation bank credits to satisfy riparian and wetlands permit requirements will be approved by the regulatory agencies prior to project initiation.												
Mitigation Measure SV/BR 2-1	Temporary Impacts to Riparian and Wetland Communities and Unvegetated Waters of the State (Impact SV/BR 2). Direct temporary impacts to CDFG-defined riparian and wetlands habitats and unvegetated waters of the State will be mitigated through revegetation/restoration/ enhancement at a 1:1 ratio, with the exception of southern willow scrub that will be mitigated at a ratio of 2:1. All temporary impacted riparian areas will be revegetated through container planting, cuttings and seeding with the appropriate native species, at densities and species diversity reflective of equivalent or higher functioning habitat in the area impacted, to restore lost functions. Mitigation for temporary impacts to southern willow scrub will consist of restoration on site at a ratio of 1:1, and creation, enhancement, and/or preservation, and management off site at a ratio of 1:1.	Biologist			X	Restoration Ecologist							
Mitigation Measure SV/BR 2-1	Prior to commencing any activities that would impact riparian and wetlands habitats, a riparian/wetlands restoration plan will be prepared by a landscape architect or restoration ecologist, experienced in southern California landscapes, to the satisfaction of the Water Authority, USFWS and CDFG. In addition to the guidelines described under Restoration Plans above, the following will be included in the Riparian/ Wetlands Restoration Plan: All temporarily impacted riparian areas and wetlands will (1) have the topsoil stockpiled; (2) be re-contoured; (3) have the topsoil re-applied; and (4) be revegetated through planting, cuttings, and/or seeding with the appropriate native species, at densities and species diversity reflective of equivalent or higher functioning habitat within the SV 100K study area to restore lost functions.	SDCWA	X			Landscape Architect or Restoration Ecologist							

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Mitigation Measure SV/BR 2-1	<i>Vegetation affected during drawdown.</i> Mitigation during drawdown of the reservoir was addressed in the ESP permits. Clearing and maintenance of the drawdown areas to remove vegetation is not anticipated as part of the Proposed Action. As addressed in the ESP CDFG Streambed Alteration Agreement (#5-631-96) and USFWS Biological Opinion (BO) (1-6-97-F-13), no mitigation is required for the removal of any incidental habitat prior to refilling. Therefore, there would be no impacts or required mitigation from vegetation removal within the drawdown area. Mitigation for impacts to listed species, that may use vegetation that becomes established within the drawdown area, due to inundation from refilling of the reservoir, is addressed in Mitigation Measure SV/BR 1-1.	SDCWA	X			SDCWA							
Mitigation Measure SV/BR 3-1	Permanent Impact to Coastal Sage Scrub (Impact SV/BR 3). Direct permanent impacts to occupied coastal sage scrub (and/or the federally threatened California gnatcatcher) will be mitigated off site at a 1:1 ratio using in-kind mitigation credits from the Water Authority's mitigation banks (e.g., San Miguel Conservation Bank) or other mitigation banks approved by the regulatory agencies. Mitigation will be in place before any impacts occur. Prior to construction, the Water Authority will obtain USFWS approval per the conditions of the conservation banking agreement for use of an upland mitigation bank to mitigate for the Proposed Action.	SDCWA	X			SDCWA							
Mitigation Measure SV/BR 4-1	Permanent Impacts to Coast Live Oak Woodland (Impact SV/BR 4). Mitigation for direct permanent impacts to coast live oak woodland will occur at a ratio of 1:1 within an off-site mitigation area consisting of preservation and management, preferably at the Rancho Cañada mitigation site located upstream of Kimball Valley, within the San Vicente Creek watershed, and/or purchase of coast live oak woodlands mitigation credits at an approved conservation bank. Mitigation will be in place before any impacts occur. The mitigation site selected will be identified as a pre-approved mitigation area, or MHPA, or equivalent designation in an approved or draft Subregional Plan or Subarea Plan. If the mitigation does not occur in an area with such a designation, the mitigation ratio will be 2:1.	SDCWA	X			SDCWA							

