2.16 Utilities and Service Systems

The utilities and service systems discussed in this section include the following: 1) potable water supply and distribution; 2) wastewater collection, transmission and disposal; 3) solid waste disposal; and 4) energy. In addition, this section also analyzes the potential for the proposed County of San Diego General Plan Update to have a significant impact on utilities and service systems. Information contained in the following section has been incorporated from the County of San Diego General Plan Conservation and Open Space Element Background Report (DPLU 2007b), the County of San Diego General Plan Land Use Element Background Report (DPLU 2007c), applicable water district's Urban Water Management Plans, the County of San Diego General Plan Update Groundwater Study (DPLU 2009f), the San Diego County Integrated Waste Management Plan Siting Element, 2005 5-Year Revision, and additional resources as cited throughout the section.

A summary of the impacts to utilities and service systems identified in Section 2.16.3 is provided below.

Utilities and Service Systems Summary of Impacts

Issue Number	Issue Topic	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
1	Wastewater Treatment Requirements	Potentially Significant	Less Than Significant	Less Than Significant
2	New Water or Wastewater Treatment Facilities	Potentially Significant	Less Than Significant	Less Than Significant
3	Sufficient Stormwater Drainage Facilities	Potentially Significant	Less Than Significant	Less Than Significant
4	Adequate Water Supplies	Potentially Significant	Potentially Significant	Significant and Unavoidable
5	Adequate Wastewater Facilities	Potentially Significant	Less Than Significant	Less Than Significant
6	Sufficient Landfill Capacity	Potentially Significant	Potentially Significant	Significant and Unavoidable
7	Solid Waste Regulations	Less than Significant	Less Than Significant	Less Than Significant
8	Energy	Potentially Significant	Potentially Significant	Less Than Significant

2.16.1 Existing Conditions

2.16.1.1 Potable Water Supply and Distribution

There are a multitude of independent districts and agencies that share the responsibility for the planning and management of the potable water delivery system in San Diego County. The following section evaluates the potable water resources in the County by examining potable water supply and distribution in four categories: 1) Metropolitan Water District (MWD), San Diego County Water Authority (SDCWA) and SDCWA Member Water Districts; 2) Groundwater Dependent Water Districts; 3) Groundwater Dependent Users; and 4) Borrego Valley Aquifer. Borrego Valley Aquifer is included in this discussion because this water supply source has a well documented groundwater overdraft condition. An overdraft condition occurs when year

after year groundwater extraction exceeds the amount of groundwater that is recharged back into the aquifer.

MWD, SDCWA and SDCWA Member Water Districts

In 2008, MWD provided approximately 71 percent of the total water supply for the entire San Diego County, including incorporated areas. SDCWA is one of MWD's 27 member agencies and is the largest MWD member agency in terms of deliveries. There are primarily 15 water districts that serve the unincorporated County which import the majority of their water from SDCWA through its supplier, MWD. The location and boundaries of the SDCWA member districts discussed below are shown on Figure 2.16-1. Table 2.16-1 identifies the existing (2004) housing and population served by each SDCWA member water district. The following section discusses water supply planning and imported water supply planning issues. The section then provides information regarding existing facilities, service areas and current and projected supply capabilities for MWD, SDCWA and the 15 SDCWA member water districts.

Planning for Future Water Supply

The California Urban Water Management Planning Act requires that each urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers, or supplying more than 3,000 acre-feet (AF) of water annually, shall prepare, update and adopt an Urban Water Management Plan (UWMP) at least once every five years on or before December 31, in years ending in five and zero. This applies to MWD, SDCWA and its 15 member agencies that serve the unincorporated County. The intent of an UWMP is to present important information on water supply, water usage, recycled water and water use efficiency programs in a respective water district's service area. An UWMP also serves as a valuable resource for planners and policy makers over a 25 year timeframe.

The UWMP process ensures that water supplies are being planned to meet future growth. UWMPs are developed to manage the uncertainties and variability of multiple supply sources and demands over the long term through preferred water resources strategy adoption and resource development target approvals for implementation. Water districts update their demand forecasts and supply needs based on the most recent SANDAG forecast approximately every five years to coincide with preparation of their UWMPs. The most current supply and demand projections for water districts are contained in their respective 2005 UWMPs. SDCWA member districts rely heavily on the UWMPs and Integrated Resources Plans (IRPs) of MWD and the Regional Water Facilities Master Plan of SDCWA for documentation of supplies available to meet projected demands.

Single year, normal year and multiple dry water year 2005 UWMP supply and demand assessments for MWD, SDCWA and SDCWA member districts are included in Appendix J of this EIR. These projections are intended to describe the reliability of the water supply and vulnerability to seasonal or climatic shortages, to the extent practical. Normal water years are considered to be years that experience average rainfall for the respective district. Single dry water years are considered one year events of less than average rainfall, surrounded by average rainfall years. Multiple dry water years refer to a series of below average rainfall for particular areas. Projections for multiple dry years are made in five year increments. In the 2005 UWMPs, MWD, SDCWA and all 15 SDCWA member agencies that serve the unincorporated County determined that adequate water supplies would be available to serve existing service areas under normal water year, single dry water year and multiple dry water

year conditions through the year 2030, if Water Authority and member agency supplies are developed as planned, along with implementation of MWD's IRP.

Imported Water Supply Issues

Since the preparation and adoption of the 2005 UWMPs, multiple events have occurred that may affect the accuracy of the projections included in the 2005 UWMPs. Factors such as cutbacks in water importation supplies from MWD and SDCWA were not accounted for in the 2005 UWMP supply and demand projections. For example, the Colorado River, a major source of imported supplies for the region, has experienced drought conditions for eight of the last nine years. Additionally, the State Water Project (SWP) in northern California experienced three years (2006-2008) of extreme drought conditions which substantially depleted storage in reservoirs throughout the whole SWP, including San Diego County. After a record dry spring that dramatically curtailed snow runoff from the Sierra Nevada Mountains, Governor Schwarzenegger declared an official Statewide drought on June 4, 2008. Following the Governor's action, the MWD Board of Directors issued a water supply alert for its six-county service area, urging local jurisdictions to adopt and implement water conservation ordinances and to significantly increase efforts and programs to conserve water. The County of San Diego maintains a Water Conservation and Landscape Design Manual, which implements Section 6712 (d) of the County Zoning Ordinance.

