Chapter 1

1.1 Introduction

The San Diego County Water Authority (Water Authority) and the U.S. Army Corps of Engineers (Corps) prepared this Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Carryover Storage and San Vicente Dam Raise Project (CSP), pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The CSP is the Water Authority’s Proposed Project under CEQA and the Proposed Action under NEPA; the federal term is used in this EIR/EIS to describe the CSP. With the CSP, the Water Authority proposes to develop approximately 100,000 acre-feet (AF) of carryover storage capacity, along with the supporting facilities to increase water storage reliability for the region by the year 2011. The Water Authority is the project proponent and Lead Agency under CEQA. The Proposed Action would necessitate issuance of federal permits under Section 404 of the Clean Water Act; therefore, the Corps is the Lead Agency for compliance with NEPA. The two agencies have agreed to the preparation of a joint EIR/EIS to fulfill the requirements of CEQA and NEPA. 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.

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.
1.2 Project Background

1.2.1 Background of the San Diego County Water Authority

The Water Authority was formed in 1944 under California’s County Water Authority Act. The mission of the Water Authority is 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. The Water Authority’s boundaries extend from the international border with Mexico in the south to the San Diego (County) borders with Orange and Riverside counties in the north, and from the Pacific Ocean on the west to the foothills east of the urbanized portion of the County.

The Water Authority’s service area encompasses the western third of the County, totaling approximately 920,000 acres or 1,437.5 square miles. The Water Authority has 24 member agencies, consisting of 6 cities, 17 special districts and the Pendleton Military Reservation, which purchase water for use at the retail level. A 35-member Board of Directors (Board), consisting of representatives from each of the member agencies, governs the Water Authority. According to the U.S. Census of 2000, the total population of the San Diego region was 2.8 million. With about 96 percent of the County’s population residing within the Water Authority’s service area, this amounts to a population of approximately 2.7 million served by the Water Authority. The City of San Diego (City) is the member agency with the largest population at an estimated 1.2 million.

The Water Authority currently supplies between 75 and 95 percent of the region’s wholesale water supplies, depending on the amount of annual surface runoff into local reservoirs. The Water Authority’s imported supplies come primarily from the Colorado River through purchases from the Metropolitan Water District of Southern California (MWD), although the Water Authority is supplementing these supplies with increasing transfers from the Imperial Irrigation District (IID). The Water Authority is a member agency of the MWD and has entitlements to approximately 345,000 AF annually from MWD. In the past, the Water Authority has been able to purchase supplies in excess of its entitlements, but these cannot be counted on for planning purposes. The Water Authority also receives Colorado River water through an agreement with the IID. This agreement, signed in 2003, follows the execution of the Quantitative Settlement Agreement (QSA), which resolved a number of outstanding water rights claims on the Colorado River. Under the Water Authority/IID agreement, the Water Authority is entitled to supplies increasing from 10,000 AF in 2003 to a maximum of 200,000 AF in 2021.

As noted above, much of the water imported by the Water Authority is from the Colorado River (although a portion of the MWD supplies also comes from Northern California via the State Water Project [SWP]) through the Colorado River Aqueduct (CRA) San Diego Canal. Once the water reaches the Water Authority’s service area, the water is delivered through the Water Authority’s two aqueducts, or right-of-way corridors, containing a total of five large-diameter pipelines. The aqueducts follow general north-to-south alignments, and the water in the pipelines is delivered largely by gravity.
The pipelines, two in the First Aqueduct and three in the Second Aqueduct, are connected to a number of reservoirs to provide operational flexibility. The new Olivenhain Reservoir is owned and operated by the Water Authority. All other local public reservoirs are owned by member agencies; however, the Water Authority maintains rights for the use of storage in a number of them. For example, the San Vicente Reservoir is owned and operated by the City of San Diego. The delivery capacity of the Water Authority’s total imported water system is approximately 1,430 cubic feet per second (cfs), which would yield a maximum of 1,033,461 AF annually if deliveries were constant at delivery capacity. The greatest quantity of water used by member agencies in a single year was 715,763 AF in fiscal year (FY) 2004, of which 666,008 AF (approximately 93 percent) was imported. By 2030, total normal water demands are projected to reach 829,030 AF.

San Diego County’s population has increased every year (except 1992 and 1993) since the Water Authority was formed in 1944, and over that time the Water Authority has continually added and improved facilities to meet growing water demands, and increased the reliability and operational flexibility of the aqueduct system. The Water Authority’s Capital Improvement Program (CIP) was originally adopted by the Board in 1989, and has been modified and amended for the purpose of fulfilling the mission of the Water Authority 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 achieve this mission, the Board has adopted a Strategic Plan. Goal Number 2 of the plan is to “provide the necessary facilities for a safe, reliable, and operationally flexible water storage, treatment, and delivery system” (Water Authority, 1999). The facilities necessary to meet this goal include pipelines, pump stations, storage facilities, treatment plants, flow control facilities, and other appurtenances to the aqueduct system.

1.2.2 Emergency Storage Project

In 1998, the Water Authority’s Board approved the Emergency Storage Project (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 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 CSP addition.
1.2.2.1 San Vicente Reservoir and Dam Enlargement under the ESP

Enlarging the 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 roller compacted concrete (RCC). The spillway crest would be raised from 650 to 699 feet above mean sea level (AMSL), and the dam crest from 659 to 713 feet AMSL for the ESP raise. The existing storage capacity of the reservoir is 90,063 AF; 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. 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. The ESP enlargement would also involve the construction of a new outlet tower in the reservoir and relocation of the existing marina facilities and marina access road. The reservoir enlargement for the ESP 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. The general function of these facilities with respect to San Vicente Reservoir is described below.

Deliveries from Reservoir

Prior to dam raise construction, the Reservoir Interconnect Pipeline would deliver water from the existing City of San Diego Pipelines 1 and 2 (which are connected to the San Vicente Reservoir) to the San Vicente Pump Station. After dam raise construction, a new pipeline from an expanded outlet works would deliver water from the reservoir to the Reservoir Interconnect Pipeline. The San Vicente Pump Station would pump water from the reservoir (via the Reservoir Interconnect Pipeline) to the Surge Control Facility, a 3.32-million-gallon basin located at the top of a hill that forms the right abutment of the dam. Water in the basin can be delivered by gravity through the San Vicente Pipeline to the Water Authority’s Second Aqueduct. Water in the basin can also be delivered by gravity (via the Moreno-Lakeside Pipeline) to the Levy Water Treatment Plant owned by the Helix Water District, a member agency of the Water Authority. In an unlikely event of over-pumping of water to the basin from the San Vicente Pump Station, excess water would spill from the basin back into the reservoir via an overflow chute.

The San Vicente Pump Station would have the capability to pump at a rate of 444 cfs when the water level in San Vicente Reservoir is at 600 feet AMSL or higher. The maximum possible flow rate in San Vicente Pipelines 1 and 2 varies with the reservoir water level, as well as other hydraulic conditions, but is expected to be approximately 165 cfs when the expanded reservoir is at 697 feet AMSL, the maximum normal pool (MNP) of the expanded reservoir, for the ESP.
Deliveries to Reservoir

The San Vicente Pipeline would deliver water from the Second Aqueduct to San Vicente Reservoir. Delivery would be by gravity flow and would enter the reservoir at a location on the west shore of the reservoir, about 1,100 feet northwest of the existing dam structure. Deliveries of water to the reservoir could also be made via the First Aqueduct, the existing delivery method. The First Aqueduct delivery point is also located on the west shore of the reservoir, about 5,000 feet northwest of the existing dam structure.

1.2.3 Regional Water Facilities Master Plan

The Water Authority completed a Regional Water Facilities Master Plan (Master Plan) in December 2002. 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.

During the Master Plan preparation, the Water Authority relied upon the San Diego Association of Government’s (SANDAG’s) population and demographic forecasts, and considered historic weather patterns, anticipated and planned water projects in the region, planned land uses, and other information supplied by SANDAG to forecast regional water demand and the availability of imported water supplies.

