

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

for the

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

**CEQA Findings of Fact and
Statement of Overriding Considerations**

SCH No. 2006101044



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

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1.0 Introduction

The San Diego County Water Authority (Water Authority) was formed in 1944 under California's County Water Authority Act with a mission to provide a safe and reliable supply of water at the lowest possible and equitable cost to its member agencies serving the San Diego region. To fulfill its mission, the Water Authority determined that it needed to increase both emergency storage and carryover storage capacity within the region. In 1996, as part of its Emergency Storage Project (ESP), the Water Authority approved, and received permits for, a project to raise San Vicente Dam by 54 feet to increase emergency water storage capacity for the region by 52,100 acre feet (AF). The existing storage capacity of the San Vicente Reservoir is 90,063 AF, and the existing dam is 220 feet high. The Water Authority is now considering an additional 63-foot raise of the dam to provide approximately 100,000 AF of carryover storage¹ as part of its Carryover Storage and San Vicente Dam Raise Project (CSP).

The Water Authority has received all necessary approvals, including a permit from the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (CWA), to raise the dam sufficiently to provide for 52,100 AF of emergency storage. The purpose of the CSP is to substantially increase the reliability and flexibility of the regional water supply by providing up to 100,000 AF of carryover storage capacity by the year 2011. Because it would not be feasible or practicable to construct two separate raises of the dam due to issues such as cost, safety of the raised dam structure, and construction logistics, the two increases would be combined and constructed at the same time. When completed, the combined ESP and CSP dam raise would add as much as 117 feet of height to the existing dam using roller compacted concrete (RCC), thereby expanding the usable reservoir capacity by up to 152,100 AF.

As with the ESP, approval of the proposed CSP requires compliance with a number of environmental laws including the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and Section 404 of the CWA. CEQA requires that the Lead Agency assess the potential adverse impacts on the physical environment and adopt all feasible alternatives or mitigation measures to avoid or substantially reduce the significance of those impacts. The Water Authority is the Lead Agency under CEQA. Expansion of the existing San Vicente Dam and Reservoir to meet carryover storage requirements is the Water Authority's "Proposed Project" under CEQA.

NEPA requires a federal agency to evaluate the effects of a major federal action on the natural and human environment. Furthermore, NEPA requires that the analysis consider all available alternatives to identify the least environmentally damaging practicable alternative (LEDPA). Under Section 404 of the CWA, a permit is required for discharges of dredged or fill material into waters of the United States (U.S.), including wetlands. Because the proposed CSP would impact waters of the U.S. and require a Section 404 permit, the Corps is the federal Lead Agency for the "Proposed Action" under NEPA.

¹ The term "carryover" refers to the operation of accumulating water in wet seasons or years and carrying it over for use in subsequent dry seasons or years.

These Findings of Fact (Findings) have been prepared to comply with the requirements of both CEQA and NEPA. The Water Authority and the Corps have agreed to jointly prepare an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the proposed CSP. As this is a joint CEQA/NEPA document, the term “Proposed Action” is used to refer to the CSP in these Findings. Alternatives to the Proposed Action that are evaluated in the EIR/EIS include the No Project Alternative; construction of a new dam and 100,000 AF reservoir in Moosa Canyon in the Valley Center area; and a 50,000-AF dam raise at San Vicente Reservoir combined with a new dam and 50,000-AF reservoir in Moosa Canyon. Detailed Findings are presented only for the Proposed Action.

2.0 Acronyms and Abbreviations

ADT	average daily trips
AF	acre feet
AMSL	above mean sea level
APCD	San Diego Air Pollution Control District
BMPs	Best Management Practices
BO	Biological Opinion
CAL/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CNEL	community noise equivalent levels
CO	Carbon Monoxide
Corps	U.S. Army Corps of Engineers
CSP	Carryover Storage and San Vicente Dam Raise Project
CWA	Clean Water Act
CY	cubic yards
dB(A) L_{eq}	A-weighted sound amplitude is also the decibel. But in reporting measurements to which A-weighting has been applied, an “A” is appended to dB
DO	Dissolved Oxygen
DOI	U.S. Department of Interior
DSOD	Division of Safety of Dams
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
EPA	U.S. Environmental Protection Agency
EREP	Emergency Response and Evacuation Plan
ESA	Environmentally Sensitive Area
ESP	Emergency Storage Project
FESA	Federal Endangered Species Act
Findings	Findings of Fact
GEI	GEI Consultants, Inc.
I-15	Interstate 15
IID	Imperial Irrigation District
IRP	Integrated Resources Plan
LCTPP	Lakeside Community Trails and Pathways Plan
LEDPA	least environmentally damaging practicable alternative
LFPD	Lakeside Fire Protection District
LOS	Level of Service
Master Plan	Regional Water Facilities Master Plan

MHPA	Multi-Habitat Planning Area
MMRP	Mitigation Monitoring and Reporting Program
MNP	maximum normal pool
MRZ	mineral resource zone
MSCP	Multiple Species Conservation Program
MWD	Metropolitan Water District
NCCP	Natural Community Conservation Planning
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOP	Notice of Preparation
NO _x	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
O ₃	ozone
OHWM	ordinary high water mark
OSHA	U.S. Occupational Safety and Health Administration
PA	Programmatic Agreement
PM ₁₀	particulate matter less than 10 microns in aerodynamic diameter
PM _{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
PMF	probable maximum flood
RAQS	Regional Air Quality Strategy
RCC	roller compacted concrete
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
SANTEC	San Diego Traffic Engineers' Council
SDAB	San Diego Air Basin
SIP	State Implementation Plan
SR-67	State Route 67
SSC	Species of Special Concern
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWSAS	Storm Water Sampling and Analysis Strategy
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
U.S.	United States
UBC	Uniform Building Code
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
v/c	volume-to-capacity
VOCs	Volatile Organic Compounds
Water Authority	San Diego County Water Authority

3.0 Project Description

3.1 Project Location and Environmental Setting

San Vicente Dam and Reservoir are located in a relatively unpopulated area north of the community of Lakeside in San Diego County. The reservoir is approximately six miles southeast of the City of Poway, four miles west of the Barona Indian Reservation, and approximately one mile east of State Route 67 (SR-67). The reservoir is also bordered on the north and west by mostly undeveloped land that is within the jurisdiction of the County of San Diego.

The study area for the evaluation of environmental impacts from the Proposed Action is referred to as “SV 100K study area” and is defined as the water’s edge around San Vicente Reservoir up to 880 feet above mean sea level (AMSL). Elevations within the SV 100K study area range from approximately 450 feet AMSL near the base of the existing dam to approximately 1,500 feet AMSL at the top of ridges around the reservoir. The topography and prevalent vegetation immediately surrounding the reservoir consists of steep, boulder-strewn slopes with extensive rock outcrops, coastal sage scrub, mixed chaparral, and oak woodlands. Soils vary throughout the study area from the hydric soils that are found in drainages and other wetland areas, to soils that are derived from granitic and metavolcanic sources on slopes and peaks.

Lowell Island is a prominent feature in the center of San Vicente Reservoir. The exposed surface area of Lowell Island is approximately 85 acres. Topography and vegetation on the island consists of steep slopes, boulders, rock outcrops, and mixed chaparral with limited coastal sage scrub on the eastern portion. The majority of vegetation on Lowell Island and in the area surrounding the reservoir burned in the Cedar Fire of October 2003, and is recovering from that event.

The lands immediately surrounding San Vicente Reservoir are part of the City of San Diego Multiple Species Conservation Program (MSCP) “Cornerstone Lands.” Cornerstone Lands are lands surrounding the City of San Diego reservoirs that have been maintained in a largely undisturbed condition and are considered to be essential building blocks for creating a viable habitat preserve system.

Local access to San Vicente Dam and Reservoir is provided via Vigilante Road and Moreno Avenue. Regional access is via SR-67, approximately one mile southwest of the reservoir at its closest point. A marina is located along the western shore of the reservoir and is accessed via a two-lane paved road, which is also connected to Moreno Avenue.

To the south and southeast of the reservoir, isolated residences are located on remote hilltops, and limited low-density residential development is intermingled with agricultural lots on canyon floors. Many residential lots also contain equestrian and agricultural structures. There are pockets of industrial and extraction uses (e.g., quarry operations) near SR-67. The eastern edge of Sycamore Canyon Regional Open Space Park is approximately one mile northwest of the reservoir. The western extent of Oak Oasis County Park is 0.25 mile southeast of the reservoir.

3.2 Project Characteristics

San Vicente Dam would be raised approximately 63 feet beyond the 54-foot raise approved for the ESP, increasing the overall height of the dam by 117 feet (or a total dam height of 337 feet). The dam crest would extend 1,437 feet in length and have a crest width of about 20 feet. The new spillway crest at 766 feet AMSL would lie approximately 10 feet below the dam crest (776 feet AMSL). The combined CSP and ESP dam raise would increase the usable volume of San Vicente Reservoir by approximately 152,100 AF, and the total storage capacity by 156,931 AF. The difference between total storage capacity and usable volume is due to evaporation and seepage losses, as well as “dead storage” at the bottom of the reservoir. Total storage capacity and surface area of the expanded reservoir would be 246,994 AF and 1,667 acres, respectively, at the maximum normal pool² (MNP) level of 764 feet AMSL, or two feet below the planned elevation of the new spillway crest. The probable maximum flood³ (PMF) level for the expanded reservoir would be about 778 feet AMSL. The PMF level would be contained by a parapet wall located on the upstream side of the dam crest; the top of the parapet wall would be at 779.5 feet AMSL.

Construction associated with raising the dam would generally take place on the downstream (dry) side and on the abutments above the dam. The foundation would be prepared by drilling, blasting, and excavating the soil and weathered rock. The dam raise would be accomplished by placing approximately 820,000 cubic yards (CY) (ESP = 430,000 CY; CSP = 390,000 CY) of RCC (fill material) against the downstream face of the existing dam, followed by placement of RCC above the crest elevation of the existing dam. The dam enlargement would be built from the foundation upward. For the new dam foundation, it is anticipated that about 190,000 CY of overburden and weathered rock would need to be excavated. RCC placement is expected to be a continuous operation, 24 hours per day and seven days per week over the duration of the dam construction. This phase of dam construction is estimated to take up to 18 months to complete.

RCC is a modern method of placing mass concrete for gravity dams. It utilizes the materials of conventionally placed concrete (i.e., cement, coarse aggregate, sand, and water), but minimizes the water content to allow material handling with conventional soil-placing methods. That is, RCC is placed using conveyors, dump trucks, dozers, and roller compactors. Like engineered-soil placement, RCC is placed in thin layers (usually 12 inches thick) as opposed to typically 5-foot thick layers of conventionally placed mass concrete. Once placed and cured, RCC is indistinguishable from conventionally placed concrete.

Several options are being evaluated for the provision of aggregate for RCC production. One of these options involves the extraction and processing of aggregate from an on-site “borrow area” (the term “quarry option” is used synonymously with “borrow area”). Three alternative locations are being considered for on-site borrow areas: the Southwest and Southeast quarry options located downstream of the dam, and the Marina Quarry Option located at the proposed marina (where excess excavated material from the proposed marina relocation would be considered for

² The MNP level is the maximum surface water elevation under normal operating conditions of the reservoir.

³ The PMF level is based on the occurrence of a maximum theoretically possible precipitation event.

use as aggregate for RCC production). The Marina Quarry Option is identified as the “Northwest Borrow Area” in the engineering design reports for the Proposed Action. To reduce the need to export excess material from the marina excavations that is not used for RCC production, the spoils could be permanently deposited in areas of the reservoir between approximately 590 and 764 feet AMSL.

Another option for the provision of aggregate for RCC production involves hauling of aggregate to the site from an undetermined off-site quarry location. An RCC concrete batch plant and possibly a conventionally placed concrete batch plant would be set up near the existing dam and/or the marina site to process this material for the combined dam raise.

As addressed in the Corps permit for the ESP, the reservoir water level would be lowered to an elevation of approximately 590 feet AMSL to allow for construction of the new outlet tower, to reduce the stresses on the existing dam for construction of the dam raise, and to reduce the flow into the foundation excavation. Lowering the reservoir water level to this elevation may require up to one year, depending on local inflows. The inlet/outlet facility would contain six ports at various elevations to allow selective withdrawal of reservoir water following dam raise construction. A low-level outlet, separate from the tower, would also be constructed to allow reservoir withdrawals when the reservoir water level is below the lowest port on the tower.

The proposed increase in reservoir capacity and elevation would also require the construction of two saddle dams to the west of the main dam, approximately 150 feet apart. The westerly saddle dam would be about 18 feet high, 120 feet long, and span the topographic low area near the existing marina access road; the easterly saddle dam would be about 28 feet high, 270 feet long, and span the small canyon area east of the marina access road. Both saddle dams would also be constructed of RCC.

In addition to the use of RCC as described above, conventionally placed concrete would be used for the following components: (1) leveling of the foundation surface, crest surface, parapet walls, spillway facing, spillway training walls, and stilling basin (main dam); (2) outlet tower; and (3) leveling of the foundation surface, crest surface, and parapet walls (saddle dams), and (4) marina boat ramp.

Additional proposed facilities include an energy dissipation system located immediately downstream of the main dam to reduce the energy of spillway flows, such as a stilling basin or a “flip bucket” in combination with a “plunge pool;” a downstream control facility containing valves to control flow in and out of the conduits from the new outlet tower and low level outlet, as well as valves to release reservoir water to the streambed in the event of a dam safety emergency; a tunnel and an outlet pipeline to connect the downstream control facility to the Reservoir Interconnect Pipeline that leads to the San Vicente Pump Station, as well as to the San Diego Pipelines 1 and 2 and possibly a relocated Bypass Pipeline extending from the saddle dam area to the First Aqueduct Diversion/Terminal Structure north of the proposed marina. In addition, new access roads are proposed to reach the dam crest and the relocated marina facilities. Some modifications to the First Aqueduct Diversion/Terminal Structure and other control structures would also be required as a result of reservoir expansion.

The total estimated time to lower the reservoir, maintain the reservoir at the lowered water level during construction of the dam raise, and refill the reservoir to the new water level is approximately eight years, depending on the rate and availability of imported water. Reservoir drawdown is expected to begin in the fall of 2008.

New recreational facilities, to replace the existing marina that would be inundated by the ESP dam raise, were included as part of the ESP. The marina facilities would be shifted further west of the ESP planned location as part of the Proposed Action. In addition, a new access road to the relocated marina would follow a different alignment than what was studied in the ESP EIR/EIS.

3.3 Project Objectives

The Proposed Action is needed to increase water storage reliability for the region by the year 2011. The Proposed Action would provide approximately 100,000 AF of local storage, and facilitate the reliable and efficient delivery of water to residents of the Water Authority's service area through the year 2030.

During dry weather periods, increased regional demand for water may exceed local supplies resulting in potential water shortages. The immediate need for carryover storage capacity was documented in the *Regional Water Facilities Master Plan* (Master Plan), which was completed by the Water Authority in 2002. Three new water conveyance and supply alternatives were presented and analyzed within the Master Plan. The reliability of each alternative was modeled, with and without 100,000 AF of carryover storage. The Water Authority's *2005 Urban Water Management Plan* (UWMP) identified the need for carryover storage capacity above and beyond the 100,000 AF identified in the Master Plan. Refer to Section 4.0 (Background) of these Findings for further discussion of the 2002 Master Plan and the 2005 UWMP and their relationship to the Proposed Action.

The Water Authority has identified three main needs for carryover storage capacity:

1. **Enhance reliability of the water supply:** Carryover storage would provide a reliable and readily available source of water during periods of shortage, such as during dry years.
2. **Increase system efficiency:** Carryover storage would provide operational flexibility to serve above normal demands, such as those occurring during peak summer months or extended droughts, from locally stored water rather than by the over-sizing of the Water Authority's imported water transmission facilities.
3. **Better management of water supplies:** Carryover storage would allow the Water Authority to accept additional deliveries from its existing State Water Project (SWP)- and Colorado River-derived sources during periods of greater availability, such as during wet years, as well as to increase water availability locally during periods of shortage, such as during dry years.

The need for the Proposed Action is also supported by recent federal actions related to the SWP and Bay-Delta resources. Specifically, as documented in the Record of Decision (ROD) for the *CALFED Bay-Delta Program EIR/EIS*, the U.S. Department of Interior (DOI) confirmed federal interest in additional surface and groundwater storage supplies south of the Bay-Delta to protect environmental resources in the Delta (DOI, 2000).

The overall purpose of the Proposed Action is to develop 100,000 AF of additional carryover storage capacity, which would substantially increase the reliability and flexibility of the Water Authority to meet the region's water supply needs.

The Proposed Action would provide the additional carryover storage capacity identified in the Master Plan. Water would be accumulated (when it is available) in the expanded San Vicente Reservoir from a variety of sources and, once stored, would provide a reliable local reserve against shortages when supply sources are limited. This type of operation is well suited for improving supply reliability during droughts. Through the use of carryover storage, water can be accumulated during wetter years/seasons, when supplies are greater, and used in drier years/seasons or during droughts, when supplies are in higher demand. As documented in the Master Plan, a carryover storage volume of approximately 100,000 AF at San Vicente Reservoir would provide a substantial increase in reliability for the regional water supply.

The primary objectives of the Proposed Action include the following:

- Provide approximately 100,000 AF of carryover storage capacity that would provide readily available, locally stored water for distribution to member agencies during supply shortages by the year 2011;
- Increase system reliability and operation flexibility;
- Locate new facilities in a manner that reduces the need for additional improvements to the Water Authority's infrastructure network;
- Minimize environmental and social impacts; and
- Minimize costs.

3.4 Required Permits and Approvals

The EIR/EIS for the Proposed Action (and its alternatives) has been prepared pursuant to the following statutes and regulations:

- California Environmental Quality Act (Public Resources Section 21000, et seq.)
- State of California CEQA Guidelines (California Code of Regulations, Section 15000 et seq.)
- National Environmental Policy Act (42 U.S. Code 4321-4347)
- President's Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations, Section 1500 et seq.)

- Corps Procedures for Implementing NEPA (33 Code of Federal Regulations, Section 230 et seq.)

Section 15222 of the State CEQA Guidelines and CEQ regulations at 40 CFR 1506.2 describe the process for preparing a joint CEQA/NEPA document. The EIR/EIS on which these Findings is based evaluates the environmental impacts identified as potentially significant by community members, agencies, the Water Authority, and its consultants that may result from implementation of the Proposed Action or its alternatives. In addition, the primary federal involvement associated with the Proposed Action is the discharge of fill materials within federal jurisdictional areas and waters of the U.S. The Proposed Action could also have potential significant effects on the human environment. The Water Authority and the Corps have agreed to jointly prepare an EIR/EIS for the Proposed Action to optimize efficiency and avoid duplication. The EIR/EIS is intended to be sufficient in scope to address federal, state, and local requirements and environmental issues concerning the Proposed Action and permit approvals. The Corps' decision will be to either issue or deny a Department of the Army permit for the Proposed Action.

The EIR/EIS process and the information it generates will be used for the following purposes:

- To give government officials and the community the opportunity to have input into the decision-making process;
- To provide agencies with information necessary to determine if they have jurisdiction over some aspect of the Proposed Action, and, if so, to identify project permitting requirements;
- To define a range of reasonable and practicable alternatives to the Proposed Action;
- To inform the public as well as the decision makers of the environmental consequences of the Proposed Action and its alternatives to assist agency officials in making decisions and taking actions to protect, restore, and enhance the environment;
- To assist the community in understanding the expected project-related environmental effects and how decision-makers plan to respond to and mitigate these effects; and
- To develop mitigation measures that will reduce or eliminate the potential for environmental, public health, and safety impacts.

The EIR/EIS for the Proposed Action requires certification by the Water Authority's Board of Directors prior to approval of construction contracts. Upon completion of the EIR/EIS, the Water Authority can choose to: (1) approve the Proposed Action with conditions and mitigation measures; (2) approve one of the other alternatives evaluated in detail with conditions and mitigation measures; or (3) not approve the Proposed Action or its alternatives. The Water Authority-certified EIR/EIS is required for the Corps' issuance of an Individual Permit for the Proposed Action under Section 404 of the CWA. Although review of the EIR/EIS and the processing of a permit can run concurrently, a ROD on the EIR/EIS must be completed by the Corps before it can make a permit decision. In the ROD for the EIR/EIS, the Corps will make one of the following decisions: (1) approve the 404 Permit for the Proposed Action as submitted;

(2) approve a 404 Permit for the Proposed Action with modifications; or (3) deny the 404 Permit. The Proposed Action, through the Corps' permit process, will require consultation under the federal Endangered Species Act (FESA) and Section 106 of the National Historic Preservation Act (NHPA). Other permits and approvals required for implementation of the Proposed Action are described below.

Permits/Approvals Required for the Proposed Action

Agency	Permit/Approvals
U.S. Army Corps of Engineers	Individual 404 Permit for proposed impacts to federally protected waters and wetlands
U.S. Army Corps of Engineers	Section 106 of 36 C.F.R. 800 for proposed impacts to historic properties that may be affected by federally permitted impacts to wetlands or waters of the U.S. via the Corps 404 Permit
U.S. Fish and Wildlife Service	Section 7 permit consultations for proposed impacts to federally listed threatened or endangered species
California Department of Fish and Game	Section 1602 Streambed Alteration Agreement for proposed diversion or modification of state-protected streams or waters
California Department of Fish and Game	Memorandum of Understanding (2081 Permit) for proposed impacts to state-listed threatened or endangered species
California Department of Transportation (Caltrans)	Encroachment Permit for proposed activities that would occur in Caltrans-designated right-of-way
California Department of Health Services	Authorization to Use Reservoir for Human Consumption
California Governor's Office of Emergency Services	Approval of a reservoir Inundation Study and Evacuation Plan based on final dam as-built drawings
California Department of Water Resources	Dam Alteration application, Certification of Authorization to Construct, and Approval of Plans and Specifications for dam safety and impounding water behind a dam
Regional Water Quality Control Board	National Pollutant Discharge Elimination System (NPDES) permit for proposed discharge of storm water
Regional Water Quality Control Board	Water Quality Certification for assessment of proposed effects to water quality from federally permitted impacts to wetlands or waters of the U.S. via the Corps 404 Permit
San Diego County Air Pollution Control District	Authority to Construct and Permit to Operate for proposed facilities

4.0 Background

San Vicente Reservoir is the terminus for the Water Authority's First Aqueduct, a pipeline corridor that contains two pipelines up to 48 inches in diameter. The primary source of water to fill the reservoir comes from deliveries of untreated imported water supplies from the First Aqueduct. The existing storage capacity of the reservoir is 90,063 AF at the MNP level of 650 feet AMSL. At this water level, the reservoir surface area is approximately 1,083 acres.

Constructed over the period of 1941 to 1943, San Vicente Dam is a concrete gravity structure founded on bedrock, with a structural height of 220 feet and crest length of 963 feet. The width of the dam crest is 14 feet, and a 3.75-foot high parapet wall is located on the upstream side of the crest. The central 275 feet of the existing dam has an overflow spillway, a depressed area along the dam crest to route overflows to the streambed downstream of the dam. The crest of the spillway is at 650 feet AMSL. The outlet works consist of three 36-inch-diameter conduits through the dam, connected on the upstream side to an outlet tower. On the downstream side, the conduits combine into 42.5-inch and 48-inch diameter pipelines that are the San Diego Pipelines 1 and 2, respectively.

The existing San Vicente Dam and Reservoir are owned and operated by the City of San Diego. The City holds storage rights provided by the existing dam and reservoir. San Vicente Creek is a tributary to the San Diego River, and the City holds pueblo rights to all flows within the San Diego River watershed needed to meet demand. The water stored in the reservoir is conveyed to the City's water treatment plants and provides potable water for the City's residents. The existing reservoir also provides public recreational facilities, including boating, fishing, and water skiing. A marina facility is located on the shore of the reservoir, about 1,800 feet northwest of the dam.

In 1996, the Water Authority's Board of Directors approved the ESP to provide adequate storage to meet emergency needs, an initiative central to the agency's overall mission to deliver a reliable supply of water to the region. The Water Authority's existing supply system is vulnerable to natural hazards, such as strong seismic activities in Southern California, severe floods, or prolonged droughts. The Water Authority's pipelines cross the Elsinore Fault, and the Metropolitan Water District (MWD) facilities cross both the San Andreas Fault and San Jacinto Fault in several locations. A major earthquake on these faults could render this delivery system inoperable for up to six months. The Water Authority's ESP is designed to improve the reliability of the region's existing water supply system by the addition of 90,100 AF of reservoir storage in San Diego County.

The approved ESP includes the following major components: a new dam, pipeline, and pump station at Olivenhain (complete); the Lake Hodges Pump Station and Pipeline (under construction); the San Vicente Pipeline (under construction); the San Vicente Pump Station/Surge Control Facility (under construction); and expansion of the existing San Vicente Reservoir by raising San Vicente Dam. The Water Authority has not yet implemented the latter component of the ESP, and is now proposing to combine the approved ESP dam raise with the

Proposed Action to accommodate carryover storage. If the Proposed Action is not approved, the Water Authority will proceed with the already-approved ESP dam raise.

Expanding San Vicente Reservoir per the approved ESP would involve raising the existing dam by up to 54 feet (or a total dam height of up to 274 feet) using RCC. The spillway crest would be raised from 650 to 699 feet AMSL, and the dam crest from 659 to 713 feet AMSL for the ESP raise. The expanded reservoir under ESP would add 56,931 AF of storage capacity (of which 52,100 AF would be usable emergency storage capacity) to the reservoir's existing storage capacity of 90,063 AF. The total capacity of the expanded reservoir with ESP would be 146,994 AF. At the spillway crest elevation, the existing reservoir surface area is 1,083 acres; the ESP reservoir surface area would be 1,340 acres at the raised spillway crest of 699 feet AMSL. The expanded reservoir under ESP would involve the construction of a new outlet tower in the reservoir and relocation of the existing marina facilities and marina access road, but would not require saddle dams.

Conveyance facilities planned or under construction by the Water Authority in the vicinity of San Vicente Reservoir and Dam, prior to the ESP dam raise, consist of a Reservoir Interconnect Pipeline, San Vicente Pump Station, Surge Control Facility, and San Vicente Pipeline. All necessary drain/fill pipelines, respective pump stations, and interconnection facilities being constructed for the ESP dam raise would be sufficient for the additional dam raise under the Proposed Action.

The ESP was evaluated in an EIR/EIS for which the Water Authority was Lead Agency under CEQA and the Corps was Lead Agency under NEPA. The ESP EIR/EIS analyzed various alternatives that could provide 90,100 AF of reservoir storage and supporting facilities to supplement emergency water supplies available to the region. Three of the four alternatives analyzed in detail in the EIR/EIS included raising San Vicente Dam to provide additional emergency storage in San Vicente Reservoir. The Water Authority's Board of Directors certified the ESP Final EIR/EIS on August 15, 1996. The Corps issued a ROD for the EIR/EIS on August 4, 1997, and an Individual Permit under Section 404 of the CWA (Permit No. 95-2009200-DZ) on August 18, 1997.

As referenced in Section 3.3 (Project Objectives) of these Findings, the Master Plan encompasses a region-wide planning effort, incorporating three interrelated components: water demands, water supplies, and facilities. Facility planning for the Master Plan involved: (1) estimating future water demands; (2) identifying water supply options and their respective reliability; and (3) defining facilities and system modifications needed to store, treat, and transport the supplies to the points of demand. The Master Plan reviewed the future water demands of the region and analyzed different alternatives to convey water supplies to meet customer demands. The Master Plan also presented reliability forecasts that were calculated for the different alternatives. Three new conveyance and supply alternatives were developed to analyze the ability of the regional system to meet the demands projected for each member agency:

Alternative 1: Conveyance of Supplies from the North (MWD) via Pipeline 6;

Alternative 2: Conveyance of Supplies from the West, or Regional Seawater Desalination; and

Alternative 3: Conveyance of Supplies from the East (MWD and Imperial Irrigation District [IID]), via Regional Colorado River Conveyance Facility.

Each of the three Master Plan alternatives included a number of new facilities and modifications to the Water Authority's existing system, which would become a part of the selected alternative. All three alternatives included a project to add approximately 100,000 AF of carryover⁴ storage capacity in the Water Authority service area. The Master Plan presented the raise of San Vicente Dam, beyond the height already planned and approved as part of the ESP, as the representative project alternative to provide this storage. The Water Authority was the Lead Agency under CEQA for the Master Plan Program EIR, which evaluated the projects identified in the Master Plan on a broader or program level. The Water Authority's Board of Directors certified the Master Plan Final Program EIR on November 20, 2003.

Section 3.3 (Project Objectives) of these Findings also references the 2005 UWMP. The California Water Code requires all urban water suppliers in the state to prepare UWMPs and update them every five years. These plans satisfy the requirements of the California Urban Water Management Plan Act of 1983, including amendments that have been made to the Act. The Water Authority's 2005 UWMP was prepared in compliance with the Act. The UWMP identifies a diverse mix of water resources projected for development over the next 25 years to ensure long-term water supply reliability for the San Diego region.

As documented in the 2005 UWMP, if the Water Authority and member agency supplies are developed as planned, along with implementation of MWD's Integrated Resources Plan (IRP), no shortages are anticipated within the Water Authority's service area in a normal year or under single dry-year or multiple dry water years through 2030. However, under Section 135 of the Metropolitan Act, preferential rights are determined by each member agency's total historic payments to MWD from property taxes, stand-by charges, readiness-to-serve charges, and other revenue. While the Water Authority had a preferential right to 15.8 percent of MWD's water in 2004, it purchased about 25 percent of MWD's available supply. At any time under Section 135, MWD may allocate water without regard to historic water use or dependence on MWD. Therefore, the Water Authority is at risk for shortages should the supplies identified in MWD's IRP not be developed as planned, or if MWD invokes Section 135 of the Metropolitan Act. To alleviate this risk, the Water Authority is pursuing regional water supply and storage options. Supply options include: the Imperial Irrigation District Water Conservation and Transfer Agreement; the All-American Canal and Coachella Canal Lining Projects; a mix of regional and local seawater and brackish groundwater desalination projects, and water recycling projects. Storage options include: local carryover storage facilities to accumulate and store water during periods of availability for use during dry years; and the acquisition of out-of-region conjunctive-use facilities for developing additional groundwater storage.