In addition to extreme drought conditions, in August 2007, a U.S. District Court decision was issued to protect the endangered Delta smelt (fish). This federal court ruling set operational limits on pumping in the Sacramento-San Joaquin Delta from December 2007 to June 2008 to protect the Delta smelt. As a result of this ruling, MWD is estimated to see as much as a 20 to 30 percent reduction in SWP supplies in 2008 and beyond. It should be noted that actual supply curtailments for MWD, due to this court decision, are contingent upon fish distribution, behavioral patterns, weather, Delta flow conditions, and how much water supply reductions are divided between State and federal projects. Since the SDCWA and SDCWA member agencies import large quantities of water from MWD, their water supply has been impacted by this court ruling. As a result, local water agencies have had to rely on contingency and emergency sources of water, including local groundwater and storage supplies, as well as voluntary and mandatory restrictions, to lessen direct impacts on water availability for their customers.

Additionally, climate change due to global warming also creates new uncertainties that significantly affect California's water resources and lessen the reliability of the 2005 UWMPs. This issue is further discussed in Section 2.17, Climate Change, of this EIR.

All 2005 UWMPs include a drought management or shortage contingency analysis section, which identifies how the agency will manage shortages. However, these UWMPs do not account for the severity or longevity of the above-mentioned difficulties in providing enough supply for the region's demand. In preparing 2010 UWMPs, MWD, SDCWA and SDCWA member water districts are going to account for these issues and will likely place more emphasis on conservation, water recycling, and expanding local supplies through methods such as seawater desalination.

Metropolitan Water District (MWD)

MWD supplies water to approximately 18 million people in a 5,200-square mile service area that includes portions of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego

counties. The MWD service area covers a 70-mile-wide strip of the Southern California coastal plain, extending from the City of Oxnard on the north to the U.S./Mexico international border on the south. Close to half of the water used in this region is supplied by MWD, and about 90 percent of the regional population receives at least some of its water from MWD. MWD provides approximately 71 percent of the total water supply for the entire San Diego County, including incorporated areas. SDCWA is one of MWD's 27 member agencies and is the largest MWD member agency in terms of deliveries. In Fiscal Year 2006/7, SDCWA purchased 662,801 acre feet (AF) of water, or about 28 percent of all the water MWD delivered. Supply and demand projection information for MWD is included in its 2005 Regional UWMP, adopted on November 8, 2005.

MWD's long-term strategy for a sustainable water supply is outlined in its IRP (2004), which is currently being updated. This plan requires that an agency develop a water management plan for incorporation in a regional process to integrate its plan with other agencies having responsibilities for water management. The MWD IRP, updated every five years, was first adopted in 1996 and last updated in 2004. MWD's IRP identifies a mix of resources (imported and local) that will provide 100 percent reliability for full-service demands through the attainment of regional targets set for conservation, local supplies, SWP supplies, Colorado River supplies, groundwater banking, and water transfers through the year 2030. The IRP sets regional goals for the development of MWD's various water resources and is the blueprint that guides MWD's efforts to increase water supplies and lower demands. The IRP is also an important foundation for water planning needs throughout Southern California. State law requires water districts to have long-term water plans in order to successfully manage growth and plan for the future.

MWD imports water from two primary sources for Southern California. One source is the Colorado River, which is connected to the District's six-county service area through a 242-mile aqueduct. Another source is water from Northern California, which supplies water through a series of dams and aqueducts known as the SWP. In addition, MWD is active in increasing local supplies through sponsoring recycling, conservation, groundwater recovery and desalination efforts. Imported supplies also help to replenish local groundwater basins. MWD's Board of Directors sets the targets for lowering demands and securing the necessary supplies in the IRP. The so-called "Preferred Resource Mix" is identified based on extensive technical modeling, IRP workgroups, and stakeholder involvement. The 2004 MWD IRP assumed that new local efforts, both increasing supplies and lowering demands, would meet the needs of population growth. Given the challenges facing imported supplies, it is widely expected that the 2009 IRP will have an even greater focus on local projects and control of demand. The precise resource mix (including recycling, desalination, and more conservation) will be identified in the 2009 IRP process (MWD 2009).

The MWD IRP also includes a planning buffer supply intended to mitigate the risks associated with implementation of local and imported supply programs. The planning buffer identifies an additional increment of water that could potentially be developed if other supplies are not implemented as planned. As part of implementation of the planning buffer, MWD periodically evaluates supply development to ensure that the region is not under or over developing supplies. Managed properly, the planning buffer will help ensure that the southern California region, including San Diego County, will have adequate water supplies to meet future demands.

On April 14, 2009, MWD announced that it will cut water deliveries to the Southern California region by 13 percent in 2009. MWD will cut back deliveries to the SDCWA and MWD's other member agencies starting July 1, 2009.

San Diego County Water Authority (SDCWA)

The SDCWA service area covers approximately 922,381 acres, services a population of almost three million people, and encompasses the western third of San Diego County. SDCWA has 24 member agencies, 15 of which provide water to unincorporated areas of San Diego County. The water that SDCWA imports serves 75-95 percent of the total water consumed by the population of the San Diego region. Historically, SDCWA has relied on imported water supplies purchased from the MWD to meet the needs of its member agencies. However, this imported water only serves a portion of the total unincorporated population. Geographically, the majority of the unincorporated area is reliant on separate groundwater dependent districts or private wells, which are unaffiliated with SDCWA. These independent districts are discussed in more detail in the following section.