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Mitigation Measure SV/BR 5-1	Temporary Impacts to Coastal Sage Scrub (Impact SV/BR 5). Direct temporary impacts to coastal sage scrub will be mitigated through on-site revegetation at a 1:1 ratio. Coastal sage scrub will be revegetated with a coastal sage scrub seed mix reflective of species in the area. Coastal sage scrub temporarily impacted by the marina quarry footprint will also be revegetated on site.	Biologist			X	Restoration Ecologist							
Mitigation Measure SV/BR 5-1	Prior to commencing any activities that would impact coastal sage scrub habitat, a final coastal sage scrub/upland revegetation plan will be prepared by a landscape architect or restoration ecologist, experienced in southern California landscapes, to the satisfaction of the Water Authority, and USFWS. All revegetation specifications, species composition and density, and success criteria will be approved by an experienced/qualified restoration ecologist-biologist, and included in the final construction documents.	SDCWA	X			Landscape Architect or Restoration Ecologist							
Mitigation Measure SV/BR 6-1	Temporary Impacts to Coast Live Oak Woodland (Impact SV/BR 6). Mitigation for direct temporary impacts to coast live oak woodland will occur at a ratio of 1:1, consisting of on-site restoration.	Biologist			X	Restoration Ecologist							
Mitigation Measure SV/BR 6-1	A restoration plan will be prepared by a landscape architect or restoration ecologist, experienced in southern California landscapes, to the satisfaction of the Water Authority.	SDCWA	X			Landscape Architect or Restoration Ecologist							
Mitigation Measure SV/BR 7-1	Permanent Impacts to Corps-Regulated Wetlands/Vegetated Waters and Unvegetated Waters of the U.S. (Impact SV/BR 7). Refer to Mitigation Measure SV/BR 1-1. Impacts to Corps-regulated unvegetated waters are considered self-mitigating because the amount of open water and lakeshore fringe will be increased after filling of the reservoir to the CSP operational water levels. The current average lakeshore fringe of 136 acres (120.3 acres surrounding the reservoir and 15.6 acres surround Lowell Island) will be replaced after implementation of the CSP the dam raise and filling of the reservoir by an average of approximately 225 acres of lakeshore fringe (214 acres around the reservoir and 11 acres around Lowell Island).	SDCWA	X			SDCWA							

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Mitigation Measure SV/BR 8-1	Temporary Impacts to Corps-Regulated Wetlands/Vegetated Waters and Unvegetated Waters of the U.S. (Impact SV/BR 8). Direct temporary impacts to wetland communities will be mitigated at a minimum of 1:1 ratio through on-site revegetation of native wetland communities representative of the communities impacted by the Proposed Action, as specified in Mitigation Measure SV/BR 2-1.	Biologist (revegetation installation)/ SDCWA (revegetation plan)	X		X	Restoration Ecologist (revegetation installation)/ Landscape Architect or Restoration Ecologist (revegetation plan)							
Mitigation Measure SV/BR 9-1	Permanent Impacts to the Federally Endangered Arroyo Toad (Impact SV/BR 9). Direct permanent impacts to arroyo toad individuals and occupied habitat will require consultation under Section 7 of the FESA, and will be mitigated off site per terms and conditions negotiated between USFWS and the Water Authority. If necessary, the Water Authority will acquire suitable, arroyo toad-occupied habitat to facilitate mitigation for arroyo toad. Mitigation will be in place before any impacts occur. Mitigation will consist of the preservation or restoration at a 1:1 ratio of occupied toad habitat, currently estimated at 30.7 acres but subject to USFWS concurrence. Exotic species known to prey on all life stages of arroyo toad will be regularly controlled during the monitoring period; per the ESP BO (1-6-97-F-13), the Water Authority will implement a bullfrog control program.	SDCWA	X			SDCWA (off-site acquisition of occupied toad habitat)/ Biologist (off-site restoration of toad habitat; exotic species monitoring program)							
Mitigation Measure SV/BR 9-1	The Water Authority will prepare an Arroyo Toad Habitat Management Plan in coordination with the USFWS and CDFG. Prior to commencing any activities that would impact arroyo toad or occupied habitat, the Arroyo Toad Habitat Management Plan will be approved by the regulatory agencies.	SDCWA	X			SDCWA							
Mitigation Measure SV/BR 10-1	Permanent Impacts to the Federally Threatened California Gnatcatcher (Impact SV/BR 10). Direct permanent impacts to pre-fire habitat previously occupied by the California gnatcatcher through inundation and aggregate production will require consultation under Section 7 of the FESA and will be mitigated off site using in-kind mitigation credits, as specified in Mitigation Measure SV/BR 3-1.	SDCWA	X			SDCWA							