⁴ The Master Plan used the terms "seasonal" and "carryover" synonymously when referring to this additional storage. For the purposes of brevity in this document, "carryover" will be used herein because carryover storage is inclusive of seasonal storage.

San Vicente Reservoir is within the San Vicente Creek watershed, which encompasses approximately 74 square miles. Although the reservoir is primarily filled with untreated water deliveries from the First Aqueduct, natural runoff enters the reservoir from San Vicente and West Branch creeks in the north, Foster Creek in the northwest, and Padre Barona Creek in the east. During the past 10 years, the water elevation of the reservoir has ranged from a low of 610 feet to a high of 650 feet AMSL. Within a given year, the water level may fluctuate 10 to 30 or more feet, depending on rainfall, operation of the reservoir, and other factors. The 650-foot elevation is the top of the existing dam spillway and represents the ordinary high water mark (OHWM) under Section 404 of the CWA. The reservoir has a PMF elevation of 664 feet AMSL.

The ESP analysis focused on the change in water elevation from 664 feet (existing PMF) to 710 feet (PMF for the ESP) AMSL. The Proposed Action would increase the water elevation from 650 feet (existing dam spillway crest or OHWM) to 766 feet (CSP spillway crest) AMSL. Therefore, defining the baseline for existing and post-project conditions under CEQA, NEPA and the Section 404(b)(1) guidelines (40 CFR Part 230) is necessary to determine the impacts from the Proposed Action on the natural and human environments at, and in the vicinity of, San Vicente Reservoir.

Section 15125 of the CEQA Guidelines requires that the environmental setting (the physical environmental conditions at the time of the Notice of Preparation [NOP]) is *normally* the baseline for determining significance of impacts. However, the most conservative approach under CEQA would be to use the current reservoir elevation and existing habitat values associated with that elevation as the baseline for determining impacts. In this case, because reservoir water elevation can and does fluctuate dramatically depending on weather conditions and water demands, the full operational/design volume of the reservoir is the appropriate baseline elevation. Therefore, the baseline reservoir elevation is the full operational capacity of the reservoir (i.e., 650-foot AMSL spillway elevation) regardless of the elevation existing at the time of NOP. According to Section 15126.6 of the CEQA Guidelines, “the *No-Project Alternative* is not to be used as the baseline for determining whether the proposed project’s environmental impacts may be significant, unless the No-Project Alternative is identical to the existing environmental setting analysis, which does establish that baseline.”

A requirement under CEQA is to disclose what the existing conditions are at the time of NOP, no matter what baseline is ultimately used for determining impacts. Because the current water elevation fluctuates during the year, it is reasonable to use the OHWM—the current spillway elevation of 650 feet AMSL as both the “existing condition” as well as the baseline for determining impacts of the Proposed Action. Although there is some discretion in the management of the reservoir that allows for variation in water elevation levels, CEQA would require, at a minimum, discussion of the 650-foot spillway elevation as the “current state.” CEQA could be interpreted to allow the Water Authority to set a baseline at some future condition, based on the already approved ESP, because this is not a “normal” situation related to existing conditions. NEPA is not as specific as CEQA in its guidance for federal agencies for determining whether an action “significantly affects the quality of the human environment.” NEPA requires that the EIS discuss the “affected environment,” defined as the “environment of

the area(s) to be affected or created by the alternatives being considered” (CEQ NEPA regulations, 40 Code of Federal Regulations [CFR] §1502.15). NEPA also requires that the environmental consequences of the Proposed Action must be analyzed in the EIS; the CEQ regulations state that this discussion “will include the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented ...” (40 CFR §1502.16).

Although the CEQ regulations call for an analysis of the environmental effects of the alternatives, including the Proposed Action, they do not explicitly state how to set the appropriate threshold.⁵ However, the CEQ regulations do require that direct and indirect effects and their significance be discussed along with means to mitigate adverse effects (40 CFR §1502.16). The term “effect” is defined in the CEQ regulations in part as follows:

- Direct effects, which are caused by the action and occur at the same time and place.
- Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still foreseeable. (40 CFR §1508.8.)

NEPA requires that the EIS shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration (40 CFR 1502.15). However, NEPA has no direct guidance regarding when the establishment of a baseline for determining the significance of an impact when preparing an EIS should occur. Therefore, the EIR/EIS uses the CEQA environmental setting baseline identified above.

⁵ Neither NEPA nor the Guidelines refer to the term *existing conditions* or *baseline*. Despite this lack of reference or definition, a baseline is a necessary requirement for determining the effects of an action. See *American Rivers v. Federal Energy Regulatory Commission*, 187 F. 3d 1007 (9th Cir. 1999) citing Council on Environmental Quality, *Considering Cumulative Effects under the National Environmental Policy Act* (“The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process”). Available: <http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm>.

5.0 Record of Proceedings

For purposes of CEQA and these Findings, the Record of Proceedings for the Proposed Action consists of the following documents, at a minimum:

- The NOP and all other public notices issued by the Water Authority in conjunction with the Proposed Action;
- The Draft EIR/EIS and Final EIR/EIS, including appendices and technical studies included or referenced in the Draft EIR/EIS and Final EIR/EIS;
- All comments submitted by agencies or members of the public during the 45-day public comment period on the Draft EIR/EIS;
- All comments and correspondence submitted to the Water Authority with respect to the Proposed Action, in addition to timely comments on the Draft EIR/EIS;
- The design measures incorporated into the Proposed Action to avoid significant environmental impacts;
- All findings and resolutions adopted by the Water Authority decision makers in connection with the Proposed Action, and all documents cited or referred therein;
- All final reports, studies, memoranda, maps, staff reports, or other planning documents relating to the Proposed Action prepared by PBS&J, consultants to the Water Authority, including the subconsultants retained by PBS&J;
- All documents and information submitted to the Water Authority by responsible, trustee, or other public agencies, or by individuals or organizations, in connection with the Proposed Action, up through the date the Water Authority Board of Directors approved the Proposed Action;
- Minutes and/or verbatim transcripts of all information sessions, public meetings, and public hearings held by the Water Authority, in connection with the Proposed Action;
- Any documentary or other evidence submitted to the Water Authority at such information sessions, public meetings, and public hearings;
- Matters of common knowledge to the Water Authority including, but not limited to, federal, state, and local laws and regulations;
- Any documents expressly cited in these Findings, in addition to those cited above; and
- Any other materials required for the Record of Proceedings by Public Resources Code Section 21167.6, subdivision (e).

The custodian of the documents comprising the Record of Proceedings is the Water Authority, whose office is located at 4677 Overland Avenue, San Diego, California, 92123.

The Water Authority has relied on all of the documents listed above in reaching its decision on the Proposed Action, even if every document was not formally presented to the Water Authority

decision makers as part of the Water Authority's files generated in connection with the Proposed Action. Without exception, any document set forth above that is not found in the project files falls into one of two categories. Many of the documents reflect prior planning or legislative decisions with which the Water Authority was aware in approving the Proposed Action (see *City of Santa Cruz v. Local Agency Formation Commission* (1978) 76 Cal.App.3d 381, 391-392; *Dominey v. Department of Personnel Administration* (1988) 205 Cal.App.3d 729, 738, fn. 6). Other documents influenced the expert advice provided to the Water Authority staff or consultants, who then provided advice to the Water Authority decision makers. For that reason, such documents form part of the underlying factual basis for the Water Authority's decision relating to the adoption of the Proposed Action (see Public Resources Code, § 21167.6, subd. (e)(10); *Browning-Ferris Industries v. City Council of City of San Jose* (1986) 181 Cal.App.3d 852, 866; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 153, 155).

6.0 Findings Required Under CEQA

Public Resources Code Section 21002 provides that “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would *substantially lessen* the significant environmental effects of such projects[...]

(emphasis added). The same statute states that the procedures required by CEQA “are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures that will *avoid* or *substantially lessen* such significant effects” (emphasis added). Section 21002 goes on to state that “in the event [that] specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects.”

The mandate and principles announced in Public Resources Code Section 21002 are implemented, in part, through the requirement that agencies must adopt findings before approving projects for which EIRs are required (see Public Resources Code, § 21081, subd. (a); State CEQA Guidelines, § 15091, subd. (a)). For each significant environmental effect identified in an EIR for a proposed project, the approving agency must issue a written finding reaching one or more of three permissible conclusions. The first such finding is that “[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR” (State CEQA Guidelines, § 15091, subd. (a)(1)). The second permissible finding is that “[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency” (State CEQA Guidelines, § 15091, subd. (a)(2)). The third potential conclusion is that “[s]pecific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR” (State CEQA Guidelines, § 15091, subd. (a)(3)). Public Resources Code Section 21061.1 defines “feasible” to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors.” State CEQA Guidelines Section 15364 adds another factor: “legal” considerations (see also *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 565).

The concept of “feasibility” also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 417). “[F]easibility” under CEQA encompasses “desirability” to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors” (*Ibid.*; see also *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 715).

The State CEQA Guidelines do not define the difference between “avoiding” a significant environmental effect and merely “substantially lessening” such an effect. The Water Authority must, therefore, glean the meaning of these terms from the other contexts in which the terms are

used. Public Resources Code Section 21081, on which State CEQA Guidelines Section 15091 is based, uses the term “mitigate” rather than “substantially lessen.” The State CEQA Guidelines therefore equate “mitigating” with “substantially lessening.” Such an understanding of the statutory term is consistent with the policies underlying CEQA, which include the policy that “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of such projects” (Public Resources Code, § 21002).

For purposes of these Findings, the term “avoid” refers to the effectiveness of one or more mitigation measures to reduce an otherwise significant effect to a less than significant level. In contrast, the term “substantially lessen” refers to the effectiveness of such measure or measures to substantially reduce the severity of a significant effect, but not to reduce that effect to a less than significant level. These interpretations appear to be mandated by the holding in *Laurel Hills Homeowners Association v. City Council* (1978) 83 Cal.App.3d 515, 519-527, in which the Court of Appeal held that an agency had satisfied its obligation to substantially lessen or avoid significant effects by adopting numerous mitigation measures, not all of which rendered the significant impacts in question less than significant.

Although State CEQA Guidelines Section 15091 requires only that approving agencies specify that a particular significant effect is “avoid[ed] or substantially lessen[ed],” these Findings, for purposes of clarity, in each case will specify whether the effect in question has been reduced to a less than significant level or has simply been substantially lessened but remains significant. Moreover, although Section 15091, read literally, does not require findings to address environmental effects that an EIR identifies as merely “potentially significant,” these Findings will nevertheless fully account for all such effects identified in the Final EIR/EIS.

In short, CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environmental impacts that would otherwise occur. Certain project modifications or the adoption of certain mitigation measures or alternatives are not required, however, where such actions are infeasible or where the responsibility for implementation lies with some other agency (State CEQA Guidelines, § 15091, subd. (a), (b)).

With respect to a project for which significant impacts are not avoided or substantially lessened, either through the adoption of feasible mitigation measures or a feasible environmentally superior alternative, a public agency, after adopting proper findings, may nevertheless approve the project if the agency first adopts a statement of overriding considerations setting forth the specific reasons why the agency found that the project’s “benefits” rendered “acceptable” its “unavoidable adverse environmental effects” (State CEQA Guidelines, §§ 15093, 15043, subd. (b); see also Public Resources Code, § 21081, subd. (b)). The California Supreme Court has stated that, “[t]he wisdom of approving. . . any development project, a delicate task which requires a balancing of interests, is necessarily left to the sound discretion of the local officials and their constituents who are responsible for such decisions. The law as we interpret and apply it simply requires that those decisions be informed, and therefore balanced” (*Goleta, supra*, 52 Cal.3d 553, 576).

7.0 Legal Effects of Findings

To the extent that these Findings conclude that various project design features and mitigation measures outlined in the Final EIR/EIS are feasible and have not been modified, superseded, or withdrawn, the Water Authority hereby binds itself to implement these measures. These Findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when the Water Authority formally approves the Proposed Action.

The project design features and mitigation measures are included in the Mitigation Monitoring and Reporting Program (MMRP) adopted concurrently with these Findings, and will be effectuated through the process of constructing and implementing the Proposed Action (refer to Section 8.0 of these Findings). In addition to the design features and mitigation measures, the Water Authority's General Conditions and Standard Specifications that are applicable to the Proposed Action will be included in the project construction documents to reduce environmental impacts associated with the Proposed Action. The applicable General Conditions and Standard Specifications are summarized in the Final EIR/EIS (Volume 1, Section 1.9).

8.0 Mitigation Monitoring and Reporting Program

An MMRP has been prepared for the Proposed Action, and has been adopted concurrently with these Findings (see Public Resources Code, § 21081.6, subd. (a)(1)), that includes the project design features and mitigation measures incorporated into the Proposed Action to avoid or substantially lessen significant environmental effects, as outlined in the Final EIR/EIS (Volume 1). The Water Authority will use the MMRP, which is a separate, stand-alone document, to track compliance with the adopted design features and mitigation measures. The MMRP will remain available for public review during the compliance period.

9.0 Significant Effects and Mitigation Measures

9.1 Aesthetics/Visual Quality

Thresholds of Significance

Thresholds used to evaluate potential aesthetic/visual quality impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant aesthetic/visual quality impact would occur if the Proposed Action would:

1. Have a substantial adverse effect on a scenic vista.
2. Damage a scenic resource, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. Degrade the existing visual character or quality of the project site and its surroundings.
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views or normal sleep patterns.

Source: Volume I, Final EIR/EIS, page 3.3-4.

Impact

Threshold 1: The Proposed Action would not have a substantial adverse effect on scenic vistas along SR-67 and from surrounding open space preserves (Volume I, Final EIR/EIS, page 3.3-5); therefore, this issue is not addressed in these Findings.

Threshold 2: Impacts of the Proposed Action on scenic resources, including trees, rock outcroppings and historic buildings, within or visible from SR-67 (a third-priority scenic highway) would be less than significant (Volume I, Final EIR/EIS, pages 3.3-5 through 3.3-6).

Threshold 3: Impacts of the Proposed Action on the existing visual character or quality of the project site and its surroundings would be less than significant (Volume I, Final EIR/EIS, pages 3.3-6 through 3.3-10).

Threshold 4: Implementation of project design features listed below would reduce the effects of construction-related nighttime light and glare on surrounding residents; therefore, impacts from a new (temporary) source of light or glare on nighttime views or normal sleep patterns would be less than significant (Volume I, Final EIR/EIS, page 3.3-10).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 2, 3 and 4; therefore, no mitigation measures are required.

Explanation

Threshold 2: Damage a scenic resource, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway

Oak trees are considered a scenic resource, but the removal of these trees in the area of the Southeast Quarry Option would not be visible from SR-67. The Proposed Action would also include the preservation of rock outcroppings, wherever practicable, as a project design feature (see below). Nevertheless, it is expected that some rock outcroppings would be altered by quarrying operations (including blasting). However, most of the outcroppings that would be affected would not be visible from surrounding areas, including SR-67; the exception would be the Southeast Quarry Option, which would be partially visible. Impacts on rock outcroppings from the Southeast Quarry Option would be limited to a small area of the hillside at the lower elevations; the rest of the topography would remain in its natural state with substantial outcroppings. In addition, there are no historic buildings within the SV 100K footprint that would be affected by the Proposed Action. Therefore, impacts on scenic resources (i.e., oak trees, rock outcroppings, and historic buildings) due to the Proposed Action, as viewed from SR-67 (a third-priority scenic highway), would be less than significant.

Threshold 3: Degrade the existing visual character or quality of the project site and its surroundings

San Vicente Dam and Reservoir are barely visible to residential viewers within all four viewsheds described in the Final EIR/EIS (Volume 1, Section 3.3.1). Although residential viewers have a high sensitivity to change in the visual environment, views of the downstream and upstream sides of the dam and views of the reservoir are limited to residences in the following areas: (1) approximately 15 homes that are slightly elevated above the west side of SR-67; (2) scattered residences in the higher elevations of the Eucalyptus Hills community approximately 1 to 2 miles west of the dam; and 3) scattered residences on ridgelines above the reservoir (i.e., Lake San Vicente and Foster Canyon). These views are either completely blocked or partially screened by natural terrain and/or vegetation (for the homes on the west side of SR-67); are so distant that the dam is barely noticeable (for the homes in the Eucalyptus Hills community); or have partial views of the reservoir from over one mile away (for the ridgeline homes in the Lake San Vicente and Foster Canyon communities). The Southwest Quarry Option would not be visible from these residential viewpoints, and the Southeast Quarry Option would be partially screened by existing terrain and vegetation. With implementation of project design features listed below, the landform alteration at the Southeast Quarry Option would be further minimized. The incremental change in the height of the main dam, the addition of the two saddle dams, the dam construction zone, the grading associated with the Southeast Quarry Option, the increase in the unvegetated ring around the reservoir due to drawdown, and the temporary quarry operations at the marina site (i.e., Marina Quarry Option) would either blend into the background or would be barely noticeable from these residential viewpoints. In addition, the new marina would be landscaped and designed to be an attractive recreational amenity. Therefore, impacts of the Proposed Action on the existing visual character/quality of views from surrounding residences would be less than significant.

Motorists traveling north on SR-67 would have limited views of the downstream side of the raised dam from several locations, but these views would be from a moving vehicle as there are no designated scenic turnouts or viewing vista areas on this segment of SR-67. The incremental change in the height of the main dam, the addition of the two saddle dams, the dam construction zone and grading associated with the Southeast Quarry Option would barely be detectable to SR-67 motorists due to the distance and orientation of these features relative to the highway. In addition, the area along SR-67 from which the Southwest Quarry Option would be visible is a small portion of the drivers' experience along the road, and with implementation of project design features listed below, the change to the existing landform would be further minimized. Therefore, impacts of the Proposed Action on the existing visual character/quality of views from motorists along SR-67 would be less than significant.

Due to the distances, elevation differences, and intervening topography, recreational users of surrounding open space preserves would not be able to see the dam construction zone, the higher dam, or the new outlet tower on the upstream side of the dam. Therefore, impacts of the Proposed Action on the existing visual character/quality of views from recreational users of surrounding open space preserves would be less than significant.

Threshold 4: Create a new source of substantial light or glare that would adversely affect day or nighttime views or normal sleep patterns

There is potential for lighting impacts because the dam raise and related aggregate production activities would be a continuous 24/7 operation, extending through the night. The proposed construction schedule would require the use of night lighting for work performed during nighttime hours to ensure the safety of working crews and employees. As a project design feature to be included in the contractor specifications (see below), construction night lighting would be directed and shielded to minimize lighting impacts. The shielding would prevent construction lighting from the Proposed Action being a new source of substantial light that would adversely affect nighttime views in the area. Therefore, impacts from construction lighting to day or nighttime views or normal sleep patterns would be less than significant.

Permanent security lighting on the dam would be similar to the existing dam, and would be minimal and be directed downward. The raised dam would be gray, typical of concrete and similar to the color of the existing dam. The reflectivity of the downstream surface of the dam would be no greater than the existing dam, and with the terraced effect of the RCC layers, reflectivity may actually be less than that of the existing dam. In addition, the raised dam would continue to be recessed deep into San Vicente Creek canyon and oriented away from any land uses and roadways that could otherwise be affected by daytime reflections from the RCC dam surface. Therefore, permanent impacts from light and glare to day or nighttime views or normal sleep patterns would be less than significant.

Cumulative Impacts

The Proposed Action would not have a substantial adverse effect on a scenic vista; would not damage a scenic resource, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; would not degrade the existing visual character or quality of the project site and its surroundings; and would not create a new source of substantial light or glare that would adversely affect day or nighttime views or normal sleep patterns. Therefore, cumulative impacts due to the Proposed Action for these activities, when combined with the short-term (construction-related) and long-term (operational) aesthetic impacts associated with the Slaughterhouse Terminal Reservoir (a Water Authority Capital Improvement Program [CIP] project), San Vicente Pipeline (ESP), San Vicente Pump Station (ESP) and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Project Design Features

In addition to the Water Authority General Conditions and Standard Specifications listed in Section 1.9.1 of the Final EIR/EIS (Volume I, pages 1-23 and 1-24), the following project design features have been incorporated into the Proposed Action to minimize aesthetics/visual quality impacts:

- 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.
- 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.
- Design Feature 3* All temporarily disturbed areas will be graded to be compatible with the surrounding topography, where practicable.
- 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.
- Design Feature 5* Lighting will consist of low-sodium or similar lighting equipped with shields to focus light downward on the appropriate subject.

Source: Volume I, Final EIR/EIS, page 3.3-3.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design features would reduce potential aesthetics and visual quality impacts to less than significant levels; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.2 Agricultural Resources

Thresholds of Significance

Thresholds used to evaluate potential agricultural resources impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact on agricultural resources would occur if the Proposed Action would:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
2. Conflict with existing zoning for agricultural use, or a *Williamson Act* contract.
3. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

Source: Volume I, Final EIR/EIS, page 3.4-5.

Impact

Threshold 1: The Proposed Action would not convert mapped Farmland to non-agricultural use (Volume I, Final EIR/EIS, page 3.4-6); therefore, this issue is not addressed in these Findings.

Threshold 2: The Proposed Action would not conflict with agriculturally zoned areas or any property under a *Williamson Act* contract (Volume I, Final EIR/EIS, page 3.4-6); therefore, this issue is not addressed in these Findings.

Threshold 3: Impacts of the Proposed Action from conversion of 46 acres of soils representing potential farmland to non-agricultural (reservoir) use would be less than significant (Volume I, Final EIR/EIS, pages 3.4-6 through 3.4-7).

Finding

The analysis concluded that impacts would be less than significant for Threshold 3; therefore, no mitigation measures are required.

Explanation

Threshold 3: Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use

The SV 100K study area does not include any active farms. The Proposed Action would convert approximately 46 acres of soils representing potential farmland to non-agricultural (reservoir) use. This impact would represent a very small percentage of farmable land in the county (0.04 percent), and based on consultation with the Natural Resources Conservation Service and completion of Form AD-1006, the 46 acres would be categorized as “minimal level of consideration for protection.” In addition, the Farmland Protection Policy Act (Section 658.1) specifically states: “Farmland does not include land already in or committed to urban development or water storage.” The farmland soils in question are on publicly owned land, and the County General Plan calls for continued use of the site as a dam and water reservoir. Furthermore, the Proposed Action would not involve changes in the existing environment that would result in conversion of farmland to non-agricultural use. The existing use of the reservoir would remain the same after the dam raise and reservoir expansion, and no additional land uses or other substantial changes in the environment would occur as part of the Proposed Action. Therefore, impacts to 46 acres of soils representing potential farmland within the SV 100K study area would be less than significant.

Cumulative Impacts

The Proposed Action would not convert mapped farmland to non-agricultural use; would not impact agriculturally zoned areas or any property under a Williamson Act contract; and would convert a minimal amount of potential farmland soils (46 acres) to non-agricultural (reservoir) use. Therefore, cumulative agricultural resource impacts due to the Proposed Action, when combined with the agricultural resources impacts associated with CIP, ESP and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Project Design Features

There are no Water Authority General Conditions and Standard Specifications or project design features that specifically address reducing potential impacts on agricultural resources.

Mitigation Measures

Impacts to potential farmland were determined to be less than significant; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.3 Air Quality

Thresholds of Significance

Thresholds used to evaluate potential impacts on air quality are based on applicable criteria in the state CEQA Guidelines (CCR §§15000-15387), Appendix G; and the San Diego Air Pollution Control District (APCD) regulations. A significant impact on air quality would occur if the Proposed Action would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Expose sensitive receptors (e.g., schools, day care centers, hospitals, resident care facilities, retirement homes) to substantial pollutant concentrations.
4. Create objectionable odors affecting a substantial number of people.
5. Exceed the pollutant emission thresholds as indicated in Table 3.5-4 of the Final EIR/EIS (Volume I, page 3.5-8).
6. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Source: Volume I, Final EIR/EIS, pages 3.5-7 and 3.5-8.

Impact

Threshold 1: Construction emissions associated with the Proposed Action are accounted for in the State Implementation Plan (SIP) budget estimates and stationary sources would comply with the San Diego Air Pollution Control District (APCD) Rules and Regulations. The Proposed Action would not conflict with or obstruct implementation of the SIP or the Regional Air Quality Strategy (RAQS); therefore, impacts would be less than significant (Volume I, Final EIR/EIS, pages 3.5-10 through 3.5-13).

Threshold 2: Under both the on-site quarry options and off-site quarry option, construction activities associated with the Proposed Action would exceed pollutant emission thresholds and have the potential to violate air quality standards for nitrogen oxides (NO_x), an ozone (O₃) precursor, and particulate matter 10 microns in diameter (PM₁₀), and would contribute substantially to an existing or projected air quality violation for O₃ as represented by its precursor NO_x (**Impact SV/AQ 1**) (Volume I, Final EIR/EIS, pages 3.5-13 through 3.5-16). In

addition, under the on-site quarry options, construction activities associated with the Proposed Action would exceed pollutant emission thresholds and have the potential to violate air quality standards for carbon monoxide (CO) and particulate matter 2.5 microns in diameter (PM_{2.5}) (**Impact SV/AQ 1**) (Volume I, Final EIR/EIS, pages 3.5-13 through 3.5-16). Therefore, all of these impacts would be significant.

CO emissions at impacted intersections from construction-related traffic volumes associated with the Proposed Action (under either the on-site quarry options or the off-site quarry option for aggregate supply) would be less than significant; therefore, the Proposed Action would not cause CO “hot spots” or CO emission thresholds to be exceeded at impacted intersections (Volume I, Final EIR/EIS, page 3.5-17). The total estimated air pollutant emissions from vehicles and boats operating at the expanded San Vicente Reservoir and marina would not exceed pollutant emission thresholds, violate air quality standards, or contribute substantially to an existing or projected air quality violation. Therefore, air quality impacts associated with operation of the expanded reservoir would be less than significant (Volume I, Final EIR/EIS, pages 3.5-17 through 3.5-19).

Threshold 3: Construction activities associated with the Proposed Action would not expose sensitive receptors to substantial pollutant concentrations; therefore, the construction-related air quality impacts would be less than significant (Volume I, Final EIR/EIS, pages 3.5-19 and 3.5-20).

Threshold 4: Odor emissions associated with construction (diesel exhaust from heavy equipment) and operation (algal blooms at the reservoir) of the Proposed Action would be less than significant because such nuisance odors would not affect a substantial number of people (Volume I, Final EIR/EIS, page 3.5-20).

Threshold 5: Refer to Threshold 2 (Volume I, Final EIR/EIS, pages 3.5-20 and 3.5-21).

Threshold 6: Construction activities associated with the Proposed Action would result in a cumulatively considerable net increase of criteria pollutants NO_x, PM₁₀, and PM_{2.5}, for which the San Diego Air Basin (SDAB) is listed or proposed as non-attainment under applicable federal and state air quality standards, resulting in a significant impact (**Impact SV/AQ 1C**) (Volume I, Final EIR/EIS, page 3.5-21).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 1, 3, and 4, and impacts would be significant for Thresholds 2 and 5 (**Impact SV/AQ 1**) and 6 (**Impact SV/AQ 1C**); therefore, mitigation measures are required (see below).

Explanation

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan

Year 2010 was identified as when the maximum construction emissions would occur for both aggregate provision options: (1) one of three potential on-site quarries, and (2) an off-site quarry. The on-site quarry options represent the maximum annual emissions scenario.

SIP Conformity

Construction emissions would be below the federal *de minimis* thresholds for Volatile Organic Compounds (VOC) and CO, but above the *de minimis* threshold for NO_x. Based on the 2010 estimated annual emissions reported for the SDAB, the SIP budget for off-road diesel-powered construction equipment NO_x emissions is estimated at 18.15 tons per day, and the budget for on-road vehicle emissions is estimated at 82.74 tons per day. The Proposed Action would have estimated total 2010 heavy construction equipment emissions of 159.16 tons/year, or 0.45 ton per day assuming 350 days per year. This would be 2.5 percent of the off-road emissions budget in the current SIP (calculated as 0.45 ton per day divided by 18.15 tons per day). The total 2010 on-road vehicle emissions for the Proposed Action are 1.94 tons/year, or 0.0055 ton per day assuming 350 days per year, which amounts to 0.0066 percent of the on-road vehicle emissions budget in the current SIP (calculated as 0.0055 ton per day divided by 82.74 tons per day). The projected NO_x emissions from construction activities associated with the Proposed Action would represent a small portion of the total SIP emissions budget for off-road equipment and on-road vehicles, and are accounted for in the SIP budget estimates for construction. Routine maintenance and operational activities at the dam and reservoir, and increased use of the marina and reservoir, would result in negligible air emissions, as compared to construction emissions (see Threshold 2). Therefore, construction and operational emissions would not exceed federal *de minimis* thresholds for maintenance and non-attainment pollutants in the SDAB, the Proposed Action would be consistent with the SIP, and conflicts with this applicable air quality plan would be less than significant.

RAQS Conformity

The San Diego APCD's RAQS focuses on O₃ precursors (VOCs and NO_x). The RAQS identifies control measures designed to meet a five percent annual reduction in emissions or, if that is not achievable, an expeditious schedule for adopting every feasible emission control measure under the purview of the San Diego APCD. The RAQS control measures, therefore, focus on emission sources under the San Diego APCD's authority, specifically stationary sources. However, the emission inventories and emission projections in the RAQS reflect the impact of all emission sources and all control measures (e.g., on-road motor vehicles, off-road vehicles and equipment, consumer products, aircraft, ships, trains, and pre-empted off-road equipment). The analysis of emissions was conducted taking into account the RAQS control strategies, and was based on the latest emission factors and quantifications, and thus is consistent with the emission inventories and emission projections contained within the RAQS. Stationary sources would comply with the San Diego APCD Rules and Regulations and would thus meet the requirements for stationary

source control measures required by the RAQS. Therefore, the Proposed Action would be consistent with the RAQS, and conflicts with this applicable air quality plan would be less than significant.