Supply and demand projections for the San Diego region were forecasted and presented in the Master Plan. Demand associated with municipal and industrial users is anticipated to increase over time due to increased population and development growth in the region. Regional growth projections were based on data generated by SANDAG. The 2030 SANDAG Regional Growth Forecast (RGF) projects a population growth of 1.04 million people between 2000 and 2030, for a total regional population of 3.86 million in 2030. This represents an average annual increase of 35,000 people, and a total increase of 37 percent over 30 years.

SANDAG has been preparing long-range RGFs of population, housing and employment since the 1970s. SANDAG’s RGFs represent population, housing and employment changes anticipated for the region based upon the best available information at the time of the forecasts, and use of computer models that evaluate land use, demographics, regional and local economics, and transportation patterns. The SANDAG RGFs utilize a complex set of assumptions, input data, computations, and model interactions.

In 1988, San Diego County voters passed Proposition C. This proposition required the cities and the County to establish a regional board to prepare a “regional growth management plan.” The cities and the County designated SANDAG as the regional board. Proposition C grants the regional board “the authority to require that the County and the cities adopt the necessary legislation to implement the regional growth management plan.”
The Water Authority and SANDAG entered into a Memorandum of Agreement (MOA) in 1992 where the Water Authority “agrees to use SANDAG’s most recent RGF for planning purposes.” The MOA serves to ensure that there is “consistency between the plans, policies, and ordinances of the cities and County, and the plans and programs of the Water Authority.” The Water Authority utilizes SANDAG’s RGF to develop demand projections to be used in its water supply and facility planning. The MOA ensures that the water demand projections for the San Diego region are linked with SANDAG’s RGF and that water supply is a component of the overall growth management strategy and regional comprehensive planning efforts.

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 IID), via Regional Colorado River Conveyance Facility.

On November 20, 2003, the Water Authority’s Board approved Alternative 2 as the preferred alternative. Should regional seawater desalination development be delayed or not occur, the reliability forecasts for Alternative 1 would exceed those of Alternative 2, making it the preferred alternative for the Master Plan. From 2003-mid 2006, planning activities continued for a regional desalination project that would be located at the Encina Power Station in Carlsbad. At its July 2006 meeting, the Water Authority’s Board decided not to certify the Final EIR for the Regional Seawater Desalination Project at Encina and not to pursue the project further.

Facility timing analyses conducted by MWD, the Water Authority, and the City of San Diego independently support a timeline that requires that a new regional water supply, either from Alternative 1 (Pipeline 6) or Alternative 2 (seawater desalination), be in place no later than 2018. Based on a nine-year lead time requested by MWD, a decision on which alternative (Alternative 1 or 2) to proceed would not need to be communicated to MWD until 2009. This timeline affords the Water Authority with the opportunity to thoroughly consider a mix of regional and local seawater desalination projects that could help fill the potential supply gap created by the decision not to proceed with the Regional Seawater Desalination Project at Encina. In October 2006, the Water Authority’s Board approved a seawater desalination action plan that focuses on quantifying, evaluating and facilitating local and regional desalination opportunities that would provide the water supply originally anticipated under Alternative 2.

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 carryover 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 inclusion of a project to raise San Vicente Dam for additional carryover storage in the Master Plan was not a commitment to this specific project by the Water Authority. Rather, the project was identified and analyzed in the Master Plan as representative of the type of facility needed to meet the dry-weather storage needs of the region in the future. The Master Plan was the first step in determining the facilities needed to ensure a reliable supply of water to San Diego County. It anticipated that detailed evaluations of specific projects would occur at a later stage.

The Master Plan identified an immediate need for approximately 100,000 AF of storage capacity for carryover use, along with other elements, to ensure the reliable delivery of water to member agencies that serve the San Diego region. The concept of “reliability,” a key component of the Water Authority’s mission, is defined in the Master Plan as the ability of the Water Authority to meet the daily needs of each of the member agencies. Therefore, reliability is a function of demand and supply, and the numerous factors and needs of member agencies.

Population is the primary factor that affects demand, while a number of parameters, including weather and implementation constraints, can affect supply. Carryover storage would be directed primarily towards improving reliability issues associated with weather and similar factors that result in seasonal fluctuations in supply. Specifically, carryover storage would provide additional protection from droughts and seasonal peak demands, which would offset the need for additional pipeline delivery capacity.

As evaluated in the Master Plan, regional water supply is to be obtained from a range of sources including local sources, imported water, and desalination. As stated above, however, the Water Authority has decided not to proceed with the Regional Seawater Desalination Project at Encina, and instead, will consider a mix of regional and local seawater desalination projects that could help fill the potential supply gap created by this decision. Historically, supplies have primarily come from local sources and imported water. The region’s reliance on imported water supplies has increased over the years in response to population growth. Since 1990, the Water Authority has imported 75 to 95 percent of the region’s water supply from MWD. Over the next 20 years, an increasing portion of these supplies will come through the transfer agreement with IID.

The availability of imported supplies is directly linked to the reliability of, and dependence on, the SWP and the Colorado River. Reliability issues associated with MWD and its sources are discussed in the Master Plan. The following is a summary list of some of the issues identified in the Master Plan:

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2 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.
The SWP has not been fully developed and in times of prolonged drought has not been able to provide 100 percent of the supplies entitled to contracted agencies. For example, in 1991, MWD only received about 20 percent of its entitlement (pages 4-4 and 5-11).

SWP shortages are expected to become more frequent as demands on the system increase, with a projection that under the 2020 demand scenario, there is less than a 25 percent chance that existing SWP facilities will make full deliveries (page 4-5).

MWD’s rights to Colorado River are junior to several other agencies and in recent years, MWD has relied upon unused apportionments for Arizona, Nevada, and California agricultural agencies, as well as surplus water to fill its aqueduct (page 4-2).

In order to reduce the effect of shortages on San Diego County supplies from these sources, the Water Authority and its member agencies have taken, and plan to continue taking, steps to increase reliability through diversification of supplies. As identified in the Master Plan, primary components of the region’s diversification of supplies are:

- Existing local water resources, which up to 1947 provided the entire region’s supply, including surface water, recycled water and groundwater supplies (page 4-10).
- Future local water resources, including seawater desalination, which was identified in the Master Plan as the preferred Alternative 2 (page 4-13).
- Agreement between the Water Authority and IID, which has more senior rights to Colorado River water, for the transfer of conserved water to San Diego (pages 4-4 and 4-8).
- Other water transfer and storage opportunities in California (page 4-9).

These various sources would improve the reliability of the regional supplies; however, they are not without their own reliability issues. A number of supplies are yet to be developed, including seawater desalination, and some recycled water and groundwater sources. Planned projects are subject to funding, regulatory, institutional, and public acceptance factors, all of which can affect the success of a project. In addition, surface and groundwater resources can be affected by droughts, as well as the conditions placed on other agreements (i.e., the QSA). Droughts are common to the weather pattern of California and will continue to affect local and imported water supplies into the future.

Although the reliability forecasts in the Master Plan were only calculated for weather variability and different alternative scenarios, the benefits of carryover storage extend further. For example, carryover storage increases reliability associated with other variable factors such as operations, maintenance and development of infrastructure. In addition, carryover storage would provide for increased operational flexibility, allowing for more cost-effective supply strategies (e.g., facilitating the purchase of available transfer water).
1.2.4  Urban Water Management Plan

The California Water Code requires all urban water suppliers in the state to prepare urban water management plans 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 Draft 2005 Urban Water Management Plan (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. The Draft UWMP was released for public review on October 10, 2005.

Key features of the Draft 2005 UWMP include the following:

- Review of the Water Authority’s service area characteristics, including regional economy and demographics, climate, population history and forecasts.
- Identification of projected water demands based on the SANDAG 2030 RGF, released in December 2003. This includes municipal, industrial, and agricultural demands. The analysis presents a baseline forecast, takes into account estimated water conservation savings, adds additional demands for pending annexations, and provides a Normal Year Water Demand Forecast for years 2010, 2015, 2020, 2025, and 2030.
- Identification of projected dry-year water demands for a single dry year and for multiple dry years (three years) for each five-year increment (i.e., three consecutive dry years between each of the five-year increments: 2010, 2015, 2020, 2025, and 2030). The Act requires agencies to prepare multiple dry-year demand scenarios.
- Discussion of preferential water rights, as determined under Section 135 of the Metropolitan Act (Preferential Rights to Water); member agencies’ existing and projected local surface, ground, and recycled water supplies; and Water Authority’s regional water supply and storage options (see below).
- Analysis of water supply reliability based on a Normal Year Supply and Demand Assessment, a Single Dry-Year Supply and Demand Assessment, and a Multiple Dry Years Supply and Demand Assessment.