The SDCWA is responsible for ensuring a safe and reliable water supply to support the region's $130 billion economy and the quality of life for three million residents. Because of the County's semi-arid climate and limited local water supplies, SDCWA provides up to 90 percent of the water used in the San Diego region by way of imported water from MWD, a transfer agreement with Imperial Irrigation District (IID) and agreements for the lining of the All American and Coachella Canals, via the Quantification Settlement Agreement of October 2003.. Most of this water is obtained from the Colorado River and the SWP through a massive system of pipes and aqueducts. The SDCWA has determined that the best way to ensure a reliable water supply for the future is to diversify its water supply portfolio. Diversification includes water that originates locally, such as recycled water and desalinated seawater. The SDCWA Regional Water Facilities Master Plan serves as the roadmap for identifying a diverse mix of water supply sources and implementing the associated facilities and projects needed through 2030 to ensure a safe and reliable supply.

The 2002 Regional Water Facilities Master Plan, planned to be updated in 2012, analyzes future water demands and different ways to meet those demands. It describes three different water supply alternatives: 1) Northern Alternative, 2) Western Alternative, and 3) Eastern Alternative. The Northern Alternative would consist of the construction of a new, sixth pipeline in the northern half of San Diego County to convey additional water from MWD. The Western Alternative would result in the development of additional water supplies from the west through construction of seawater desalination facilities. The Eastern Alternative would result in the construction of a new pipeline from the east to deliver water from the Colorado River. The SDCWA Board of Directors selected the Western Alternative, seawater desalination, as the preferred alternative for providing a new, safe and reliable water supply for the region. Seawater desalination removes salts and other impurities to produce very safe, high-quality water for drinking and other potable water uses (SDCWA 2004). As part of the SDCWA's diversification of supply, a Carlsbad desalination plant is scheduled to begin construction in 2009 and is expected to be operational before the end of 2011. This project has received final approvals from the required regulatory and permitting agencies in the State, including the California Coastal Commission, State Lands Commission, and RWQCB.

In addition to the 2004 Regional Water Facilities Master Plan, the SDCWA, County of San Diego and City of San Diego collaboratively maintain an Integrated Regional Water Management Plan (IRWMP) for the San Diego region. The Final San Diego IRWMP, adopted in 2007, reflects a comprehensive approach to water resources planning that integrates ongoing local planning efforts in order to maximize regional water management benefits and resolve any existing or potential conflicts. The San Diego IRWMP identifies programs and projects that best

achieve the region's goals to optimize water supply reliability, and protect and enhance water quality, while providing stewardship of natural resources. The 2007 San Diego IRWMP includes a description of the region and participants, regional objectives and priorities, water management strategies, implementation, impacts and benefits, data management, financing, stakeholder involvement, relationship to local planning, and State and federal coordination. IRWM planning was derived from California Proposition 50, approved by the voters in 2002, which set aside $380 million for IRWMP-related grants (SDIRWM 2010).

SDCWA also has a Drought Management Plan (May 2006) which provides its member agencies with a series of potential actions to engage when faced with a shortage of imported water supplies due to prolonged drought conditions. Such actions help avoid or minimize impacts of shortages and ensure an equitable allocation of supplies throughout the San Diego region.

The SDCWA's most recent planning documents, the 2005 Urban Water Management Plan and 2006-2007 Annual Report, concluded that water supplies would be sufficient through 2030, if Water Authority and member agency supplies are developed as planned, along with the implementation of MWD's IRP. However, with the majority of its supplies coming from MWD, the SDCWA has also been affected by the federal court decision regarding the Delta smelt and the Statewide drought. These two issues have primarily affected allocations from the SWP, which has accounted for approximately 30 percent of the SDCWA's water supply in recent years. Additionally, as discussed above, uncertainties also exist with SDCWA's other major water source, the Colorado River.

To prepare the San Diego region for potential water shortages, in March 2008 the SDCWA released a Model Drought Response Ordinance to its member agencies. The Model Drought Response Ordinance identifies four drought response levels that contain water-use restrictions that will help achieve demand reduction during water shortages. Member agencies are using the SDCWA's model to update their own ordinances to help provide consistency throughout the region on response levels and water use restrictions that may be taken to reduce water demand.

Responding to reduced water supplies caused by regulatory restrictions, lingering drought, and cutbacks from MWD, the SDCWA announced on April 23, 2009 that it will cut water deliveries to its member water agencies by 8 percent effective July 1, 2009. To help achieve the required reduction in regional water use, the SDCWA Board also immediately declared a Level 2 "Drought Alert" condition. This action enables the SDCWA's 24 member agencies to adopt mandatory conservation measures for residents and businesses, such as use restrictions or tiered water rates that charge more for excessive water use.

SDCWA Member Water Districts

The following discussion provides information regarding existing facilities, service areas and current and projected supply capabilities for the 15 SDCWA member water districts.

Fallbrook Public Utility District (FPUD)

The FPUD provides water service to the unincorporated areas of Fallbrook. Specifically the service area includes the Fallbrook Country Town Area and surrounding vicinity, and the eastern portion of the De Luz area in northern San Diego County. The FPUD service area covers 28,000 acres and has 8,970 connections. FPUD operates approximately 230 miles of

pipeline, four lift stations, one groundwater well, and the Red Mountain Reservoir, which has a storage capacity of 1,300 AF. FPUD imports 99 percent of its water supply from SDCWA and obtains one percent from local water sources. FPUD provides 47 percent of its service to residential land uses, 47 percent to agricultural land uses, and 6 percent to commercial land uses. The average daily consumption for FPUD is 47.7 AF. FPUD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Helix Water District (HWD)

The HWD provides water service to the cities of El Cajon, La Mesa, Lemon Grove, and portions of Spring Valley, Sweetwater, Crest/Dehesa, Valle de Oro, and Lakeside Community Planning Areas (CPAs). HWD service area covers 31,327 acres and has 54,477 connections. The HWD service area is nearly completely built out, and does not have territory to expand in the future. HWD operates 713 miles of pipeline, 21 lift stations, one groundwater well, the R.M. Levy Water Treatment Plant, and four reservoirs. These reservoirs include Cuyamaca Lake, capacity 3,829 million gallons (mg); Lake Jennings, capacity 3,189 mg; El Captain Lake, capacity 3,267 mg; and various storage tanks, combined capacity 70 mg. The R.M. Levy Water Treatment Plant has a treatment capacity of 106 million gallons per day (mgd). HWD imports 82 percent of its water supply from SDCWA and obtains 18 percent from local water sources. HWD provides 81 percent of its service to residential land uses, 12 percent to industrial/commercial land uses, and 7 percent to public land uses. Average daily consumption for HWD is 36 mgd.