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation

Construction Impacts

Construction impacts would include emissions associated with heavy equipment exhaust, construction truck traffic, worker travel to/from the site, and fugitive dust created by grading and truck travel on dirt roads. Construction emissions were calculated for the following aggregate provision options: (1) the option that involves one of three potential on-site quarry locations adjacent to the dam site, and (2) the option that involves hauling of aggregate and RCC materials to the construction site from an undetermined off-site quarry location.

Construction Stage 1: Mobilization and Initial Site Preparatory Work

This construction stage would be the same for either the on-site quarry options or the off-site quarry option. Air quality impacts associated with exceedance of the daily NO_x, PM₁₀, and PM_{2.5} emissions thresholds resulting from grading for access roads and excavation for the dam foundation the Marina Quarry Option (i.e., individual Stage 1 construction activities) would be significant (***Impact SV/AQ 1***).

Construction Stage 2: Facilities Construction with On-Site Quarry Options

Air quality impacts associated with exceedance of the daily NO_x, PM₁₀, and PM_{2.5} emissions thresholds resulting from operation of the on-site quarry options and RCC placement (i.e., individual Stage 2 construction activities) would be significant (***Impact SV/AQ 1***). In addition to the maximum daily emissions generated by individual construction components, higher emissions would be generated when components occur at the same time. Air quality impacts associated with exceedance of the daily CO, NO_x, PM₁₀, and PM_{2.5} emissions thresholds resulting from simultaneous Stage 2 construction activities combined with operation of the on-site quarry options would be significant (***Impact SV/AQ 1***).

Construction Stage 2: Facilities Construction with Off-Site Quarry Option

As with the on-site quarry option above, the emissions were estimated for individual construction components and for the Year 2010 worst-case construction period (simultaneous occurrence of the same construction components under the on-site quarry option). Air quality impacts associated with exceedance of the daily NO_x emissions thresholds resulting from RCC placement under the off-site quarry option (i.e., individual Stage 2 construction activities) would be significant (***Impact SV/AQ 1***). Air quality impacts associated with exceedance of the daily NO_x and PM₁₀ emissions thresholds resulting from simultaneous Stage 2 construction activities combined with the off-site quarry option would be significant (***Impact SV/AQ 1***).

CO “Hot Spots”

Construction traffic associated with the Proposed Action would significantly contribute to Level of Service (LOS) F conditions (AM and PM peak hours) at the SR-67/Vigilante Road and SR-67/Willow Road intersections under both the on-site quarry options and the off-site quarry option. Receptors are located within approximately 50 feet of the intersection of SR-67/Willow Road, and within approximately 300 feet of the intersection of SR-67/Vigilante Road.

Because the off-site quarry option would result in a greater number of trips than the on-site quarry options, and because the intersections for which significant traffic impacts are predicted would be the same for both aggregate provision options, CO “hot spots” were evaluated for the off-site quarry option as a “worst-case” analysis. The predicted CO concentrations at the impacted intersections would be substantially below the federal and state CO standards. The Proposed Action would not cause CO “hot spots” or CO emission thresholds to be exceeded at the impacted intersections. Therefore, air quality impacts associated with CO concentrations from construction-related traffic volumes at affected intersections would be less than significant.

Operational Impacts

Once the reservoir is fully operational, potential air quality impacts would be associated with routine maintenance and operation of the reservoir, and recreational use at the site. Motor vehicles and boats would be the primary source of emissions associated with operation of the expanded reservoir. Operational and maintenance activities would result in emissions associated with worker trips to the reservoir, assumed to be four trips per day. Emissions associated with these trips would be negligible. The Proposed Action would include a larger reservoir and an expanded/relocated marina corresponding to an increase in recreational users and visitor trips, compared to current conditions. Exhaust emissions from personal vehicles and boating equipment, as well as exhaust from the boats operating on the reservoir, would be the primary sources of air pollutant emissions associated with recreational use of the reservoir. During peak summer months, the maximum daily vehicle trips could increase from an estimated 225 average daily trips (ADT) for the existing conditions to up to 360 ADT when the reservoir is at maximum capacity. If all of the boat slips would be used in a maximum day scenario during the peak summer months, a maximum of 291 boats were assumed to operate on the reservoir at any one time. The total estimated air pollutant emissions from vehicles and boats operating at the relocated/expanded marina and reservoir would not exceed the quantitative significance thresholds for any criteria pollutants. Therefore, air quality impacts associated with operation of the expanded reservoir would be less than significant.

Threshold 3: Expose sensitive receptors to substantial pollutant concentrations

Construction activities associated with the Proposed Action could result in emissions of toxic air contaminants, which would be mainly associated with diesel heavy equipment exhaust. Diesel exhaust is considered to have long-term carcinogenic and non-carcinogenic health effects. However, the construction equipment would be operating at various locations throughout the site, which is relatively isolated and not near sensitive receptors. Results of field reconnaissance and a directed web search of schools, day care centers, hospitals, resident care facilities, and

retirement homes confirmed that none of these sensitive receptors are located within one mile of the SV 100K study area. Therefore, construction activities associated with the Proposed Action would not expose sensitive receptors to substantial pollutant concentrations and the impacts would be less than significant.

Threshold 4: Create objectionable odors affecting a substantial number of people

Construction could generate minor amounts of odor compounds associated with diesel heavy equipment exhaust. However, the construction equipment would be operating at various locations throughout the site, which is relatively isolated and not near a substantial number of people. As stated above, a field reconnaissance and directed web search of schools, day care centers, hospitals, resident care facilities, retirement homes and other uses where a substantial number of people congregate indicate that none of these sensitive receptors are located within one mile of the SV 100K study area.

Drawdown of the reservoir could result in an increase in the frequency and density of algal blooms. The release of nutrients during drawdown could result in increased occurrences of nuisance odors. However, the reservoir would be closed to recreational use throughout the construction period, and a substantial number of people would not be exposed to these potential episodes of nuisance odors during construction activities associated with the Proposed Action. Furthermore, in terms of long-term operations, the deeper volume and annual turnover of the expanded reservoir would limit the frequency of algal blooms and associated episodes of nuisance odors after completion of construction. Therefore, the Proposed Action would not result in objectionable odors affecting a substantial number of people and impacts would be less than significant.

Threshold 5: Exceed pollutant emission thresholds

Refer to the discussion under Threshold 2 above (***Impact SV/AQ 1***).

Threshold 6: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or state ambient air quality standard

The SDAB is classified as a nonattainment area for the federal standard for O₃ (for which VOCs and NO_x are precursors), and the state standard for O₃ and PM₁₀. The SDAB has also been recommended by the California Air Resources Board in November 2006 for designation as a non-attainment area for the state PM_{2.5} standard. As evaluated under Threshold 2 above, because construction activities associated with the Proposed Action would have a significant direct impact on air quality with regard to emissions of NO_x, PM₁₀, and PM_{2.5}, it would also have a significant cumulative effect (***Impact SV/AQ 1C***).

Cumulative Impacts

The Proposed Action would result in significant direct air quality impacts during construction (***Impact SV/AQ 1***). These impacts were also determined to be unmitigable for the reasons stated below (refer to discussion under Mitigation Measures). Therefore, the construction-related cumulative air quality impacts of the Proposed Action, when combined with air pollutant emissions from concurrent construction and/or operation of the CIP, ESP, and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be significant for the duration of construction (***Impact SV/AQ 1C***).

No feasible measures, in addition to the General Conditions and Standard Specifications listed in Section 1.9.2 of the Final EIR/EIS (Volume I, pages 1-24 and 1-25) and the project design feature listed below (i.e., standard dust control Best Management Practices [BMPs]) are available to mitigate the cumulative construction-related air quality impacts of the Proposed Action. A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). These significant cumulative impacts would cease upon completion of construction.

Long-term cumulative operational air quality impacts of the Proposed Action would be less than significant.

Project Design Features

The projected emissions of criteria air pollutants and objectionable odors associated with the operational, maintenance, and recreational aspects of the Proposed Action would be negligible; therefore, project design features to minimize operational air quality impacts are not proposed. In addition to required compliance with all SIP rules and regulations adopted by the San Diego APCD to reduce O₃ precursors and the General Conditions and Standard Specifications listed in Section 1.9.2 of the Final EIR/EIS (Volume I, pages 1-24 and 1-25), the following project design features have been incorporated into the Proposed Action to minimize air quality impacts:

- | | |
|-------------------------|--|
| <i>Design Feature 1</i> | Multiple applications of water during grading between dozer/scrapper passes. |
| <i>Design Feature 2</i> | Use of sweepers to remove “track-out” at any point of public street access. |
| <i>Design Feature 3</i> | Termination of earthwork if sustained winds exceed 25 mph for more than 30 minutes. |
| <i>Design Feature 4</i> | Stabilization of dirt storage piles by chemical binders, shrouding or other erosion control methods. |
| <i>Design Feature 5</i> | Hydroseeding on manufactured slopes. |

Source: Volume I, Final EIR/EIS, page 3.5-7.

Mitigation Measures

The project construction documents will incorporate the General Conditions and Standard Specifications listed in Section 1.9.2 of the Final EIR/EIS (Volume I, pages 1-24 and 1-25) and the standard dust control BMPs listed above to reduce CO, NO_x, and PM₁₀ emissions during construction of the on-site quarry options, and to reduce NO_x and PM₁₀ emissions during construction of the off-site quarry option (*Impacts SV/AQ 1 and SV/AQ 1C*). These measures were included in the construction emission calculations presented in Tables 3.5-6 and 3.5-7 of the Final EIR/EIS (Volume I, page 3.5-16). Implementation of standard dust control BMPs would reduce PM₁₀ emissions by approximately two percent for the on-site quarry options and by approximately 33 percent for the off-site quarry option. Implementation of standard dust control BMPs would reduce PM_{2.5} emissions by approximately four percent for the on-site quarry options and by approximately 25 percent for the off-site quarry option. Therefore, with implementation of standard dust control BMPs, construction-related emissions of PM_{2.5} associated with the Proposed Action would be less than significant for the off-site quarry option. However, with implementation of standard dust control BMPs, construction-related emissions of PM₁₀ for both the on-site quarry options and the off-site quarry option, and emissions of PM_{2.5} for the on-site quarry options, would remain above the significance thresholds (Tables 3.5-6 and 3.5-7, Volume I, Final EIR/EIS, page 3.5-16). Dust control BMPs would not reduce construction-related emissions of CO or NO_x to less than significant levels. There are no additional feasible mitigation measures available to reduce these impacts; therefore, the construction-related direct and cumulative air quality impacts of the Proposed Action would be significant and unmitigable.

Source: Volume I, Final EIR/EIS, pages 3.5-21 and 3.5-22.

Residual Impacts after Mitigation

Construction-related direct (*Impact SV/AQ 1*) and cumulative (*Impact SV/AQ 1C*) air quality impacts associated with the on-site quarry options and the off-site quarry option would be significant and unmitigable.

A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). Significant air quality impacts would cease upon completion of construction.

9.4 Biological Resources

Thresholds of Significance

Thresholds used to evaluate impacts to biological resources are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact to biological resources would occur if the Proposed Action would:

1. Have a substantial adverse effect on any riparian habitat, submerged aquatic vegetation, or other sensitive natural communities identified in policies or regulations by the California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS).
2. Have a substantial adverse effect on Corps-jurisdictional waters of the U.S., including wetlands, as defined by Section 404 of the CWA through direct or indirect removal, filling, inundation, hydrological interruption, or other means.
3. Have a substantial adverse effect, either directly (e.g., habitat loss) or indirectly (e.g., noise effects on wildlife) through habitat modifications, on any species identified or published as an endangered, threatened, rare, candidate, sensitive, or special-status species by CDFG or USFWS, and meets the definition of Section 15380 (b), (c) or (d) of the CEQA guidelines.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Substantially conflict with the policies and provisions of an adopted local or regional Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) for the area where the project is located, or with any of these plans' efforts to conserve "covered species."

Source: Volume I, Final EIR/EIS, pages 3.6-19 and 3.6-20.

Impact

Threshold 1: The Proposed Action would have a substantial adverse effect on riparian habitat, submerged aquatic vegetation, and other sensitive natural communities identified in policies or regulations by the CDFG or USFWS. Specifically, the Proposed Action would result in direct permanent impacts to CDFG-defined wetlands and unvegetated waters of the State, including freshwater marsh, southern coast live oak riparian forest, southern cottonwood-willow riparian forest, mulefat scrub, southern willow scrub, lakeshore fringe, and unvegetated channel (**Impact SV/BR 1**). The Proposed Action would result in direct temporary impacts to CDFG-defined wetlands and unvegetated waters of the State, including freshwater marsh, mulefat scrub, southern willow scrub, lakeshore fringe, and unvegetated channel (**Impact SV/BR 2**). The Proposed Action would result in direct permanent impacts to coastal sage scrub (**Impact SV/BR 3**) and to coast live oak woodland (**Impact SV/BR 4**), and direct temporary impacts to coastal

sage scrub (*Impact SV/BR 5*) and to coast live oak woodland (*Impact SV/BR 6*). Therefore, all of these impacts would be significant.

Impacts to chaparral due to the Proposed Action would represent only 0.02 percent of the total amount of this vegetation community that would otherwise be conserved under the City of San Diego Multiple Species Conservation Program (MSCP). Temporary changes to open water and the temporary loss of submerged aquatic vegetation during reservoir drawdown would be offset by the larger reservoir volume upon refilling after the dam raise, and by the reestablishment of this vegetation community at an estimated 590 feet AMSL during the dam raise construction period. The Proposed Action would generate construction-related indirect impacts to sensitive habitats (including CDFG-defined wetlands and unvegetated waters of the State) that would be reduced with implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below. Therefore, all of these impacts would be less than significant.

Source: Volume I, Final EIR/EIS, pages 3.6-22 through 3.6-28.

Threshold 2: The Proposed Action would have a substantial adverse effect on Corps-jurisdictional waters of the U.S., including wetlands, as defined by Section 404 of the CWA through direct and indirect removal, filling, inundation, hydrological interruption, and other means. Specifically, the Proposed Action would result in direct permanent (*Impact SV/BR 7*) and direct temporary (*Impact SV/BR 8*) impacts to Corps-regulated wetlands/vegetated waters and unvegetated waters of the U.S. Therefore, these impacts would be significant.

The temporary reduction of submerged aquatic vegetation during reservoir drawdown is expected to be offset by the reestablishment of this vegetation community at an estimated 590 feet AMSL during the dam raise construction period. The Proposed Action would generate construction-related indirect impacts to Corps-regulated wetlands/vegetated waters and unvegetated waters of the U.S. that would be reduced with implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below. Therefore, all of these impacts would be less than significant.

Source: Volume I, Final EIR/EIS, pages 3.6-28 through 3.6-30.

Threshold 3: The Proposed Action would have a substantial adverse effect, both directly and indirectly, on species identified or published as an endangered, threatened, rare, candidate, sensitive, or special-status species by CDFG or USFWS, and species that meet the definition of Section 15380 (b), (c) or (d) of the CEQA guidelines. Specifically, the following impacts of the Proposed Action to listed and non-listed sensitive species would be significant:

- direct permanent impacts to the federally endangered arroyo toad and suitable toad habitat in Kimball Valley (*Impact SV/BR 9*);

- direct permanent impacts to the federally threatened California gnatcatcher territories (*Impact SV/BR 10*);
- direct temporary impacts to the federally threatened California gnatcatcher territories (*Impact SV/BR 11*);
- indirect temporary noise impacts (construction-related noise levels within 500 feet of an active nest) to the federally threatened California gnatcatcher (*Impact SV/BR 12*);
- direct permanent impact to suitable habitat for the federally and state endangered least Bell's vireo in Kimball Valley and Padre Barona Creek and to least Bell's vireo due to inundation of potential habitat from refilling of the reservoir (*Impact SV/BR 13*);
- direct permanent impacts to delicate clarkia (*Impact SV/BR 14*); and
- direct permanent impacts to the federally and state endangered San Diego thornmint (*Impact SV/BR 15*).

Direct (permanent and temporary) impacts of the Proposed Action to the following listed and non-listed sensitive species would be less than significant: Engelmann oak, San Diego sagewort, San Diego County viguiera, the federally endangered Quino checkerspot butterfly, coast horned lizard, orange-throated whiptail, red diamond rattlesnake, two-striped garter snake, the federally threatened and state endangered bald eagle, Bell's sage sparrow, the state fully protected golden eagle, loggerhead shrike, osprey, the state endangered peregrine falcon, rufous-crowned sparrow, and the state fully protected white-tailed kite.

With the exception of indirect noise impacts to California gnatcatcher, all construction-related indirect impacts to listed and non-listed sensitive species would be reduced with implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below. Therefore, the remaining indirect impacts would be less than significant.

Although the southwestern pond turtle was detected at the reservoir during 1993 ESP field surveys, the Proposed Action would not impact this species because it is assumed that the species is no longer occupying the reservoir as it was not detected during visual and trapping surveys conducted by USGS in 2002; therefore, impacts to this species is not addressed in these Findings.

Source: Volume I, Final EIR/EIS, pages 3.6-31 through 3.6-38.

Threshold 4: Impacts of the Proposed Action in terms of interference with the movement of any native resident or migratory fish or wildlife species; with established native resident or migratory wildlife corridors; or with the use of native wildlife nursery sites would be less than significant (Volume I, Final EIR/EIS, pages 3.6-38 and 3.6-39).

Threshold 5: Indirect impacts of the Proposed Action on biological resources within the adjacent portions of the San Vicente Reservoir Cornerstone Lands Multi-Habitat Planning Area (MHPA) Preserve would be less than significant; therefore, the Proposed Action would not conflict with

MSCP planning policies and design guidelines, including Conservation Goals, Covered Species, Land Use Adjacency Guidelines, and MHPA Preserve Design (Volume I, Final EIR/EIS, pages 3.6-39 through 3.6-41).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 4 and 5, and impacts would be significant for Thresholds 1 (*Impacts SV/BR 1-6*), 2 (*Impacts SV/BR 7-8*) and 3 (*Impacts SV/BR 9-15*); therefore, mitigation measures are required (see below).

Explanation

Threshold 1: Have a substantial adverse effect on any riparian habitat, submerged aquatic vegetation, or other sensitive natural communities identified in policies or regulations by the CDFG or USFWS

Direct Impacts to Sensitive Vegetation Communities and Habitats

The Proposed Action would result in permanent direct impacts to an estimated 16.97 acres of riparian and wetland habitats (*Impact SV/BR 1*), and potential temporary direct impacts to riparian and wetland habitats ranging from an estimated low of 5.23 acres to an estimated high of 7.40 acres (*Impact SV/BR 2*), depending on which quarry option (SW Quarry Option, SE Quarry Option, and Marina Quarry Option) is implemented. Potential permanent direct impacts to coastal sage scrub would range from an estimated low of 195.48 acres to an estimated high of 209.57 acres (*Impact SV/BR 3*), and potential temporary direct impacts would range from an estimated low of 55.31 acres to an estimated high of 62.38 acres of (*Impact SV/BR 5*). Potential permanent direct impacts to coast live oak woodland would range from an estimated low of 16.97 acres to an estimated high of 19.94 acres (*Impact SV/BR 4*), and potential temporary direct impacts would range from an estimated low of 4.69 acres to an estimated high of 5.93 acres (*Impact SV/BR 6*). All riparian/wetlands, coastal sage scrub, and coast live oak woodland vegetation communities have been identified as rare natural communities by CDFG, or a vegetation community of statewide conservation focus (Oak Woodland Conservation Act). Therefore, substantial permanent and temporary impacts to these vegetation communities would be significant.

Chaparral and non-native grassland are not considered to be rare natural communities because they have not been identified by CDFG as such, and are relatively abundant at both the local and regional scales and are well distributed throughout San Diego County. In addition, the permanent loss of approximately 152 acres of chaparral due to the Proposed Action would represent only 0.02 percent of the total amount of this vegetation community (an estimated 10,424 acres) required to be conserved under the City of San Diego MSCP. Therefore, all permanent impacts (an estimated 152.23 acres) and temporary impacts (an estimated low of 26.71 acres or an estimated high of 41.52 acres) to chaparral associated with the Proposed Action would be less than significant. In addition, due to the minimal amount of non-native grassland to be impacted

by the Proposed Action, the permanent impacts (an estimated 0.04 acre) and temporary impacts (an estimated 2.02 acres) to this vegetation community would be less than significant.

Eucalyptus woodland can provide foraging opportunities for native wildlife, such as hummingbirds and woodpeckers, and nesting and roosting sites for breeding birds and raptors; however, eucalyptus woodland is not native to Southern California and is well distributed. In addition, some eucalyptus species tend to be invasive. Permanent impacts include an estimated 1.59 acres, and an estimated 0.13 acre of temporary impacts occur only with implementation of the Marina Quarry option. These impacts would be less than significant.

Disturbed habitat has little wildlife value due to the abundance of non-native invasive plants, such as thistles and mustards, which do not provide quality habitat. Within the SV 100K footprint, this vegetation community generally occurs near developed areas. For these reasons, estimated permanent (0.47 acre) and temporary (3.45 acres) impacts to disturbed habitat would be less than significant.

Direct Impacts to Open Water and Aquatic Resources

Changes to open water from reservoir drawdown (to allow for the dam raise construction) would occur below the OHWM; the resultant biological impacts have been permitted during the ESP process and were addressed in the ESP EIR/EIS. Potential impacts to aquatic resources (i.e., fisheries resources and submerged aquatic vegetation) due to reservoir drawdown and post-construction operation of the expanded reservoir are discussed below.

Fisheries Resources

Recreational fishing would not be allowed during the proposed dam raise because of limited access and safety concerns. The absence of fishing in the lowered reservoir during the proposed dam raise would favor an increase in larger fish and establishment of a stable reproductive population because an increase in larger fish generally equates to an increase in broodstock (fish capable of reproduction). Therefore, impacts to fisheries resources due to drawdown of the reservoir would be less than significant. Upon completion of the dam raise, the increase in volume during reservoir operations would increase surface area and shoreline. Changes in fish abundance, aquatic invertebrates, and water quality are expected to occur when the reservoir is filled. Fish populations would not be adversely affected, particularly considering that the amount of shoreline and suitable fish habitat would increase. Therefore, impacts to fisheries resources due to operation of the expanded reservoir would be less than significant.

Submerged Aquatic Vegetation

The aquatic plants and algae that occur in this band at the water's edge would be subjected to desiccation during the period of drawdown. Although reservoir drawdown would result in a temporal loss of this vegetation community, the propagules necessary for colonization of aquatic plants and algae would remain in the receding waters. As such, the aquatic vegetation is expected to reestablish at the lowered water level which would be maintained at an estimated 590 feet AMSL during the dam raise construction period. Therefore, effects to submerged aquatic vegetation would be less than significant. When the reservoir refills after the dam is raised, this

band of aquatic vegetation is expected to travel upward with the slowly rising water level until it reaches the higher operating level of the expanded reservoir. Because the perimeter of the higher reservoir level would be greater than current conditions, the Proposed Action may result in a net benefit to this resource by increasing the surface area available for colonization of aquatic plants and algae.

Indirect Impacts to Sensitive Vegetation Communities and Habitats

Several indirect impacts to sensitive vegetation communities and habitats (including CDFG-defined wetlands and unvegetated waters of the State) may occur from construction activities associated with the Proposed Action. For example, erosion and sedimentation could affect water quality or natural hydrologic processes in, or adjacent to riparian plant communities. In addition, construction activities could produce enough dust to affect plants by reducing photosynthesis capabilities and overall plant health if heavy and prolonged enough. Construction-related grading, brushing and soil stockpiling can also often lead to exotic plant species (e.g., arundo) being transported into adjacent native habitat, which can compete with native plants for resources. Vegetation trampling and soil compaction could also occur from construction personnel and equipment. The Proposed Action includes Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below that would be implemented during construction to reduce potential indirect impacts to sensitive habitats to less than significant levels.

Threshold 2: Have a substantial adverse effect on Corps-jurisdictional waters of the U.S., including wetlands, as defined by Section 404 of the CWA through direct or indirect removal, filling, inundation, hydrological interruption, or other means

Direct Impacts to Corps-Regulated Wetlands/Vegetated Waters and Unvegetated Waters of the U.S.

Wetlands/Vegetated Waters

Impacts to Corps-regulated wetlands/vegetated waters include permanent impacts to an estimated 2.15 acres from reservoir inundation (above the OHWM) (***Impact SV/BR 7***), and temporary impacts to an estimated low of 0.25 acre or an estimated high of 0.36 acre (***Impact SV/BR 8***), depending on which quarry option (SW Quarry Option, SE Quarry Option, and Marina Quarry Option) is implemented, from construction activities below the dam, such as staging and access. All direct impacts to jurisdictional wetlands would be significant.

The submerged aquatic vegetation that occurs below the OHWM is subject to reservoir operations. Nevertheless, impacts to this aquatic habitat are addressed under Threshold 1. Therefore, effects to submerged aquatic vegetation would be less than significant.

Unvegetated Waters of the U.S.

The Proposed Action would result in permanent impacts to an estimated 6.93 acres of unvegetated waters of the U.S. from reservoir inundation (above the OHWM) and construction

activities below the dam (**Impact SV/BR 7**), and temporary impacts to an estimated low of 3.29 acres or an estimated high of 5.35 acres from construction activities such as staging and access (**Impact SV/BR 8**). All direct impacts to unvegetated waters of the U.S. would be significant.

As stated in Threshold 1 above, upon drawdown of the reservoir, the volume of open water would be reduced during the dam raise construction. Changes to open water from drawdown would occur below the OHWM; the resultant biological impacts have been permitted during the ESP process and were addressed in the ESP EIR/EIS.

Indirect Impacts to Corps-Regulated Wetlands/Vegetated Waters and Waters of the U.S.

Indirect impacts to Corps-regulated wetlands/vegetated waters and unvegetated waters of the U.S. would be the same as discussed in Threshold 1 above for sensitive vegetation communities and habitats. The Proposed Action includes Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below that would be implemented during construction to reduce potential indirect impacts to Corps-regulated wetlands/vegetated waters and unvegetated waters of the U.S. to less than significant levels.

Threshold 3: Have a substantial adverse effect, either directly (e.g., habitat loss) or indirectly (e.g., noise effects on wildlife) through habitat modifications, on any species identified or published as an endangered, threatened, rare, candidate, sensitive, or special-status species by CDFG or USFWS, and meets the definition of Section 15380 (b), (c) or (d) of the CEQA guidelines

Direct Impacts to Listed Species

The Proposed Action would directly impact the following listed species:

- Arroyo toad (federally endangered)
- California gnatcatcher (federally threatened)
- Least Bell's vireo (federally and state endangered)

Arroyo Toad

Suitable breeding habitat for the federally endangered arroyo toad occurs along the entire reach of San Vicente Creek in Kimball Valley. Surveys conducted in 2005 determined that the upper reaches of Kimball Valley were occupied by the toad. Suitable habitat and species observations have been documented prior to 2005 in the downstream portions of the creek, including data collected for the ESP. In addition, USFWS designated areas along Kimball Valley as essential but not critical, habitat for arroyo toad (U.S. Federal Register, 66 FR 9414). Within this designation, an estimated 30.7 acres of toad habitat would be permanently impacted by reservoir inundation. Because of the endangered status of this species, this impact would be significant (**Impact SV/BR 9**).

California Gnatcatcher

The federally threatened California gnatcatchers were not detected in the SV 100K footprint during the 2006 focused species surveys. The lack of gnatcatchers is likely the result of the 2003 Cedar Fire, which burned 98 percent of the SV 100K study area. Historical evidence from fire-recovered coastal sage scrub suggests that the habitat should fully recover through post-fire succession and that gnatcatchers would reestablish populations at the San Vicente Reservoir to the extent reported prior to the 2003 Cedar Fire. Therefore, observations made prior to the 2003 wildfire are assessed in this document. The Proposed Action would result in the following impacts to gnatcatcher territories and habitat; both the permanent (***Impact SV/BR 10***) and temporary (***Impact SV/BR 11***) impacts would be significant:

Southwest Quarry Option

- A total of 15 territories would be impacted (3 within the quarry footprint, and 12 within the SV 100K footprint)
 - Temporary impacts to 3 territories within the quarry footprint
 - Permanent impacts to 8 territories in the SV 100K footprint
 - Temporary impacts to 4 territories in the SV 100K footprint
- Permanent impacts to an estimated 204.42 acres of gnatcatcher habitat
- Temporary impacts to an estimated 62.38 acres of gnatcatcher habitat

Southeast Quarry Option

- A total of 12 territories would be impacted (none within the quarry footprint, and 12 within the SV 100K footprint)
 - No impacts to territories within the quarry footprint
 - Permanent impacts to 8 territories in the SV 100K footprint
 - Temporary impacts to 4 territories in the SV 100K footprint
- Permanent impacts to an estimated 209.57 acres of gnatcatcher habitat
- Temporary impacts to an estimated 55.72 acres of gnatcatcher habitat

Marina Quarry Option

- A total of 13 territories would be permanently impacted (1 within the quarry footprint, and 12 within the SV 100K footprint)
 - Permanent impacts to 1 territory within the quarry footprint
 - Permanent impacts to 8 territories in the SV 100K footprint
 - Temporary impacts to 4 territories in the SV 100K footprint
- Permanent impacts to an estimated 210.38 acres of gnatcatcher habitat
- Temporary impacts to an estimated 40.41 acres of gnatcatcher habitat

Least Bell's Vireo

Focused surveys performed in 2005 detected three individuals of the federally and state endangered least Bell's vireo within the SV 100K footprint. The ESP Biological Opinion (BO) issued by the USFWS (1-6-97-F-13) and the Consistency Determination issued by CDFG (tracking #2080-2000-003-5) pursuant to Section 2080.1 of the Fish and Game Code allowed for the take of one vireo pair to account for potential impacts to individuals that could occupy newly created habitat that could become established during drawdown and subsequently submerged during refilling. Although no temporary impacts to vireo habitat are expected, permanent impacts to an estimated 1.94 acres of vireo habitat would be significant (***Impact SV/BR 13***), as additional individuals not accounted for in the ESP impact analysis and BO have been documented from the SV 100K footprint.