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. The MWD calculates the preferential right of each of its member agencies at the end of each fiscal year as a percentage, with the preferential rights of all member agencies totaling 100 percent. For Fiscal Year 2006-2007, the percentage of the preferential rights to the Water Authority was 16.46 of the total Metropolitan supply (2.3 MAF), or approximately 378,580 AF annually. While the Water Authority had a preferential right to 16.46 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: IID Water Conservation and Transfer Agreement; the All-American Canal and Coachella Canal Lining Projects; and a mix of regional and local seawater desalination 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.

1.3 Project Need

*The CSP is needed to increase water storage reliability for the region by the year 2011. The CSP 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. As stated above, the immediate need for carryover storage capacity was documented in the 2002 Master Plan. 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 2005 UWMP Update identified the need for carryover storage capacity above and beyond the 100,000 AF identified in the Master Plan.

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

1. **Enhance reliability of the water supply:** Carryover storage could 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 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 CSP 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).
1.4 Project Purpose

The overall purpose of the CSP is to develop approximately 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 CSP would provide the additional carryover storage capacity identified in the Master Plan. Once the capacity is constructed, water would be accumulated (when it is available) 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 CSP include the following:

- Provide approximately 100,000 AF of carryover storage capacity that could 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.

1.5 Environmental Process

1.5.1 Purpose and Use of the EIR/EIS

This EIR/EIS 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. This document 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 and 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 United States (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.

1.5.2 Scoping Process

Scoping is the process followed to ensure that the germane environmental concerns of individuals, organizations, and agencies about a proposed project/action are adequately addressed within the project’s environmental document. Scoping is an integral part of the CEQA and NEPA processes because it allows interested parties to participate directly in the preparation of the environmental document, and to identify significant environmental effects and alternatives.
To initiate the public scoping process for this EIR/EIS in accordance with CEQA and NEPA, the Water Authority circulated a Notice of Preparation (NOP) through direct mailings and published a legal notice in the San Diego Union Tribune on October 8, 2006, and the Corps published a Notice of Intent (NOI) in the Federal Register (71 FR 59499-59501) on October 10, 2006. The 30-day public review period for the NOP and NOI ended November 9, 2006.

An Open House and Scoping Meeting was held at the Water Authority offices, located at 4677 Overland Avenue, San Diego, California, on November 1, 2006 from 6:30 p.m. to 8:00 p.m. An additional public meeting (“Community Forum”) was held in the Lakeside community on December 11, 2006. Although conducted outside the official NOP/NOI public scoping period, the Lead Agencies have agreed to give the comments received at the Lakeside Community Forum the same weight as those received during the NOP/NOI public scoping period, and are equally addressed in this EIR/EIS. The purpose of these public meetings was to provide the public and governmental agencies with information on the Proposed Action and the CEQA and NEPA processes, and to give attendees an opportunity to identify environmental issues and alternatives that should be considered in the EIR/EIS.

Attendees were invited to mail their comment letters to the Water Authority and to the Corps during the 30-day NOP/NOI public scoping period by no later than November 9, 2006, or leave them with Water Authority or Corps staff following the public meetings to ensure that their concerns would be addressed in the EIR/EIS. Comment forms were also available for attendees to fill out and leave with the Water Authority and the Corps at the public meetings.

Eighteen comment letters, e-mails, and comment forms were received during the NOP/NOI public scoping period, and nine comment forms were received at the December 11, 2006 Lakeside Community Forum, from public agencies and private citizens. In addition, verbal comments were received from five persons at the November 1, 2006 NOP/NOI Scoping Meeting and from four persons at the December 11, 2006 Lakeside Community Forum.

A Scoping Report is included in Attachment 1 to this EIR/EIS, and is divided into two parts: Part 1 contains the official “Scoping Comments” from the NOP/NOI public scoping period; and Part 2 contains the “Additional Comments Received After Scoping.” Part 1 includes the NOP and associated legal newspaper advertisements; the NOI along with the Federal Register publication; the 18 comment letters, e-mails and comment forms received during the NOP/NOI public scoping period; the legal transcript from the November 1, 2006 NOP/NOI Scoping Meeting; and a matrix summarizing all written and verbal comments received during the NOP/NOI scoping period, and identifying the locations in the EIR/EIS where the pertinent comments are addressed. Part 2 includes the legal transcript from the December 11, 2006 Lakeside Community Forum; the 9 comment forms received at this Forum; and a matrix summarizing all written and verbal comments received at this Forum, and identifying the locations in the EIR/EIS where the pertinent comments are addressed.

The input received from the NOP/NOI public scoping period and the Lakeside Community Forum assisted the Water Authority and the Corps in identifying the range of actions, alternatives, issues, and potential effects associated with the Proposed Action. All issues raised
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during the NOP/NOI public scoping period and the Lakeside Community Forum were reviewed by the Water Authority and the Corps to determine the appropriate consideration and level of analysis.

1.5.3 Availability of Draft EIR/EIS

This Draft EIR/EIS is subject to a 45-day public review and comment period. Interested individuals, organizations, and agencies can provide written comments on the document during this review period. In addition, the Draft EIR/EIS is circulated to trustee and responsible agencies for review. Responsible agencies are those agencies, other than the Lead Agencies, that have discretionary approval over the Proposed Action. Trustee agencies are those agencies that have jurisdiction by law over natural resources affected by the Proposed Action, which are held in trust for the people of the State of California. Publication of this Draft EIR/EIS marks the beginning of the 45-day public review period. Written comments will be received by the Water Authority and by the Corps at the following addresses:

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AND

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Copies of the Draft EIR/EIS are available to the public for review at the Water Authority’s website (www.sdcwa.org), and the following public libraries:

- Central Library, 820 E Street, San Diego, CA 92101.
- Lakeside Public Library, 9839 Vine Street, Lakeside, CA 92040.
- Valley Center Public Library, 29200 Cole Grade Road, Valley Center, CA 92082.

1.6 Document Organization

The content and format of this Draft EIR/EIS are designed to meet the current requirements of CEQA and NEPA. To easily obtain information about the Proposed Action and its specific issues, the EIR/EIS is organized to comply with a both sets of requirements, as demonstrated in Table 1.6.1.

This document has been prepared as a joint EIR/EIS to fulfill the requirements of CEQA and NEPA. Preparation of a joint EIR/EIS is provided for under Section 15222 of the State CEQA Guidelines and CEQ regulations at 40 CFR 1506.2. CEQA and NEPA are separate but similar laws that contain a number of requirements pertaining to the noticing, preparation, format,
content, and review of documents providing impact analyses. This document is organized to comply with both sets of requirements, as demonstrated in Table 1.6-1.