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Mitigation Measure SV/BR 11-1	Temporary Impacts to the Federally Threatened California Gnatcatcher (Impact SV/BR 11). Direct temporary impacts to habitat historically occupied by the California gnatcatcher will be mitigated by the following program: <i>Minimize habitat loss.</i> Coastal sage scrub impacts will be avoided where possible by repositioning structures and staging areas into non-sensitive habitats.	Biologist	X			Contractor							
Mitigation Measure SV/BR 11-1	<i>Clearing, grubbing and vegetation removal.</i> If possible, clearing/grubbing activities and vegetation removal within the approved construction limits should occur outside of the gnatcatcher breeding season (February 15 - August 31). As permitted by the ESP BO (1-6-97-F-13), once the site is cleared of vegetation and as long as construction activities begin prior to the breeding season, work that has commenced prior to the breeding season will be allowed to continue without interruption.	Biologist	X	X		Contractor							
Mitigation Measure SV/BR 11-1	<i>Focused surveys.</i> A qualified biologist will conduct pre-construction focused gnatcatcher surveys. In addition, if clearing/grubbing, vegetation removal or construction activities are initiated prior to, and extend into, the breeding season, but they cease for a period longer than three weeks and the contractor wishes to restart work within the breeding season window, then updated pre-construction gnatcatcher surveys are also necessary.	Biologist	X	X		Biologist							
Mitigation Measure SV/BR 11-1	<i>Construction schedule.</i> Prior to initiating clearing/grubbing, vegetation removal or construction activities, the Water Authority will submit to the USFWS the results of the above pre-construction focused gnatcatcher surveys. Construction schedules will clearly identify all areas that contain the federally threatened California gnatcatchers. Temporary impacts to the California gnatcatcher at the marina quarry will not be mitigated on site if it is determined that the final manufactured slopes and slope aspect would not yield suitable gnatcatcher habitat. Therefore, if suitable gnatcatcher habitat cannot be established on site, then impacts would be considered permanent (25.51 acres) to gnatcatcher habitat in this location and will be mitigated off site as specified in Mitigation Measure SV/BR 3-1.	SDCWA	X			SDCWA							

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Mitigation Measure SV/BR 12-1	<p>Temporary Noise Impacts to the Federally Threatened California Gnatcatcher (Impact SV/BR 12). Indirect temporary construction-related noise impacts to the California gnatcatcher will be mitigated by the following program:</p> <p><i>Focused surveys.</i> Once the site is cleared of vegetation and as long as construction activities begin prior to the breeding season, as specified in Mitigation Measure SV/BR 11-1, work that has commenced prior to the breeding season will be allowed to continue without interruption. If gnatcatchers move into an area within 500 feet of ongoing construction noise levels and attempt to nest, then it can be deduced that the noise is not great enough to discourage gnatcatcher nesting activities. If work begins prior to the breeding season, the contractor(s) should maintain continuous construction activities next to the adjacent coastal sage scrub that falls within 500 feet, until the work is completed. However, if clearing/grubbing, vegetation removal or construction activities are scheduled to begin during the gnatcatcher breeding season, then updated pre-construction surveys are necessary as specified in Mitigation Measure SV/BR 11-1. In addition, if these activities are initiated prior to, and extend into, the breeding season, but they cease for a period longer than three weeks and the contractor wishes to restart work within the breeding season window, then updated pre-construction gnatcatcher surveys are also necessary. If these surveys indicate no nesting birds occur within the coastal sage scrub that falls within 500 feet of the proposed work, then the adjacent construction activities will be allowed to commence. However, if the birds are observed nesting within these areas, then the adjacent construction activities will be postponed until all nesting has ceased or until after August 31.</p>	Biologist	X	X		Biologist							
Mitigation Measure SV/BR 12-1	<p><i>Continuous construction.</i> All work within the approved construction limits and within 500 feet of coastal sage scrub will proceed in a continuous manner to minimize the duration of indirect impacts. Construction traffic will be allowed to traverse occupied breeding habitat areas only if access routes have been established prior to the breeding season.</p>	Biologist		X		Contractor							

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Mitigation Measure SV/BR 12-1	<i>Monitoring.</i> During construction, a biologist certified by USFWS with a 10(a) permit for the federally threatened California gnatcatcher will conduct weekly monitoring for the presence of the gnatcatcher and gnatcatcher nests in areas adjacent to the approved construction limits.	Biologist		X		Biologist							
Mitigation Measure SV/BR 13-1	<p>Permanent Impacts to the Federally and State Endangered Least Bell's Vireo (Impact SV/BR 13). Direct permanent impacts to least Bell's vireo individuals and occupied habitat will require consultation under Section 7 of the FESA and under Section 2080.1/2081 of the Fish and Game Code. Impacts will be mitigated off site per terms and conditions negotiated between USFWS, CDFG, and the Water Authority by:</p> <ul style="list-style-type: none"> • Creating and/or conserving suitable vireo riparian habitat at the Tijuana River Valley Wetland Mitigation Banking site and/or at the San Vicente Creek mitigation site (Rancho Cañada property), as specified in Mitigation Measure SV/BR 1-1; or • Acquiring documented off-site occupied vireo habitat at a 1:1 ratio or greater. <p>Created or acquired mitigation habitat will be conserved and managed per the regulatory agencies' permit requirements. Mitigation will be in place before any impacts occur. The Water Authority will prepare a Least Bell's Vireo Habitat Management Plan in coordination with the USFWS and CDFG. Prior to commencing any activities that would impact least Bell's vireo or occupied habitat, the Least Bell's Vireo Habitat Management Plan will be approved by the regulatory agencies. If a mitigation bank is utilized and least Bell's vireo management is included in the overall mitigation bank's resource management plan, it is not necessary to produce the Least Bell's Vireo Habitat Management Plan identified above.</p>	SDCWA	X			SDCWA							
Mitigation Measure SV/BR 14-1	<p>Permanent Impacts to Delicate Clarkia (Impact SV/BR 14). Mitigation for direct permanent impacts to delicate clarkia will occur in off-site habitat (e.g., at the edges of oak woodland) used for the mitigation of impacts to oak woodland that is required for permanent impacts to this habitat (Mitigation Measure SV/BR 4-1). This mitigation will occur via off-site preservation and/or restoration, preferably at the Rancho Cañada mitigation site located upstream of</p>	SDCWA	X			SDCWA							

