Chapter 3
Alternative 1: San Vicente
100,000 AF (Proposed Action)

3.1 Project Description and General Environmental Setting

3.1.1 Project Description

As described in Section 2.2 (Alternatives Analyzed) of this EIR/EIS, this alternative (the SV 100K or Proposed Action) would provide approximately 100,000 AF of usable carryover storage at San Vicente Reservoir by raising the existing dam beyond the already approved and permitted ESP height. The existing dam and reservoir are owned and operated by the City of San Diego. The City holds pueblo water rights to all flows in the San Diego River watershed, including storage rights provided by the existing dam and reservoir, necessary to meet its needs. For the Proposed Action, the City’s pueblo right has been extended to the Water Authority by agreement. The water stored in San Vicente Reservoir is conveyed to City of San Diego water treatment plants and provides potable water to city residents. The existing reservoir also provides for a variety of beneficial uses, including recreational uses such as boating, fishing, and water
skiing. A marina facility is located on the shore of the reservoir, about 1,800 feet northwest of the dam.

San Vicente Reservoir is the terminus for the Water Authority’s First Aqueduct, a pipeline corridor that contains Pipeline 1 and Pipeline 2. The existing storage capacity of the reservoir is 90,063 AF at the spillway crest elevation of 650 AMSL. At this water elevation, the reservoir surface area is an estimated 1,083 acres.

As discussed in Section 1.1 (Introduction) of this EIR/EIS, the existing storage capacity of San Vicente Reservoir is currently planned and approved to be increased by 52,100 AF of usable volume as part of the ESP. The 100,000 AF increase for the Proposed Action would be in addition to the ESP increase. 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. Therefore, the two increases would be combined and constructed at the same time.

Constructed between 1941 and 1943, San Vicente Dam is a concrete gravity structure founded on bedrock, with a structural height of 220 feet. The main features associated with the Proposed Action are shown in Figure 2.2-4 (Alternatives Analyzed) of this EIR/EIS. The San Vicente Dam would be raised approximately 63 feet beyond the 54-foot raise approved by the ESP, increasing the overall height of the dam by 117 feet (for a total dam height of 337 feet). The dam crest would extend approximately 1,442 feet in length and have a crest width of 20 feet. 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 raised dam would include a new spillway at the same location. The new spillway would lie approximately 10 feet below the dam crest, which would be at an elevation of 776 feet AMSL.

The dam raise would increase the usable storage capacity of the San Vicente Reservoir by approximately 152,100 AF. The elevation of the spillway crest would be raised from 650 to 766 feet AMSL. Total storage capacity and surface area of the expanded reservoir would be 246,994 AF and 1,667 acres, respectively, at the maximum normal pool (MNP) of the reservoir. The MNP is the maximum elevation of the reservoir under normal operating conditions. The MNP for the expanded reservoir would be at 764 feet AMSL, two feet below the planned elevation of the new spillway crest. The probable maximum flood (PMF) level for the expanded reservoir would be at 778 feet AMSL. The PMF level is based on the occurrence of a maximum theoretically possible precipitation event. 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 AMSL.

The existing San Vicente Dam and Reservoir are owned and operated by the City of San Diego. The Water Authority’s entitlement to divert and store water in the San Vicente Reservoir is granted by agreement through the City’s pueblo water rights, which are not under the jurisdiction of the State Water Resources Control Board (SWRCB) and not subject to the appropriative rights process. Refer to Section 1.8.1 (Water Rights and Permits) of this EIR/EIS for background information pertaining to the City’s pueblo water right. Essentially, the City’s pueblo rights
allow it to divert and store within the San Diego River watershed as much water as is necessary to meet the expanding needs of the City.

Enlargement of an existing dam under the jurisdiction of the California Division of Safety of Dams (DSOD) would normally require an appropriative water right permit from the SWRCB Division of Water Rights (23 CCR §§ 303). However, in the case of the Proposed Action, the SWRCB cannot accept any new applications for appropriative water rights for the San Diego River stream system because the San Diego River watershed is fully appropriated. Therefore, no application for an appropriative water right is deemed necessary for the Proposed Action.

### 3.1.2 General Environmental Setting

The existing San Vicente Dam and Reservoir are located in the San Vicente Creek watershed, which is a tributary to the San Diego River. The San Vicente watershed encompasses approximately 74 square miles in a relatively undeveloped and sparsely populated area in central San Diego County. The reservoir is bordered on the south by the community of Lakeside, on the east by the Barona Tribal lands, and on the north and west by mostly undeveloped land that is within the jurisdiction of the County of San Diego.

The SV 100K study area is characterized by steep, boulder-strewn slopes with extensive rock outcrops, surrounding a large body of open water (i.e., San Vicente Reservoir). The reservoir is filled with untreated water deliveries from the First Aqueduct, as well as some natural runoff that enters from San Vicente and West Branch creeks in the north, Foster Creek in the northwest, and Padre Barona Creek in the east. The reservoir is part of the San Diego River watershed, which is the second largest watershed in San Diego County.

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. 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. Most of the land surrounding the reservoir is undeveloped and consists mostly of coastal sage scrub, mixed chaparral, oak woodlands, and lakeshore fringe.

Lowell Island is a prominent feature in the center of San Vicente Reservoir, and a small peninsula to the south occurs as smaller islands at higher water levels. The exposed surface area of Lowell Island is approximately 85 acres under normal conditions. Vegetation on the island is similar to that of the surrounding area, and consists mostly of mixed chaparral, with limited coastal sage scrub on the eastern portion. Topography on the island consists of steep slopes, boulders, and rock outcrops. 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.

Local access to San Vicente Dam and Reservoir is provided via Vigilante Road and Moreno Avenue. Regional access is via SR-67, which is located approximately one mile to the west of...
the reservoir. The marina on the west side of the reservoir can be accessed via a two-lane paved road, which is also connected to Moreno Avenue.

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 reservoirs that are considered to be essential building blocks for creating a viable habitat preserve system. They consist of lands surrounding Lake Hodges, San Vicente, and Otay reservoirs that have been maintained in a largely undisturbed condition by the City of San Diego Water Department.

To the south and southeast of the SV 100K study area, isolated residences are located on remote hilltops, and limited low-density residential development is intermingled with agricultural lots on canyon floors. Many of the residential lots also contain equestrian and agricultural structures. Other existing uses near the reservoir include passive recreation at Sycamore Canyon Regional Open Space Park and Oak Oasis County Park. The eastern edge of Sycamore Canyon Regional Open Space Park is approximately one mile west of the reservoir. The western extent of Oak Oasis County Park is 0.25 mile east of the reservoir. There are also pockets of industrial and extraction uses (e.g., the quarry operations) near SR-67.