Lakeside Water District (LWD)

On November 15, 2006, LWD consolidated services with the former Riverview Water District and became an independent member of the SDCWA. The LWD water service area includes 20 square miles of the Lakeside CPA, including Eucalyptus Hills, Moreno Valley and Muth Valley. LWD service area has approximately 7,055 connections. Seventy-three percent of the LWD water supply is imported from the SDCWA and the remaining 27 percent of the water supply is derived from groundwater wells. LWD operates six wells, 10 pump stations, 11 reservoirs (total capacity 12.7 mg), 90 miles of pipelines, and the Vine Street Groundwater Treatment Plant (capacity 1.5 mgd). One LWD well also operates a MTBE removal system. MTBE is a gasoline additive that negatively affects groundwater quality. Ninety-eight percent of LWD water service is provided to residential land uses. The remaining water service is provided to industrial, agricultural and commercial land uses. Average daily consumption for LWD is 4 mgd.

Olivenhain Municipal Water District (OMWD)

The OMWD provides water service to the unincorporated areas of Olivenhain Valley, Fairbanks Ranch, Mt. Israel, Elfin Forest, Rancho Santa Fe, 4S Ranch Specific Plan Area, Whispering Palms, and portions of the cities of Carlsbad, Encinitas, San Diego, San Marcos, and Solana Beach. OMWD's service area covers 48 square miles and has 14,501 connections. OMWD operates approximately 375 miles of pipeline, 16 storage tanks, the Olivenhain Reservoir (24,789 AF capacity), and the Roger Miller Reservoir. Additional facilities in this District include the Olivenhain Water Treatment Plant and two hydroelectric plants. OMWD imports 100 percent of its water supply from SDCWA. OMWD provides 86 percent of its water service to residential, industrial or commercial land uses and 14 percent of its service to agricultural land uses. The average daily consumption for this District is 41.1 mgd. OMWD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Otay Water District (OWD)

The OWD provides water services to southern El Cajon, La Mesa, Rancho San Diego, Jamul, Spring Valley, Bonita, eastern Chula Vista, the Eastlake community, and Otay Mesa along the international border with Mexico. OWD covers 80,320 acres and has approximately 41,500 connections. OWD has approximately 450 miles of pipelines, 21 pump stations, and 37 reservoirs with a total storage capacity of 190 mg. One hundred percent of the OWD water supply is imported from SDCWA. OWD provides 90 percent of its water service to residential land uses and 10 percent to commercial and industrial land uses. Average daily consumption for OWD is 36,970 AF. OWD maintains five major systems to supply and deliver water, which include Hillsdale, Regulatory, La Presa, Central, and Otay Mesa. OWD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Padre Dam Municipal Water District (PDMWD)

The PDMWD provides water service to portions of the unincorporated communities of Alpine, Crest/Dehesa, and Lakeside. The District also wholesales water to the Lakeside and Riverview Water Districts. PDMWD covers 54,400 acres and has approximately 21,454 connections. PDMWD has approximately 353 miles of pipelines, 26 potable water reservoirs, one recycled water reservoir, and 16 lift stations. One hundred percent of PDMWD's water supply is imported from SDCWA. PDMWD has two distinct service areas: western and eastern. The PDMWD western area has higher residential densities and more intensive commercial land uses, while the eastern area has semi-rural densities and more agricultural land uses. PDMWD provides 88 percent of its water service to residential land uses, 10 percent to commercial land uses, and two percent to agricultural land uses. The average daily consumption for PDMWD is 38 mgd during peak summer demand and 25 mgd during the rest of the year. PDMWD also provides wastewater service to customers within its service area. These services are discussed below in Section, 2.16.1.2 Wastewater Collection, Treatment and Disposal.

Rainbow Municipal Water District (RMWD)

The RMWD provides water service to the unincorporated areas of northwestern San Diego County, specifically the unincorporated communities of Rainbow, Bonsall, and a portion of Fallbrook. The RMWD service area is bounded by Camp Pendleton on the west, the City of Vista on the south, the Fallbrook Community Planning Area on the east and the County of Riverside on the north. RMWD covers 49,800 acres and has approximately 6,300 connections. RMWD has 17 reservoirs (total capacity 1,350 AF), 46 pressure stations, and approximately 300 miles of pipeline. The majority of water service is provided to agricultural customers and the average daily consumption of RMWD is a maximum of 58,619 gpm.

In May of 2003, the RMWD declared an infrastructure state of emergency due to increasing occurrences of infrastructure failures. RMWD is now experiencing more than 80 pipeline breaks annually and the number is increasing. In comparison, an average healthy system with a good preventive maintenance program would only have a few minor leaks per year. Many of these failures can be attributed to the age of the water pipelines and pump stations, many of which are more than 50-years old. Thus far, RMWD has been unable to invest in preventive maintenance due to an ordinance restricting them from going in debt for more than one million dollars. RMWD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Ramona Municipal Water District (Ramona MWD)

The Ramona MWD provides water service to approximately 57 percent of the Ramona CPA. Ramona MWD covers 45,796 acres and has approximately 9,477 connections. Ramona MWD operates 272 miles of pipeline, 13 water pump stations, and the Lake Ramona Reservoir, which has a storage capacity of 13,400 AF. RMWD also has one treatment facility, the John C. Bargar Water Treatment Plant. This plant has a treatment capacity of 5.3 mgd; however, the plant is currently not in operation and although rated at 5.3 mgd, has been unable to operate above 3.0 mgd as a result of recent changes in drinking water standards. The average daily consumption for Ramona MWD is 10.86 mgd. Ramona MWD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Rincon del Diablo Municipal Water District (RDDMWD)

The RDDMWD provides water service to the unincorporated areas of North County Metro, San Dieguito, and the cities of Escondido, San Marcos, and San Diego. RDDMWD covers 26,760 acres and has approximately 7,400 connections. RDDMWD has 129 miles of pipeline, four lift stations, and 10 reservoirs. Water service is provided to residential land uses (66 percent), agricultural land uses (13 percent), commercial land uses (12 percent) and agricultural land uses (9 percent). The average daily consumption for RDDMWD is 22.9 AF.