Other Listed Species

Two additional listed species have been previously documented within the SV 100K study area: the state fully protected bald eagle (delisting of the bald eagle was published in the Federal Register on July 9, 2007 [72 FR, 37346-37372]), and the state endangered peregrine falcon. The bald eagle is not known to nest or breed in the vicinity of the study area, and, therefore, no direct impacts are expected. In addition, direct impacts to the peregrine falcon are not anticipated because large flocks of waterfowl, the preferred prey of this species, do not generally occur at the San Vicente Reservoir possibly due to human presence. Nesting opportunities for the peregrine falcon, such as cliffs or tall buildings, are also lacking in the study area. However, drawdown of the reservoir could result in temporary impacts to foraging habitat of both the bald eagle and peregrine falcon. These impacts were previously addressed in the ESP EIR/EIS.

The federally and state endangered San Diego thornmint and the state fully protected golden eagle have the potential to occur within the SV 100K study area; however, these species were not observed during the 2005 and 2006 field seasons or during the previous ESP surveys. Directed pre-construction surveys for San Diego thornmint would need to be performed should this alternative be chosen. If this potentially occurring species is detected within the impact footprint during pre-construction surveys, the potential direct impacts would be significant (***Impact SV/BR 15***). With implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below, potential direct impacts to the potentially occurring golden eagle would be less than significant.

Indirect Impacts to Listed Species

The following listed species could be potentially impacted from other construction-related indirect effects:

- *Quino Checkerspot Butterfly (federally endangered)*. Although no Quino checkerspot were detected during the 2006 surveys, potential habitat currently exists within the SV 100K study area. Based on habitat assessments conducted in the study area in 2006, the Proposed Action would permanently impact 38.45 acres (Southwest or Southeast quarry options) or 37.97 acres (Marina Quarry Option), and temporarily impact 10.31 acres

(Southwest or Southeast quarry options) or 16.95 acres (Marina Quarry Option), of potentially suitable Quino checkerspot habitat. Due to the absence of this species on site and the likelihood that Quino checkerspot habitat would decrease by the time the Proposed Action is implemented, and with implementation of Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below, the potential direct and indirect (from dust emissions) impacts to the federally endangered Quino checkerspot butterfly would be less than significant.

- *Arroyo Toad*. No indirect impacts are expected to the arroyo toad.
- *California Gnatcatcher (federally threatened)*. Indirect impacts from construction-related noise, dust and night lighting could disrupt breeding populations and cause nest abandonment. Dust and night lighting impacts would be less than significant with implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below. Indirect impacts from construction-related noise levels within 500 feet of an active nest could be significant (**Impact SV/BR 12**).
- *Least Bell's Vireo (federally and state endangered)*. Indirect impacts to this species may include construction-related noise and nighttime lighting, both of which can disrupt breeding populations and cause nest abandonment. However, because construction activities are restricted to areas away from potential vireo habitat, no indirect impacts to this species are expected.

Direct Impacts to Other (Non-Listed) Sensitive Species

The Proposed Action would result in the permanent loss of 1,065 delicate clarkia plants in 11 locations. Out of 31 known remaining clarkia populations in San Diego County, the San Vicente population is considered one of the largest. The numbers of plants within most extant populations are not available, however, populations reported by the Natural History Museum range between 25 and 300 individuals. Impacting over 1,000 individual plants may eliminate half of the known remaining plants in the county. Therefore, because the Proposed Action would affect a large number of individuals from a major delicate clarkia population, a species of special concern, permanent impacts would be significant (**Impact SV/BR 14**).

Less-than-significant permanent or temporary direct impacts would occur to the remaining species in Table 3.6-13 (Volume I, Final EIR/EIS, page 3.6-37) for the following reasons: (1) a relatively small number of non-listed individuals would be impacted; (2) populations with a larger number of individuals are abundant in the region; (3) recovery and conservation efforts are documented to adequately conserve the species or habitat, and impacts would not affect the recovery or conservation of this species or habitat; and (4) the species or habitat is locally common and fairly abundant in the region. Additionally, the state fully protected white-tailed kite was not observed nesting in the area of impact.

Although chaparral and non-native grassland are not considered to be sensitive vegetation communities in the Final EIR/EIS because they are not designated by CDFG as rare natural

communities, they provide habitat for sensitive species within the SV 100K footprint, including non-chaparral obligates such delicate clarkia (oak woodland and chaparral), the federally endangered Quino checkerspot butterfly (coastal sage scrub, open chaparral, native and non-native grassland), coast horned lizard (open coastal sage scrub and chaparral), orange-throated whiptail (coastal sage scrub and chaparral), loggerhead shrike (native and non-native grassland, and open coastal sage scrub and chaparral), rufous-crowned sparrow (coastal sage scrub and chaparral), and foraging raptors (native and non-native grassland and various vegetation communities dependent on the species). For the reasons stated in the paragraph above, impacts to these species from the Proposed Action would be less than significant.

Indirect Impacts to Other (Non-Listed) Sensitive Species

Indirect impacts to nesting birds and other non-listed sensitive species during construction, such as noise, human presence, and nighttime lighting, are expected. However, implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below would reduce indirect impacts to non-listed sensitive species to less than significant levels.

Threshold 4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

The Proposed Action is not expected to cause permanent impacts to habitat linkages or wildlife movement corridors in the SV 100K study area for the following reasons: no regional or local movement corridors would be permanently blocked; multiple north-south and east-west corridors would remain after project implementation; and wildlife movement would not be impeded through the area. The Proposed Action would not temporarily impact local wildlife movement in the SV 100K study area because drawdown of the reservoir water level would be maintained at an estimated 590 feet AMSL and, as such, wildlife would not lose access to this source of drinking water. Construction within 500 feet of an active nest and nighttime lighting south of the dam may temporarily affect the breeding of California gnatcatchers within the SV 100K footprint. However, these effects are not expected to impact bird dispersal. In addition, implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.3 of the Final EIR/EIS (Volume I, pages 1-25 and 1-26) and the project design features listed below would reduce indirect construction-related impacts to wildlife movement to less than significant levels.

Threshold 5: Substantially conflict with the policies and provisions of an adopted local or regional HCP/NCCP for the area where the project is located, or with any of these plans' efforts to conserve covered species.

The Water Authority is not seeking third party beneficiary status under the City of San Diego MSCP permit because impacts from the Proposed Action to federally and state listed species and supporting habitats would be authorized through the Corps, USFWS, Regional Water Quality Control Board (RWQCB) and CDFG permitting processes. The Water Authority is not a

signatory to the MSCP Implementing Agreement; therefore, the MSCP Subregional/Subarea Plans do not govern the Water Authority's land use policies. In addition, the Water Authority is not subject to local land use plans, policies, and ordinances, per California Government Code Section 53091(d) and (e). Furthermore, the MSCP excludes areas of the ESP and future expansion of San Vicente Reservoir from the Cornerstone Lands MHPA Preserve, and provides exemptions for filling the reservoir to 800 feet AMSL, a new marina, quarry operations, access roads, staging areas, a horizontal buffer of 300 feet around the expanded reservoir (as measured from 800 feet AMSL), and other supporting uses. Nevertheless, the EIR/EIS provides an analysis of the Proposed Action in terms of impacts to biological resources in accordance with MSCP planning policies and design guidelines because it is relevant to evaluate indirect effects to adjacent resources of the MHPA Preserve, given that the MSCP excludes the Proposed Action from the Preserve.

MSCP Land Use Adjacency Guidelines

The Proposed Action would be consistent with MSCP Land Use Adjacency Guidelines by implementing Water Authority General Conditions and Standard Specifications listed in Sections 1.9.1, 1.9.3 and 1.9.9 of the Final EIR/EIS (Volume I, pages 1-23 and 1-24, 1-25 and 1-26, and 1-31 and 1-32, respectively), and the project design features listed below, to minimize edge effects and impacts to the surrounding natural habitat within the San Vicente Reservoir Cornerstone Lands MHPA Preserve. Because indirect impacts on biological resources within the adjacent portions of the MHPA Preserve would be less than significant, the Proposed Action would not conflict with the MSCP Land Use Adjacency Guidelines.

MSCP Conservation Goals

In terms of assembling large amounts of conserved habitats to build the MHPA preserve system, temporary and permanent impacts to an estimated 194 acres of chaparral due to the Proposed Action may affect the ability of the City of San Diego to implement the MSCP. However, the City is currently at 91.9 percent of its conservation goal (52,727 acres), with the remaining 8.1 percent comprised of privately owned lands. Impacts to chaparral within the SV 100K footprint would occur on publicly owned land and these impacts would be less than significant because this vegetation community is considered locally and regionally well distributed. The loss of this vegetation community would not affect MSCP conservation goals on a regional basis. In addition, the minor permanent impact to non-native grassland would not substantially affect the regional distribution of this habitat. Therefore, impacts to biological resources associated with MSCP conservation goals would be less than significant.

MSCP-Covered Species

Impacts to the majority of MSCP-covered species have been addressed under Threshold 3, with the exception of western bluebird and southern mule deer; these species are discussed below. The mitigation measures listed below and the conditions of the regulatory agency permits would ensure that the Proposed Action is consistent with regional NCCP planning efforts and the long-term preservation of MSCP-covered species.

Although the bluebird was observed (two incidental observations) in the oak woodland on site, the Proposed Action is not expected to significantly impact local or regional bluebird populations because impacts to bluebird habitat are minor, and large amounts of habitat for this species remain in the region. Mule deer were seen numerous times throughout the SV 100K footprint. This species is common in the region and is not expected to be negatively impacted by the Proposed Action. Therefore, impacts to the MSCP-covered species, western bluebird and southern mule deer, and associated habitats would be less than significant.

MHPA Preserve Design

Land disturbance associated with the Marina Quarry Option would slightly encroach into the San Vicente Reservoir Cornerstone Lands MHPA Preserve. However, if the Marina Quarry Option were selected by the Water Authority, it would not impact the long-term function or design of the MHPA Preserve or conflict with the identified MHPA exemptions anticipated for this area in the MSCP Subarea Plan (Section 1.2.5). The Marina Quarry Option would result in less acreage being impacted for aggregate production and allow for areas south of the existing dam with occupied habitat to be retained in their natural state. Therefore, impacts to biological resources associated with the Cornerstone Lands MHPA Preserve would be less than significant.

Cumulative Impacts

When combined with cumulative impacts from the Slaughterhouse Terminal Reservoir (CIP) project and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), the Proposed Action's contribution to the following cumulative impacts would be considerable: riparian/wetlands (including CDFG-defined wetlands and unvegetated waters of the State) (***Impact SV/BR 1C***), coastal sage scrub (***Impact SV/BR 3C***), and coast live oak woodland (***Impact SV/BR 4C***) habitats; Corps-regulated wetlands/vegetated waters and unvegetated waters of the U.S. (***Impact SV/BR 7C***); the federally endangered arroyo toad (***Impact SV/BR 9C***); the federally threatened California gnatcatcher (***Impact SV/BR 10C***); the federally and state endangered least Bell's vireo (***Impact SV/BR 13C***); the delicate clarkia (***Impact SV/BR 14C***); and the federally and state endangered San Diego thornmint (if determined to be present) (***Impact SV/BR 15C***).

Implementation of Mitigation Measures SV/BR 1-1, SV/BR 7-1, SV/BR 9-1, SV/BR 13-1, SV/BR 14-1, and SV/BR 15-1 (see below) would reduce the cumulative impacts of the Proposed Action to riparian/wetlands (including CDFG-defined wetlands and unvegetated waters of the State); Corps-regulated wetlands/vegetated waters and unvegetated waters of the U.S.; the federally endangered arroyo toad; the federally and state endangered least Bell's vireo; the delicate clarkia; and the federally and state endangered San Diego thornmint (if determined to be present) to less than significant levels.

Implementation of Mitigation Measures SV/BR 3-1, SV/BR 4-1 and SV/BR 10-1 (see below) would reduce the cumulative impacts of the Proposed Action to coastal sage scrub, coast live oak woodland, and the federally threatened California gnatcatcher to less than significant levels because the preservation and management of conserved upland (including gnatcatcher) habitats

within an approved off-site mitigation bank would substantially contribute to the regional conservation strategy for these sensitive vegetation communities, habitats and species.

When combined with cumulative impacts from the Slaughterhouse Terminal Reservoir project and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), the Proposed Action's contribution to the following cumulative impacts would be less than significant: Engelmann oak, San Diego sagewort, San Diego County viguiera, the federally endangered Quino checkerspot butterfly, coast horned lizard, orange-throated whiptail, red diamond rattlesnake, two-striped garter snake, the federally threatened and state endangered bald eagle, Bell's sage sparrow, the state fully protected golden eagle, loggerhead shrike, osprey, the state endangered peregrine falcon, rufous-crowned sparrow, and the state fully protected white-tailed kite.

Project Design Features

In addition to the Water Authority General Conditions and Standard Specifications listed in Sections 1.9.1, 1.9.3 and 1.9.9 of the Final EIR/EIS (Volume I, pages 1-23 and 1-24, 1-25 and 1-26, and 1-31 and 1-32, respectively), the following project design features have been incorporated into the Proposed Action to minimize impacts to 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 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 USFWS.

Design Feature 2 Specific areas at San Vicente Reservoir are excluded from the Cornerstone Lands MHPA Preserve for the 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 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Design Feature 9* Vegetation outside the approved construction limits will not be cut or sprayed with herbicide.
- 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.

- 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.
- Design Feature 12* Construction personnel will park private vehicles in designated areas within the approved construction limits.
- 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.
- 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.
- 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.
- 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.

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.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design features would not reduce potential biological resources impacts to less than significant levels. The following mitigation measures have been incorporated into the Proposed Action to reduce impacts to biological resources:

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 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 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.

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.

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.

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.

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.

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. 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.

Vegetation affected during drawdown. 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.

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.

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.

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.

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.

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. 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.

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 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).

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.

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.

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.

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.

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:

- *Minimize habitat loss.* Coastal sage scrub impacts will be avoided where possible by repositioning structures and staging areas into non-sensitive habitats.
- *Clearing, grubbing and vegetation removal.* 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.
- *Focused surveys.* 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.
- *Construction schedule.* 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.

However, 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.

SV/BR 12-1 *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:

- *Focused surveys.* 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.

- *Continuous construction.* 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.
- *Monitoring.* 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.

SV/BR 13-1 *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:

- 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.

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.

SV/BR 14-1 *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 Kimball Valley, within the San Vicente Creek watershed. 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:

- 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.
- 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.

SV/BR 15-1 *Potential Permanent and Temporary Impacts to the Federally and State Endangered San Diego Thornmint (Impact SV/BR 15)*. Potential direct permanent impacts to the San Diego thornmint will be mitigated by the following:

- 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, 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 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.

- 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.

Residual Impacts after Mitigation

No residual impacts would remain after implementation of the project design features and mitigation measures listed above.

9.5 Cultural Resources

Thresholds of Significance

Thresholds used to evaluate potential impacts on cultural resources are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact on cultural (historical and/or archaeological) resources would occur if the Proposed Action would:

1. Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in §15064.5 of the State CEQA Guidelines and §106 of the National Historic Preservation Act (NHPA).
2. Disturb any human remains, including those interred outside of formal cemeteries.

Source: Volume I, Final EIR/EIS, page 3.7-7.

Impact

Threshold 1: Implementation of the project design features listed below would reduce impacts of the Proposed Action on important cultural resources to less than significant levels; therefore, the Proposed Action would not cause a substantial adverse change in the significance of a historical or archaeological resource as defined in §15064.5 of the State CEQA Guidelines and §106 of the NHPA (Volume I, Final EIR/EIS, pages 3.7-10 through 3.7-12).

Threshold 2: Implementation of the ESP Programmatic Agreement (PA), which addresses unexpected discoveries during construction, would reduce potential impacts of the Proposed Action on human remains, including those interred outside of formal cemeteries, to less than significant levels (Volume I, Final EIR/EIS, page 3.7-12).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 1 and 2; therefore, no mitigation measures are required.

Explanation

Threshold 1: Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in §15064.5 of the State CEQA Guidelines and §106 of the NHPA

Impacts to cultural resources from the Proposed Action would result from direct effects to sites due to inundation or ground disturbance for dam construction, or from indirect effects from potential erosion due to wave action during reservoir filling or operations. Eight of the 11 sites evaluated are located south of, or below, the dam and would be directly affected by construction activities. The remaining three sites evaluated are located above, or north of, San Vicente Dam and would be indirectly affected by reservoir filling or operations.

Of the eight sites located below the dam, two require further actions to avoid significant impacts: SDI-13630 and SDI-17650. Fencing, signage and monitoring are required at site SDI-13630 (see project design features listed below). Site SDI-17650 was evaluated, and the results of the testing indicated that it is not significant; however, the site could contain buried deposits that were not identified during testing. Therefore, construction monitoring is required at site SDI-17650 (see project design features listed below). With the exception of burials, which are addressed in Threshold 2 below, any unanticipated discoveries resulting from ground disturbance at this site would be removed and evaluated in accordance with the PA, while construction activities are allowed to proceed. Therefore, potential indirect impacts at site SDI-13630 and direct impacts at site SDI-17650 from dam construction activities would be less than significant.

Of the three sites located above the dam, two historic road sites (SDI-17656 and SDI-17657) would be partially inundated and subject to potential erosion from wave action during reservoir operations. The other site, a prehistoric milling site (SDI-13542), would be completely inundated. The significance evaluations for sites SDI-17656, SDI-17657 and SDI-13542 indicate that no further work is recommended for these. However, there is the possibility that buried cultural deposits not identified during evaluation exist at site SDI-13542. Therefore, construction monitoring is required at site SDI-13542 (see project design features listed below). With the exception of burials, which are addressed in Threshold 2 below, any unanticipated discoveries resulting from ground disturbance or inundation during reservoir filling at this site would be removed and evaluated in accordance with the PA, while construction activities are allowed to proceed. Therefore, direct and indirect impacts at sites SDI-17656, SDI-17657 and SDI-13542 from reservoir filling and operations would be less than significant.

The significance evaluations for sites SDI-13848, SDI-16913, SDI-17286, SDI-17652, SDI-17654, and SDI-17655 indicate that these sites do not possess the integrity and the informational content to address questions important to prehistory. It is highly unlikely that these sites have

unidentified, buried cultural deposits, and monitoring is not recommended. Therefore, direct impacts at sites SDI-13848, SDI-16913, SDI-17286, SDI-17652, SDI-17654, and SDI-17655 from dam construction activities would be less than significant.

Two additional sites require further actions to avoid significant impacts: SDI-16514 and SDI-13629H. Previous studies indicate that these sites possess the integrity and the informational content to address questions important to prehistory. SDI-16514 is located outside, but near, the dam construction limits; therefore, fencing, signage and monitoring are required at this site (see project design features listed below). SDI-13629H is located within the dam construction zone; therefore, construction monitoring is required at this site (see project design features listed below). Any unanticipated discoveries would be removed and evaluated in accordance with the PA. Therefore, potential impacts at sites SDI-16514 and SDI-13629H would be less than significant.

In addition, there are eight recorded submerged sites in San Vicente Reservoir. They are located at what was once the confluence of two streams that met near the western end of Lowell Island. Based on a review of bathymetric data (i.e., a contour map of the reservoir bottom), these sites would be substantially below the proposed reservoir drawdown level of approximately 590 feet AMSL and would not be exposed during construction activities associated with the Proposed Action. Therefore, there would be no impacts on these submerged archaeological sites in San Vicente Reservoir from drawdown of the reservoir during construction.

Threshold 2: Disturb any human remains, including those interred outside of formal cemeteries

The Proposed Action is not expected to disturb any human remains, including those interred outside of formal cemeteries. Stipulations in the PA address appropriate procedures for handling unexpected discoveries during construction or reservoir drawdown; these conditions would be incorporated into the final construction specifications. Therefore, potential impacts on human remains from the Proposed Action would be less than significant.

Cumulative Impacts

Implementation of the PA conditions (i.e., data recovery for unanticipated discoveries in accordance with the Treatment Plan) and project design features would mitigate or avoid cumulative impacts on cultural resources and human remains from the Proposed Action. The Slaughterhouse Terminal Reservoir project, and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be required to comply with mitigation measures or regulations intended to avoid or mitigate significant impacts on cultural resources and human remains. Therefore, cumulative impacts on cultural resources and human remains from the Proposed Action, when combined with the potential cumulative impacts associated with the Slaughterhouse Terminal Reservoir project and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant after mitigation.

Project Design Features

There are no Water Authority General Conditions and Standard Specifications that specifically address reducing potential impacts on cultural resources. The following project design features have been incorporated into the Proposed Action to minimize impacts on cultural resources:

Design Feature 1 Training will be provided to all construction personnel to educate them on cultural resources protection measures.

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.

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 PA (e.g., protection, identification, and evaluation).

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.

Mitigation Measures

Implementation of the project design features and the PA requirements would reduce potential cultural resources impacts to less than significant levels; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.6 Geology and Soils

Thresholds of Significance

Thresholds used to evaluate potential geology and soils impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G; and the ESP EIR/EIS. A significant geology and soils impact would occur if the Proposed Action would:

1. Expose people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.) to substantial adverse effects, including the risk of loss, injury, death or property damage, from:
 - a. Rupture along a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault, such as Division of Mines and Geology Special Publication 42;
 - b. Strong seismic ground shaking;
 - c. Seismic-related ground failure, including liquefaction;
 - d. Landslides;
 - e. Seismic-induced waves (seiches) in existing or proposed reservoirs; or
 - f. Accelerated seismic activity along existing faults due to an increase in stress on the faults caused by the presence of a dam and/or reservoir.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (UBC, 1994), creating substantial risks to life or property.

Source: Volume I, Final EIR/EIS, pages 3.8-14 and 3.8-15.

Impact

Threshold 1a: There are no active or conditionally active faults that underlie the SV 100K footprint. Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), and the project design features listed below, would reduce impacts of the Proposed Action on people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.), including the risk of loss, injury, death or property damage, from an earthquake fault rupture to less than significant levels (Volume I, Final EIR/EIS, pages 3.8-15 and 3.8-16).

Threshold 1b: Implementation of seismic design criteria approved for the dam raise by the California Department of Water Resources, Division of Safety of Dams (DSOD), the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), and the project design features listed below, would reduce impacts of the Proposed Action on people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.), including the risk of loss, injury, death or property damage, from strong seismic ground shaking to less than significant levels (Volume I, Final EIR/EIS, pages 3.7-16 and 3.7-17).

Threshold 1c: Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), and the project design features listed below, would reduce impacts of the Proposed Action on people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.), including the risk of loss, injury, death or property damage, from seismic-related ground failure, including liquefaction, to less than significant levels (Volume I, Final EIR/EIS, page 3.7-17).

Threshold 1d: Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), and the project design features listed below, would reduce impacts of the Proposed Action on people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.), including the risk of loss, injury, death or property damage, from landslides to less than significant levels (Volume I, Final EIR/EIS, pages 3.7-17 and 3.7-18).

Threshold 1e: There is a low potential for seiches to occur in San Vicente Reservoir based on the geotechnical evaluation; therefore, impacts of the Proposed Action on people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.), including the risk of loss, injury, death or property damage, from seismic-induced waves would be less than significant (Volume I, Final EIR/EIS, page 3.7-18).

Threshold 1f: Conditions that could result in reservoir-induced seismicity do not exist at San Vicente Reservoir and Dam based on the geotechnical evaluation; therefore, impacts on people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.), including the risk of loss, injury, death or property damage, from accelerated seismic activity along existing faults due to an increase in stress on the faults caused by the Proposed Action would be less than significant (Volume I, Final EIR/EIS, pages 3.7-18 and 3.7-19).

Threshold 2: Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), and the project design features listed below, would reduce impacts of the Proposed Action on erosion or loss of topsoil to less than significant levels (Volume I, Final EIR/EIS, page 3.7-19).

Threshold 3: Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), and the project design features listed below, would reduce impacts of the Proposed Action on

landslides, lateral spreading, subsidence, liquefaction or ground collapse to less than significant levels (Volume I, Final EIR/EIS, pages 3.7-19 and 3.7-20).

Threshold 4: The Proposed Action is not located on expansive soil, as defined in Table 18-1-B of the UBC. Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27) and the project design features listed below, would reduce impacts of the Proposed Action, including substantial risks to life or property, to less than significant levels (Volume I, Final EIR/EIS, page 3.7-20).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 1 through 4; therefore, no mitigation measures are required.

Explanation

Threshold 1a: *Expose people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.) to substantial adverse effects, including the risk of loss, injury, death or property damage, from: rupture along a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault, such as Division of Mines and Geology Special Publication 42*

Ground rupture generally occurs along active faults. No active or conditionally active faults underlie the SV 100K footprint. The two shear zones that underlie the existing dam abutments and the proposed footprint of the dam raise section have been determined to be non-seismogenic. Therefore, ground rupture on these shear zones from a seismic event would be unlikely. In addition, the Proposed Action would implement the project design features listed below, and any remedial measures recommended by further geotechnical investigations associated with final engineering and design. Therefore, impacts of the Proposed Action from ground rupture would be less than significant.

Threshold 1b: *Expose people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.) to substantial adverse effects, including the risk of loss, injury, death or property damage, from: strong seismic ground shaking*

The La Nacion Fault and the Julian segment of the Elsinore Fault are the principal contributors to the seismic hazard at the San Vicente Dam site. Moderate ground motion would be induced at the site as a result of a maximum magnitude earthquake on these faults. The proposed raised dam would be designed to withstand strong ground motions induced by earthquakes. To reduce potential effects from seismic ground shaking, the Proposed Action would implement DSOD approved seismic design criteria, the project design features listed below, and the recommendations of additional site-specific geotechnical investigations associated with final

engineering and design. Therefore, impacts of the Proposed Action from seismic ground shaking would be less than significant.

Threshold 1c: Expose people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.) to substantial adverse effects, including the risk of loss, injury, death or property damage, from: seismic-related ground failure, including liquefaction

All loose soils (overburden) were removed within the San Vicente dam footprint during original construction. Similarly, all of the loose alluvial soils within the foundation area of the dam expansion would be excavated during foundation preparation such that the entire dam rests on competent bedrock. For other components where data are not sufficient to fully characterize liquefaction potential, site-specific geotechnical studies would be performed during final engineering and design, and the recommendations for liquefaction from these studies would be incorporated into final construction specifications for the Proposed Action. Therefore, impacts of the Proposed Action from liquefaction at the dam construction site and other on-site areas would be less than significant.

Threshold 1d: Expose people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.) to substantial adverse effects, including the risk of loss, injury, death or property damage, from: landslides

Based on geologic investigations and explorations two large landforms along the northeast perimeter of the San Vicente Reservoir were determined not to be landslide features, and no other landslides were observed in the area based on a review of aerial photographs and surface reconnaissance. To reduce potential effects from landslides, the Proposed Action would implement DSOD guidelines, the project design features listed below, and the recommendations of additional site-specific geotechnical investigations associated with final engineering and design. Therefore, impacts of the Proposed Action from landslides would be less than significant.

Threshold 1e: Expose people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.) to substantial adverse effects, including the risk of loss, injury, death or property damage, from: seismic-induced waves (seiches) in existing or proposed reservoirs

The geotechnical evaluation concluded that because of the irregular shape of the shoreline and the large central island within San Vicente Reservoir, the potential for seiches to overtop the raised dam is considered low. Due to the low potential for this hazard to occur, the impact of seiches would be less than significant.

Threshold 1f: Expose people, boats, or structures (e.g., dams, docks, waterfront and downstream facilities, etc.) to substantial adverse effects, including the risk of loss, injury, death or property damage, from: accelerated seismic activity along existing faults due to an increase in stress on the faults caused by the presence of a dam and/or reservoir

The geotechnical evaluation concluded the potential for reservoir-induced seismicity for the expanded San Vicente Reservoir is considered to be low for the following reasons:

- The total storage capacity of the expanded reservoir would be 246,994 AF, much less than the one million acre-foot volume that would be needed to substantially contribute to the potential for reservoir-induced seismicity.
- The reservoir basin consists of competent metamorphic and igneous rock, as opposed to sedimentary rock.
- The reservoir basin is not underlain by active or conditionally active faults.

No reservoir-induced seismicity has been associated with any existing reservoir in San Diego County, including San Vicente (in operation since 1943). Due to the low potential for this hazard to occur, impacts from reservoir-induced seismicity would be less than significant.

Threshold 2: Result in substantial soil erosion or the loss of topsoil

All of the soil associations within the SV 100K study area, except Diablo-Altamont (clays), possess severe erosion potential, as defined by UBC Standard No. 18-2. To reduce potential effects from soil erosion, the Proposed Action would implement DSOD guidelines, the project design features listed below, and the recommendations of additional site-specific geotechnical investigations associated with final engineering and design. Therefore, impacts of the Proposed Action from soil erosion would be less than significant.

Threshold 3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse

Landslides and liquefaction impacts are discussed above. Soils in the SV 100K study area have the potential to be unstable because they can contain both clay and sand, and therefore exhibit both moderate to high expansion and moderate to severe erosion potential. To reduce potential effects from unstable geologic units or soils, the Proposed Action would implement the project design features listed below and the recommendations of additional site-specific geotechnical investigations associated with final engineering and design. Therefore, impacts of the Proposed Action from unstable geologic units or soils would be less than significant.