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	Kimball Valley, within the San Vicente Creek watershed.												
Mitigation Measure SV/BR 14-1	<p>If no clarkia-occupied oak woodland is available for mitigation, reintroduction of plants to appropriate areas will occur as described below and as determined by the Water Authority in consultation with CDFG:</p> <ul style="list-style-type: none"> • Prior to impacts, collect seed and topsoil, and establish a one-year seed propagation program. • Reintroduce the seed into suitable habitat. • Monitor the mitigation sites after seeding to determine seedling survival/density, phenology, and species reproductive capabilities, in accordance with success criteria to be determined in coordination with CDFG, until the success criteria have been met, or for five years, whichever occurs first. • File an informational report on both the seed reproduction and field monitoring aspects of the reintroduction program with the CDFG Rare Plant Program for use in future mitigation of this species. 	SDCWA	X	X		Biologist							
Mitigation Measure SV/BR 14-1	Prior to commencing any activities that would impact delicate clarkia, a final Delicate Clarkia Restoration Plan will be prepared by a landscape architect or restoration ecologist, experienced in southern California landscapes, to the satisfaction of the Water Authority and CDFG.	SDCWA	X			SDCWA							
Mitigation Measure SV/BR 15-1	<p>Potential Permanent and Temporary Impacts to the Federally and State Endangered San Diego Thornmint (Impact SV/BR 17). Potential direct permanent impacts to the San Diego thornmint will be mitigated by the following.</p> <p>Prior to the start of construction, a qualified biologist will conduct a rare plant survey. If it is determined that this species occurs within the SV 100k footprint, then the direct permanent impacts to the San Diego thornmint will require consultation under Section 7 of the FESA and under Section 2080.1/2081 of the Fish and Game Code, the Water Authority will obtain a consistency determination (Fish and Game Code 2080.1) or an incidental take permit from CDFG, and impacts will be mitigated according to negotiations with the USFWS and CDFG. Mitigation will occur through habitat acquisition or restoration to be</p>	SDCWA	X			SDCWA (obtain permits, off-site habitat acquisition)/ Biologist (off-site habitat restoration)							

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	coordinated with other public agencies and land owners in accordance with CDFG's standard to "fully mitigate" (Fish and Game Code 2081(b)(2)). Mitigation will be in place before any impacts occur. Depending on the number of individuals impacted, and the location relative to other populations, a mitigation ratio of 1:1 to 3:1 may be applied.												
Mitigation Measure SV/BR 15-1	If temporary impacts to the San Diego thornmint are unavoidable, mitigation will occur through on-site revegetation of the habitat in which the species occurs (i.e., coastal sage scrub) at a minimum 1:1 ratio, as specified in Mitigation Measure SV/BR 5-1.	Biologist			X	Restoration Ecologist							
Cultural Resources													
Design Feature 1	Training will be provided to all construction personnel to educate them on cultural resources protection measures.	Construction Superintendent	X	X		Archaeologist							
Design Feature 2	Sites that are in proximity to construction limits, but are outside the area of potential adverse effects, will be protected. Fences will be installed at a distance of 20 meters around the site boundaries, and signs will be posted identifying the areas as an "Environmentally Sensitive Area." Monitoring will be conducted at these sites to ensure avoidance and protection of the sites.	Construction Superintendent		X		Contractor (fencing, signage)/ Archaeologist (monitoring)							
Design Feature 3	Construction monitoring will be performed during initial site grading at sites within the construction limits where there is a potential for unanticipated and unknown buried cultural deposits. These are sites that were either found to lack significance or where mitigation through data recovery has been accomplished. Monitoring will focus on unanticipated, significant artifacts and intact deposits that may be present. If cultural resources are observed in exposed areas, protocols for unanticipated discoveries will be followed in accordance with the ESP Programmatic Agreement (e.g., protection, identification, and evaluation).	Construction Superintendent	X	X		Archaeologist							
Design Feature 4	The Water Authority will implement the recommendations contained in the Native American Consultation Report, including continuing consultation, providing an opportunity for Native American monitoring during construction, and notifying the interested tribes of project modifications and discovery of any unanticipated cultural resources.	SDCWA		X		SDCWA							