Santa Fe Irrigation District (SFID)

SFID provides service to the unincorporated communities of Rancho Santa Fe, Fairbanks Ranch, and the City of Solana Beach. SFID has a 10,359 acre service area with 6,313 connections. Approximately 76 percent of SFID water supply is imported from SDCWA and about 24 percent is derived from local supplies. SFID operates 135 miles of pipeline, the RE Badger Clearwell Reservoir (9 mgd capacity), the Larrik Reservoir (6 mgd capacity) and the RE Badger Filtration Plan (40 mgd capacity). SFID provides approximately 86 percent of its water service to residential land uses, six percent to irrigation land uses, four percent to commercial land uses, two percent each to agricultural and other land uses, and one percent to public land uses. The SFID service area is 98 percent built-out, with little capability for growth left. The average daily consumption for SFID is 12 mgd.

Sweetwater Authority/South Bay Irrigation District (SA/SB)

The SA/SB provides water service to National City, the northern part of Bonita, and the western portion of Chula Vista. SA/SB serves approximately 32,560 connections over a service area of 20,480 acres. Depending upon the amount of rainfall received, as much as 70 percent of the water supply is obtained from the SDCWA and as little as 30 percent is obtained from local sources. SA/SB operates 388 miles of pipelines, 23 pump stations, 9 groundwater production wells, the Perdue Water Treatment Plant (30 mgd capacity), the Reynolds Groundwater Desalination Facility (4 mgd capacity), Sweetwater Reservoir (28,079 AF capacity), and Loveland Reservoir (25,387 AF capacity). SA/SB provides 88 percent of its water service to residential land uses, 18 percent to commercial land uses, nine percent to government land uses, two percent to industrial land uses, and less than one percent to agricultural land uses. Average daily consumption for SA/SB is 19.5 mgd.

Vallecitos Water District (VWD)

The VWD provides water service to the City of San Marcos, portions of the City of Vista, Escondido, and Carlsbad, and the unincorporated areas/communities of Twin Oaks, portions of

San Dieguito, and North County Metro. VSD serves approximately 19,500 connections over a 28,800 acre service area. One hundred percent of the water supply is imported from SDCWA. VWD operates nine pump stations, 329 miles of pipeline and 16 reservoirs (227 AF total capacity). Average daily consumption for VWD is 17 mgd. VWD provides approximately 90 percent of its water supply to residential land uses, four percent to commercial land uses, three percent to landscape uses, and less than one percent to industrial, institutional, governmental, and agricultural land uses. VWD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Valley Center Municipal Water District (VCMWD)

The VCMWD provides water service to the residents of Valley Center and surrounding areas (generally located east of I-15). VCMWD serves approximately 7,600 meters, seven aqueduct connections and a service area of 62,100 acres. VCMWD operates 26 pump stations, 97 pumps, 15 pressure reducing stations, 270 miles of pipeline, and 79 reservoirs and storage facilities (415 AF total capacity). All of VCMWD's water is imported from SDCWA. Land uses served include agriculture (82 percent), residential (14 percent), and commercial (four percent). Average daily consumption for VCMWD is approximately 34.7 mgd. VCMWD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Vista Irrigation District (VID)

The VID provides water service to the City of Vista, portions of the Cities of Escondido, Oceanside, and San Marcos, and the unincorporated areas located on the periphery of the Cities of San Marcos and Vista, and portions of the North County Metro Subregion, including the Twin Oaks Valley area. VID serves approximately 27,317 connections over a service area of 21,316 acres. Approximately 70 percent of VID's water supply is imported from SDCWA and the remaining 30 percent comes from groundwater sources that include the Warner Basin aquifer and surface diversion sources such as Lake Henshaw. VID operates 462 miles of pipeline, eight lift stations, the Escondido/Vista Filtration Plant (90 mgd capacity) and 14 reservoirs (48 mg combined capacity). VID supplies 73 percent of its water service to residential land uses, 18 percent to commercial/industrial land uses, and nine percent to agricultural land uses.

Yuima Municipal Water District (YMWD)

The YMWD provides water service to the unincorporated areas in the vicinity of Pauma Valley in northern San Diego County. YMWD serves a service area of 13,460 acres. YMWD has four pump stations, approximately 43 miles of pipeline connected directly to MWD aqueducts, and 11 reservoirs (46 AF total capacity). Forty-two percent of the YMWD water supply is imported from SDCWA and 58 percent is derived from local groundwater sources, including deep-water wells and the San Luis Rey groundwater basin. YMWD provides 98 percent of its water service to agricultural land uses and the remaining two percent to residential land uses.

<u>Groundwater Dependent Water Districts</u>

The 14 groundwater dependent water districts listed below serve the unincorporated areas of San Diego County without the ability to receive imported water directly from SDCWA. Each of these districts relies on groundwater as the only source for their water supply. Table 2.16-2, identifies the existing (year 2004) housing units and population served by each groundwater

dependent water district. The districts listed below are not required to produce UWMPs because they either do not serve over 3,000 customers or do not distribute over 3,000 AF of water annually. Additional information regarding groundwater quality and distribution is discussed in Section 2.8, Hydrology and Water Quality. Information on additional groundwater dependent users within the unincorporated County and the groundwater conditions of the Borrego Valley aquifer is further discussed below.