Threshold 4: Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property

All of the soil associations within the SV 100K study area, except rock land and Visalia-Tujunga san/silt/clay mixtures, possess at least a moderate expansion potential as defined by UBC

Standard No. 18-2. The clayey portions of on-site soils are considered moderately expansive. To reduce potential effects from expansive soils, the Proposed Action would implement the project design features listed below and the recommendations of additional site-specific geotechnical investigations associated with final engineering and design. Therefore, impacts of the Proposed Action from expansive soils would be less than significant.

Cumulative Impacts

The Proposed Action would not be subject to any geologic or soils conditions or hazards that could not be mitigated through implementation of DSOD requirements, Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), and the project design features listed below to minimize potential exposure of people, boats, or structures, including the risk of loss, injury, death or property damage, to substantial adverse effects from ground shaking, ground rupture, ground failure or liquefaction, landslides, substantial soil erosion, loss of topsoil, unstable geologic units, and soil expansion. The Proposed Action would have a low potential for seiches and for conditions resulting in reservoir-induced seismicity. However, due to their distances from the SV 100K footprint, none of the CIP and other cumulative planned projects in the area (Table 3.2-1 of the Final EIR/EIS, Volume I, pages 3.2-6 through 3.2-9) would combine with the Proposed Action to result in cumulative geology and soils impacts.

Project Design Features

In addition to the Water Authority General Conditions and Standard Specifications listed in Section 1.9.4 of the Final EIR/EIS (Volume I, pages 1-26 and 1-27), the following project design features have been incorporated into the Proposed Action to minimize geology and soils impacts:

- | | |
|-------------------------|---|
| <i>Design Feature 1</i> | Project plans will be reviewed to ensure compatibility with geotechnical conclusions. |
| <i>Design Feature 2</i> | Applicable field activities (e.g., manufactured slope conditions, excavations, fill placement) will be reviewed and appropriately modified by the geotechnical engineer. |
| <i>Design Feature 3</i> | 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. |
| <i>Design Feature 4</i> | 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 Storm Water Pollution Prevention Plan (SWPPP) and associated BMPs. Actual BMPs will be determined during |

SWPPP preparation, with such measures taking priority over the following typical control measures:

- 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.
- 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

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:

- Field observation/mapping of manufactured slopes by the project 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).
- 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

Design features will be incorporated into the Proposed Action to avoid differential compression or settlement of on-site soils, including, but not limited to, the following:

- Perform site-specific settlement analyses in areas deemed appropriate by the project 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.

Design Feature 7

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:

- Excavate (or overexcavate), 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.

Design Feature 8

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:

- 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.
- 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 Design features will be incorporated into the Proposed Action to avoid liquefaction, including, but not limited to, the following:

- 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.

Design Feature 10 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).

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:

- 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.
- Provide seeding of disturbed and constructed slopes with groundcover vegetation as soon as possible following grading activities.
- Minimize disturbance to existing vegetation and slopes.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design features would reduce potential geology and soils impacts to less than significant levels; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.7 Land Use and Planning

Thresholds of Significance

Thresholds used to evaluate potential land use impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G; and the ESP EIR/EIS. A significant land use impact would occur if the Proposed Action would:

1. Physically divide an established community.
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, unless exempted by state law.
3. Result in the displacement, relocation or permanent loss of any residence, business (e.g., commercial, industrial, and extractive) or governmental or institutional uses (i.e., educational, religious, or scientific).

Source: Volume I, Final EIR/EIS, page 3.9-7.

Impact

Threshold 1: The Proposed Action would not physically divide an established community (Volume I, Final EIR/EIS, page 3.9-8); therefore, this issue is not addressed in these Findings.

Threshold 2: The Proposed Action is exempted from plans, policies, or regulations of other land use agencies, pursuant to Section 53091(d) of the California Government Code. Nevertheless, the EIR/EIS provides an analysis of the Proposed Action in terms of impacts to biological resources in accordance with MSCP planning policies and design guidelines because it is relevant to evaluate indirect effects to adjacent resources of the Cornerstone Lands MHPA Preserve, given that the MSCP excludes the Proposed Action from the Preserve. Indirect impacts of the Proposed Action on biological resources within the adjacent portions of the MHPA Preserve would be less than significant; therefore, the Proposed Action would not conflict with MSCP planning policies and design guidelines, including Land Use Adjacency Guidelines, Conservation Goals, Covered Species, and MHPA Preserve Design (Volume I, Final EIR/EIS,

pages 3.9-8 through 3.9-14). In addition, there are no proposed land uses adjacent to San Vicente Reservoir; therefore, this issue is not addressed in these Findings.

Threshold 3: The Proposed Action could result in the displacement, relocation or permanent loss of residences around the expanded reservoir, which would be a significant impact (*Impact SV/LU 1*), but impacts from disruption of freshwater aquatic businesses that operate at the reservoir would be less than significant because alternative sites are available to serve these businesses (Volume I, Final EIR/EIS, pages 3.9-14 through 3.9-16).

Finding

The analysis concluded that impacts would be less than significant for Threshold 2, and impacts would be significant for Threshold 3 (*Impact SV/LU 1*); therefore, mitigation measures are required (see below).

Explanation

Threshold 2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, unless exempted by state law

Refer to Section 9.4 (Biological Resources), Threshold 5, of these Findings for a discussion of indirect impacts of the Proposed Action on biological resources within the adjacent portions of the MHPA Preserve relative to MSCP planning policies and design guidelines, including Land Use Adjacency Guidelines, Conservation Goals, Covered Species, and MHPA Preserve Design.

Threshold 3: Result in the displacement, relocation or permanent loss of any residence, business (commercial, industrial, extractive) or governmental or institutional uses (educational, religious, scientific)

For purposes of analysis, an approximate 500- to 1,000-foot septic system setback was assumed around the new MNP elevation of 764 feet AMSL. The actual buffer width of the septic system setback would vary depending on topography. Under this “worst-case” assumption and based on preliminary engineering estimates, up to 53 parcels could be affected by the Proposed Action, including the inundation area, construction areas, and septic system setback areas. These 53 potentially affected parcels would encompass approximately 4,940 acres. Of the 53 potentially affected parcels, 12 may require full acquisition, 32 may require partial acquisition, 4 may require purchase of easements, and 5 may require a septic offset but no taking. It is not known what portion, if any, of the parcels may be affected. The 12 parcels that may need to be acquired are zoned residential. Five of these 12 residentially zoned parcels are developed with single-family residences, and seven are currently vacant. Two of the 32 parcels that may require partial acquisition are developed with single-family residences; the remaining parcels are vacant. As stated above, it is not known at this time what the final septic system setback requirements would be for the Proposed Action. This would be determined once individual septic field percolation

tests are conducted on each parcel. However, the Water Authority considers the displacement of even one residence a significant impact. Therefore, impacts of the Proposed Action due to displacement, relocation, or permanent loss of residential property as a result of the septic system setback would be significant (***Impact SV/LU 1***).

In addition, it is possible that easements may be purchased on properties that restrict the installation of septic systems to limited portions of a parcel. If acquiring the easement to restrict installation of septic systems would result in residential displacement, this impact would also be significant (***Impact SV/LU 1***).

There are no active businesses within the SV 100K study area. However, several local freshwater aquatic recreation businesses located outside of the SV 100K study area use the reservoir for demonstration of boating equipment. These businesses may be adversely affected by temporary closure of the reservoir during construction activities associated with the Proposed Action. Alternative year-round freshwater sites are available at other locations to accommodate boating demonstrations, such as Lake Elsinore and El Capitan Reservoir. Upon completion of the dam raise and reservoir filling, the relocated marina and larger reservoir surface would enhance aquatic recreation business opportunities. Therefore, impacts associated with the displacement of aquatic businesses from the Proposed Action would be less than significant.

Cumulative Impacts

When combined with potential cumulative land use impacts from the Slaughterhouse Terminal Reservoir (CIP) project and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), the Proposed Action's contribution to cumulative impacts with respect to potential displacement of residences would be considerable (***Impact SV/LU 1C***). Implementation of Mitigation Measures SV/LU 1-1, SV/LU 1-2, and SV/LU 1-3 would reduce the cumulative land use impact of the Proposed Action to less than significant levels. The Slaughterhouse Terminal Reservoir (CIP) project and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9) would be required to comply with similar regulations (e.g., federal Uniform Relocation Assistance Act) to mitigate significant direct and cumulative impacts associated with potential residential displacements. Therefore, potential cumulative displacement of residences due to the Proposed Action, when combined with similar potential cumulative land use impacts from the Slaughterhouse Terminal Reservoir (CIP) project and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant after mitigation.

Project Design Features

Refer to Section 9.4 (Biological Resources) of these Findings for a list of project design features to minimize indirect impacts of the Proposed Action on biological resources within the adjacent portions of the MHPA Preserve relative to MSCP planning policies and design guidelines.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design features would not reduce potential land use impacts to less than significant levels. The following mitigation measures have been incorporated into the Proposed Action to reduce impacts associated with potential displacement of residences due to establishment of a septic system setback around the expanded reservoir (*Impact SV/LU 1*):

- 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.
- 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.
- 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.

Residual Impacts after Mitigation

No residual impacts would remain after implementation of the project design features and mitigation measures listed above.

9.8 Mineral Resources

Thresholds of Significance

Thresholds used to evaluate potential mineral resources impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant mineral resources impact would occur if the Proposed Action would:

1. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Source: Volume I, Final EIR/EIS, page 3.10-3.

Impact

Threshold 1: The Proposed Action would require excavation within mapped mineral resource zone (MRZ-) 2 and MRZ-3 areas and inundation of areas mapped as MRZ-3. The use of these mineral resources would be a valid use of the resources for a public water storage project and would not represent a loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, page 3.10-4).

Finding

The analysis concluded that impacts would be less than significant for Threshold 1; therefore, no mitigation measures are required.

Explanation

Threshold 1: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

State's Mineral Land Classification Report

Aggregate obtained from the marina or the southwest quarry options would be in areas mapped as MRZ-2, where significant mineral deposits are present or where there is a high likelihood for their presence. Aggregate obtained from the southeast quarry option would be in an area mapped as MRZ-3, which contains mineral deposits, the significance of which cannot be evaluated from available data. If aggregate were obtained from one of either of these locations, it would be used for a public water storage project, which would be considered a designated, valid use of the mineral resource. Further, aggregate obtained from one of either of these locations would not prohibit the recovery of mineral resources in the future at the other locations after completion of the Proposed Action. Therefore, the impact would be less than significant.

The inundation areas and portions of the dam construction site near the existing dam would be located in areas mapped as MRZ-3, which would make these resources unavailable for future extraction. However, these areas are already unavailable due to their proximity to the dam and reservoir. Therefore, the impact would be less than significant.

Local General or Specific Plan

The San Diego County General Plan land use designation in the Lakeside Community Plan for the San Vicente Reservoir and surrounding areas is "Impact Sensitive and Public/Semi-Public Lands." It does not specifically identify any areas for mineral recovery or gravel operations. However, the Conservation Element of the Lakeside Community Plan (under the sand and gravel policies and recommendations) identifies that "additional resources also exist, particularly, sand in San Vicente Creek; and "Poway Conglomerate" located in the areas surrounding the heavy industrial designations in the northern section of the community. While there are currently no

plans for excavating these sites, further studies may indicate a need to tap these important resources.” The Proposed Action would involve excavation of these resources for the quarry options and inundation of these resources for the reservoir expansion, which would be a valid use of the resources for a public water storage project. Moreover, although the resources are recognized as a valuable commodity, they are not specifically mapped or otherwise delineated for protection or preservation. Therefore, the Proposed Action would not conflict with any mapping of a locally important mineral resource recovery site, as delineated on a local general plan, specific plan, or other local land use plan, and impacts would be less than significant.

Cumulative Impacts

The Proposed Action would be located in MRZ-2 and MRZ-3 zones, but it is not expected to reduce the availability of significant mineral resource deposits represented by these designations. Therefore, cumulative mineral resources impacts of the Proposed Action, when combined with the mineral resources impacts associated with CIP, ESP, and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Project Design Features

There are no Water Authority General Conditions and Standard Specifications or project design features that specifically address reducing potential impacts on mineral resources.

Mitigation Measures

Mineral resources impacts were determined to be less than significant; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.9 Noise and Vibration

Thresholds of Significance

Thresholds used to evaluate potential noise and vibration impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G, and the County of San Diego noise standards and regulations. A significant noise and/or vibration impact would occur if the Proposed Action would:

1. Expose noise-sensitive land uses to construction noise levels exceeding 75 dB(A) L_{eq} during an 8-hour period between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday; or to increases in ambient noise levels equal to or above 3 dB in areas where ambient noise levels already equal or exceed 75 dB(A) L_{eq} .

2. Expose sensitive receptors to construction noise between the hours of 7:00 p.m. and 7:00 a.m.
3. Expose off-site noise-sensitive receptors to a road noise level increase of more than 3 dB and either elevate noise levels above 60 dB community noise equivalent levels (CNEL) or exceed a 3 dB increase above an already noisy condition.
4. Result in operational noise levels that exceed a one-hour average noise level of 50 dB(A) L_{eq} by day or 45 dB(A) L_{eq} at night at the property boundary.
5. Expose persons to or generate excessive vibrations that:
 - a. Result in peak particle velocities in excess of 2 inches per second at the nearest structure.
 - b. Result in a daily average particle velocities in excess of 0.5 inch per second at the nearest sensitive receptor.

Source: Volume I, Final EIR/EIS, page 3.11-8.

Impact

Threshold 1: The Proposed Action would not exceed the 75 dBA L_{eq} noise standard for daytime construction and blasting activities, nor increase ambient noise levels by 3 dB (or above) in areas where ambient noise levels already equal or exceed 75 dB(A) L_{eq} ; therefore, impacts of the Proposed Action would be less than significant (Volume I, Final EIR/EIS, pages 3.11-10 and 3.11-11).

Threshold 2: Nighttime noise levels from dam construction activities (**Impact SV/NV 1**), batch plant operations downstream of the existing dam (**Impact SV/NV 2**), and nighttime blasting for tunneling operations (**Impact SV/NV 3**) would exceed the 45 dBA L_{eq} nighttime noise standard at nearby residential receptors. Therefore, all of these impacts would be significant. However, nighttime noise levels from batch plant operations near the Marina Quarry Option would not exceed the 45 dBA L_{eq} nighttime noise standard at nearby residential receptors; therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, pages 3.11-12 and 3.11-13).

Threshold 3: In the peak construction months in Year 2010, calculated roadway noise levels at selected noise-sensitive receptors would already exceed 60 dB CNEL; therefore, noise impacts of the Proposed Action are evaluated with respect to potential exposure of off-site noise-sensitive receptors to a road noise level increase of more than 3 dB. During the peak construction months in Year 2010, construction traffic from the Proposed Action would increase roadway noise levels at residential properties along Vigilante Road and Moreno Avenue such that the 3 dB significance threshold would be exceeded, resulting in a significant impact (**Impact SV/NV 4**). However, the increase in roadway noise levels at residential properties along SR-67 from construction traffic would not exceed the 3 dB significance threshold; therefore, these impacts would be less than significant. The expected increase in recreational traffic volumes along vicinity roadways to access the relocated/expanded marina would not generate noise levels at

nearby residential receptors above the 3 dB significance threshold; therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, pages 3.11-13 and 3.11-14).

Threshold 4: The expected increase in the use of motorboats on the expanded reservoir would not generate noise levels at nearby residential receptors above the 50 dBA L_{eq} daytime noise standard or the 45 dBA L_{eq} nighttime noise standard; therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, pages 3.11-15). The Water Authority and City of San Diego have agreed to evaluate measures to discourage direct public access into the Kimball Valley arm of the expanded reservoir and onto private properties in Kimball Valley, including but not limited to, signage, a tamper-proof buoy line (floating barricade) at the mouth of Kimball Valley Creek, etc. This measure would avoid potential nuisance noise impacts near private properties in Kimball Valley caused by use of recreational motorboats. Therefore, this issue is not addressed in these Findings.

Threshold 5a: The Proposed Action would not generate vibration from blasting that would expose persons to, or result in, peak particle velocities in excess of 2 inches per second at the nearest structure; therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, page 3.11-15).

Threshold 5b: The Proposed Action would not generate vibration from blasting that would expose persons to, or result in, daily average particle velocities in excess of 0.5 inch per second at the nearest structure; therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, page 3.11-16).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 1, 4, 5a, and 5b, and impacts would be significant for Thresholds 2 (**Impacts SV/NV 1-3**) and 3 (**Impact SV/NV 4**); therefore, mitigation measures are required (see below).

Explanation

Threshold 1: *Expose noise-sensitive land uses to construction noise levels exceeding 75 dB(A) L_{eq} during an 8-hour period between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday; or to increases in ambient noise levels equal to or above 3 dB in areas where ambient noise levels already equal or exceed 75 dB(A) L_{eq}*

General Daytime Construction Activities

Daytime construction activities associated with the Proposed Action would result in maximum instantaneous noise levels at the nearby sensitive receptors of 54.0 dBA L_{max} (at 1,500 feet) and 51.5 dBA L_{max} (at 2,000 feet). In addition, the highest average construction noise levels of 50.1 dBA L_{eq} at 1,500 feet and 47.6 dBA L_{eq} at 2,000 feet (from scraper equipment) would be less than the existing daytime peak-hour roadway noise levels of 63.9 dBA and 65.3 dBA L_{eq} calculated for residents along Vigilante Road and Moreno Avenue, respectively. Therefore,

general daytime construction activities associated with the Proposed Action would comply with the 75 dBA L_{eq} noise standard, and noise impacts on nearby residents would be less than significant.

Blasting

Blasting of underlying rock structures would be required for the dam, the on-site quarry options, the new marina road, and the tunneling operations for pipelines. Blasting activities could result in a maximum noise level of 64.5 dBA L_{eq} at the nearest residential receptor located approximately 1,500 feet south of the dam construction zone. This noise level would be below the 75 dBA L_{eq} daytime noise standard for construction activities. Therefore, noise impacts on nearby residents from daytime blasting activities would be less than significant.

Threshold 2: Expose sensitive receptors to construction noise between the hours of 7:00 p.m. and 7:00 a.m.

Construction of the dam would continue 24 hours per day, 7 days per week for approximately 18 months. The nearest residential receptors to the dam construction zone would be exposed to average noise levels as high as 50.1 dBA L_{eq} at 1,500 feet and 47.6 dBA L_{eq} at 2,000 feet, which would exceed the 45 dBA L_{eq} nighttime exterior noise standard for residential uses. Therefore, nighttime noise impacts on nearby residents from dam construction would be significant (***Impact SV/NV 1***).

If batch plant operations were located on the south side of the dam construction zone in the vicinity of the southeast or southwest on-site quarry options, they would be approximately 1,500 feet from the nearest residential receptor. Average noise levels from batch plant operations would be 45.2 dBA L_{eq} at this receptor, which would be slightly above the 45 dBA L_{eq} nighttime noise standard for residential uses. Therefore, nighttime noise impacts on nearby residents from batch plant operations located near the southwest or southeast quarry options would be significant (***Impact SV/NV 2***).

If the Marina Quarry Option were selected, batch plant operations would be located near the existing marina and approximately 4,500 feet away from the nearest residential receptor. Average noise levels from batch plant operations would be 35.7 dBA L_{eq} at this receptor, which would be substantially below the 45 dBA L_{eq} nighttime noise standard. Therefore, nighttime noise impacts on nearby residents from batch plant operations located near the Marina Quarry Option would be less than significant.

Blasting may occur at night for tunneling operations for pipelines. Average noise levels from nighttime blasting are expected to be 44.5 dBA L_{eq} at the nearest residential receptor located approximately 1,500 feet to the south of the dam. This noise level would essentially equal the allowable nighttime noise standard of 45 dBA L_{eq} . Therefore, nighttime noise impacts on nearby residents from blasting associated with tunneling operations would be significant (***Impact SV/NV 3***).

Threshold 3: Expose off-site noise-sensitive receptors to a road noise level increase of more than 3 dB and either elevate noise levels above 60 dB CNEL or exceed a 3 dB increase above an already noisy condition

Construction-Related Roadway Noise Impacts

During the peak construction months in Year 2010, the Proposed Action is estimated to generate approximately 550 truck trips per day for the off-site quarry option, and up to 160 truck trips per day for the on-site quarry options. In addition to truck trips, the Proposed Action would generate a maximum of about 900 vehicle trips per day for construction crew vehicles. For the off-site quarry option, roadway noise levels along Vigilante Road and Moreno Avenue, which are the only access roads to the SV 100K site, would result in a noise level increase of up to 6.2 and 5.9 dBA, respectively, during the PM peak hour. These noise level increases would exceed the 3 dB significance threshold. Although less than the off-site quarry option, the Year 2010 maximum noise level increase for the on-site quarry options would also exceed the 3 dB significance threshold. Therefore, roadway noise impacts on residents along Vigilante Road and Moreno Avenue due to construction-related traffic volumes would be significant (***Impact SV/NV 4***).

While there would also be noise level increases to residents along SR-67 from construction-related traffic volumes, the noise level increases would not exceed the 3 dB significance threshold. Therefore, roadway noise impacts on residents along SR-67 due to construction-related traffic volumes would be less than significant.

Operational (Recreational Trips) Roadway Noise Impacts

The Proposed Action would include a larger reservoir and an expanded/relocated marina corresponding to an increase in recreational users and visitor trips, compared to current conditions. During peak summer months, the maximum daily recreational trips could increase from an estimated 225 ADT for the existing marina to possibly up to 360 ADT for the new marina. In 2010, roadway noise levels at the nearest residential receptors, along Vigilante Road and Moreno Avenue, are calculated to exceed the 60 dB CNEL noise standard; therefore, the 3 dB significance threshold is used to evaluate the increase in roadway noise levels from recreational traffic associated with the Proposed Action. An approximate doubling of traffic is required to increase roadway noise levels by 3 dB. Because the larger marina and reservoir would not result in a doubling of recreational trips, compared to current conditions, the significance threshold of 3 dB would not be exceeded at residential receptors along roadways in the vicinity. Therefore, traffic noise impacts on residents along vicinity roadways due to the increase in recreational trips associated with the expanded marina would be less than significant.

Threshold 4: Result in operational noise levels that exceed a one-hour average noise level of 50 dB(A) L_{eq} by day or 45 dB(A) L_{eq} at night at the property boundary

Because there are no residents near the shoreline of the reservoir, any increase in the number of recreational motorboats using the larger reservoir water surface area, compared to current conditions, would not exceed the 50 dBA L_{eq} (daytime) and the 45 dBA L_{eq} (nighttime) noise

standards for residential uses. Therefore, there would be no noise impacts on nearby residents from an increased number of motorboats using the expanded reservoir.

Threshold 5a: Expose persons to or generate excessive vibrations that result in peak particle velocities in excess of 2 inches per second at the nearest structure

Blasting would generate temporary vibrations in the vicinity of the dam construction zone, on-site quarry options, and new marina road construction areas. The closest sensitive receptor is a residence located approximately 1,500 feet south of the dam construction zone. Because vibration diminishes quickly with distance, this structure would not be expected to experience vibration levels over the damage criteria established for blasting. Therefore, vibration impacts at nearby structures due to construction-related blasting activities associated with the Proposed Action would be less than significant.

Threshold 5b: Expose persons to or generate excessive vibrations that result in a daily average particle velocity in excess of 0.5 inches per second at the nearest sensitive receptor

Calculations completed for the ESP EIR/EIS indicated that vibration from blasting would be attenuated to levels below 0.5 inch per second at a distance of approximately 80 feet. The nearest residential receptor is approximately 1,500 feet from the dam construction zone, so no receptors are close enough to experience excessive vibration. Therefore, vibration impacts at nearby structures due to construction-related blasting activities associated with the Proposed Action would be less than significant.

Cumulative Impacts

The Proposed Action would not exceed construction noise standards during daytime activities; would not exceed applicable noise standards and significance thresholds for operations (i.e., roadway noise from long-term recreational trips and noise from use of recreational motorboats at the expanded reservoir); and would not generate vibration levels from blasting that would exceed the damage threshold at the nearest residential structure. Therefore, cumulative daytime construction noise impacts due to the Proposed Action, when combined with the short-term (construction-related) noise impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), San Vicente Pump Station (ESP) and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Although none of the CIP and ESP projects, nor any of the other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would contribute to cumulative nighttime noise and vibration impacts at the nearest noise-sensitive residential receptor from the dam construction zone, the Proposed Action's direct nighttime construction noise impact at this residence would be significant and unmitigable for the reasons stated below (refer to discussion under Mitigation Measures). Therefore, the nighttime construction noise levels associated with the Proposed Action would result in a significant

cumulative impact at the nearest noise-sensitive residential receptors (***Impacts SV/NV 1C, SV/NV 2C, and SV/NV 3C***).

No feasible measures are available to mitigate these cumulative nighttime construction noise impacts of the Proposed Action. A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). These significant cumulative impacts would cease upon completion of construction.

The Proposed Action would result in significant cumulative noise impacts at off-site residences due to increased noise levels from construction traffic along Vigilante Road and Moreno Avenue (***Impact SV/NV 4C***); this impact was determined to be unmitigable for the reasons stated below (refer to discussion under Mitigation Measures). Therefore, cumulative traffic noise impacts due to construction activities associated with the Proposed Action, when combined with the construction-related traffic noise impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP) and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be significant for the duration of construction.

No feasible measures are available to mitigate the cumulative construction traffic noise impacts of the Proposed Action. A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). These significant cumulative impacts would cease upon completion of construction.

The Proposed Action would not exceed applicable noise standards and significance thresholds for operations (i.e., roadway noise from long-term recreational trips and noise from use of recreational motorboats at the expanded reservoir). Therefore, cumulative operational noise impacts due to the Proposed Action, when combined with the long-term (operational) noise impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), San Vicente Pump Station (ESP) and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

The Proposed Action would not generate vibration levels from blasting that would exceed the damage threshold at the nearest residential structure. Therefore, cumulative vibration impacts due to the Proposed Action, when combined with the short-term (construction-related) vibration impacts associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), San Vicente Pump Station (ESP) and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Project Design Features

Water Authority General Conditions and Standard Specifications that will be included in the project construction documents to reduce construction-related noise and vibration impacts associated with the Proposed Action are summarized in Section 1.9.5 of the Final EIR/EIS (Volume I, page 1-27). No specific project design features have been identified for this issue.

Mitigation Measures

To reduce noise impacts from dam construction activities associated with blasting and tunneling operations downstream of San Vicente Dam (*Impacts SV/NV 1 and SV/NV 3*), the placement of noise attenuation barriers along the southerly and easterly limits of the construction zone was examined. However, given the height of standard truck exhaust stacks and the height of stationary equipment associated with possible quarry operations, it is speculative that barriers could feasibly be constructed at the height necessary to attenuate nighttime construction noise levels at the residences located south of the dam construction zone to a level below the 45 dBA L_{eq} exterior noise standard for residential uses. While the barriers may reduce the nighttime noise levels, there are no feasible mitigation measures available to reduce these impacts to less than significant levels. Therefore, the impacts of the Proposed Action would be significant and unmitigable.

Implementation of the Water Authority General Conditions and Standard Specifications would not reduce potential noise and vibration impacts to less than significant levels. The following mitigation measure has been incorporated into the Proposed Action to reduce impacts associated with nighttime noise levels from batch plant operations south of the dam (*Impact SV/NV 2*):

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.

The significant impacts from increased noise levels along Vigilante Road and Moreno Avenue due to construction traffic (*Impact SV/NV 4*) cannot be reduced by any measure other than reducing construction-related vehicle trips to a level below the estimated traffic volumes associated with the on-site quarry options. This is not considered practicable due to the 24-hour construction process for RCC placement. There are no feasible mitigation measures available to reduce these impacts to less than significant levels. Therefore, the impacts of the Proposed Action would be significant and unmitigable.

Residual Impacts after Mitigation

No residual nighttime noise impacts associated with the batch plant operations (*Impact SV/NV 2*) would remain if Mitigation Measure SV/NV 2-1 is feasible and is implemented. 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.

Significant nighttime noise impacts associated with dam construction activities and blasting for tunneling operations south of the dam (*Impacts SV/NV 1 and SV/NV 3*), and impacts due to noise level increases along Vigilante Road and Moreno Avenue from construction traffic (*Impact SV/NV 4*), would be unmitigable.

A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). Significant noise impacts would cease upon the completion of construction.

9.10 Paleontological Resources

Thresholds of Significance

Thresholds used to evaluate potential impacts on paleontological resources are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact on paleontological resources would occur if the Proposed Action would:

1. Directly or indirectly destroy a unique paleontological resource or site or geologic feature.

Source: Volume I, Final EIR/EIS, page 3.12-5.

Impact

Threshold 1: Implementation of the project design features listed below would reduce potential direct or indirect impacts of the Proposed Action on a unique paleontological resource or site or geologic feature to less than significant levels (Volume I, Final EIR/EIS, page 3.12-6).

Finding

The analysis concluded that impacts would be less than significant for Threshold 1; therefore, no mitigation measures are required.

Explanation

Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or geologic feature

Construction activities in the immediate vicinity of the existing dam have the potential to affect Jurassic/Cretaceous-age sedimentary deposits of the Santiago Peak Volcanics (high paleontological resource sensitivity) and Quaternary-age alluvium (unknown paleontological resource sensitivity). Proposed excavation and grading for the relocated marina in the side canyon drainage along the southwest shore of the reservoir would affect Eocene-age sedimentary deposits of the Stadium Conglomerate (high paleontological resource sensitivity) and Pomerado Conglomerate (high paleontological resource sensitivity). Raising the water level of the reservoir has the potential to result in significant impacts to paleontological resources that may occur within exposures of Stadium Conglomerate (high paleontological resource sensitivity) and Pomerado Conglomerate (high paleontological resource sensitivity) that crop out below 766 feet AMSL. Inundation would cause such geologic formations to be in direct contact with water which accelerates the chemical weathering process, damaging or destroying any fossils (and

associated contextual data) that may exist at the ground surface within the proposed inundation area. However, with implementation of the project design features listed below, these potential impacts would be less than significant.