Table 1.6-1. EIR/EIS Format and Required Content

<table>
<thead>
<tr>
<th>Chapter</th>
<th>EIR/EIS Chapter</th>
<th>Required EIR Content under CEQA (CEQA Guidelines Reference)</th>
<th>Required EIR Content under NEPA (CEQ Regulations Reference)</th>
</tr>
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<tr>
<td>N/A</td>
<td>Cover</td>
<td>No requirement</td>
<td>No requirement</td>
</tr>
<tr>
<td>N/A</td>
<td>Title Page</td>
<td>No requirement</td>
<td>Cover sheet (§1502.11)</td>
</tr>
<tr>
<td>N/A</td>
<td>Table of Contents</td>
<td>Table of contents (§15122)</td>
<td>Table of contents (§1502.10)</td>
</tr>
<tr>
<td>N/A</td>
<td>Summary</td>
<td>Summary (§15123)</td>
<td>Summary (§1502.12)</td>
</tr>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Statement of project objectives (§15124(b))</td>
<td>Purpose and need (§1502.13)</td>
</tr>
<tr>
<td>2, 6</td>
<td>Project Alternatives, No Project Alternatives</td>
<td>Project description (§15124) Alternatives to the proposed project (§15126.6)</td>
<td>Alternatives including the Proposed Action (§1502.14)</td>
</tr>
<tr>
<td>3-5</td>
<td>Affected Environment, Consequences, and Mitigation</td>
<td>Environmental setting (§15125) Environmental impacts (§15126) Significant environmental impacts (§15126.2) Mitigation measures proposed to minimize significant effects (§15126.4) Cumulative impacts (§15130)</td>
<td>Affected environment (§1502.15) Environmental consequences (§1502.16)</td>
</tr>
<tr>
<td>8</td>
<td>Other CEQA and NEPA Considerations</td>
<td>Effects not found to be significant (§15128) Unavoidable adverse effects (§15126(b)) Significant irreversible environmental changes (§15126(c)) Growth-inducing impacts (§15126(d))</td>
<td>Unavoidable adverse effects (§1502.16) Short-term environmental uses and long-term productivity (§1502.16) Irreversible/irretrievable commitments of resources (§1502.16)</td>
</tr>
<tr>
<td>11</td>
<td>Preparers</td>
<td>Organizations and persons consulted (§15129)</td>
<td>List of preparers (§1502.17)</td>
</tr>
<tr>
<td>12</td>
<td>Organizations and Persons Consulted</td>
<td>Organizations and persons consulted (§15129)</td>
<td>List of agencies, organizations, and persons to whom copies of the statement are sent (§1502.10)</td>
</tr>
<tr>
<td>14</td>
<td>Index</td>
<td>Table of Contents or Index (§15122)</td>
<td>Index (§1502.10)</td>
</tr>
<tr>
<td>N/A</td>
<td>Appendices</td>
<td>No requirement</td>
<td>Appendices (§1502.18)</td>
</tr>
</tbody>
</table>

Tables are found throughout the text of each chapter or section, and figures are included at the end of each chapter. Part I of this EIR/EIS presents the Purpose of and Need for the Action (Chapter 1) and Alternatives Including the Proposed Action (Chapter 2). Two alternatives are evaluated in this EIR/EIS in addition to the Proposed Action and the required No Action alternatives: (1) the Moosa 100K Alternative; and (2) the SV 50K/Moosa 50K Alternative. Part II of this document addresses Affected Environment and Environmental Consequences for all three alternatives. The Proposed Action (Alternative 1) is analyzed in Chapter 3, Alternative 2 (Moosa 100K Alternative) is analyzed in Chapter 4, and Alternative 3 (SV 50K/Moosa 50K Alternative) is analyzed in Chapter 5. Part II also discusses the No Action Alternative (Chapter 6), Comparison of Alternatives (Chapter 7), and Other CEQA and NEPA Considerations such as
Growth Inducing Effects, Socioeconomics/Environmental Justice, Effects Found Not Significant, Non-Applicable Significance Thresholds, Unavoidable Significant Effects, Irreversible and Irretrievable Commitment of Resources, and Potential Effects on Global Warming (Chapter 8). Part III contains reference material, including Acronyms and Abbreviations (Chapter 9), References (Chapter 10), List of Preparers (Chapter 11), List of Agencies, Organizations and Persons Consulted (Chapter 12), Distribution List (Chapter 13), and Index (Chapter 14).

As stated in Section 1.5.2 above, the Scoping Report is included as Attachment 1. The Section 404 (b)(1) Alternatives Analysis is included as Attachment 2. Attachments 1 and 2 are located at the end of the Draft EIR/EIS, after Chapter 14.

A separate volume contains the following appendices: Recreation Master Plan Update (Appendix A); Air Quality Technical Report (Appendix B); Biology Technical Report (Appendix C); Cultural Resources Technical Report (Appendix D); Noise and Vibration Technical Report (Appendix E); Hazardous Materials Technical Report (Appendix F); Traffic Technical Report (Appendix G); Community Impact Assessment (Appendix H); and the Energy Analysis (Appendix I). Supporting technical reports prepared by GEI Consultants, Inc. (GEI) are incorporated by reference in this EIR/EIS. These GEI technical reports are available to the public for review at the Water Authority office.

1.7 Other Related Environmental Documents

This EIR/EIS tiers from, and incorporates by reference, two other environmental documents: the ESP EIR/EIS (State Clearinghouse #93011028) and the Regional Water Facilities Master Plan Program EIR (State Clearinghouse #2003021052). Tiering is a process provided under both CEQA and NEPA, pursuant to State CEQA Guidelines Section 15152 and CEQ Regulations at 40 CFR 1502.2. As discussed in CEQA Guidelines Section 15152, “tiering” refers to using the analysis of general matters contained in a broader EIR with later EIRs. Tiering is accomplished by incorporating by reference the general discussions from broader EIRs. Tiering allows the subsequent environmental document to focus on those issues most relevant to its preparation. State CEQA Guidelines Section 15150 and CEQ Regulations at 40 CFR 1502.2 provide guidance for incorporation by reference, and require that relevant information be summarized in the subsequent environmental document and that the broader (tiered) environmental documents be made available for review by the public. These documents are available to the public for review at the Water Authority office.

1.7.1 Emergency Storage Project EIR/EIS

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 San Vicente Dam raise components of these three alternatives are summarized in Table 1.7-1. The Olivenhain/Hodges/San Vicente Alternative was identified as the Preferred Alternative in the ESP EIR/EIS.

### Table 1.7-1. ESP EIR/EIS San Vicente Dam Raise Alternatives

<table>
<thead>
<tr>
<th></th>
<th>Storage Volume (AF)</th>
<th>Spillway Elevation (feet AMSL)</th>
<th>Dam Height (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing San Vicente Dam</td>
<td>90,063</td>
<td>650</td>
<td>220</td>
</tr>
<tr>
<td>ESP Alternatives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Vicente Stand Alone Alternative</td>
<td>+90,100(1)</td>
<td>727 (+ 77)(2)</td>
<td>303 (+ 83)(3)</td>
</tr>
<tr>
<td>San Vicente with Reoperation Alternative</td>
<td>+68,000(1)</td>
<td>709 (+ 59)(2)</td>
<td>285 (+ 65)(3)</td>
</tr>
<tr>
<td>Olivenhain/Hodges/San Vicente Alternative</td>
<td>+52,100(1)</td>
<td>699 (+ 49)(2)</td>
<td>274 (+ 54)(3)</td>
</tr>
</tbody>
</table>

(1) Usable storage volume in San Vicente Reservoir for ESP beyond the existing reservoir storage.
(2) Numbers inside parentheses represent increases in the spillway elevation (feet) at San Vicente Dam.
(3) Numbers inside parentheses represent increases in the dam height (feet) at San Vicente Dam.

The Water Authority’s Board certified the ESP Final EIR/EIS on August 15, 1996. The Corps issued a Record of Decision (ROD) for the EIR/EIS on August 4, 1997, and an Individual Permit under Section 404 of the Clean Water Act (Permit No. 95-2009200-DZ) on August 18, 1997. The Board approved the funding for the ESP Olivenhain/Hodges/San Vicente Alternative and added the ESP components to its current CIP on June 11, 1998. The ESP EIR/EIS is available to the public for review at the Water Authority office.

### 1.7.2 Regional Water Facilities Master Plan Program EIR

The Water Authority was the Lead Agency under CEQA for the Master Plan Program EIR (PEIR), which evaluated the projects identified in the Master Plan on a broader or program level. The Water Authority’s Board certified the Master Plan Final Program EIR on November 20, 2003.

The Master Plan did not describe every facility in detail, but rather described the types of facilities needed to help the Water Authority achieve its mission of providing a safe and reliable water supply to the San Diego region. Therefore, only a broader environmental analysis of these planned facilities was achieved. The Master Plan Program EIR identified and included analysis, to the extent possible, of a carryover storage project that would raise San Vicente Dam above that already planned and approved for the ESP. However, the Program EIR recognized that detailed evaluations of specific projects would need to be conducted as part of the site-specific design and CEQA review.
All relevant sections of the Master Plan Program EIR have been referenced, repeated, or summarized in this EIR/EIS. The Master Plan Program EIR is available to the public for review at the Water Authority office and on the Water Authority’s website (www.sdcwa.org).