Borrego Springs Park Community Service District (BSPCSD)

The BSPCSD currently provides water service to the Borrego Springs Country Club located in the heart of the unincorporated community of Borrego Springs, within the boundaries of the Country Town area. BSPCSD is located entirely within the Borrego Springs Subregion and is completely surrounded by the Borrego Water District, a separate, independent water district. BSPCSD serves approximately 94 connections over a 1,200 acre service area. One hundred percent of the BSPCSD water supply comes from local wells. This District has two pump stations, five miles of pipelines and four groundwater wells. Average daily consumption for BSPCSD is 186,000 gallons per day (gpd). BSPCSD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Borrego Water District (BWD)

In 1962, the BWD was formed as a landowner-voter district under the provisions of the California Water District Act to protect the water rights in Borrego Valley. However, the District was inactive until 1979 when the San Diego LAFCO sanctioned the District to exercise its latent water authority. The BWD provides water service to areas of Borrego Valley, excluding the area served by the BSPCSD. BWD serves approximately 1,679 connections over a service area of 6,130 acres. One hundred percent of BWD water supply comes from groundwater. BWD operates 13 groundwater wells, two pump stations, 82 miles of pipeline and six reservoirs (total capacity 4.05 mg). Ninety percent of BWD water service is provided to residential land uses and 10 percent is provided to commercial land uses. Average daily consumption for BWD is 3.42 mgd. A majority of the water supplied to agricultural users within Borrego Valley comes from privately owned wells. The BSPCSD is in process of a merger to become part of the BWD. BWD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal. Additional discussion on the groundwater conditions within the Borrego Valley Aquifer are discussed below.

Campo Water and Sewer Maintenance District (CWSMD)

The CWSMD is located in the southeastern portion of the County and provides water service to several County facilities and local residents. One hundred percent of CWSMD water supply comes from three local wells. CWSMD operates two miles of pipeline and three storage tanks (total capacity 1.6 mg). Land uses served by the CWSMD include residential and commercial uses and average daily consumption for the CSA is 115,000 gpd.

Canebrake County Water District (CCWD)

The CCWD provides water service to approximately 78 connections over a service area of 950 acres. One hundred percent of CCWD water supply comes from one local groundwater well. The average daily consumption for the CCWD is 3,500 gpd and all water service is provided to residential land uses. CCWD is surrounded by the Anza-Borrego State Park and federally

owned land, and many of its customers are seasonal visitors and/or part-time residents. For this reason, CCWD does not anticipate future growth.

Cuyamaca Water District (CWD)

The CWD provides water service to approximately 151 connections over a 200 acre service area. One hundred percent of CWD water supply comes from four local groundwater wells. CWD operates one pump station, five miles of pipeline and two reservoirs (total capacity 335,000 gallons). Ninety-nine percent of CWD water service is provided to residential land uses and one percent is provided to commercial land uses. Average daily consumption for CWD is 36,000 gpd.

Descanso Community Services District (DCSD)

The DCSD provides water service to an area situated north of Old Highway 80, west of State Route (SR) 79, and south of Cuyamaca Rancho State Park within the Descanso CPA. Descanso serves approximately 313 connections. The District owns two groundwater wells, two storage tanks (total capacity 770,000 gallons), 29 fire hydrants and 37 standpipes (of various sizes). One hundred percent of DCSD water supply is from groundwater and the average daily consumption is 100,000 gpd. DCSD provides 94 percent of its water service to residential land uses and six percent to commercial land uses.

In 2002, water production could not keep up with water demand. This was a result of DCSD relying heavily on one well to supply the needs of 313 customers, which caused an extraction demand that exceeded extraction capacity. To provide an additional volume of water, the groundwater well pump was lowered 126-feet to obtain adequate water. It should be noted that Descanso itself does not have a depleted water supply, as shown in wells monitored by the County; however, the supply from one well is not sufficient to keep up with demand.

Jacumba Community Services District (JCSD)

The JCSD provides water service to the small, rural community of Jacumba located between I-8 and the U.S./Mexico international border. JCSD serves approximately 234 connections over a service area of 435 acres. One hundred percent of the JCSD water supply comes from groundwater and the District operates two active groundwater wells, one pump, seven miles of pipeline, and two reservoirs (total capacity 202,000 gallons). Ninety percent of JCSD water service is provided to residential land uses and the remaining 10 percent is provided to commercial land uses.

Julian Community Services District (Julian CSD)

The Julian CSD provides water service to residential and commercial land uses in the historic town site and the schools in the Julian CPA. Julian CSD provides 183 potable water connections over a service area of 270 acres. Julian CSD owns one pump station, five miles of pipelines, one treatment facility (capacity 125 gallons per minute (gpm)) and two reservoirs (total capacity 500,000 gallons). One hundred percent of the Julian CSD water supply comes from the District's seven groundwater wells. In addition to groundwater wells, the District also has a well field in the vicinity of the headwaters of Santa Ysabel Creek. Average daily consumption in Julian CSD is 0.06 mgd.

The water supply for Julian CSD lies in limited, confined areas of water-bearing, fractured, subsurface rock. This geology results in a maximum capacity for the Julian CSD of 200,000 gpd. In the past, Julian CSD has had to establish connection moratoriums and punitive water

rate schedules to limit further depletion. Complicating the already serious problem of water availability is a contamination issue facing the aquifer under the historic town site. In 1976, it was discovered that a gasoline leak from a gas station located in Julian had contaminated the groundwater supply. The co-mingled stream of gasoline and fuel by-products is addressed under the San Diego RWQCB Clean-Up and Abatement Order 94-09. Through this order, the Julian CSD was prohibited from expanding beyond its current boundaries until the health risks associated with the contaminated groundwater had been resolved. However, this prohibition does not restrict development from occurring within the current boundaries of Julian CSD, provided the development is located outside of the affected area. Groundwater is currently being pumped within the Julian town center, although outside of the prohibited areas of pumping. To date, the groundwater in the aquifer is still contaminated, and will likely remain contaminated for the foreseeable future. Therefore, the District's sole source of uncontaminated water is located at the base of Volcan Mountain. Julian CSD also provides wastewater service to customers within its service area. These services are discussed below in Section 2.16.1.2, Wastewater Collection, Treatment and Disposal.