Cumulative Impacts

The Proposed Action, the Slaughterhouse Terminal Reservoir (CIP) project components, and other cumulative projects in the vicinity of the Proposed Action would have the potential to affect geologic formations with high paleontological resource sensitivity. However, the Proposed Action's contribution to cumulative impacts would be avoided by incorporation of the project design features listed below. Therefore, cumulative paleontological resource impacts due to the Proposed Action, when combined with construction impacts associated with the Slaughterhouse Terminal Reservoir (CIP) project and the other cumulative projects in the area, would be less than significant.

Project Design Features

There are no Water Authority General Conditions and Standard Specifications that specifically address reducing potential impacts on paleontological resources. The following project design features have been incorporated into the Proposed Action to minimize potential impacts on paleontological resources:

Design Feature 1 A qualified paleontologist will attend pre-construction meetings to consult with grading and exaction contractors in all areas of high or moderate sensitivity.

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, etc., in areas with no paleontological resource sensitivity (i.e., basement rocks, the pyroclastic and hybabysal intrusives portion of Santiago Peak Volcanics, and debris flow deposits).

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 the site depending on the types of fossils discovered.

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.

Design Feature 5 Prior to inundation, a detailed survey of surface exposures between 590 and 766 AMSL of paleontologically high or moderate sensitive geologic units that crop out within the reservoir will be conducted by a qualified paleontologist. Sensitive geologic units to be surveyed are mapped in Figure 3.12-1. 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.

Design Feature 6 A final report will be completed that outlines the results of the monitoring report. This report will include discussions of the methods used, stratigraphy exposed, fossils collected, and the scientific significance of recovered fossils.

Mitigation Measures

Implementation of the project design features would reduce potential paleontological resources impacts to less than significant levels; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.11 Public Safety and Hazards

Thresholds of Significance

Thresholds used to evaluate potential public safety impacts are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G; the ESP EIR/EIS; and the RWF Master Plan PEIR. A significant public safety impact would occur if the Proposed Action would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

4. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
5. Increase boating accidents due to increased recreational use of any reservoir.

Source: Volume I, Final EIR/EIS, page 3.13-5.

Impact

Threshold 1: Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.6 of the Final EIR/EIS (Volume I, pages 1-27 through 1-30), and project design features (safety measures) listed below, would reduce the impacts of the Proposed Action on the public or the environment through the routine transport, use, or disposal of hazardous materials during project construction and operation to less than significant levels. Therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, pages 3.13-7 through 3.13-8).

Threshold 2: Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.6 of the Final EIR/EIS (Volume I, pages 1-27 through 1-30), and project design features (safety measures) listed below, would reduce the impacts of the Proposed Action on the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment to less than significant levels. Therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, page 3.13-8).

Threshold 3: The Proposed Action would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment (Volume I, Final EIR/EIS, pages 3.13-8 through 3.13-9). Therefore, this issue is not addressed in these Findings.

Threshold 4: Although there is a significant potential to expose people or structures to loss, injury, or death from flooding as a result of failure of San Vicente Dam or overtopping of the dam spillway during very large and prolonged storm events, the probability for dam failure is one in a million and the Proposed Action would create additional storage volume to increase storm flow detention. Therefore, these impacts would be less than significant (Volume I, Final EIR/EIS, pages 3.13-9 through 3.13-12).

Threshold 5: Because the probability of a boating accident at the expanded reservoir would remain the same as under existing conditions (assuming a safety limit of 10 acres per water ski boat is maintained at the reservoir), the Proposed Action would not increase the risk of boating accidents. Therefore, the potential public safety impacts due to increased recreational use of the reservoir would be less than significant (Volume I, Final EIR/EIS, pages 3.13-12 through 3.13-13).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 1, 2, 4, and 5; therefore, no mitigation measures are required.

Explanation

Threshold 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

A limited amount of hazardous materials (paints, solvents, petroleum products, etc.) would be used or stored in association with construction and operation of the Proposed Action. Transportation, use, or disposal of hazardous materials during construction, operation, and maintenance of the proposed facilities could pose potential health and safety hazards to construction and maintenance workers, nearby residents, and the environment. These impacts would be associated with the potential for spills on the construction site, during operation, or along access roads, and improper disposal of hazardous materials.

The City's Hazardous Materials Business Plan created for the San Vicente Reservoir established procedures for proper storage and use of hazardous chemicals by City staff that work at the reservoir. In addition, safety measures would be implemented in accordance with the Water Authority General Conditions and Standard Specifications listed in Section 1.9.6 of the Final EIR/EIS (Volume I, pages 1-27 through 1-30) and the project design features listed below to reduce the risk of upsets during construction, including accidental explosions or releases of hazardous substances. Therefore, public safety or environmental impacts due to routine transport, use or disposal of hazardous materials during construction and operation of the Proposed Action would be less than significant.

Threshold 2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

A reasonable amount of hazardous materials would be associated with operation of the Proposed Action, including gasoline, motor oil, grease, etc. As discussed under Threshold 1 above, the implementation of safety measures from the Water Authority General Conditions and Standard Specifications listed in Section 1.9.6 of the Final EIR/EIS (Volume I, pages 1-27 through 1-30) and the project design features listed below would be incorporated into plans and specifications to reduce the risk of upsets during construction, including accidental explosions or releases of hazardous substances. Therefore, public safety or environmental impacts due to reasonably foreseeable upset and accident conditions of hazardous materials during the construction or operation of the Proposed Action would be less than significant.

Threshold 4: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam

The Proposed Action involves raising and strengthening the existing San Vicente Dam with a design safety goal of one in a million, which is more conservative than historical dam failure frequencies in the U.S. The raised dam would be designed to withstand maximum credible earthquakes on active faults in the region. The earthquakes that govern the design were determined to be a Magnitude 6.7 earthquake on the La Nacion Fault zone located about 12 miles west of the dam, and a Magnitude 7.5 earthquake on the Elsinore Fault zone located about 22 miles east of the dam. RCC is an inherently strong material, which, when placed properly, behaves like a cohesive, monolithic mass, thereby reducing the likelihood of cracking along the dam face.

Nevertheless, the County of San Diego Office of Environmental Services (OES) maintains inundation mapping regulations in the event of a catastrophic dam failure and subsequent downstream flooding which would pose a threat to the health and safety of the public. The consequences of a simulated catastrophic failure at San Vicente Dam were assessed based on a comparison of the downstream flood zones under existing conditions and the simulated zones for the Proposed Action. Considering the quantity of water released if the dam should fail, and the relatively short time period over which the release could occur, the dynamic forces exerted by the rapidly traveling flood wave and the resultant damage to structures, buildings, and infrastructure would be extensive. The main consequences of dam break flooding would be loss of human life, property, and infrastructure. However, the probability of such a catastrophic event must also be considered in determining significance; for the Proposed Action the probability for dam failure is one in a million.

During very large and prolonged storm events, overtopping of the proposed San Vicente Dam spillway and subsequent downstream flooding is possible. However, such events would occur less frequently, and would be less severe in terms of volume, than under existing reservoir conditions because the proposed dam raise would create additional reservoir storage volume which would result in increased storm flow detention, ultimately reducing the 100-year storm flow rate. Specifically, the expanded reservoir under the Proposed Action would produce 46 percent less flood flow than the existing reservoir. In addition, the Water Authority and the City of San Diego would continue to implement a Reservoir Regulating Plan to control the water levels in the reservoir based on changing conditions.

Therefore, due to the low risk of dam breach (supported by the use of RCC construction techniques) and expanded reservoir storage volume (increased storm flow detention), downstream flooding impacts as a result of the Proposed Action would be less than significant.

Threshold 5: Increase boating accidents due to increased recreational use of any reservoir

The types of water-based recreational uses allowed at San Vicente Reservoir would not change as a result of the Proposed Action and these uses would continue under the same rules that apply to the existing reservoir, but the volume of use would increase with the larger reservoir surface

area. Based on an expected maximum daily use of the expanded reservoir estimated at 1,000 persons, two safety officers would be required for this intensity of use, which is the same as is required under existing conditions. Therefore, the Proposed Action would not result in a significant increase in the number of safety officers needed to patrol the additional recreational boating use at the expanded reservoir.

Similar to existing conditions, the Proposed Action would not increase the minimum reservoir surface area required for safe water ski boat operation (10 acres per boat). Therefore, the probability of a boating accident at the expanded reservoir would remain the same as under existing conditions. In addition, the Water Authority and City of San Diego have agreed to evaluate measures to discourage direct boating access into the Kimball Valley arm of the reservoir, including but not limited to, signage, a tamper-proof buoy line (floating barricade) at the mouth of Kimball Valley Creek, etc. Such measures would avoid the potential for accidents caused by recreational boaters in Kimball Valley Creek. Therefore, the Proposed Action would not increase the risk of boating accidents, and the potential public safety impacts due to increased recreational use of the reservoir would be less than significant.

Cumulative Impacts

The Proposed Action would implement safety measures to control and prevent upset of hazardous materials when transported, used, or disposed of during construction and operation. The proposed dam raise would be designed with a safety goal of one in a million, which is more conservative than the historical dam failure frequencies in the U.S. As such, the probability of a catastrophic dam failure and associated downstream flooding event would be extremely low. The Proposed Action would not increase boating accident potential due to increased recreational use of the expanded reservoir. Therefore, cumulative public safety impacts for these activities due to the Proposed Action, when combined with the short-term (construction-related) and long-term (operational) public safety impacts associated with the Slaughterhouse Terminal Reservoir (CIP), ESP project components, and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Project Design Features

In addition to the Water Authority General Conditions and Standard Specifications listed in Section 1.9.6 of the Final EIR/EIS (Volume I, pages 1-27 through 1-30), the following project design features have been incorporated into the Proposed Action to minimize potential public safety impacts 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.

Design Feature 2 The Contractor will be required to conduct ongoing worker training for all levels of construction personnel, including weekly safety meetings.

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 will be reviewed and updated to satisfy the new requirements resulting from the dam expansion.

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 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.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design features would reduce potential public safety and hazards impacts to less than significant levels; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.12 Public Services and Utilities

Thresholds of Significance

Thresholds used to evaluate potential impacts on public services and utilities are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact on public services would occur if the Proposed Action would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other

performance objectives for any of the public services, such as: police protection, fire protection, emergency medical services (EMS), schools, parks, and other public facilities.

2. Require or result in the need for new or expanded water supplies or entitlements.
3. Interrupt or disrupt utility services as a result of physical displacement and subsequent relocation of public utility infrastructure.
4. Result in the need for additional capacity of utility infrastructure or additional services that could not be supplied by existing utility service providers.
5. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Source: Volume I, Final EIR/EIS, page 3.14-7.

Impact

Threshold 1: Impacts of the Proposed Action on service ratios, response times or other performance objectives for police protection, fire protection, and emergency medical services would be less than significant (Volume I, Final EIR/EIS, pages 3.14-7 through 3.14-10). The Proposed Action would not result in the provision of, or the need for, new or physically altered police protection, fire protection, EMS, school, park and other public facilities, the construction of which could cause substantial adverse physical impacts (Volume I, Final EIR/EIS, pages 3.14-7 through 3.14-10); therefore, these issues are not addressed in these Findings.

Threshold 2: The Proposed Action is covered under the City of San Diego's pueblo water rights, and would not require or result in the need for new or expanded water supplies or entitlements (Volume I, Final EIR/EIS, pages 3.14-10 through 3.14-11); therefore, this issue is not addressed in these Findings.

Threshold 3: Impacts of the Proposed Action in terms of potential construction-related interruption or disruption of water supply, electrical power and wastewater utility services as a result of physical displacement and subsequent relocation of public utility infrastructure would be less than significant (Volume I, Final EIR/EIS, pages 3.14-11 through 3.14-12). The Proposed Action would not result in long-term interruptions/disruptions to these utility services, nor would it result in construction-related or long-term interruptions/disruptions to natural gas utilities (Volume I, Final EIR/EIS, pages 3.14-11 through 3.14-12); therefore, these issues are not addressed in these Findings.

Threshold 4: Impacts of the Proposed Action in terms of requiring additional capacity or infrastructure demands for water supply, electrical power, natural gas and solid waste utility services (that could not be supplied by existing utility service providers) would be less than significant (Volume I, Final EIR/EIS, pages 3.14-12 through 3.14-13). The Proposed Action

would not require additional wastewater capacity or infrastructure demands, or affect existing levels of service (Volume I, Final EIR/EIS, page 3.14-13); therefore, this issue is not addressed in these Findings.

Threshold 5: Impacts of the Proposed Action from the construction of new storm water drainage facilities or expansion of existing facilities would be less than significant (Volume I, Final EIR/EIS, pages 3.14-13 through 3.14-14).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 1, 3, 4, and 5; therefore, no mitigation measures are required.

Explanation

Threshold 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services, such as police protection, fire protection, emergency medical services, schools, parks, and other public facilities

The Santee Substation of the San Diego County Sheriff's Department provides average response times in the range of 5.8 to 21.1 minutes for priority calls to the reservoir and surrounding area, which exceeds the County General Plan goal of 12 minutes. Fire protection and EMS in the vicinity of San Vicente Reservoir is provided by Lakeside Fire Protection District (LFPD) Station 2, with an approximate fire response time of 8 minutes and EMS response time of 12 minutes to the reservoir and surrounding area, which both meet the County General Plan goal of 20 minutes.

The addition of construction traffic along SR-67, Vigilante Road, and Moreno Avenue as a result of the Proposed Action could, at times, decrease travel speeds on these segments. However, all vehicles on the road are required to yield to approaching emergency response vehicles when they are operating sirens and/or flashing emergency lights. Any decreases in travel speeds on vicinity roadways resulting from slow-moving construction traffic associated with the Proposed Action would not cause a delay in police, fire and EMS response times. Therefore, impacts to police protection, fire protection and emergency medical services during construction activities associated with the Proposed Action would be less than significant.

The expanded facilities at San Vicente Marina would generate a maximum average daily use rate of approximately 1,000 persons, compared with the existing rate of 450 persons per day. These additional users may, at times, need police protection services and could add to the already unacceptable response times. In addition, the expanded marina/reservoir would continue to be served by the LFPD Station 2, with wildlands fire protection provided by California Department of Forestry and Fire Protection. As confirmed by County staff and the City of San Diego Lakes

Supervisor, it is anticipated that existing police and LFPD facilities and personnel would accommodate the expanded marina/reservoir and additional recreational users during peak periods. While the expanded marina/reservoir may incrementally add to the service load of the Sheriff's Department and LFPD, the Proposed Action would not require new or physically altered police or fire protection facilities. Furthermore, as discussed in Section 9.11 (Threshold 5) of these Findings, the expanded reservoir would not lead to a substantial increase in recreational-related boating accidents during peak periods which would require new or physically altered EMS facilities. Therefore, impacts to police protection, fire protection, and emergency medical services due to operation of the expanded marina/reservoir would be less than significant.

Threshold 3: Interrupt or disrupt utility services as a result of physical displacement and subsequent relocation of public utility infrastructure

Any required relocation of water and sewer lines within the SV 100K footprint would occur prior to their displacement. In addition, the existing 12 kV electrical lines servicing the dam and marina facilities would be replaced by a new 12 kV electrical line to be installed along the proposed marina access road. Implementation of the Water Authority General Conditions and Standard Specifications listed in Section 1.9.7 of the Final EIR/EIS (Volume I, page 1-30), and the project design features listed below, would minimize potential short-term interruptions/disruptions to water, electrical, and sewer lines in the vicinity of the pump stations, caretaker's house, and City operations yard downstream of San Vicente Dam. Therefore, potential impacts to these utility services as a result of physical displacement and subsequent relocation of public utility infrastructure during construction activities associated with the Proposed Action would be less than significant.

Threshold 4: Result in the need for additional capacity of utility infrastructure or additional services that could not be supplied by existing utility service providers

Water Supply

The Water Authority would refill the expanded reservoir after construction of the dam raise through the use of its existing imported water supplies and entitlements (when available) from the existing First and Second Aqueduct pipelines, and does not require an increase in capacity. No additional water supplies would be needed to refill the expanded reservoir. Conveyance facilities required to deliver the carryover storage water from the reservoir to the Water Authority aqueduct system, as needed, are under construction as part of the ESP, and include the San Vicente Pipeline, Pump Station, and Surge Control Facility. No other conveyance facilities are necessary for the Proposed Action. Therefore, impacts of the Proposed Action in terms of requiring additional capacity or infrastructure demands for water supply utility services (that could not be supplied by existing utility service providers) would be less than significant.

Fossil Fuel and Electrical Power

Refer to Section 9.17 of these Findings.

Solid Waste

The Proposed Action would generate demolition debris and organic waste requiring disposal in a local solid waste landfill. The closest facility to San Vicente Reservoir is the Sycamore Landfill, which has a remaining capacity of approximately 24 million cubic yards. It is likely that solid waste generated from preparation of the existing dam, demolition of the existing marina facilities, and vegetation clearing at the marina relocation area would be disposed of at Sycamore Landfill. The incremental contribution of solid waste from these activities would represent only 0.1 percent of the remaining capacity in Sycamore Landfill. In addition, California law requires a 50 percent reduction in solids requiring disposal, through composting, recycling, and other means. As part of the construction plan for the Proposed Action, demolition and organic debris will be reused on site wherever possible (e.g., cleared vegetation could be reused as mulch/compost on manufactured slopes and landscaped areas). Demolition debris could be sold to firms that specialize in separating the wood, metal, and concrete elements of debris for recycling purposes. These measures would further decrease the negligible impact of the Proposed Action on solid waste landfill capacity. Therefore, impacts of the Proposed Action in terms of requiring additional solid waste landfill capacity (that could not be supplied by Sycamore Landfill) would be less than significant.

Threshold 5: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

Construction of permanent storm water drainage facilities would be required to convey runoff from new impermeable surfaces associated with the Proposed Action, including the dam structure, the relocated/expanded marina, and any new or relocated access roads. Storm water runoff from the downstream face of the dam would be conveyed via the spillway chute, which would pass through a proposed energy dissipater. Runoff from the marina parking lot would be directed into perimeter curbs and irrigated grass swales and/or into below-grade storm drains where it would first pass through storm drain inlet filters, before discharging into the reservoir. Storm water drainage facilities for proposed access roads may include brow ditches along the top of cut slopes, roadside ditches, or concrete culverts with rip-rap protection at culvert outlets, with all runoff routed to catch basins or natural drainage courses. Any new storm water drainage facilities would be sized with the appropriate capacity to convey the estimated flows from a given drainage basin or sub-basin. As the construction of new storm water drainage facilities has already been accounted for in the SV 100K footprint, they would not cause additional environmental effects. Therefore, impacts of the Proposed Action from the construction of new, or the expansion of existing, storm water drainage facilities would be less than significant.

Cumulative Impacts

The Proposed Action would not significantly impact service ratios, response times or other performance objectives for police protection, fire protection, and emergency medical services; would not significantly interrupt or disrupt utility services; would not require additional capacity or infrastructure demands for utility services; and would involve the construction of storm water

drainage facilities that would not cause unaccounted-for significant impacts. Therefore, cumulative public services and utilities impacts due to the Proposed Action, when combined with the short-term (construction-related) and long-term (operational) public services and utilities impacts associated with the Slaughterhouse Terminal Reservoir (CIP), ESP project components in the vicinity of the San Vicente Reservoir, and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Project Design Features

In addition to the Water Authority General Conditions and Standard Specifications listed in Section 1.9.7 of the Final EIR/EIS (Volume I, page 1-30), the following project design features have been incorporated into the Proposed Action to minimize potential impacts to 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.

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.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design features would reduce potential public services and utilities impacts to less than significant levels; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.13 Recreation

Thresholds of Significance

Thresholds used to evaluate potential impacts on recreation are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact on recreation would occur if the Proposed Action would:

1. Result in the direct disturbance or displacement of established recreation facilities.
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
3. Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Source: Volume I, Final EIR/EIS, page 3.15-4.

Impact

Threshold 1: Impacts of the Proposed Action in terms of direct disturbance or displacement of established recreational facilities would be significant (**Impact SV/R 1**); however, impacts of the Proposed Action on the planned locations of the San Vicente and Trans-County Trails would be less than significant (Volume I, Final EIR/EIS, pages 3.15-5 and 3.15-6).

Threshold 2: The potential physical deterioration of existing neighborhood and regional parks or other recreational facilities (e.g., riding/hiking trails, fishing, picnicking and other on-shore uses at recreational lakes) due to the Proposed Action and the long-term recreational impacts would be less than significant; however, the temporary closure of San Vicente Reservoir during construction activities associated with the Proposed Action may cause an increase in use of other recreational lakes for waterskiing, where facilities are limited, possibly causing an acceleration of the physical deterioration at those other facilities, and resulting in a significant impact (**Impact SV/R 2**) (Volume I, Final EIR/EIS, pages 3.15-7 through 3.15-10).

Threshold 3: Potential adverse physical effects on the environment due to construction of expanded recreational facilities (reservoir/marina) associated with the Proposed Action would be less than significant; however, the unknown impacts due to potential construction or expansion of other off-site reservoir recreational facilities could be significant (**Impact SV/R 3**) (Volume I, Final EIR/EIS, pages 3.15-10 and 3.15-11).

Finding

The analysis concluded that impacts would be significant for Thresholds 1-3 (*Impacts SV/R 1-3*); therefore, mitigation measures are required (see below).

Explanation

Threshold 1: Result in the direct disturbance or displacement of established recreation facilities

The existing marina at San Vicente Reservoir would be displaced by construction activities associated with the Proposed Action, including a possible quarry, and would be permanently inundated when the reservoir is refilled to the higher operational water levels. Recreational facilities at the existing marina and reservoir (e.g., boating, waterskiing, fishing, picnicking), would be closed for approximately five to nine years to allow for draw down of the reservoir water level, construction of the enlarged dam, and refilling of the reservoir to a level sufficient to allow use of the marina. Due to public safety concerns, interim recreational facilities cannot be provided at the reservoir during construction activities associated with the Proposed Action. There are no off-site locations under Water Authority ownership where interim reservoir recreational facilities may be constructed or expanded to offset the temporary loss of recreational opportunities at San Vicente Reservoir and Marina during construction activities associated with the Proposed Action. Therefore, impacts on recreational opportunities as a result of temporary closure of San Vicente Reservoir during construction activities associated with the Proposed Action would be significant (*Impact SV/R 1*).

The Proposed Action is located within the Lakeside Community Trails and Pathways Plan (LCTPP) area. The LCTPP designates a planned multi-use trail around San Vicente Reservoir and a section of the Trans-County Trail just south of San Vicente Dam, within the SV 100K footprint. The Proposed Action would not affect the planned locations of these trails. The intent of the San Vicente Trail is to circumnavigate the reservoir; therefore, future construction of this trail would be required to occur above the PMF level of the enlarged reservoir at 778 feet AMSL. Grading and excavation activities associated with the relocated marina access road and the new foundation of the enlarged dam would not extend into the planned route of the Trans-County Trail segment to the south. The County of San Diego and City of San Diego are responsible for approval and construction of these planned trails. Because there is no specified timeline for completion of these trails identified in the LCTTP, the Proposed Action would not impede the design and approval process. If the timing of this process were such that the trails could be installed during the construction timeframe associated with the Proposed Action, then it is anticipated that portions of both trails could be installed at locations that would avoid these construction activities. Therefore, impacts of the Proposed Action on planned trails at San Vicente Reservoir and near the dam would be less than significant.

Threshold 2: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated

Neighborhood and Regional Parks

San Vicente Reservoir is a regional recreational facility predominantly used for boating, waterskiing, and fishing. None of these activities are available at neighborhood or regional parks. Therefore, recreational users seeking alternative locations for these aquatic activities would not go to those parks. Consequently, the temporary loss of water-based recreational activities at San Vicente Reservoir during construction activities associated with the Proposed Action would not result in the accelerated use, and/or substantial physical deterioration of recreational facilities at neighborhood and regional parks in the region. In addition, the existing path/service road north of the marina primarily provides pedestrian access to the fishing pier and to the shoreline fishing area, and is not heavily used by hikers and equestrians. As such, the temporary loss of this path during construction associated with the Proposed Action would not result in the accelerated use and substantial physical deterioration of hiking, biking, and equestrian trails at neighborhood and regional parks in the region, and at County Open Space Preserves in the vicinity of the Proposed Action. Therefore, these impacts would be less than significant.

Other Recreational Facilities

Construction (Short-Term) Impacts

During construction activities associated with the Proposed Action, water-based recreational users would not have access to San Vicente Reservoir for fishing, boating, waterskiing, wakeboarding, or tubing. Such recreational users could use the ocean, Mission Bay, and other City of San Diego reservoirs such as Lake Hodges, El Capitan Reservoir or Otay Lakes, depending on the type of recreational activity a user wanted to pursue. Marine-based recreational facilities are not an appropriate substitute for freshwater-based facilities. Fishing is allowed from boats at all reservoirs except Upper Otay, but only San Vicente and El Capitan offer waterskiing and wakeboarding. Loss of fishing opportunities at San Vicente during construction activities associated with the Proposed Action would result in an increase in fishing at other City reservoirs. However, the City encourages catch-and-release fishing at all of their reservoirs. Therefore, an increase in fishing at other reservoirs would not affect fish population at these reservoirs. In addition, the loss of access to waterskiing at San Vicente would result in further pressure for waterskiing opportunities at El Capitan, which is the only other City reservoir that allows such use. The amount of increased recreational use at other City reservoirs due to the Proposed Action cannot be predicted. Under a “worst-case” scenario, it must be assumed that temporary closure of San Vicente Reservoir during construction activities associated with the Proposed Action could contribute to the substantial physical deterioration or acceleration of deterioration of recreational facilities at these reservoirs. Therefore, this impact would be significant (***Impact SV/R 2***).

Operational (Long-Term) Impacts

Once San Vicente Reservoir is refilled and the relocated/expanded marina facilities are completed, there would be a net increase in City of San Diego reservoir recreational facilities because the new marina would accommodate twice the facilities than currently exist. The proposed marina facilities would also be designed to provide maximum access to disabled persons in compliance with ADA requirements. The relocated/expanded marina would be considered a substantial recreational amenity of the Proposed Action, greatly improving upon the current recreational experience provided by the existing San Vicente Reservoir and Marina, and benefiting the San Diego region. Therefore, operational impacts of the Proposed Action on recreation would be less than significant.

Threshold 3: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment

The relocated/expanded marina would not result in additional environmental impacts that would extend outside the SV 100K footprint. Due to the lack of residences around San Vicente Reservoir, no disruption to surrounding land uses would occur from the expected increase in use of the expanded reservoir and marina. Therefore, physical effects on the environment due to the relocated/expanded marina would be less than significant.

The Water Authority has inquired into the possibility of the City of San Diego expanding water-based recreational uses at another of their reservoirs to offset the temporary loss of the San Vicente Reservoir and Marina during construction activities associated with the Proposed Action. However, it is unknown whether the City could commit to constructing or expanding other reservoir recreational facilities now or in the future. Furthermore, the Water Authority does not have the ability to mandate the construction of new reservoir recreational facilities, or the expansion of existing or planned facilities, to meet the possible increase in temporary demand for such facilities as a result of the Proposed Action. Therefore, under a worst-case scenario, impacts on off-site recreational facilities due to the temporary closure of San Vicente Reservoir during construction activities associated with the Proposed Action would be significant (**Impact SV/R 3**).

Cumulative Impacts

The Proposed Action would involve displacement and relocation of the existing marina at San Vicente Reservoir and temporary closure of these recreational facilities for an extended period and may cause an increase in use of other recreational lakes (especially for waterskiing), possibly causing an acceleration of the physical deterioration at those other recreational facilities. In addition, there could be unknown impacts from potential construction or expansion of other off-site recreational facilities due to an increase in the use of other recreational water bodies resulting from temporary closure of San Vicente Reservoir during construction activities for the Proposed Action. These impacts were determined to be unmitigable for the reasons stated below (refer to discussion under Mitigation Measures). Therefore, short-term (construction-related) cumulative recreation impacts due to the Proposed Action, when combined with recreational

impacts from other cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9) would be significant for the duration of construction.

No feasible measures are available to mitigate the cumulative recreational impacts of the Proposed Action (*Impacts SV/R 1C, SV/R 2C, and SV/R 3C*). A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). These significant cumulative impacts would cease upon completion of construction.

Project Design Features

There are no Water Authority General Conditions and Standard Specifications that specifically address reducing potential impacts on recreational resources. The following project design feature has been incorporated into the Proposed Action to minimize potential impacts on recreational resources:

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 would accommodate a larger number of visitors. Conceptual recreational facilities at the relocated/expanded marina would include an extended boat launch ramp, docks, piers, parking, and buildings (e.g., concessions, City office and comfort station).

Mitigation Measures

Implementation of the project design feature would reduce impacts to the existing marina to less than significant levels. However, there are no feasible mitigation measures to reduce: (1) the impacts from temporary closure of San Vicente Reservoir during construction activities associated with the Proposed Action (*Impact SV/R 1*); (2) the expected increase in use of other recreational lakes for fishing and waterskiing, possibly causing an acceleration of the physical deterioration at those other recreational facilities (*Impact SV/R 2*); or (3) the unknown impacts associated with potential construction or expansion of other off-site reservoir recreational facilities (*Impact SV/R 3*).

While the City of San Diego could expand or allow increased use of other reservoir recreational facilities in the region, or construct recreational facilities at City lakes that currently do not provide fishing and water sports activities (e.g., bass fishing, waterskiing, and wakeboarding), such mitigation is outside the jurisdictional control of the Water Authority to implement.