1.8 Discretionary Actions and Approval

The Water Authority and the Corps are the Lead Agencies for the preparation of this joint EIR/EIS. This document requires certification by the Water Authority’s Board prior to approval of CSP construction contracts. Upon completion of this document, 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 CSP. Similarly, the document is needed for the Corps’ issuance of an Individual Permit under Section 404 of CWA. Although review of the EIR/EIS and the processing of a permit can run concurrently, a ROD on the EIR/EIS must be made 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 in Table 1.8-1.

1.8.1 Water Rights and Related Permits

A water right is a legal entitlement authorizing water to be diverted from a specified source and put to beneficial, non-wasteful use at a specific place. California recognizes many types of surface water rights, which have developed with the state over time and are unique to the state. In California, the State Water Resources Control Board (SWRCB) Division of Water Rights is responsible for administering the water rights program. It issues permits and licenses, and maintains records of the appropriation and use of all waters within the state, as appropriate. From a water right standpoint, there are two types of water: surface water and groundwater, and the laws that govern their use are different. The term surface water refers to the state’s streams and lakes, as well as subterranean flows. Surface water has a well-developed set of state-wide laws regulating its development and use, which are administered by the SWRCB. Groundwater, on the other hand, refers to percolating water that does not flow in a defined subterranean channel, and is generally treated as a local water supply and has little statewide regulation of its use.

The Proposed Action would involve the storage and delivery of surface water. This section briefly describes the constitutional authority, key water rights regulatory requirements, and the water rights process in California as they pertain to surface water. The following is provided for informational purposes to assist the reader in reviewing the project description and the analysis presented in this EIR/EIS.
Table 1.8-1. Permits/Approvals Required for the Project

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit/Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Army Corps of Engineers</td>
<td>Individual 404 Permit for proposed impacts to federally protected waters and wetlands</td>
</tr>
<tr>
<td>U.S. Army Corps of Engineers</td>
<td>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</td>
</tr>
<tr>
<td>U.S. Fish and Wildlife Service</td>
<td>Section 7 permit consultations for proposed impacts to federally listed threatened or endangered species</td>
</tr>
<tr>
<td>California Department of Fish and Game</td>
<td>1601 Streambed Alteration Agreement for proposed diversion or modification of state-protected streams or waters</td>
</tr>
<tr>
<td>California Department of Fish and Game</td>
<td>Memorandum of Understanding (2081 Permit) for proposed impacts to state-listed threatened or endangered species</td>
</tr>
<tr>
<td>California Department of Transportation (Caltrans)</td>
<td>Encroachment Permit for proposed activities that would occur in Caltrans-designated right-of-way</td>
</tr>
<tr>
<td>California Department of Health Services</td>
<td>Authorization to Use Reservoir for Human Consumption</td>
</tr>
<tr>
<td>California Governor’s Office of Emergency Services</td>
<td>Approval of a reservoir Inundation Study and Evacuation Plan based on final dam as-built drawings</td>
</tr>
<tr>
<td>California Department of Water Resources</td>
<td>Dam Alteration application, Certification of Authorization to Construct, and Approval of Plans and Specifications for dam safety and impounding water behind a dam</td>
</tr>
<tr>
<td>State Water Resources Control Board</td>
<td>Permit to Appropriate Water for the proposed creation of a reservoir or for increasing capacity at an existing reservoir (Moosa 100K Alternative only; San Vicente Reservoir exempt under the City’s pueblo rights)</td>
</tr>
<tr>
<td>Regional Water Quality Control Board</td>
<td>National Pollutant Discharge Elimination System (NPDES) permit for proposed discharge of storm water</td>
</tr>
<tr>
<td>Regional Water Quality Control Board</td>
<td>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</td>
</tr>
<tr>
<td>San Diego County Air Pollution Control District</td>
<td>Authority to Construct and Permit to Operate for proposed facilities</td>
</tr>
</tbody>
</table>

1.8.1.1 Types of Surface Water Rights

Riparian Rights

Prior to the Treaty of Guadalupe Hidalgo, signed in 1848, California was part of Mexico. Riparian rights were the most prevalent type of water right at that time. Riparian rights, which have their origins in Roman law, allow the use of water by property owners with land abutting a stream or lake. Riparian rights attach to the land, and allow the landowner to take as much water as can be reasonably and beneficially used on riparian land in the watershed of the stream (i.e., water diverted under riparian rights cannot be used outside of the watershed). Riparian rights do not allow water to be wasted or public trust resources to be unreasonably affected. Riparian rights extend only to the natural flow of the stream and do not allow the storage of water from
times of water surplus to times of water shortage. Riparian rights are still recognized in the state, but there is no state permit requirement for this right. However, with some exceptions, statements of water diversion and use must be filed with the state.

**Pueblo Rights**

When California became part of the United States, the United States agreed to recognize existing law. The Mexican Government had provided for agricultural pueblos, by granting water on the public domain for these pueblos. These “pueblo” rights were the only vested water right at the time. Pueblo rights provided that Spanish and Mexican Pueblos were entitled to the beneficial use of all needed naturally occurring water from the entire watershed of a stream flowing through the pueblo. A pueblo water right is the prior and paramount right of an American city as the successor to a Mexican or Spanish pueblo to the use of water naturally occurring within the old pueblo limits for the use of the inhabitants of the city. This right can encompass the entire flow of streams within a pueblo, and the right may expand to meet the municipal needs of the city’s inhabitants. Unlike riparian or appropriative rights, pueblo rights, if unused, cannot be abandoned, forfeited, or appropriated (Water Code §§ 1241). The SWRCB does not have jurisdiction over pueblo rights, but must validate the claim.

Within California, the cities of Los Angeles and San Diego have confirmed pueblo water rights. The City of San Diego’s prior and paramount right to the waters of the San Diego River and its tributaries for the use of its inhabitants was established in 1930 by the Supreme Court of California (City of San Diego v. Cuyamaca Water Co., 209 Cal. 105 [287 P. 457]). This right, which has been recognized by numerous cases subsequent to the 1930 decision, vests the City of San Diego with a legal priority over other competing water claims. Other court decisions further established the City’s pueblo rights extend to all the water that is reasonably necessary to give an ample supply for the use of its inhabitants and for all municipal uses and purposes for which the city may require water. This right is measured by necessity, and if the needs increase in the future the right will expand to include all that the needs require. The City can also make water available to other users until such time as the city needs it, without impairing or harming its prior and paramount right.

**Appropriative Rights**

Another type of surface water right is called an “appropriative right.” This covers the direct diversion of surface water to meet authorized beneficial uses, including storage. Appropriative water rights are based on the premise of “first in time, first in rights,” and allow for the use of natural flow of the stream provided the riparian rights are satisfied. In contrast to riparian rights that share in the natural flow of the system, “appropriators” are entitled to their full entitlement based on a priority system that was established in 1914. There are two types of appropriative rights: pre-1914 and post-1914 (modern) appropriative rights. Pre-1914 rights pre-dated the modern water rights process and are not under any statewide permitting authority, although pre-1914 rights holders are prevented from wasting or unreasonably using water or unreasonably affecting public trust lands. Similar to riparian rights, pre-1914 water right holders must file
introduction

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statements of water diversion and use. Construction of a new dam and, with few exceptions, enlargement of an existing dam normally require an appropriative water right permit from the SWRCB Division of Water Rights (23 CCR §§ 303), as these would require diversion of natural flow for direct use and storage.

Records of water appropriation and use are maintained by the SWRCB Division of Water Rights. A stream is considered “fully appropriated” when the supply of water in the stream system is being fully applied to beneficial uses where the SWRCB finds that previous water rights decisions have determined that no water remains available for appropriation. (Water Code, §§ 1205) Based on the City’s pueblo right, the San Diego River watershed is considered fully appropriated, as the City holds all of the rights in the watershed to meet its current and future expanded needs (SWRCB 2006).