Majestic Pines Community Services District (MPCSD)

The MPCSD is located east of the historic Country Town of Julian and includes the neighborhoods of Kentwood and Whispering Pines in the Julian CPA. MPCSD serves approximately 684 connections over a 1,000 acre service area. One hundred percent of the MPCSD water supply is obtained from local wells. MPCSD operates two groundwater wells, two pump stations, 25 miles of pipeline, and three reservoirs (total capacity 790,000 gallons). MPCSD also operates two treatment facilities, Whispering Pines Treatment Plant and Kentwood Treatment Plant, each with a 125 gpm capacity. Average daily consumption for MPCSD is 100,000 gpd. All water service is provided to residential land uses.

The MPCSD groundwater basin supply has been identified as being very limited and not readily rechargeable due to the nature of the fractured rock aquifers that serve the District. It is also estimated that the MPCSD needs to double its existing capacity in order to adequately meet current demands. Therefore, drilling projects are currently underway to try and accomplish this task. However, the District does not anticipate being able to meet the demands of further development.

Mootamai Municipal Water District (MMWD)

The MMWD provides fire suppression services and was formed to protect the water rights associated with local wells and the groundwater resources of Pauma Creek. MMWD operates as a private mutual shareholder water company, which relies entirely upon groundwater for its water source and uses no imported water. The District encompasses a small portion of the Pauma Valley area of northern San Diego County. The primary function of the MMWD is to establish a service boundary and, therefore, it does not regulate any infrastructure.

Pauma Municipal Water District (PMWD)

The PMWD's primary function is to provide water rights protection for landowners through coordinating joint legal and engineering efforts related to water and water supply problems. The function of the District is primarily to establish a service boundary. It does not regulate any infrastructure. The PMWD is totally dependent upon groundwater resources, and all of its water comes from private wells.

Questhaven Municipal Water District (QMWD)

The QMWD provides water service to the Questhaven Retreat, located in the Elfin Forest area. QMWD serves approximately eight customers through 15 connections over a service area of 655 acres. One hundred percent of the water supply is provided from two local wells and the average daily consumption for this District is 6,000 gpd. QMWD operates two reservoirs (total capacity 170,000 gallons), three pump stations and approximately one mile of pipeline.

San Luis Rey Municipal Water District (SLRMWD)

The SLRMWD service area covers approximately 3,000 acres. All of the local landowners operate their own private wells, with no imported water. SLRMWD staff estimates that landowners pump between 2,500 and 3,500 AF of water from the San Luis Rey River basin every year, mainly for agricultural and domestic purposes. The District largely exists to establish a boundary, with no general infrastructure, and primarily facilitates cooperation between landowners on matters of water rights.

Wynola Water District (WWD)

The WWD was created to serve property owners within the subdivision known as Wynola Estates, located approximately three miles from Santa Ysabel and four miles from the Julian historic town site. WWD serves approximately 60 connections over a service area of 235 acres. One hundred percent of the water supply is provided from local wells. WWD operates 4.7 miles of pipelines, nine groundwater wells, and one reservoir (capacity 110,000 gallons). The WWD's average daily consumption is 30,000 gpd during summer. All water service from WWD is provided to residential land uses.

Groundwater Dependent Users

The unincorporated portion of the County east of the SDCWA line (approximately 65 percent of the total area of the County) is totally dependent on groundwater resources, which provides the only source of water for over 41,000 residents. In addition to the above discussion regarding groundwater dependent water districts, groundwater users in the unincorporated County can be broken down into the following general categories: Residential; Commercial/ Industrial/Public Services; Agriculture; Small Water Systems; and Indian Reservations. General characteristics of these groundwater dependent users are discussed below.

Residential

Groundwater dependent residences are either served by on-site private wells or by groundwater provided by a small water system such as a small water company or water district. It is conservatively estimated that an average residence has a consumptive use of approximately 0.5 AF of groundwater per year per single-family residence. Consumptive use is the amount of water lost from the groundwater resource due to human use, including evaporation and evapotranspiration losses associated with human use. Residential water uses include household consumption, irrigation of landscaping and/or agricultural crops, watering horses or other livestock, and pumping water to fill swimming pools or ponds.

Commercial/Industrial/Public Services

Commercial and industrial uses are mostly located within small community town centers, but are also located sporadically throughout the backcountry. Commercial uses include store fronts and

retail strip malls, low-rise office buildings, libraries, post offices, and fire and police stations. Industrial uses include extractive industry (mining), light industrial, and warehousing/public storage. Groundwater dependent commercial/industrial/public services are either served by on-site private wells or by groundwater provided by a small water system. Estimated water demand generally ranges from none to approximately 1 AF per year per user.

Agriculture

In 1998, the California Department of Water Resources (DWR) conducted a detailed survey of irrigated agricultural land in the County, which included review of aerial photography and extensive field visits to collect site-specific data. These data represent the most detailed information available at a countywide scale to estimate water demand from agricultural uses. General agricultural use categories include grazing and dry land farming, irrigation of pasture lands and alfalfa, orchards and vineyards (citrus, avocados, apples, grapes, etc.), and truck crops (seasonally planted crops such as lettuce or tomatoes). Some of the main water-intensive agricultural production areas are within Pala/Pauma (citrus, avocados, nursery crops, and cut flowers), Julian (apples), Jamul (citrus and avocados), east of Ramona (ranches/egg ranch), and Borrego Valley (citrus and palms). Water use for plants varies depending on weather factors including air temperature, relative humidity, wind speed, and solar radiation; soil factors such as soil texture, structure, density, and chemistry; and plant factors such as plant type, root depth, foliar density, height, and stage of growth. Agricultural users that are dependant on groundwater are either served by on-site private wells or by groundwater provided by a small water system such as a small water system or water district. Water demand can range from less than 1 AF of water per acre per year for dry land farmed areas to over 4 AF of water per acre per year for irrigated alfalfa and other water-intensive plant types.