Residual Impacts after Mitigation

Because it is unknown whether the City will construct or expand recreational facilities for fishing and water sports at any of their other reservoirs to compensate for the temporary loss of these activities at San Vicente Reservoir and Marina during construction activities associated with the Proposed Action, it is assumed that potential impacts on other City reservoir recreational facilities would be significant and unmitigable. The Proposed Action would ultimately provide

greater fishing and water sports recreational opportunities for recreational users, benefiting the San Diego region.

A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). Significant impacts on recreation (*Impacts SV/R 1, SV/R 2, and SV/R 3*) would cease upon completion of the relocated/expanded San Vicente Marina subsequent to the dam raise and refilling of San Vicente Reservoir.

9.14 Traffic/Circulation

Thresholds of Significance

The standards of significance in this analysis are based upon the current practice of the appropriate regulatory agencies. Thresholds used to evaluate potential traffic/circulation impacts are based on applicable criteria in State CEQA Guidelines (CCR §§15000-15387), Appendix G; and the San Diego Traffic Engineers' Council (SANTEC) Guidelines. A significant traffic/circulation impact would occur if the Proposed Action would:

1. Significantly worsen congestion at any intersection that is currently operating, or is projected to operate at, LOS E or F, by adding two seconds or more to the delays experienced by motorists at intersections.
2. Cause any roadway segment to be reduced to LOS E or F, or increase the volume-to-capacity (v/c) ratio by 0.02 or more at any roadway segment currently operating at LOS E or F.
3. Result in delays in emergency vehicle response times or require emergency vehicles to use alternate routes during emergency situations.
4. Result in construction activities within or adjacent to roadway rights-of-way, thereby creating increased risk of motor vehicle accidents and/or pedestrian injury.

Source: Volume I, Final EIR/EIS, pages 3.16-7 and 3.16-8.

Impact

Threshold 1: Under both the off-site quarry option and the on-site quarry options, construction-related traffic from the Proposed Action would significantly worsen congestion at the SR-67/Vigilante Road intersection (*Impact SV/TC 1*) and at the SR-67/Willow Road intersection (*Impact SV/TC 2*) which are currently operating, or projected to operate at, LOS E or F, by adding two seconds or more to the delays experienced by motorists at these intersections (Volume I, Final EIR/EIS, pages 3.16-11 through 3.16-13). However, under both the off-site quarry option and the on-site quarry options, construction-related traffic from the Proposed Action would not add to the critical movements at the SR-67/San Vicente Avenue intersection, for which other movements are projected to operate at LOS E or F; therefore, this impact would be less than significant.

Threshold 2: Under the off-site quarry option and the on-site quarry options, impacts associated with construction-related traffic on roadway segments in the vicinity of the Proposed Action would be less than significant. Therefore, the Proposed Action would not cause any roadway segment to be reduced to LOS E or F, or increase the volume-to-capacity ratio by 0.02 or more at any roadway segment currently operating at LOS E or F (Volume I, Final EIR/EIS, pages 3.16-13 and 3.16-14).

Threshold 3: Under both the off-site quarry option and the on-site quarry options, the potential delays in emergency vehicle response times due to construction-related traffic associated with the Proposed Action would be less than significant. In addition, the Proposed Action would not require emergency vehicles to use alternate routes during emergency situations (Volume I, Final EIR/EIS, pages 3.16-14 and 3.16-15).

Threshold 4: Under both the off-site quarry option and the on-site quarry options, the Proposed Action would contribute construction-related traffic that could result in a potential for increased risk of motor vehicle accidents and pedestrian injuries along SR-67 in the vicinity of the unsignalized Vigilante Road intersection; therefore, this impact would be significant (**Impact SV/TC 3**) (Volume I, Final EIR/EIS, pages 3.16-15 and 3.16-16).

Finding

The analysis concluded that impacts would be less than significant for Thresholds 2 and 3, and impacts would be significant for Thresholds 1 and 4 (**Impacts SV/TC 1-3**); therefore, mitigation measures are required (see below).

Explanation

Threshold 1: Significantly worsen congestion at any intersection that is currently operating, or is projected to operate at, LOS E or F, by adding two seconds or more to the delays experienced by motorists at intersections

Under both the off-site quarry option and the on-site quarry options, construction-related traffic from the Proposed Action would substantially increase delays at the following intersections that are projected to operate at LOS E or F in Year 2010 without SV 100K:

- SR-67/Vigilante Road (westbound left-turn movement would operate at LOS F during both AM and PM peak hour);
- SR-67/San Vicente Avenue (eastbound movement would operate at LOS F during both AM and PM peak hour, and westbound movement would operate at LOS E during the AM peak hour); and
- SR-67/Willow Road (LOS F during both AM and PM peak hour).

Construction-related traffic from the Proposed Action would not add to the critical movements at the unsignalized SR-67/San Vicente Avenue intersection because haul trucks are not allowed on

this unpaved road. Therefore, under the off-site quarry option and the on-site quarry options, the construction-related traffic congestion impacts at the SR-67/Vigilante Road and SR-67/Willow Road intersections would be significant, and the construction-related traffic congestion impact at the SR-67/San Vicente Avenue intersection would be less than significant.

Threshold 2: Cause any roadway segment to be reduced to LOS E or F, or increase the v/c ratio by 0.02 or more at any roadway segment currently operating at LOS E or F

Under the off-site quarry option and the on-site quarry options, all roadway segments are calculated to operate at LOS D or better with SV 100K construction traffic. Since the Proposed Action would not cause any roadway segment to operate at LOS E or F, or increase the v/c ratio by 0.02 or more at any roadway segment currently operating at LOS E or F, the contribution of construction-related traffic on roadway segments in the vicinity would be less than significant.

Threshold 3: Result in delays in emergency vehicle response times or require emergency vehicles to use alternate routes during emergency situations

The following analysis of potential delays in emergency vehicle response times or rerouting of emergency vehicles due to construction activities associated with the Proposed Action applies to both the off-site quarry option and the on-site quarry options. The addition of slow-moving construction traffic associated with the Proposed Action along SR-67, Vigilante Road, and Moreno Avenue could result in an overall slowing of traffic on these segments. However, all vehicles on the road are required to yield to approaching emergency response vehicles when they are operating sirens and/or flashing emergency lights. Any decreases in travel speeds on vicinity roadways resulting from slow-moving construction traffic associated with the Proposed Action would not cause a delay in emergency vehicle response times. In addition, the Proposed Action would not require emergency vehicles to use alternate routes during emergency situations. Therefore, these impacts would be less than significant.

Threshold 4: Result in construction activities within or adjacent to roadway rights-of-way, thereby creating increased risk of motor vehicle accidents and/or pedestrian injury

The following analysis of potential increased risk of motor vehicle accidents and pedestrian injuries due to construction activities associated with the Proposed Action applies to both the off-site quarry option and the on-site quarry options. According to Caltrans, the portion of SR-67 near San Vicente Reservoir has a high accident rate due to conflicts between cross traffic in the vicinity of the unsignalized Vigilante Road intersection, which is located at the bottom of a steep downgrade, and southbound traffic on SR-67 traveling at high speeds. This situation would be exacerbated during construction associated with the Proposed Action due to the addition of construction-related traffic on SR-67, both north and south of Vigilante Road. Therefore, the potential for increased risk of motor vehicle accidents and pedestrian injuries due to construction-related traffic on this portion of SR-67 would be significant.

Cumulative Impacts

Under both the off-site quarry option and the on-site quarry options, construction-related traffic from the Proposed Action would not add to the critical movements at the SR-67/San Vicente Avenue intersection, for which other movements are projected to operate at LOS E or F; would not cause any roadway segment to operate at LOS E or F; and would not result in delays in emergency vehicle response times, or require emergency vehicles to use alternate routes during emergency situations. Therefore, cumulative impacts due to the Proposed Action for these activities, when combined with the construction-related and operational traffic volumes associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP), and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9) would be less than significant.

Under both the off-site quarry option and the on-site quarry options, the Proposed Action would result in significant project-specific traffic congestion impacts at the SR-67/Vigilante Road intersection (***Impact SV/TC 1C***) and the SR-67/Willow Road intersection (***Impact SV/TC 2C***) during construction, both of which are projected to operate at LOS E or F in Year 2010, by adding two seconds or more to the delays at these intersections. Under both the off-site quarry option and the on-site quarry options, the Proposed Action would contribute construction-related traffic that could result in a potential for increased risk of motor vehicle accidents and pedestrian injuries along SR-67 in the vicinity of the unsignalized Vigilante Road intersection (***Impact SC/TC 3C***). These impacts were determined to be unmitigable for the reasons stated below (refer to discussion under Mitigation Measures). Therefore, the construction-related cumulative traffic impacts of the Proposed Action, when combined with the construction-related and operational traffic volumes associated with the Slaughterhouse Terminal Reservoir (CIP), San Vicente Pipeline (ESP.) and other planned cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be significant for the duration of construction (***Impacts SV/TC 1C, SV/TC 2C, and SV/TC 3C***).

No feasible measures are available to mitigate the cumulative construction traffic impacts of the Proposed Action. A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). These significant cumulative impacts would cease upon completion of construction.

Project Design Features

In addition to the Water Authority General Conditions and Standard Specifications listed in Section 1.9.8 of the Final EIR/EIS (Volume I, pages 1-30 and 1-31), the following project design feature has been incorporated into the Proposed Action to minimize potential traffic/circulation impacts:

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.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design feature would reduce potential impacts of the Proposed Action on traffic and circulation, but not to less than significant levels. The significant construction-related traffic congestion impacts at the SR-67/Vigilante Road intersection (*Impact SV/TC 1*) and at the SR-67/Willow Road intersection (*Impact SV/TC 2*) due to the Proposed Action, under both the off-site quarry option and the on-site quarry options, could be avoided by prohibiting haul trucks and crew vehicles from accessing the construction site during both AM and PM peak hours. However, this is not a feasible mitigation measure because hauling, materials deliveries, and crew access must occur on a continuous basis to support the 24 hours per day, 7 days per week operations associated with RCC dam construction. Several additional mitigation scenarios were examined specific to each intersection; however, as explained below, none were determined to be feasible or practicable.

SR-67/Vigilante Road

Under both the off-site quarry option and the on-site quarry options, the significant construction-related traffic congestion impact at the SR-67/Vigilante Road intersection (*Impact SV/TC 1*) could be mitigated by installing a traffic signal and extending the southbound left-turn pocket on SR-67 by 150 feet. However, based on discussions with Caltrans staff, the agency would not likely support the installation of a traffic signal at this intersection. Therefore, this measure is not considered feasible.

Additional mitigation scenarios for this intersection were considered, such as rerouting truck and crew traffic to the SR-67/Willow Road intersection; however, this would substantially increase trip lengths and result in delays for haul trucks traveling southbound on SR-67 from locations north of the site. As such, there are no other feasible measures to mitigate the significant construction-related traffic congestion impact at the SR-67/Vigilante Road intersection (*Impact SV/TC 1*) due to the high volume of daily haul trucks estimated throughout the construction period. Therefore, the construction-related traffic congestion impact at this intersection under both the off-site quarry option and on-site quarry options would be significant and unmitigable.

SR-67/Willow Road

Under both the off-site quarry option and the on-site quarry options, the significant construction-related traffic congestion impact at the SR-67/Willow Road intersection (*Impact SV/TC 2*) could be mitigated via signal retiming, lane reconfigurations or “fair-share” funding of unidentified improvements. Retiming the signals at this intersection is not a viable mitigation scenario because substantial delays already exist for all movements, and it is important to minimize congestion on the SR-67 through movements.

Lane reconfigurations, additions and widening were considered for the SR-67 southbound approach to allow adequate capacity and “green” signal time for trucks making left turns.

However, the narrow right-of-way in this area precludes such improvements; a cut slope exists on the west side, and a convenience store is located on the east side of SR-67 at this intersection. Another mitigation scenario involves the addition of a Left Turn Only lane on the westbound Willow Road approach. There appears to be sufficient right-of-way on the south side of Willow Road to accommodate an additional left-turn lane. A dedicated left-turn lane on the westbound Willow Road approach would decrease the overall “green” signal time needed to serve Willow Road, which, in turn, would allow for an increase in “green” signal time for southbound SR-67 movements. Although this mitigation scenario was identified as the most feasible to implement at this intersection, it is not considered practicable given that this significant traffic impact from the Proposed Action would only occur during the construction period, and the Proposed Action would not have any impact at this intersection after completion of construction.

Contributing a “fair-share” payment to Caltrans towards the future improvement at this intersection was also considered as a possible mitigation scenario. However, Caltrans does not have a mechanism to accept a “fair-share” contribution, and therefore, this scenario was also rejected. There are no other feasible measures to mitigate this impact. Therefore, the construction-related traffic congestion impacts at the SR-67/Willow Road intersection, under both the off-site quarry option and the on-site quarry options, would be significant and unmitigable.

The potential for increased risk of motor vehicle accidents and pedestrian injuries on SR-67 due to the addition of construction-related traffic from the Proposed Action (*Impact SV/TC 3*), under both the off-site quarry option and the on-site quarry options, could be mitigated by installing a traffic signal at SR-67/Vigilante Road intersection and extending the southbound left turn pocket on SR-67 by 150 feet. However, as stated above, Caltrans has indicated they would not support the installation of a traffic signal at this intersection. The Water Authority will coordinate with Caltrans to identify other measures to slow traffic on this segment of SR-67, such as installing rumble strips or flashing signs to warn of slow trucks making left turns at this intersection, but there are no feasible measures to completely mitigate this impact. Therefore, the construction-related traffic safety impacts of the Proposed Action would be significant and unmitigable, under both the off-site quarry option and the on-site quarry options.

Residual Impacts after Mitigation

Under both the off-site quarry option and on-site quarry options, the significant impacts associated with construction-related traffic congestion at the SR-67/Vigilante Road intersection (*Impact SV/TC 1*) and SR-67/Willow Road intersection (*Impact SV/TC 2*), and the significant impact associated with an increased risk of accidents on SR-67 due to construction-related traffic from the Proposed Action (*Impact SV/TC 3*), would be unmitigable because all mitigation scenarios analyzed were determined to be infeasible or not practicable.

A Statement of Overriding Considerations is required for the Proposed Action (refer to Section 11.0 of these Findings). Significant traffic/circulation impacts would cease upon the completion of construction.

9.15 Water Resources

Thresholds of Significance

Thresholds used to evaluate potential impacts on water resources are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact on water resources would occur if the Proposed Action would:

1. Violate any water quality standards or waste discharge requirements.
2. Substantially alter the existing drainage pattern of the site or area, in a manner that would result in substantial erosion or siltation on or off site.
3. Substantially alter the existing drainage pattern of the site or area, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.
4. Place structures within a 100-year flood hazard area, which would impede or redirect flood flows.

Source: Volume I, Final EIR/EIS, pages 3.17-9 and 3.17-10.

Impact

Threshold 1: Implementation of project design features listed below would reduce impacts due to downstream water quality degradation during construction and reservoir operations to less than significant levels; therefore, the Proposed Action would not violate any water quality standards or waste discharge requirements (Volume I, Final EIR/EIS, pages 3.17-10 and 3.17-16).

Threshold 2: The Proposed Action would not substantially alter the existing drainage patterns on site; therefore, impacts associated with erosion or siltation on or off site would be less than significant (Volume I, Final EIR/EIS, pages 3.17-16 and 3.17-18).

Threshold 3: The Proposed Action would not substantially alter the existing drainage patterns on site nor would it increase the rate or amount of surface runoff; therefore, impacts associated with flooding on or off site would be less than significant (Volume I, Final EIR/EIS, page 3.17-18).

Threshold 4: The Proposed Action would not place structures within a 100-year flood hazard area, which would otherwise impede or redirect flood flows (Volume I, Final EIR/EIS, page 3.17-18); therefore, this issue is not addressed in these Findings.

Finding

The analysis concluded that impacts would be less than significant for Thresholds 1, 2, and 3; therefore, no mitigation measures are required.

Explanation

Threshold 1: Violate any water quality standards or waste discharge requirements

The San Vicente Reservoir drawdown and refilling phases associated with the Proposed Action could change water quality; this may affect the suitability of water in the reservoir to meet water quality objectives and protect beneficial uses. Drawdown would result in a proportionally larger surface layer of warm water (epilimnion) because the total volume of water in the reservoir would be less. During dam raise construction, when water volume is reduced through drawdown, higher water temperatures may occur. Deep water would still be common at the reservoir during the drawdown period because of the steep slopes, and water temperatures in these deeper layers are not expected to increase substantially. Also during drawdown, destratification (mixing) in the reservoir could occur earlier in the year and last longer than it currently does because of the smaller water volume. However, these impacts would be temporary and only occur during drawdown and refilling periods. Therefore, water quality impacts on aquatic life due to stratification modification would be less than significant.

The expanded reservoir (once filled) would result in a greater thermal mass and have a larger hypolimnion (deeper, colder water layer), which would result in destratification later in the year because more heat must be lost from the epilimnion and thermocline before temperatures equalize throughout the water column. Natural turnover might not occur on a yearly basis and the hypolimnion could have higher nutrient concentrations during stratification than it currently does. With a reduced frequency of natural turnover, nutrients could accumulate in the hypolimnion over longer periods. To counteract these effects, water management practices at the expanded reservoir would involve average annual turnover to meet the Total Dissolved Solids (TDS) goal. These operation plans would maintain water quality within historical levels. Therefore, water quality impacts on aquatic life due to stratification changes of the expanded reservoir would be less than significant.

Dissolved Oxygen (DO) concentrations indicate the amount of oxygen available to aquatic organisms. Low concentrations may inhibit growth and cause die-off of organisms. Hydrogen sulfide, a by-product of bacterial decomposition, is formed under anaerobic conditions and can adversely affect the growth and survival of aquatic organisms. In a stratified reservoir, the deeper water may no longer support aquatic organisms because of low oxygen and high hydrogen sulfide concentrations. During construction activities associated with the Proposed Action, occurrences and duration of low DO and high hydrogen sulfide concentrations would decrease at the reservoir because the volume of the hypolimnion would be relatively smaller during drawdown conditions. Therefore, water quality impacts due to a decrease in DO levels during drawdown of the reservoir would be less than significant.

When the reservoir is expanded to the larger storage volume, occurrences and duration of low DO and high hydrogen sulfide concentrations could increase because the hypolimnion would be larger. To counteract these effects, water management practices at the expanded reservoir would involve average annual turnover to meet the TDS goal. These operation plans would maintain water quality within historical levels. Decomposing vegetation also contributes to a decline in

DO levels because oxygen is consumed during decomposition. The Proposed Action would substantially increase the volume of water in the expanded reservoir, which would dilute the water quality impacts associated with low DO levels resulting from decaying vegetation. With the expanded water volume, and the dilution and mixing effects from reservoir turnover to meet the TDS goal, low DO levels are not expected to persist in the reservoir. Therefore, water quality impacts due to a decrease in DO levels in the expanded reservoir during operation would be less than significant.

Total Organic Carbon (TOC) is a measure of natural organic compounds in the water, and occurs as a result of decomposition of organic materials. Water transported out of the reservoir for treatment and delivery to water supply customers would have the potential to have an elevated amount of TOC. During refilling of the expanded reservoir, inundation of vegetation that may become established above approximately 590 feet AMSL during dam raise construction is not expected to result in a substantial increase in TOC levels due to the dilution effects related to the increased reservoir volume. In addition, water delivered to the reservoir is expected to have a low level of TOCs, and normal operation of the reservoir is not expected to increase TOC levels. Therefore, refilling and operation of the expanded reservoir would not result in increased TOCs, and water quality impacts would be less than significant.

Increased metals concentrations have been associated with sediment mobilization. Metals that have been bound to anaerobic sediments and rendered harmless may be released and changed to a toxic state in an oxidative environment. Depending on water levels, stratification and discharge regimes within the operating reservoir, metals that may be carried into the reservoir in runoff from the watershed may settle into submerged sediments below the water level. Drawdown and construction activities at the reservoir could mobilize sediments and cause an increase in metals concentrations in the overlying water. When the inundation area is kept exposed during drawdown and then re-flooded, metals that have been bound to anaerobic sediments could be released into the water. Exposure of these submerged sediments to the air would oxidize these and other pollutants and may cause their release into the environment. However, it is unlikely that substantial amounts of metals exist in these reservoir sediments. Therefore, water quality impacts due to mobilization of metals in the reservoir sediments during drawdown and refilling of the reservoir and during construction activities associated with the Proposed Action would be less than significant.

The Proposed Action would substantially increase the volume of water in the expanded reservoir. With the expanded water volume and the dilution and mixing effects from reservoir turnover to meet the TDS goal, metals released from mobilized sediments are not expected to persist at concentrations that would significantly affect the water quality in the reservoir. Therefore, water quality impacts due to mobilization of metals in the reservoir sediments during operation of the expanded reservoir would be less than significant.

Algal blooms occur during turnover of warmer near-surface water with colder water in the hypolimnion, which could cause the release of nutrients (eutrophication). Drawdown of the reservoir could result in an increase in the frequency and density of algal blooms. The release of nutrients during drawdown could result in increased occurrences of nuisance odors and

decreased levels of DO in the water. However, any potential nuisance odors would be temporary. In addition, as stated above, occurrences and duration of low DO levels would decrease because the volume of the hypolimnion would be relatively smaller during drawdown conditions, and aquatic organism populations are not expected to be affected. Therefore, water quality impacts due to an increased frequency of algal blooms during drawdown of the reservoir would be less than significant.

Filling of the reservoir could result in an initial reduction of algae because of dilution; however, leaching of nutrients from previously exposed sediments could provide enough nutrients to sustain algal populations. The water quality of a newly filled reservoir may initially be poor depending on materials leached from the soil, the quality of imported water, runoff, and rainfall. In the long term, water quality in the reservoir is expected to return to historical levels. The expanded reservoir would be deep enough such that eutrophication would not cause an increase in water quality problems. Therefore, water quality impacts due to an increased frequency of algal blooms during operation of the expanded reservoir would be less than significant.

During operations, a long storage time for reservoir water would tend to degrade water quality, mainly because of evaporation (when water evaporates, salts are left behind, thereby increasing TDS in the remaining water). To reduce these potential effects, annual operations as part of the Reservoir Regulating Plan will consider the need to maintain acceptable water quality levels in the reservoir. In addition, a reservoir operating plan will be developed for construction activities associated with the Proposed Action, and this plan will address water quality issues associated with reservoir drawdown. A water quality assessment will be performed for the reservoir drawdown condition as part of the construction phase reservoir operating plan. Therefore, beneficial uses at the reservoir would not be impaired in the long term, and water quality impacts due to water management practices associated with operation of the expanded reservoir would be less than significant.

Dewatering would likely be required during construction activities associated with the Proposed Action, including dam foundations and tunnel and trench pipelines. The quantity and quality of groundwater that would be removed and discharged would be determined during final design. Improper disposal of groundwater could cause impacts on downstream water quality. Grading and excavation activities associated with components constructed within or adjacent to drainage channels may alter the water quality of dry-weather downstream flows. Scour and erosion along the stream banks could occur if velocities of downstream flows are increased. As a result, downstream water flows could carry more sediment. In addition, disturbance of soils during construction, grading, quarry operations, and other earthwork would render previously vegetated areas susceptible to increased erosion. Increased sediment production resulting from construction of the raised dam, bypass pipeline, relocated marina, and other components of the Proposed Action may have the potential to cause effects that include the following:

- Sheet and rill erosion and associated deposition may cause undesirable changes in graded areas.
- Deposition of coarse-grained sediments may reduce flow capacity or completely plug natural or man-made channels, possible resulting in downstream flooding.

- Deposition of sediment in downstream drainages may cause ecological changes, affecting species composition and population densities. Sediment transported by runoff can gradually fill in adjacent drainages, some of which contain sensitive habitats such as freshwater marsh, and may smother other riparian habitats. However, some sediment deposition is required in high quality riparian habitats.
- Grading in the relocated marina area and potential quarry operations in this area may cause erosion and subsequent transport of sediment into the reservoir.
- BMPs implemented as part of the Proposed Action (see project design features listed below) would prevent improper disposal of groundwater dewatering and would prevent downstream scour, erosion, and sedimentation from grading and excavation activities associated with the Proposed Action. No downstream water quality violations are anticipated with the Proposed Action. Therefore, impacts on downstream water quality due to construction activities associated with the Proposed Action would be less than significant.

The reservoir has spilled five times since it was constructed in 1943. The sources of water for the reservoir are imported supplies, rainfall and runoff, which results in a mixture of water flowing downstream during infrequent spillover events. The expanded reservoir would be operated in a similar manner, and the resulting increase in storage capacity would produce 46 percent less flood flow than the existing reservoir. As a result, water would still only flow over the spillway and into lower San Vicente Creek during very large and prolonged storm events and would continue to consist of a mixture of imported water, rainfall and runoff. Therefore, the quality of water flowing downstream in San Vicente Creek is not expected to change under the Proposed Action, and any impacts on downstream water quality due to operation of the expanded reservoir would be less than significant.

The total sediment that would enter the reservoir over a lifespan of 100 years was estimated to be approximately 4,800 AF. The Proposed Action would not change the amount of sediment that enters the reservoir from its 74-square-mile watershed. Provisions will be included in the dam design to accommodate the accumulation of sediment in the reservoir without impairing the functionality of the outlet works. Therefore, sedimentation impacts within the reservoir, and downstream of the dam due to operation of the expanded reservoir, would be less than significant.

As with the ESP, the Helix Water District could receive water deliveries from Water Authority storage in the reservoir via the Moreno-Lakeside Pipeline and San Vicente Pumping Facilities. Use of reservoir water may cause some change in the quality of delivered water to Helix at times; however, the Proposed Action is not expected to result in a substantial change in water quality over the baseline established by the ESP. Therefore, impacts on the quality of water delivered from the reservoir to the Helix Water District during operation of the expanded reservoir would be less than significant.

Raising the reservoir water surface elevation would increase the downward hydraulic gradient beneath the reservoir, which could increase seepage into the bedrock aquifer below the site. The seepage water would consist primarily of imported water (mixed with runoff). Given that the

reservoir receives imported water, the enhanced recharge would not result in any substantial change in groundwater quality. Therefore, impacts on groundwater quality during operation of the expanded reservoir would be less than significant.

The result of the increased seepage or recharge would be a localized “mounding” effect superimposed on the groundwater table in the immediate vicinity of the reservoir. Because there are no known areas of contaminated soils or buried waste in the immediate area outside the reservoir, rising groundwater levels would not have an adverse impact on groundwater quality. Therefore, groundwater quality impacts due to localized groundwater mounding below the expanded reservoir would be less than significant.

Threshold 2: Substantially alter the existing drainage pattern of the site or area, in a manner that would result in substantial erosion or siltation on or off site

During construction of the expanded dam and associated outlet works, the storage volume in San Vicente Reservoir would be decreased to approximately 35,600 AF. As such, the potential for downstream flows and siltation from flooding would be reduced during this time period. BMPs implemented as part of the Proposed Action (see project design features listed below) would prevent excavation and grading activities associated with the Proposed Action (e.g., dam construction zone, bypass pipeline, relocated marina) from changing on-site flows and causing siltation. The City of San Diego does not release water downstream; water only flows over the spillway and into lower San Vicente Creek when the reservoir water levels exceed the spillway elevation (i.e., when the reservoir is full and there is significant natural inflow, as during a large storm event). The expanded reservoir would continue to be operated to conserve water supply and avoid spills, and future operations are expected to further reduce the potential for spills. There would be no increase in downstream flows in San Vicente Creek compared to existing operations, and no increase in the potential for siltation resulting from changed flows, as the normal reservoir operations currently do not release water downstream of the dam. Therefore, downstream erosion and siltation impacts due to operation of the expanded reservoir would be less than significant.

Minimum stream flows that support biological communities and recharge groundwater downstream of the dam are derived from seasonal rainfall and runoff, not from releases or spills from the reservoir. Inundating an additional 584 acres upstream of the dam as a result of the Proposed Action would not decrease recharge to the downstream alluvial aquifer. In addition, the Proposed Action would not cause a lowering of the groundwater table in the area, so downstream groundwater flow would not be affected. As a project design feature (see below), monitoring of downstream wells would be conducted to ensure the Proposed Action does not impede downstream groundwater flows during and after construction. Therefore, surface and ground water flow impacts due to construction activities associated with the Proposed Action and operation of the expanded reservoir would be less than significant.

Threshold 3: Substantially alter the existing drainage pattern of the site or area, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site

As noted in Thresholds 1 and 2 above, the City of San Diego does not release water downstream from San Vicente Reservoir, although water has spilled five times in the last 60 years. The proposed dam raise would create additional reservoir storage volume and increased storm flow detention, ultimately reducing the 100-year storm flow rate by 46 percent. As a result, the raised dam and expanded reservoir would not cause increased flooding downstream; therefore, impacts of the Proposed Action would be less than significant.

The relocated marina would be larger than the existing marina, and provide more paved areas, which would increase runoff. However, flows would be routed to grassy swales or storm drainage facilities, with appropriate water quality protection devices, prior to discharge into the reservoir. There would be no downstream flooding due to storm runoff from the relocated/expanded marina; therefore, impacts of the Proposed Action would be less than significant.

Cumulative Impacts

The Proposed Action would not violate any water quality standards or waste discharge requirements; substantially alter existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on or off site, or substantially increase the rate or amount of runoff in a manner that would result in flooding on or off site; or place structures within a 100-year flood hazard area, which would impede or redirect flood flow. The Proposed Action would implement the project design features listed below to reduce water resources impacts to less than significant levels. Therefore, short-term (construction related), and long-term (operational), cumulative water resources impacts due to the Proposed Action, when combined with water resources impacts of the Slaughterhouse Terminal Reservoir (CIP) project and the ESP projects associated with the San Vicente Reservoir and other cumulative projects listed in Table 3.2-1 of the Final EIR/EIS (Volume I, pages 3.2-6 through 3.2-9), would be less than significant.