Modern (post-1914) appropriative water rights are obtained by application to the SWRCB for a water right permit, which identifies the amounts, conditions, and construction timetables for a water project. Before the SWRCB can issue a permit to appropriate water, it must take into account all prior rights and the availability of water in a basin. As with all permits, the SWRCB must also consider the flows needed to preserve instream uses, such as recreation and fish and wildlife habitat. The steps in the application process consist of:

Filing an application. The process is initiated when a permit application is filed by the agency or person desiring to divert water. The application must describe the source of water, place of use, purpose, point(s) of diversion, and quantity to be diverted. The SWRCB notifies the applicant within 30 days whether it has accepted the application or deemed it incomplete. Acceptance establishes priority as the date of filing.

Environmental review. Consideration of the environmental effects is required by CEQA before a permit can be issued. This EIR/EIS may be used by the SWRCB in its consideration of any requests to appropriate water.

Public notice. The SWRCB publishes a notice of the applicant’s intent and invites comment. Copies of any protests are given to the applicant, who is required to respond.

Protest resolution. The SWRCB takes actions to resolve any protests that have been filed. If both parties can agree to mutually acceptable conditions, the protest is resolved at this point in the process. In the event it is not resolved, the issue may be solved through an engineering field investigation report from the SWRCB Division of Water Rights. For appeals from the report and for large projects, a formal hearing is held before one or more members of the SWRCB. The SWRCB’s decision is based on the record produced by the hearing.

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3 Exceptions are determined on a case-by-case basis. For the Proposed Action, the SWRCB has determined a permit to appropriate water would not be required based on the City’s pueblo rights. An application for an appropriative right would be required for any new diversion outside of the San Diego River watershed, including Moosa Canyon. (SWRCB, “Carryover Storage and San Vicente Dam Raise Project NOP, SCH #2006101044, San Vicente Creek Tributary to San Diego River, San Diego County,” letter from Katherine Mrowka, Chief, Watershed Unit 3, to Kelley Gage, Water Authority, November 2, 2006.)
Permit issuance. Two initial SWRCB findings are required before a permit can be issued: that unappropriated water is available to supply the applicant based on the results of a Water Availability Analysis (WAA), and that the applicant’s appropriation is in the public interest. The permit is then issued if the SWRCB determines that the proposed use of water best meets these criteria. If it determines otherwise, conditions may be imposed to ensure they are satisfied or the application may be denied. In most cases, the applicant is required to begin project construction within two years of permit issuance.

Permit review and licensing. The SWRCB confirms the terms and conditions and issues a license to the appropriator when the project is completed and the terms of the permit have been met. The largest volume of water under the permit that is put to beneficial use must be documented. This license is the final confirmation of the water right and remains effective as long as its conditions are fulfilled and beneficial use continues. The issuance of a permit continues in effect the priority of right as of the date of the application, and gives the right to take and use the amount of water specified in the permit until the issuance of a license for the use of water or until the permit is revoked (Water Code §§ 1255).

State Water Resources Control Board Authority

The SWRCB is charged with the “orderly and efficient administration of the water resources of the state...” (§ 174). It exercises both adjudicatory and regulatory functions in connection with water rights (Ibid). The water in California’s streams and rivers belongs to the people of the state, but individuals may acquire the right to use the water under common and statutory law (§§ 102, 1201).

The California Constitution sets forth the state policy of reasonable use: “It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water...” (Cal. Const., Part. X, § 2).

Beneficial uses include, but are not limited to “use for domestic, irrigation, municipal, industrial, preservation and enhancement of fish and wildlife, recreational, mining and power purposes...” (§ 1257; see also Cal. Code Regs., tit. 23, § 659 et seq.).

The SWRCB has broad discretion to approve, condition, or deny an application to appropriate water (Wat. Code, § 1200 et seq.). When acting on an application to appropriate water, the SWRCB must consider a number of factors, including whether unappropriated water is available for appropriation, whether the proposed appropriation is in the public interest, and the relative benefit to be derived from all beneficial uses of water as well as the amounts of water needed to
remain in the source supply for protection of beneficial uses (see, e.g., id., §§ 1243-1243.5, 1253-1255, 1375).

The SWRCB has an obligation to consider the effect of a proposed project on public trust resources and to protect those resources where feasible (National Audubon Society v. Superior Court (1983) 33 Cal.3d 419 [189 Cal.Rptr. 346]). The SWRCB may subject a water right appropriation to terms and conditions “as in its judgment will best develop, conserve, and utilize in the public interest the water sought to be appropriated,” and each water right permit is issued subject to other terms and conditions (Wat. Code, §§ 1257, 1382, 1391). The SWRCB Division of Water Rights nominally oversees post-1914 permitted and licensed water rights, and publicly held water rights. However, it has no statutory authority over riparian, pueblo and pre-1914 appropriative water rights represented by “Statements of Water Diversion and Use” that account for 38 percent of the state’s water subject to water rights.

1.9 Water Authority General Conditions and Standard Specifications

The Water Authority’s General Conditions and Standard Specifications 2005 Edition will be incorporated into the project specifications to be provided to the selected contractors. The Water Authority updates the General Conditions and Standard Specifications periodically to reflect changes in law, advancement of construction methods, materials and standards, and other issues as deemed appropriate for the Water Authority to achieve its mission. In addition, project-specific design features, which are required to mitigate environmental impacts, will be implemented. These contract specifications and design features have been grouped by issue area. Note that they are not all-inclusive, and that other specification requirements or design features may be developed that are as effective as those listed. Standard construction specifications and design features will be incorporated into the Proposed Action as appropriate to avoid significant impacts. The general conditions and standard construction specifications applicable to the Proposed Action are listed below, and project-specific design features can be found in the appropriate issue sections of this EIR/EIS.

1.9.1 Aesthetics/Visual Quality

General Conditions and Standard Specifications Section 02110 (Clearing and Grubbing):

Description (1.01.C): Comply with prohibitions, if any, on the removal of vegetation in accordance with regulatory permit conditions. Comply with seasonal restrictions as indicated in such permits.

General Conditions and Standard Specifications Section 02940 (Revegetation):

Erosion Control (3.05.C): Monitor for erosion within revegetation areas and provide measures to prevent gullies, rill, and sheet erosion, and silt deposition from occurring.
Erosion control shall emphasize prevention. Repair erosion as required and include redirection or dissipation of the water source and recontouring of soil, followed by seeding, mulching, or planting.

Erosion Control (3.05.D): Do not use invasive exotic species for erosion control.

Clean Up (3.12.A): Keep all work areas clean, neat, and orderly at all times.

Clean Up (3.12.B): Upon completion of revegetation work, remove all rubbish, trash, and debris resulting from revegetation operations.

Clean Up (3.12.C): Remove oversprayed hydroseeding and straw from walks, lights, access roads, streets, fences, structures, etc.

Clean Up (3.12.D): Remove any detrimental, non-native plants growing in the work area not specified in the seed mix.

Weed Control (3.14.A): Control noxious and annual weeds in all areas to be planted and hydroseeded during construction and throughout the establishment maintenance period.

Performance Standards During Plant Establishment Period (3.15.A): At six-month intervals following the completion of planting, or at other intervals as directed by the Engineer, inspect the container plants in the presence of the Engineer and determine the plant survival rate. At each inspection, should the mortality rate exceed the established percentages, plant additional container plants of like kind, and to the original number and size as specified herein for the original planting.

### 1.9.2 Air Quality

*General Conditions and Standard Specifications* Section 01560 (Temporary Controls):

Dust Control (1.03.A): Perform continuous dust abatement measures in accordance with the San Diego Air Pollution Control District’s regulations to prevent construction from producing dust in amounts harmful to persons or animals or causing a nuisance to persons or animals living nearby or occupying buildings in the vicinity of the work. Use water for dust prevention to control dust.

Street Sweeping (1.05.A): Keep all public and private roads used for ingress and egress in a clean and neat condition. Take measures, as necessary, to prevent the tracking or accumulation of materials on roads. Sweep or wash all loose materials and mud from equipment before entering the road. Provide street sweeping services when requested by the Engineer.
Abatement of Air Pollution (1.10.A): Comply with all applicable federal, state, county, and city laws and regulations concerning the prevention and control of air pollution.