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Geology and Soils													
Design Feature 1	Project plans will be reviewed to ensure compatibility with geotechnical conclusions.	Construction Superintendent		X		Contractor/ Geologist							
Design Feature 2	Applicable field activities (e.g., manufactured slope conditions, excavations, fill placement) will be reviewed and appropriately modified by the geotechnical engineer.	Construction Superintendent		X		Geologist							
Design Feature 3	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.	Construction Superintendent		X		Contractor/ Geologist							
Design Feature 4	<p>Construction activities will comply with existing regulatory requirements related to geology and soils, including applicable elements of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit, such as implementing a SWPPP and associated BMPs. Actual BMPs will be determined during SWPPP preparation, with such measures taking priority over the following typical control measures:</p> <ul style="list-style-type: none"> • Prepare and implement a “weather triggered” action plan during the rainy season to provide enhanced erosion and sediment control measures prior to predicted storm events (i.e., 40 percent or greater chance of rain). • Use 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. • Use 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, stabilized construction access points, (e.g., with temporary graveling or pavement) and sediment stockpiles (e.g., with silt fences and tarps), and properly fitted covers for sediment transport vehicles. 	Construction Superintendent		X		Contractor							

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	<ul style="list-style-type: none"> • Store 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. • Train personnel responsible for BMP installation and maintenance. • Implement solid waste management efforts such as proper containment and disposal of construction debris. • Install permanent native vegetation as soon as feasible after grading or construction. • Implement appropriate monitoring and maintenance efforts (e.g., prior to and after storm events) to ensure proper BMP function and efficiency. • Implement sampling/analysis, monitoring/reporting and post-construction management programs per NPDES requirements. • Implement additional BMPs as necessary (and required by appropriate regulatory agencies) to ensure adequate erosion and sediment control. 												
Design Feature 5	<p>Design features will be incorporated into the Proposed Action to avoid instability of manufactured slopes and retaining walls, including, but not limited to, the following:</p> <ul style="list-style-type: none"> • Field observation/mapping of manufactured slopes by the geotechnical engineer, and (if applicable) implement site-specific design/construction changes. • Install adequate drainage for all manufactured slopes and retaining walls, including surface features to prevent runoff on slopes and subdrains, if appropriate, to prevent saturation of surficial materials (including retaining wall backfills). • Depending on material, use maximum grades of 2:1 for fill slopes and 1.5:1 for cut slopes. • Use approved fill materials and application methodologies (e.g., compaction and moisture content) for fill slopes. • Use native and/or drought-tolerant landscaping to reduce irrigation requirements (and/or use of subdrains as noted above). 	Construction Superintendent		X		Contractor/Geologist							

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	<ul style="list-style-type: none"> Use stabilizing techniques (e.g., rock bolts) in applicable cut slopes. Incorporate appropriate placement of slopes and retaining walls (i.e., away from potential saturation sources) and drainage facilities, and implement applicable criteria for lateral earth, surcharge and seismic pressures in the design of all retaining walls. Evaluate soil/rock conditions encountered during excavation to determine appropriate slope inclinations and stabilizing measures (e.g., shoring) in conformance with existing U.S. Occupational Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration (CAL/OSHA) requirements (including 29 CFR Part 1926, Occupational Health Standards-Excavations). 												
Design Feature 6	<p>Design features will be incorporated into the Proposed Action to minimize or avoid differential compression or settlement of on-site soils, including, but not limited to, the following:</p> <ul style="list-style-type: none"> Perform site-specific settlement analyses in areas deemed appropriate by the geotechnical engineer. Over-excavate unsuitable materials and replace them with engineered fill, locating foundations and larger utility pipelines outside of cut/fill transition zones, and install irrigation for landscaped areas. Remove expansive materials and mix with non-expansive soils and/or place them in deeper fills (at least five feet below finished grade) during grading. Manage oversized material (i.e., rock with maximum dimensions greater than 12 inches) via off-site disposal, use in non-structural fill, or crushing or pre-blasting to generate material with maximum dimensions of less than 12 inches. Oversized material in fills will not exhibit maximum dimensions greater than 4 feet, and will not be placed within 10 feet of finish grade, 10 feet of manufactured slope faces (measured horizontally from the slope face), or 3 feet of the deepest pipeline or other utilities. 	Construction Superintendent		X		Contractor/ Geologist							