Project Design Features

In addition to the Water Authority General Conditions and Standard Specifications listed in Section 1.9.9 of the Final EIR/EIS (Volume I, pages 1-31 and 1-32), the following project design features have been incorporated into the Proposed Action to minimize potential water resources impacts:

Design Feature 1 A SWPPP will be implemented to reduce or eliminate pollutants during Proposed Action construction. 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. 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:

- 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 hazardous materials storage.
- 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 (SWSAS) program pursuant to regulatory guidelines.

Design Feature 2

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:

- 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.

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.

Mitigation Measures

Implementation of the Water Authority General Conditions and Standard Specifications and the project design features would reduce potential water resources impacts to less than significant levels; therefore, no mitigation measures are required.

Residual Impacts after Mitigation

No residual impacts would occur.

9.16 Growth Inducement

The Water Authority has historically relied on SANDAG's Regional Growth Forecast (RGF) to help it determine regional water supply requirements. Because the Water Authority does not have any land use approval authority, it can neither directly cause nor prevent growth. How and where development occurs in the Water Authority's service area is dictated by the local land use agencies through their approval authority. While lack of water is one of a number of potential barriers to the growth of an area, it is not a substantial barrier to growth within the Water Authority's service area because member agencies have always met the needs of the customers in their service areas, and have always expected the Water Authority, as the region's water wholesaler, to find the supplies to meet their needs. Member agencies have submitted their anticipated future water demands to the Water Authority and the Water Authority has responded through the implementation of CIP projects to increase water delivery and storage capacity.

The Master Plan PEIR concluded that implementation of the CIP projects would not result in direct growth-inducing effects, but could help remove an obstacle to future growth through the provision of additional water supplies. The CSP is a water storage project and not a "water supply" project; nevertheless, the "drought protection" aspects of CSP would remove an obstacle to future growth, but only to a limited extent. The CSP alone is not expected to fully alleviate the effects of multiple dry-year demand scenarios. Rather, the CSP, in combination with other water supply options, must be considered by the Water Authority to offset the effects of prolonged droughts in the region.

In terms of removing other obstacles to future growth, the CSP would not extend water service to any areas and would not remove an existing barrier to growth in any area of the county. Any future development projects within the county would be subject to review and approval by various jurisdictions with land use authority. Therefore, no direct relationship between the CSP and future growth has been established, and the CSP would not result in direct growth-inducing impacts.

Over a five-year construction period, the Proposed Action would generate an estimated 640 annual construction jobs. However, the majority of the construction labor pool for these jobs would be generated from areas throughout San Diego County, with the remainder originating from southern Riverside County. Due to a wide geographic variability in the county-wide construction sectors (e.g., residential, commercial, public works), the construction labor pool for the Proposed Action would not necessarily originate locally. Overall, there would be no net impact on potential residential construction in the vicinity of San Vicente Reservoir to house these workers. Therefore, there are no indirect growth inducement impacts (i.e., potential for construction of additional housing) from the Proposed Action.

Source: Volume I, Final EIR/EIS, Chapter 8, page 8-1.

9.17 Socioeconomics/Environmental Justice

The local community impact area for the Proposed Action includes the communities of Lakeside, Poway, Ramona, and Santee. The combined total of approximately 30 privately owned parcels surrounding San Vicente Reservoir that could be affected by potential full-takes and part-takes due to septic system setbacks could result in 890 acres being removed from the property tax roll. This could result in an estimated direct loss of \$42,146 in annual property tax. The potential loss of approximately \$42,000 in annual property tax due to the Proposed Action would represent a miniscule portion of the nearly \$3.6 billion in county-wide property tax assessment.

The Proposed Action would generate a net increase in retail sales tax revenue within the local community impact area, although this increase would represent an insignificant percentage of taxable retail sales within the region. Nevertheless, no net loss of retail sales tax revenue would result from the Proposed Action.

No business relocations or loss of employment for the community are expected during construction of the Proposed Action, and access would be maintained for all businesses located within the local community impact area. Because the dust and noise impacts would cease upon completion of construction, the Proposed Action would not result in long-term reduction in property values for homes within the local community impact area. Instead, positive economic impacts may be derived from potentially higher residential and commercial property values within the local community impact area due to the larger reservoir and marina and the associated increased recreational opportunities. In addition, the regional economy would benefit from the incomes generated by a major construction project, and this would indirectly benefit regional assessed values through the increase of county-wide sales.

The \$125 million per year in total economic output generated by the five-year construction project would represent an insignificant portion of the \$161 billion county-wide economy. Furthermore, the direct construction sales impact of \$70 million per year (i.e., \$350 million divided by 5 years) and the 640 annual direct construction jobs would represent an insignificant portion of the \$15 billion in annual sales for the San Diego construction sector and its 118,000 employees.

Closure of the reservoir during dam raise construction would result in a revenue reduction of \$840,000 per year. It is expected that some proportion of this amount would be spent at other recreational sites in the region. In comparison, upon completion of the Proposed Action, the relocated and expanded marina would provide greater recreational opportunities for County residents.

All federal agencies and departments are directed to comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Population*, signed on February 11, 1994. Due to the small number of potentially displaced homes as a result of the septic system setbacks (seven single-family residences would be lost to full-takes), the affected community would not disproportionately represent a low-income or minority population. The Proposed Action would not result in impacts due to cultural interpretations or affiliations for residents of the local community impact area. In general, the Proposed Action would be beneficial to residents within the local community impact area and the county-wide region. These benefits include regional economic protection from potential drought conditions and enhanced recreational opportunities of an expanded reservoir and marina facilities.

Source: Volume I, Final EIR/EIS, Chapter 8, page 8-7.

9.18 Energy Use

Diesel fuel consumption for the off-site quarry option (19.7 million gallons) would be greater than for the on-site quarry options (17.4 million gallons); however, both options would be less than 5 percent of the annual regional demand. Therefore, impacts of the Proposed Action in terms of requiring additional capacity or infrastructure demands for energy utility services (that could not be supplied by existing utility service providers) associated with fossil fuel consumption during construction activities would be less than significant.

Annual electrical consumption for the Proposed Action would be associated with normal and emergency operations of the expanded reservoir. Ongoing construction of new conveyance facilities by the Water Authority (separate from the CSP) will increase the ability to add and withdraw water into/from the reservoir. These conveyance facilities include the San Vicente Pipeline, San Vicente Pump Station, and Surge Control Facility. Additional conveyance facilities as part of the Proposed Action include new outlet works for the raised dam and interconnection pipelines downstream of the dam. Under normal operations, water would enter the reservoir by precipitation or by deliveries from the Water Authority's First Aqueduct and Second Aqueduct (via the San Vicente Pipeline). Water would be withdrawn from the reservoir by the San Vicente Pipeline/Pump Station system (via the San Diego Pipelines 1 and 2 which convey the water to

the City's Alvarado Water Treatment Plant via the El Monte Pipeline). Normal operation of the expanded reservoir would include withdrawal of water from the carryover storage pool during years of below-normal availability of imported water and replenishment of the carryover storage pool during periods of above-normal availability of imported water.

Under emergency operations, such as a dam breach, the outlet works of the raised dam would include provisions to discharge reservoir water to the streambed downstream of the dam, if necessary. Electrical energy use would be required to provide power to gatekeeper's facilities and for operation of valves and gates associated with the outlet works. Estimates of electrical energy use under emergency operations were based on energy requirements to operate the lowest-level outlet gate at full normal reservoir head. Gates were assumed to be operated for 40 hours per year.

Pumps are used to withdraw water from the reservoir into the Water Authority's distribution facilities (during both normal and emergency operations). The estimated annual electrical consumption for operation of the Proposed Action would be less than 3.4 percent of the regional electrical energy demand in the year 2010. Therefore, impacts of the Proposed Action in terms of requiring additional capacity or infrastructure demands for energy utility services (that could not be supplied by existing utility service providers) associated with electrical consumption during operation of the expanded reservoir would be less than significant.

Source: Volume I, Final EIR/EIS, Chapter 8, page 8-43.

9.19 Global Climate Change

On September 27, 2006, Governor Arnold Schwarzenegger signed Assembly Bill 32 (AB 32) into law, which requires the state to develop guidelines or standards to assess the potential environmental impacts associated with a project's contribution to global climate change and greenhouse gas emissions. The reference gas for global warming is carbon dioxide; other greenhouse gases include methane, nitrous oxide, and assorted fluorocarbons. Global climate change is a cumulative impact; an individual project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases. In the case of the Proposed Action, the contribution to the cumulative impact would come from potential release of carbon dioxide, methane, and other gases from the decay of organic material submerged in San Vicente Reservoir; releases due to fluctuating reservoir levels; and emissions associated with construction of the dam raise. To determine whether the Proposed Action would have a significant impact associated with global climate change, in light of the fact that no numerical thresholds exists for such an impact, would be too speculative. For this reason, a determination of significance cannot be made. It should be noted, however, that the Proposed Action, in mitigating for traffic, air, and other impacts, will help reduce the contribution to any potential cumulative impacts on global climate change.

Source: Volume I, Final EIR/EIS, Chapter 8, page 8-51.

10.0 Project Alternatives

Where a lead agency has determined that, even with the adoption of all feasible mitigation measures, a proposed project would still cause one or more significant environmental impacts that cannot be substantially lessened or avoided, the agency, prior to approving the project as mitigated, must first determine whether, with respect to such impacts, there remain any project alternatives that are both environmentally superior and feasible within the meaning of CEQA. An alternative may be “infeasible” if it fails to fully promote the lead agency’s underlying goals and objectives with respect to the project. Thus, “‘feasibility’ under CEQA encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors” of a project (*City of Del Mar, supra*, 133 Cal.App.3rd at p. 417; see also *Sequoyah Hills, supra*, 23 Cal.App.4th at p. 715).

Thus, the Water Authority can fully satisfy its CEQA obligations by determining whether any alternatives identified in the Final EIR/EIS for the CSP are both feasible and environmentally superior with respect to the significant unavoidable adverse impacts of the Proposed Action (*Laurel Hills, supra*, 83 Cal.App.3d at pp. 519-527; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 730-731; *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376, 400-403).

Alternatives to the Proposed Action are described in Chapters 2 and 6 in Volume I of the Final EIR/EIS. Section 2.1 of the Final EIR/EIS (Volume I, pages 2-1 through 2-16) describes the numerous alternatives and screening process leading to identification of the Proposed Action and two primary alternatives as requiring detailed analysis in the Final EIR/EIS. As stated in Section 1.0 (Introduction) of these Findings, two alternatives were evaluated as feasible and compared to the Proposed Action: (1) construction of a new dam and 100,000 AF reservoir in Moosa Canyon in the Valley Center area; and (2) a 50,000-AF dam raise at San Vicente Reservoir combined with a new dam and 50,000-AF reservoir in Moosa Canyon. These alternatives were fully evaluated in Volume I of the Final EIR/EIS, but were rejected as being environmentally inferior to the Proposed Action. In addition, two No Project Alternatives were evaluated and rejected as not meeting project objectives (refer to Section 3.3 of these Findings). The alternatives addressed in the Final EIR/EIS are summarized below.

10.1 Alternatives Considered But Rejected

Sections 2.1 and 2.6 of the Final EIR/EIS (Volume I) summarize information presented in a report entitled *Screening of Alternatives* (GEI 2007), referred to herein as the “*Screening Report*”, which describes an intensive screening process that was undertaken to identify those alternatives warranting closer examination in the Final EIR/EIS, in comparison to the Proposed Action. Tables 2.1-1 through 2.1-4 in the Final EIR/EIS (Volume I, pages 2-9, 2-11, 2-13, and 2-14) present the various screening phases and alternatives that were considered at each phase. In addition to the No Federal Action Alternative described in Section 10.3 of these Findings, the alternatives that did not reach and ultimately pass the fine screening phase for detailed evaluation in the Final EIR/EIS were considered but rejected on the basis of defined screening criteria. For a

complete list of alternatives that were screened out through this process, refer to columns 1 through 8 on Table 2.1-1, and Tables 2.1-2 and 2.1-4. The specific screening criteria for each phase are described in Section 2.6 of the Final EIR/EIS.

The purpose of initial screening was to identify storage options, or building blocks, that could be used to meet all or a portion of the 100,000 AF carryover storage need. These building blocks consisted of new/expanded surface reservoirs, reoperation of existing local reservoir storage, and local groundwater basins. Options that were considered speculative, such as out-of-region groundwater basin storage, were not used in the compilation of alternatives. The storage options listed in the initial screening phase were used to compile 28 carryover storage alternatives (see Tables 2.1-2 and 2.1-3 of the Final EIR/EIS).

The 28 alternatives were grouped into two main categories. The first category consists of stand-alone alternatives, wherein the 100,000 AF of carryover storage is provided either by a single new/expanded reservoir, entirely by reoperation of existing reservoirs, or entirely by groundwater basins. The second category consists of combinations of new/expanded reservoirs, reoperation of existing reservoirs, and groundwater basins to meet the 100,000 AF of carryover storage need.

The goal of coarse screening was to eliminate from further consideration those alternatives compiled during the initial screening phase that were found not to be practicable due to logistics and existing technology criteria, as defined under Section 404(b)(1) Guidelines. The coarse screening process resulted in 11 of the 28 alternatives being carried forward into fine screening (see Table 2.1-4 of the Final EIR/EIS).

Although 11 alternatives were carried forward into the fine screening process, not every one of them is necessarily “practicable.” This is because cost, one of the three criteria that define practicability in the Section 404(b)(1) Guidelines, was not part of the coarse screening process as advised by U.S. Environmental Protection Agency (EPA) representatives during a November 15, 2005 pre-consultation meeting. Otherwise, including the cost criteria in the coarse screening process would result in only the San Vicente Reservoir expansion (additional 100,000 AF beyond the ESP raise) being carried forward into fine screening. This is because the remaining 27 alternatives would be over four times the cost of the San Vicente Reservoir expansion and would be economically infeasible to implement unless the Water Authority’s Board approves additional water rate fees to increase the CSP budget. Rather, cost considerations were evaluated as part of the fine screening process, along with environmental and social concerns.

The goal of fine screening was to objectively rank the alternatives that passed the coarse screening process, forming the basis for deciding on which alternatives to carry forward for detailed analysis in the Final EIR/EIS. The screening was developed based on a consensus approach that established the following overall goals: (1) Minimize Environmental Impacts; (2) Minimize Social Impacts; (3) Maximize Implementability; and (4) Minimize Cost. A computer model was developed to perform the fine screening calculations and sensitivity analyses, and to allow results to be displayed in summary tables and figures. The model was presented in a computer

spreadsheet format to allow scores for the alternatives to be readily computed and compared, and to allow graphical presentation of the data and results.

The fine screening process resulted in three out of the four highest-scoring alternatives that passed coarse screening being carried forward into the Final EIR/EIS for detailed analysis. The alternative that considered reoperation of Loveland Reservoir (10,000 AF) combined with an expansion of San Vicente Reservoir (90,000 AF) was eliminated as the least practical of the four alternatives that passed fine screening. This is because the costs and environmental impacts associated with constructing a pipeline between San Vicente and Loveland Reservoirs to convey the additional 10,000 AF of carryover storage water would far surpass any minor benefit that might be derived from reducing the expansion of San Vicente Reservoir from 100,000 AF to 90,000 AF. The remaining alternatives were:

- Alternative 1: San Vicente 100,000 AF (Proposed Action)
- Alternative 2: Moosa 100,000 AF (Moosa 100K)
- Alternative 3: San Vicente 50,000 AF + Moosa 50,000 AF (SV 50K/Moosa 50K)

Source: Volume 1, Final EIR/EIS, Chapter 2.

10.2 No Action Alternative

Under this alternative, the Proposed Action and Alternatives 2 and 3 would not be implemented. Because the ESP has previously been approved and permitted, the No Action Alternative would still include a raise of San Vicente Dam by 54 feet and expansion of San Vicente Reservoir to accommodate 52,100 AF of useable emergency storage capacity. Refer to Chapter 4.0 (Background) of these Findings for a description of the ESP and the EIR/EIS certified in 1996.

The San Vicente Dam raise was addressed in three of the four alternatives evaluated in the ESP EIR/EIS, including the Olivenhain/Hodges/San Vicente Alternative, which was determined to be the environmentally superior alternative and was approved and permitted as the Proposed Action under the ESP. In addition to impacts associated with the San Vicente Dam raise portion of the Olivenhain/Hodges/San Vicente Alternative, the ESP EIR/EIS addressed impacts associated with a new dam and reservoir at Olivenhain, re-operation of Lake Hodges, and associated pipelines and pump stations at all three locations. It is necessary to separate the significant impacts anticipated due to the action of raising San Vicente Dam and expanding San Vicente Reservoir by itself (rather than considering the entire Proposed Action under the ESP), because the No Action Alternative for the CSP would involve implementation of only the ESP dam and reservoir expansion at San Vicente Reservoir.

Table 6.1-1 of the CSP Final EIR/EIS (Volume I, pages 3-3 through 3-6) summarizes the findings of the ESP EIR/EIS with respect to the impacts and mitigation measures associated with only the San Vicente Dam raise (and reservoir expansion) portion of the ESP. Impacts were determined to be significant and mitigation measures were proposed for most environmental issues examined, except public utilities/services. Air quality impacts were determined to be significant and unmitigable until the completion of construction.

ESP is functionally different from CSP, and even if it is built, without the carryover storage capacity provided by the Proposed Action or Alternatives 2 and 3, the regional water storage reliability would be significantly reduced. The lack of locally stored water for use during extended peak demands or prolonged droughts could cause real economic harm to the region. Additional quantities of water would need to be purchased from MWD or the IID at higher rates, driving up electrical demand for pumping facilities and water delivery costs. This assumes there would be surplus water available for delivery during a prolonged drought, and excess capacity in the Water Authority's Aqueducts to convey the additional deliveries of water.

If MWD member agencies were to also require additional water deliveries due to a prolonged drought, and Section 135 of the Metropolitan Act were invoked, the Water Authority could experience severe cutbacks in supplies, especially in the next few years before the deliveries from IID are maximized. The ensuing water shortage could have devastating economic effects: agriculture would suffer direct impacts, tourism (a major factor in the San Diego region) would be negatively impacted; new construction would be expected to decrease as new projects would be postponed; landscaping businesses would falter; significant layoffs would occur and new job opportunities would be lost.

Source: Volume 1, Final EIR/EIS, Chapters 2 (Section 2.5.1.1) and 6 (Sections 6.1.1 through 6.1.5).

10.3 No Federal Action Alternative

Although the CEQA and NEPA actions are related, there is a need to consider an alternative for which a Clean Water Act Section 404 permit would not be required. In defining the "Basic Project Purpose" for an application in which such permit is being considered, it is necessary to determine whether or not the Proposed Action is "water dependent." According to the Section 404(b)(1) Guidelines, a federal action is considered water dependent if it requires access to or siting within, or is proximal to, a special aquatic site as defined in the guidelines. If an activity is not water dependent, the 404(b)(1) Guidelines create a legal presumption that practicable alternatives to an activity are available that do not involve a special aquatic site. For projects that are not water dependent, the 404(b)(1) Guidelines establish a "rebuttable presumption." In making its permit decision, the Corps must demonstrate that there are no available, practicable alternatives that do not involve special aquatic sites. The Applicant must rebut the presumption in the Guidelines that all practicable alternatives to the proposed activity that do not involve a discharge into a special aquatic site would have a less than adverse impact on the aquatic ecosystem.

The "Overall Project Purpose" of the Proposed Action under Section 404(b)(1) Guidelines is to substantially increase the reliability and operational flexibility of the regional water storage capacity by providing the Water Authority with additional capacity of approximately 100,000 AF of carryover storage. All of the alternatives previously considered for the Proposed Action include water-dependent options, such as new or expanded surface reservoirs, reoperation of existing reservoirs, and local groundwater basin storage. Carryover storage options that do not involve a special aquatic site may include the construction of enclosed water storage reservoirs

or standpipes within upland areas. However, these options are not considered to be practicable or feasible for the following reasons:

1. A prohibitive number of large reservoirs would be necessary to accommodate 100,000 AF (equivalent to 32.6 billion gallons) of water for carryover storage purposes. Under such an example, 3,260 storage tanks holding 10 million gallons each would be needed to contain this much water.
2. The amount of land area needed for construction of multiple upland area reservoirs may not be available.
3. The large-scale construction of upland area reservoirs, as well as the temporary and permanent roadways necessary to provide construction and maintenance access to the reservoirs, would result in significant environmental impacts, including impacts to sensitive biological resources and listed species.
4. The reservoirs must be geographically situated to provide optimal inflow, storage and delivery of water for local use as dictated by peak demands and drought conditions. Topographic, elevation, and hydraulic constraints are expected to be insurmountable for the large number of upland area reservoirs that would be needed for carryover storage purposes.
5. A myriad number of conveyance facilities (pipelines, pump stations, pressure reducing stations, etc.) would be required to connect the upland area storage reservoirs to the Water Authority's distribution system. Due to the extent of such a conveyance network, significant environmental impacts are anticipated to occur in upland areas and in areas containing wetlands, waters of the U.S., and special aquatic sites.
6. Capital construction, land acquisition and energy (pump station operations) costs for this alternative would be significant.

Given the reasons outlined above, this alternative was considered impractical, and was eliminated from further analysis in the Final EIR/EIS (Volume I).

Source: Volume 1, Final EIR/EIS, Chapters 2 (Section 2.5.1.2) and 6 (Section 6.1.6).

10.4 Alternative 1: San Vicente 100,000 AF (Proposed Action)

The Proposed Action would provide for approximately 100,000 AF of carryover storage at San Vicente Reservoir by raising the existing dam 63 feet beyond the 54-foot raise already permitted and approved as part of the ESP. Thus, the combined dam raise would be 117 feet and the total dam height would be 337 feet, resulting in a total reservoir storage capacity of 246,994 AF. The potential environmental effects associated with Proposed Action are found in Chapter 3 of the Final EIR/EIS.

10.5 Alternative 2: Moosa 100,000 AF (Moosa 100K)

This alternative would provide for approximately 100,000 AF of carryover storage at Moosa Canyon through construction of a new 384-foot high dam and inundation of a natural canyon along a portion of Moosa Creek. Moosa Canyon is located in a relatively unpopulated area 3.5 miles northwest of Valley Center in northern San Diego County. The site is approximately 15 miles north of the City of Escondido and four miles east of Interstate 15. The potential environmental effects associated with Alternative 2 are found in Chapter 4 of the Final EIR/EIS.

10.6 Alternative 3: San Vicente 50,000 AF + Moosa 50,000 AF (SV 50K/Moosa 50K)

This alternative would involve a reduced raise of San Vicente Dam, which would provide approximately 50,000 AF of usable carryover storage at San Vicente Reservoir, and construction of a new dam at Moosa Canyon to create a new reservoir that would provide another 50,000 AF of usable carryover storage capacity. The two projects taken together would provide a combined 100,000 AF of carryover storage. It is assumed that both projects would be constructed concurrently. The potential environmental effects associated with Alternative 3 are found in Chapter 5 of the Final EIR/EIS.

11.0 Statement of Overriding Considerations

As set forth in the preceding sections of these Findings, the Proposed Action would result in the following significant and unavoidable impacts:

- **Air Quality (3.5).** Implementation of General Conditions and Standard Specifications and BMPs would help reduce construction emissions. However, there are no additional feasible mitigation measures to reduce impacts below thresholds. The construction-related direct air quality impacts (*Impact SV/AQ 1*) and cumulative air quality impacts (*Impact SV/AQ 1C*) associated with the on-site quarry options and the off-site quarry option would remain significant and unmitigable.
- **Noise (3.11).** Nighttime noise from batch plant operations south of the dam can be mitigated if the batch plant is located at the on-site Marina Quarry location. If the batch plant operations cannot be located at the on-site Marina Quarry location, then the nighttime noise impacts would be significant and unmitigable. There are no feasible measures to reduce noise impacts from dam construction activities and blasting for tunneling operations south of the dam (*Impacts SV/NV 1, SV/NV 2, and SV/NV 3*). Impacts due to noise level increases along Vigilante Road and Moreno Avenue from Proposed Action construction traffic (*Impact SV/NV 4*) would remain significant and unmitigable. Cumulative effects (*Impacts SV/NV 1C, SV/NV 2C, SV/NV 3C, and SV/NV 4C*) would also be significant and unmitigable.
- **Recreation (3.15).** Because it is unknown whether the City of San Diego will construct or expand recreational facilities for fishing and water sports at their other reservoirs to compensate for the temporary loss of these activities at San Vicente Marina and Reservoir during construction activities associated with the Proposed Action, and whether such expansions (if any) could result in significant project and cumulative environmental effects (*Impacts SV/R 1, SV/R 2, and SV/R 3, and Impacts SV/R 1C, SV/R 2C, and SV/R 3C*), it is assumed that potential impacts on other City reservoir recreational facilities would be significant and unmitigable.
- **Traffic/Circulation (3.16).** Direct and cumulative impacts due to construction-related traffic congestion at SR-67/Vigilante Road intersection (*Impact SV/TC 1 and Impact SV/TC 1C*) and the SR-67/Willow Road intersection (*Impact SV/TC 2 and Impact SV/TC 2C*), and due to construction-related traffic safety risks on SR-67 (*Impact SV/TC 3 and Impact SV/TC 3C*), would be significant and unmitigable.

Despite these impacts, the Water Authority has approved Alternative 1 (Proposed Action) as mitigated. To do so, the Water Authority must first adopt this Statement of Overriding Considerations.

Any one of the reasons for approval cited below is sufficient to justify approval of the Proposed Action. Thus, even if a Court were to conclude that not every reason is supported by substantial

evidence, the Water Authority would stand by its determination that each individual reason is sufficient. The substantial evidence supporting the various benefits can be found in the preceding sections of these Findings, which are incorporated by reference into this Section (11.0), and in the documents listed in the Record of Proceedings (Section 5.0 of these Findings).

It is important to note that the significant, unavoidable impacts of the Proposed Action are temporary only. The impacts are associated with construction activities and will cease when the City of San Diego resumes normal operations of the expanded San Vicente Dam and Reservoir. In addition, the Water Authority finds that the Proposed Action would have the following economic, social, or other benefits:

- As documented in the Record of Decision (ROD) for the *CALFED Bay-Delta Program EIR/EIS*, the U.S. Department of Interior (DOI) confirmed federal interest in additional surface and groundwater storage supplies south of the Bay-Delta to protect environmental resources in the Delta (DOI, 2000).
- During dry weather periods, increased regional demand for water may exceed local supplies resulting in potential water shortages. By providing approximately 100,000 AF of local storage in San Vicente Reservoir, the Proposed Action would increase water storage reliability for the region by the year 2011 and facilitate the reliable and efficient delivery of water to residents of the Water Authority's service area through the year 2030.
- The Proposed Action would provide a reliable and readily available source of water during periods of shortage, such as during dry years. Through the use of carryover storage, water can be accumulated during wetter years/seasons, when supplies are greater, and used in drier years/seasons or during droughts, when supplies are in higher demand.
- Carryover storage in San Vicente Reservoir would provide operational flexibility to serve above normal demands, such as those occurring during peak summer months or extended droughts, from locally stored water rather than by the over-sizing of the Water Authority's imported water transmission facilities.
- The Proposed Action would allow the Water Authority to accept additional deliveries from its existing State Water Project- and Colorado River-derived sources during periods of greater availability, such as during wet years, as well as to increase water availability locally during periods of shortage, such as during dry years.
- The Proposed Action would minimize construction costs by combining the ESP and CSP dam raises and constructing them at the same time, as it would not be feasible or practicable to construct two separate raises of the dam due to issues such as cost, safety of the raised dam structure, and construction logistics. All necessary drain/fill pipelines, respective pump stations, and interconnection facilities being constructed for the ESP dam raise would be sufficient for the additional dam raise under the Proposed Action.

- The Proposed Action would reduce operational costs by locating new facilities in a manner that reduces the need for additional improvements to the Water Authority's infrastructure network.
- The relocated/expanded marina would be considered a substantial recreational amenity of the Proposed Action, greatly improving upon the current reservoir recreational experience provided by the existing San Vicente Marina and Reservoir, and benefiting the San Diego region. Expanded boating and fishing opportunities would be provided due to the larger reservoir surface area, and the new marina would accommodate twice the number of facilities that currently exist, and in some cases additional facilities beyond those envisioned by the ESP Recreation Master Plan. In addition, a new access road to the relocated marina would avoid the steep grade and hairpin curves that exist for the current access road, thereby increasing safety for vehicles hauling boat trailers to the marina.
- The drawdown and refilling operations at San Vicente Reservoir as a result of the Proposed Action are expected to increase the fishery resources in the reservoir, which would enhance fishing opportunities upon reopening the lake to recreational uses. This would be considered a substantial recreational amenity of the Proposed Action, benefiting the San Diego region.
- Positive economic impacts may be derived from potentially higher residential and commercial property values within areas near San Vicente Reservoir due to the larger reservoir and marina and the associated increased recreational opportunities. In addition, the regional economy would benefit from the incomes generated by a major construction project associated with the Proposed Action, and this would indirectly benefit regional assessed values through the increase of county-wide sales.
- The greater surface-to-volume ratio of the expanded reservoir would decrease evaporative losses, allowing for greater conservation of the stored water supplies at San Vicente Reservoir.
- The increased storage capacity would provide increased dilution for any unintended spills or mishaps associated with recreational uses of the reservoir, resulting in improved water quality.
- The improved facilities in the expanded dam would result in increased public safety through better monitoring and mitigation of potential flood events, especially considering that the new PMF level would be below the top of the dam following construction. In addition, the RCC dam construction would provide greatly increased longevity of the dam, resulting in further reductions in the risk of downstream inundation and/or flood risk.

For each and all of these reasons, the Water Authority finds that, on balance, the benefits of the Proposed Action outweigh the unavoidable environmental risks. Although the significant,

unavoidable impacts of the Proposed Action are temporary, the economic, technological, and social benefits will extend into the future. Therefore, the level of environmental risk of the Proposed Action is considered to be acceptable, given its importance to the overall well being of San Diego County.