Abatement of Air Pollution (1.10.B): Perform construction activities and operate equipment in a manner which will minimize atmospheric emissions or discharges of air contaminants. Do not operate equipment or vehicles that show excessive emissions of exhaust gases on the site.

General Conditions and Standard Specifications Section 02200 (Earthwork):

General (3.01.C): Prevent dust from damaging crops, orchards, cultivated fields, and dwellings, or causing a nuisance to persons. Dust control measures shall be in effect for the duration of the project.

General Conditions and Standard Specifications Section 02310 (Tunneling):

Drill and Blast Excavation (3.05.E): Use blasting mats as necessary to prevent flying rock during tunnel excavation near the portal(s).

1.9.3 Biological Resources

General Conditions and Standard Specifications Section 02110 (Clearing and Grubbing):

Protection (3.02.B): Conduct clearing and grubbing operations in a manner that will preserve and protect vegetation beyond the limits of clearing and grubbing. No filling, excavating, trenching or stockpiling of materials shall be permitted within the drip line of the protected vegetation. The drip line is defined as a circle drawn by extending a line vertically to the ground from the outermost branches of the vegetation. To prevent soil compaction within the drip line area, no equipment will be permitted within this area.

Protection (3.02.B): Prior to the start of clearing and grubbing, schedule and attend a site observation visit with the Engineer to verify existing conditions and the location of environmentally sensitive areas. Erect protective fencing or environmental flagging around environmentally sensitive areas and along the rights-of-way as shown on the plans and as directed by the Engineer during the site observation visit. Maintain fencing and flagging in good condition for the duration of the work.

General Conditions and Standard Specifications Section 02940 (Revegetation):

Sequencing and Site Conditions (1.07.A): Prior to start of work, examine site conditions, and locate all environmentally sensitive areas, and other features, so that precautions may be taken not to damage such areas. Provide for the protection of environmentally sensitive species and habitats within and adjacent to the work areas at all times.
Sequencing and Site Conditions (1.07.B): With the exception of surveying and collection of seeds or plant cuttings, no construction or other disruptive activities (including soil testing or other form of surface disturbance) may occur in or adjacent to environmentally sensitive areas without prior written approval from the Engineer.

Erosion Control (3.05.D): Use methods and materials for re-hydroseeding, or planting of eroded areas consistent with the requirements herein. Do not use invasive exotic species for erosion control.

Establishment Maintenance (3.13.B): Maintain all container plants and cuttings in a vigorous, thriving condition by proper watering, weed control, clean up, general care, and any other means necessary.

Weed Control (3.14.A): Control noxious and annual weeds in all areas to be planted and hydroseeded during construction and throughout the established maintenance period.

Performance Standards (3.15.A): At six-month intervals following the completion of planting, or at other intervals as directed by the Engineer, inspect the container plants in the presence of the Engineer and determine the plant survival rate. At each inspection, should the mortality rate exceed the established percentages, plant additional container plants of like kind and to the original number and size as specified herein for the original planting.

1.9.4 Geology and Soils

General Conditions and Standard Specifications Section 02270 (Temporary Erosion Control):

Construction (3.01.A): Construct and implement erosion control measures in accordance with the Storm Water Pollution Prevention Plan (SWPPP) and as described herein.

Construction (3.01.B): Grade disturbed surfaces to provide positive drainage and prevent ponding of water. Surface water shall be controlled to prevent water damage or deposition of sediment to all adjoining and downstream properties.

Construction (3.01.C): Install silt fences, sedimentation ponds, sandbag dikes, stabilized construction entrances and any other erosion control measure to minimize sediment escape from the construction site and to maintain runoff quality in compliance with the General Permit. Prevent construction sediment from entering any streams, ponds or drainage facilities.

Construction (3.01.D): At a minimum, provide erosion and sedimentation control measures immediately following clearing and grubbing operations in the following locations: (a) in pipeline rights of way immediately upstream of all natural channels; (b) at the lowest end of areas divided by construction before runoff from storms can reach
natural streams; and (c) at additional locations as required to control sedimentation as required by the SWPPP.

Construction (3.01.E): Erosion and sedimentation control measures shall remain in place until such time that the site of work is prepared for permanent drainage and erosion control measures. Remove temporary erosion and sediment control measures so as not to interfere with permanent drainage, erosion control and revegetation.

General Conditions and Standard Specifications Section 02940 (Revegetation):

Erosion Control (3.05.A): Continuously control erosion as specified herein and in accordance with measures shown on the plans or the SWPPP. Erosion control measures shall be implemented and maintained throughout the warranty period.

Erosion Control (3.05.C): Monitor for erosion within revegetation areas and provide measures to prevent gullies, rill and sheet erosion, and silt deposition from occurring. Erosion control shall emphasize prevention. Repair erosion as required and include redirection or dissipation of the water source and recontouring of soil, followed by seeding, mulching, or planting. Strategically placed and secured straw wattles, hay bales or sandbags may be used to dissipate water sources.

1.9.5 Noise and Vibration

General Conditions and Standard Specifications Section 01560 (Temporary Controls):

Noise Control (1.11.B): Equip each internal combustion engine used for any purpose on the job or related to the job with a muffler of a type recommended by the manufacturer. Do not operate internal combustion engines on the project without said muffler.

Noise Control (1.11.C): Noise level requirements shall apply to all equipment on the job or related to the job, including but not limited to trucks and transient equipment that may or may not be owned by the contractor. Avoid the use of loud sound signals in favor of light warnings except where required by safety laws for the protection of personnel.

1.9.6 Public Safety and Hazards

General Conditions and Standard Specifications (General Conditions [GC]):

Responsibility for Job Site (Section 5.2): The contractor is responsible for maintaining an orderly project site and providing jobsite security, and to that end shall employ such watchmen or other persons and implement other appropriate security as may be required.

Safety, Sanitation, Medical, and Drug and Alcohol Requirements (Section 5.3.b): Appropriate first aid facilities and supplies shall be kept at the site of the work, and the
contractor shall provide and maintain all measures required by the Construction Safety Orders issued by the Division of Industrial Safety of the State of California.

Safety, Sanitation, Medical, and Drug and Alcohol Requirements (Section 5.3.c): The contractor shall prohibit the use or possession of intoxicating liquors or controlled substance at the jobsite or in any vehicle or equipment used in performance of the work.

Public Safety (Section 5.4): The contractor shall comply with all laws and regulations regarding public health and safety. The contractor shall provide, erect, or maintain temporary fences, plates, over-crossings, trench bridges, bridges, railings, barriers, and traffic control devices, lights, warning signals, guards, street sweeping, trash removal, vector control and other security devices and systems appropriate to assure public health and safety.

General Conditions and Standard Specifications Section 01560 (Temporary Controls):

Fire Danger (1.07.A): Minimize fire danger in the vicinity of and adjacent to the construction site. Provide labor and equipment to protect the surrounding private property from fire damage resulting from construction operations.

Public Safety (1.08.A): Provide temporary fencing of all open or partially open trenches and excavations, all open or partially completed structures, and all work and storage areas at all times while unattended by workmen.

Sanitation (1.09.B): Establish a regular daily collection of all sanitary and organic wastes. Dispose of away from the site all wastes and refuse from sanitary facilities provided by the contractor or organic material wastes from any other source related to the contractor’s operations in accordance with all laws and regulations pertaining thereto.

Chemicals (1.12.A): All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classifications, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

General Conditions and Standard Specifications Section 02229 (Blasting):

Submittals (1.04.B.2): The site-specific plan shall include the proposed general concept for trench excavation blasting, including controlled blasting techniques and control and monitoring of fly rock, airblast and ground vibration. Blasting intensities shall be limited as required to prevent damage to all existing structures, and in no case, shall intensities exceed the safety standard of particle velocity recommended by the U.S. Bureau of Mines.
Quality of Assurance (1.05.A): Retain the services of a qualified blasting consultant specialist to assist in the preparation of the required blasting plans and verification of reports.