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Design Feature 7	<p>A site-specific investigation of potential corrosion hazards will be conducted in areas deemed appropriate by a qualified corrosion engineer. The results of this analysis will be checked against the final design, as appropriate, to address potential corrosion impacts, and may include, but not be limited to the following recommendations:</p> <ul style="list-style-type: none"> Excavate (or over-excavate) and treat, and/or remove and replace (i.e., with engineered fill) corrosive materials. Use non-corrosive and/or corrosion-resistant building materials in appropriate locations and install cathodic protection. 	Construction Superintendent		X		Contractor/ Corrosion Engineer							
Design Feature 8	<p>The dam raise will be designed and constructed to meet current industry standards and DSOD's rules and regulations to minimize or avoid instability of the dam and its foundation. These features could include, but are not limited to, the following:</p> <ul style="list-style-type: none"> Construct the base of the raised dam on fresh to slightly weathered bedrock, requiring excavation and removal of overburden and severely to moderately weathered bedrock materials. Perform consolidation grouting across the dam raise footprint to stiffen shallow rock layers. Prior to placement of leveling concrete, zones of localized poor quality rock will be excavated and these localized excavations filled with dental concrete. Install a seepage/leakage control and drainage system to reduce seepage through the dam foundation. Construct the new spillway (stepped portion) concurrently with the placement of RCC lifts. Design the outlet works system in accordance with DSOD requirements regarding evacuation of the reservoir in the event of a dam safety emergency. For the outlet tower and conduit construction, support the rock around the existing dam with rock bolts and shotcrete, as needed, to maintain stability of the existing dam when excavation below the base of the existing dam would be performed to construct the base of the tower. 	Construction Superintendent		X		Designer/ Contractor							

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	<ul style="list-style-type: none"> Construct the saddle dams using RCC, with a similar cross section as the main dam. The foundation excavations will extend down to competent bedrock and include, as needed, a foundation seepage control system consisting of a grout curtain along the dam axis. Incorporate slope stability measures such as rock bolts or mechanically stabilized earth walls for the marina access road and the left and right abutment access roads, as needed. 												
Design Feature 9	<p>Design features will be incorporated into the Proposed Action to avoid liquefaction, including, but not limited to, the following:</p> <ul style="list-style-type: none"> Remove and replace any potentially liquefiable soils that could affect permanent construction with fill material that will not have the potential to liquefy. For thinner deposits where feasible, remove and replace loose, unconsolidated soils with properly compacted fill soils, or apply other design stabilization features (i.e., excavation of overburden). For thicker deposits, implement applicable techniques such as dynamic compaction (dropping heavy weights on the land surface); vibro-compaction (inserting a vibratory device into the liquefiable sand); vibro-replacement (replacing sand by drilling and then vibro-compacting backfill in the bore hole); and compaction piles (driving piles and densifying surrounding soil). Install subsurface barrier walls to remediate for lateral spreading. 	Construction Superintendent		X		Contractor/ Geologist							
Design Feature 10	<p>Design features will be incorporated into the Proposed Action to avoid landslides, including, but not limited to, the following: stabilization (e.g., retaining walls/other structural support), removal (e.g., over-excavation and recompaction), or avoidance (e.g., structural setbacks).</p>	Construction Superintendent		X		Geologist/ Designer/ Contractor							

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Design Feature 11	Design features will be incorporated into the Proposed Action to avoid soil erosion and expansion, including, but not limited to, the following: <ul style="list-style-type: none"> Identify areas of highly expansive or severely erodable soils as part of a site-specific geotechnical investigation. The investigations will specifically address foundation and slope stability in expansive or erodable soils proposed for construction. Recommendations made in conjunction with the geotechnical investigations will be implemented during final design and construction. Design components to resist damage from expansive soils and other unfavorable soil conditions as the need arises. Construct drainage control devices (e.g., storm drains, brow ditches, subdrains, etc.) to direct surface water runoff away from slopes and other graded areas. 	Construction Superintendent	X	X		Geologist/ Designer/ Contractor							
Design Feature 11	<ul style="list-style-type: none"> Provide seeding of disturbed and constructed slopes with groundcover vegetation as soon as possible following grading activities. 	Biologist		X		Restoration Ecologist							
Design Feature 11	<ul style="list-style-type: none"> Minimize disturbance to existing vegetation and slopes. 	Biologist		X		Contractor							
Land Use and Planning													
Mitigation Measure SV/LU 1-1	The Water Authority will conduct a site-specific septic/leach field system analysis and coordinate with property owners within the setback area of San Vicente Reservoir to ensure compliance with County of San Diego Department of Health Services Policies and Regulations for Protection of a Domestic Water Reservoir as planned.	SDCWA	X			SDCWA							
Mitigation Measure SV/LU 1-2	Relocation assistance for residential displacement impacts will be carried out pursuant to applicable sections of the Water Authority's Administrative Code and existing state and federal laws, such as the federal Uniform Relocation Assistance Act (as amended). Federal law requires that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex.	SDCWA	X	X		SDCWA							