General Requirements (3.01.C): Prior to blasting, obtain the blasting permits/licenses required by the City of San Diego, San Diego County, the State of California, and any other agency having jurisdiction.

General Requirements (3.01.D): Conform to the requirements specified in the State of California Construction Safety Orders for the transporting, handling, storage, and use of explosives. Transportation of explosives shall be in accordance with the regulations of the State Fire Marshall and the California Highway Patrol. The locations, access and construction of explosive storage magazines shall be in accordance with the American Table of Distances for Storage of Explosives and approved by the Chief of San Diego County Fire Department and the Sheriff of San Diego County.

General Requirements (3.01.E): Blasting shall only be permitted between the hours of 8:00 a.m. and 4:00 p.m. during any weekday (Monday through Friday), unless special circumstances warrant another time or day, and special approval is granted in writing by the Engineer and the agency having jurisdiction. Note: special allowance for possible blasting between the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday will be requested for the Proposed Action.

Reporting and Notification (3.02.D): Provide a minimum of two working days advance notice to all residences or businesses within 400 feet of the blast area. Provide two-work days notice to all utility agencies whose facilities may be influenced by the blasting operation.

Inspection Requirements (3.03.A): Conduct pre-blast inspections of all residential, commercial, and Water Authority structures, and other improvements and facilities as necessary, within 400 feet of the blast area. The pre-blast inspection shall be for the purpose of determining the existence of any visible or reasonably recognizable pre-existing defects or damages in any structure and for quality control and construction record purposes.

Inspection Requirements (3.03.D): Conduct post-blast inspections upon receipt of a written or verbal request or complaint of damage to property, structure, or other improvement from the respective owners.

Blasting (3.04.C): As production blasting operations progress, evaluate the drilling and blasting procedures based on the results achieved. If a drilling and blasting program yields unsatisfactory results with regard to excessive blasting effects, the contractor and blasting consultant shall be required to devise and employ methods which shall improve results.
Blasting (3.04.D): Conduct controlled blasting in a manner which produces relatively smooth and sound rock faces at the final excavation lines and maintain blasting effects within the prescribed limits. Fly rock shall be contained within the project rights of way and shall not represent a hazard to people, vehicles, existing improvements or vegetation. Use blasting mats to prevent possible fly rock damage. At the end of each working day, clean the blasting site of all debris associated with the blasting operation.

Blasting (3.04.E): Do not permit blasting within 15 feet of an existing pipeline or structure without submission of a site-specific blasting plan to the Engineer and written approval of the plan by the agency having jurisdiction. Do not conduct blasting with 1-feet of concrete which has been placed less than seven calendar days.

1.9.7 Public Services and Utilities

General Conditions and Standard Specifications Section 01530 (Protection of Existing Facilities):

Work Over Water Authority-Owned Pipelines (1.05.A): Do not operate vehicles or equipment and do not place, push, store or stockpile vehicles, equipment, supplies, tools, fabricated or manufactured articles, fuel supplies, field office facilities, excavated or imported materials of any kind, and do not perform any work within 15 feet of the centerline of existing Water Authority-owned pipelines, except where specified or shown on the plans, or where permission is granted in writing by the Engineer.

Work Over Water Authority-Owned Pipelines (1.05.B): At designated crossing locations of existing Water Authority-owned pipelines, limit equipment loads to the live load limits shown or specified. At these locations, if the contractor elects to cross existing Water Authority-owned pipelines with equipment loads in excess of the live load limits shown or specified erect temporary bridges for use by equipment that exceeds the specified live load limits.

Maintaining In Service (1.08.A): All utilities including oil and gasoline pipelines, power, and telephone or communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the work shall remain continuously in service during all operations, unless other arrangements satisfactory to the Engineer are made with the owner of said utility.

1.9.8 Traffic/Circulation

General Conditions and Standard Specifications Section 01560 (Temporary Controls):

Pre-construction Video (1.10.A): Prior to commencing any work, a pre-construction video in DVD format shall be made to illustrate all areas that may be disrupted by the
work. Include on the video Water Authority access patrol roads and rights-of-way, construction access roads, all public and private streets used for access to and from the work site, environmentally sensitive areas, the inside condition of all sanitary and storm sewer pipelines and laterals that are located within the construction zone.

Street Sweeping (1.05.A): Keep all public and private roads used for ingress and egress in a clean and neat condition. Take measures, as necessary, to prevent the tracking or accumulation of materials on roads. Sweep or wash all loose materials and mud from equipment before entering the road.

General Conditions and Standard Specifications Section 02200 (Earthwork):


Disposal of Excess Materials (3.16.C): Haul excavated materials from the work site to approved disposal location(s) during the hours permitted in accordance with local traffic control regulations. Provide traffic control as required by the agency having jurisdiction.

Erosion Control (3.17.B): Replace curbs, gutters, sidewalks, asphalt and paving as shown on the plans or in conformance with the requirements of the agency having jurisdiction. When there are no agency requirements, replace asphalt and paving in conformance with the Standard Specifications for Public Works Construction.

1.9.9 Water Resources

General Conditions and Standard Specifications Section 02140 (Dewatering):

Job Conditions (1.04.D): Comply with RWQCB Waste Discharge requirements under Orders 2000-90 and 2001-96, or the most current orders at the time of the Notice of Award. Obtain authorization, as required, prior to discharge of groundwater, and comply with the sampling, testing, monitoring, and reporting requirements specified therein.

Dewatering (3.01.E): Dispose of water in such a manner as to cause no injury or nuisance to public or private property, or be a menace to the public health. Dispose of the water in accordance with applicable regulatory agency requirements.

Dewatering (3.01.G): Prevent disposal of sediments from the soils to adjacent lands or waterways by employing necessary methods, including settling basins. Locate settling basins away from watercourses to prevent silt-bearing water from reaching the watercourse during flow regime.

Dewatering (3.01.H): Where excavations may obstruct the natural flow of a watercourse, implement measures to control and dispose of the surface water that will not adversely affect water quality or beneficial uses of the watercourse. Divert watercourse flows...
around excavation areas by constructing barriers, temporary culverts, new channels or other appropriate means.

Dewatering (3.01.I): Do not allow water containing mud, silt or other pollutants from aggregate washing or other construction activities to enter a watercourse or be placed in locations that may be subjected to high storm flows.

**General Conditions and Standard Specifications Section 02270 (Temporary Erosion Control):**

Description (1.01.C): For projects with soil disturbances of one acre or more, comply with the NPDES General Permit for Storm Water Discharges Associated with Construction Activity, General Permit No. CAS000002, Order No. 99-08-DWQ, or the most current order at the time of the Notice of Award, and requirements included herein.

Construction (3.01.B): Grade disturbed surfaces to provide positive drainage and prevent ponding of water. Surface water shall be controlled to prevent water damage or deposition of sediment to all adjoining and downstream properties.

Construction (3.01.C): Install silt fences, sedimentation ponds, sandbag dikes, stabilized construction entrances and any other erosion control measure to minimize sediment escape from the construction site and to maintain runoff quality in compliance with the General Permit. Prevent construction sediment from entering any streams, ponds or drainage facilities.

Construction (3.01.E): Erosion and sedimentation control measures shall remain in place until such time that the site of work is prepared for permanent drainage and erosion control measures. Remove temporary erosion and sediment control measures so as not to interfere with permanent drainage, erosion control and revegetation.

**General Conditions and Standard Specifications Section 02940 (Revegetation):**

Erosion Control (3.05.A): Continuously control erosion in accordance with measures shown in the plans or the SWPPP. Erosion control measures shall be implemented and maintained throughout the warranty period. Remove temporary erosion control measures that will not be part of the permanent erosion control plan.

Erosion Control (3.05.C): Monitor for erosion within revegetation areas and provide measures to prevent gullies, rill, and sheet erosion, and silt deposition from occurring. Erosion control shall emphasize prevention. Repair erosion as required and include redirection or dissipation of the water source and recontouring of soil, followed by seeding, mulching, or planting. Strategically placed and secured straw wattles, hay bales, or sandbags may be used to dissipate water sources.