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Mitigation Measure SV/LU 1-3	In areas requiring right-of-way acquisition or relocation assistance, the Water Authority will use certified independent fee appraisers to determine fair market value for all affected parcels. Landowners will be offered fair market value, based on the approved appraisal.	SDCWA	X	X		Real estate fee appraiser							
Noise and Vibration													
Mitigation Measure SV/NV 2-1	If feasible, the batch plant operations will be located at the on-site Marina Quarry Option. If the batch plant operations cannot be located at the on-site Marina Quarry Option, then the significant nighttime noise impacts from batch plant operations south of the dam would be unmitigable because there are no other feasible mitigation measures available to reduce these impacts to less than significant levels.	Construction Superintendent	X	X		Contractor							
Paleontological Resources													
Design Feature 1	A qualified paleontologist will attend pre-construction meetings to consult with grading and excavation contractors in all areas of high or moderate sensitivity.	Construction Superintendent	X			Paleontologist							
Design Feature 2	A paleontological monitor will be on site during original cutting of previously undisturbed sedimentary deposits of high or moderate sensitive geologic formations to inspect cuts for contained fossils. In the event that fossils are discovered, it may be necessary to increase the field monitoring time. Conversely, if fossils are not observed, then monitoring time can be reduced. A paleontological monitor is not needed during grading in areas with no paleontological resource sensitivity (i.e., basement rocks, the pyroclastic and hyababyssal intrusives portion of Santiago Peak Volcanics, and debris flow deposits).	Construction Superintendent		X		Paleontologist							
Design Feature 3	Should important fossils be discovered, the paleontologist or paleontological monitor will recover them. As a result, it may be necessary to halt or divert work in cases that require longer periods of time to complete the recovery (e.g., removing a large mammal skeleton). Further, it may be necessary to set up a screen-washing operation on site depending on the types of fossils discovered.	Construction Superintendent		X		Paleontologist							
Design Feature 4	Fossils recovered during the monitoring will be prepared, identified, cataloged and deposited with copies of all pertinent field notes, photographs, and maps in an appropriate regional repository such as the San Diego Natural History Museum.	SDCWA		X		Paleontologist							

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Design Feature 5	Prior to inundation, a detailed survey of surface exposures between 590 and 766 AMSL focusing on geologic units of high or moderate paleontological sensitivity that crop out within the reservoir will be conducted by a qualified paleontologist. The stratigraphic context of any fossil localities discovered will be recorded and fossils collected. Recovered fossils will be prepared, identified, cataloged and deposited with copies of all pertinent field notes, photographs, and maps in an appropriate regional repository such as the San Diego Natural History Museum.	SDCWA			X	Paleontologist							
Design Feature 6	A final report will be completed that outlines the results of the paleontological monitoring program. This report will include discussions of the methods used, stratigraphy exposed, fossils collected, and the scientific significance of recovered fossils.	SDCWA		X	X	Paleontologist							
Public Safety and Hazards													
Design Feature 1	Prior to initiation of construction, all construction personnel will be trained in the requirements of a Fire Prevention and Response Plan. The plan will outline the responsibilities for the prevention, pre-suppression, and suppression activities associated with fire within the Proposed Action construction area. Fire safety information will be disseminated to construction crews during regular safety meetings. Fire management techniques will be applied during construction, as deemed necessary by the Water Authority and depending upon the vegetation on site and in surrounding areas.	Construction Superintendent	X	X		Contractor							
Design Feature 2	The Contractor will be required to conduct ongoing worker training for all levels of construction personnel, including weekly safety meetings.	Construction Superintendent		X		Contractor							
Design Feature 3	Instrumentation will be provided in the raised San Vicente Dam to monitor hydraulic pressures and deformations in the dam. The existing Emergency Response and Evacuation Plan (EREP) will be reviewed and updated to satisfy the new requirements resulting from the dam expansion.	City of San Diego		X	X	Contractor (install monitoring instrumentation in the raised dam); City of San Diego (update EREP)							
Design Feature 4	The raised dam will be designed for a safety goal of one in a million, as was proposed for the ESP dam raise. A safety goal of one in a million means that, if there were one million dams constructed to similar standards located in a geologic and hydrologic	SDCWA	X			Designer							

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	independent area, on average, one of the million dams would fail each year. This safety goal is consistent with the performance goals set by other states and agencies for high hazard structures such as dams and nuclear facilities. A safety goal of one in a million will ensure that risks to the public from a potential dam failure are minimized; a certain reliability is provided; the expanded dam would not add substantially to the prevailing public risk; and the reliability of new construction is better than the prevailing historical trend.												
Public Services and Utilities													
Design Feature 1	The Water Authority will notify and coordinate with all other utility providers that own easements, rights-of-way, or facilities within or adjacent to the area affected by the Proposed Action. Any need to connect with or relocate utilities will be presented to the appropriate utility provider prior to commencement of construction. Any work requiring the shutdown of an aqueduct will be limited to a period not to exceed 10 consecutive days.	SDCWA	X			SDCWA							
Design Feature 2	During construction activities associated with the Proposed Action, the Water Authority will maintain water deliveries to Helix Water District from the First Aqueduct at Slaughterhouse Canyon Control Structure upstream of San Vicente Reservoir. In addition, Helix will be able to receive Second Aqueduct water via the Moreno Lakeside Pipeline upon completion of the San Vicente Pumping Facilities, which is currently under construction. In general, this delivery path will remain operational during construction activities associated with the Proposed Action. Furthermore, when water is pumped from San Vicente Reservoir during construction activities associated with the Proposed Action (e.g., following a storm to lower the reservoir level), the San Vicente Pumping Facilities will allow for the possibility of delivering reservoir water to Helix.	SDCWA		X		SDCWA							

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Recreation													
Design Feature 1	The Water Authority will replace the existing marina that would be inundated by the expanded reservoir. Based on the enlarged surface area of the reservoir, the proposed marina has been designed to accommodate a larger number of visitors. Conceptual recreational facilities at the relocated and expanded marina would include an extended boat launch ramp, docks, piers, parking, and buildings (e.g., concessions, City office and comfort station).	SDCWA			X	Contractor							
Traffic													
Design Feature 1	Prior to construction, the contractor will prepare a detailed Traffic Control Plan for review by the Water Authority and approval by Caltrans. 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.	SDCWA/Caltrans	X			Contractor							
Water Resources													
Design Feature 1	<p>A SWPPP will be implemented to reduce or eliminate pollutants during construction activities associated with the Proposed Action. The SWPPP 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.</p> <p>Detailed BMPs to prevent impacts on water quality will be included in the SWPPP. Standard industry measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> Storage of a minimal amount of hazardous materials on site and restriction of storage/use locations to areas at least 50 feet from storm drains and watercourses. Use of covered and/or enclosed facilities for all 	Construction Superintendent		X		Contractor							

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	<p>hazardous materials storage.</p> <ul style="list-style-type: none"> Maintenance of accurate written inventories and labels for all stored hazardous materials. Use of berms, ditches and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance areas to provide a containment volume of 1.5 times the volume of stored/used materials to prevent discharge in the event of a spill. On-site storage of absorbent and clean-up materials where they are readily accessible. Proper location and maintenance of trash and wastewater facilities. Posting of regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous location at or near the job site trailer. Regular (at least weekly) monitoring and maintenance of hazardous material use/storage facilities and operations to ensure proper working order. Implementation of a Storm Water Sampling and Analysis Strategy program pursuant to regulatory guidelines. 												
Design Feature 2	<p>The grading/construction contractor will comply with the applicable NPDES General Groundwater Extraction and Waste Discharge Permit for disposal of extracted groundwater. While specific BMPs to address potential water quality concerns from disposal of extracted groundwater will be determined based on site-specific parameters, they will likely include the following types of standard industry measures:</p> <ul style="list-style-type: none"> Use of erosion prevention and sediment control devices for applicable conditions (e.g., when extracted groundwater is discharged onto graded or unstabilized areas). Testing, filtering (e.g., with gravel and filter fabric media) and/or treating (e.g., by conveyance to a municipal wastewater treatment plant) of extracted groundwater prior to discharge, if required for NPDES permit conformance. Removal of groundwater for treatment and disposal by a licensed operator, if required for NPDES permit conformance. 	Construction Superintendent		X		Contractor							

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Design Feature 3	The Water Authority will monitor wells in the area during pre-construction, construction, and post-construction (during the filling period) activities to evaluate the influence of the reservoir expansion on groundwater levels.	SDCWA	X	X	X	Contractor							

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