Small and State Water Systems

Small and community water systems with up to 199 service connections are regulated by the County of San Diego DEH, Land Use Program. As of 2008, there were 174 small water systems regulated and monitored by DEH to ensure compliance with the California Safe Drinking Water Act for supplying potable water. There are a number of water uses (with widely ranging water demand) associated with these water systems including campgrounds, resorts, retreat centers, schools, residences, restaurants, and parks. Water systems with 200 or more service connections are regulated by the California Department of Public Health Division of Drinking Water & Environmental Management (DDWEM). Within the San Diego region, DDWEM regulates three companies with 200 connections or more at the State level: the Pine Hills, Pine Valley, and Rancho-Pauma Mutual Water Companies. The majority of these are State regulated systems that purvey groundwater to residential users. Water supply regulations, such as the California Safe Drinking Water Act, are discussed below in 2.16.2, Regulatory Framework.

Indian Reservations

County estimates of tribal groundwater use are based mainly on environmental documents which have been prepared by the tribes for casino projects, and reported average quantities of water that are used for given land uses that are known to exist on each reservation. There are a variety of water uses on Native American reservations including casinos, hotels, residences, restaurants, agricultural irrigation, and a golf course on the Barona Indian Reservation. Estimated water demand ranges from none on undeveloped lands (Capitan Grande, Cuyapaipe,

and Inaja Cosmit Indian Reservations) to over 500 AF per year on the Barona, Pala, and Rincon Indian Reservations. Barona Indian Reservation, with an estimated groundwater demand of greater than 500 AF per year, exceeds the sustainable yield of its groundwater basin. In recent years, the tribe has reportedly trucked in water to supplement its declining groundwater supply. Additionally, the San Pasqual tribe imports water from VCMWD to service their reservation and the Jamul Indian Village imports water from OWD to service the Jamul Casino. There is also an existing proposal to annex the Sycuan Casino into the OWD. All other Sycuan trust lands and lands owned by the Sycuan Band in fee are within the boundaries of either the PDMWD or the OWD.

Borrego Valley Aquifer

The Borrego Valley aquifer has a well documented groundwater overdraft condition, where year after year groundwater extraction exceeds the amount of groundwater that is recharged back into the aquifer. In the long-term, this situation is not sustainable. While the majority of residences and commercial entities in Borrego Valley receive their water from the BWD, there are private property owners within the BWD service area that utilize private wells. The vast majority of the water supplied to agricultural users within Borrego Valley comes from privately owned wells within the BWD service area. The BWD has water rights under some residential areas within its service area.

The BWD estimated the amount of water used within Borrego Valley from 1950 to 2007. The water demand is shown in Table 2.16-3, Historical Borrego Valley Water Demand. As shown in this table, total demand has fluctuated greatly over the past 50 years. While groundwater demand more than doubled from 1978 to 1999, it appears that overall water usage may have leveled off between 1999 and 2007. It is thought that the volume of groundwater in storage decreases with depth in Borrego Valley. Therefore, basin-wide rates of water level decline will increase with ongoing groundwater use, even without any change in the deficit between groundwater extraction and recharge. Groundwater management in Borrego Valley currently is through local water agencies (the BWD and the BSPCSD), and the County Groundwater Ordinance (as well as application of CEQA for land use discretionary applications). In the case of Borrego Valley, the basin has not been adjudicated. Therefore, individual well users are not limited in the amount of groundwater they can extract.

In 2002, the BWD adopted a Groundwater Management Plan (GMP) which allowed the District to become the groundwater management agency for the Borrego Valley aquifer as allowed under AB 3030. The adoption of the GMP thus placed BWD as the responsible agency for the stewardship of the aquifer and resolution of the overdraft condition. The GMP contains a summary of the Borrego overdraft condition, projections of future groundwater demand, and potential groundwater overdraft mitigation measures. Specifically, it set out goals including: 1) development of programs to assist in stabilizing the overdraft of the aquifer, 2) seek programs to provide a long-term supply of water for the valley, 3) continue to expand the knowledge of the water resources of the aquifer, 4) development and implementation of conservation programs, 5) work with State and County agencies to try to minimize any adverse impacts that new land uses would have on groundwater resources, 6) develop the ability to obtain funding for acquisition of actively irrigated agricultural land, and 7) evaluate the feasibility of acquiring land in adjacent basins and transporting water for use in Borrego Valley.

As part of the GMP, BWD became a groundwater replenishment district, which provides BWD with the following authority: 1) the ability to buy and sell water, 2) exchange water, 3) distribute

water in exchange for ceasing or reducing groundwater extraction, 4) recharge the basin, and 5) build necessary facilities to achieve groundwater replenishment.

The BWD is also in the process of preparing an IRP which is meant to provide an update on the BWD efforts to mitigate the overdraft condition of the Borrego Valley aquifer, and to present alternatives for the BWD to further evaluate as it strives to provide a sustainable water supply for its customers. As outlined in the BWD's draft IRP, a number of programs have been implemented to achieve the goals contained within the GMP including groundwater preservation fees, irrigated agricultural land purchases, conservation management program, water recycling, artificial recharge, and defining the reliability of the groundwater supply. In addition, there are several non-local water supply opportunities that the BWD is exploring, including: importation of groundwater from nearby basins, importation pipeline projects from non-local water agencies, such as Imperial Irrigation District or Coachella Valley Water District; and groundwater storage and recovery projects. A complete discussion of the BWD IRP programs can be found in Appendix A of the County Groundwater Study, included as Appendix F of this EIR.

2.16.1.2 Wastewater Collection, Transmission and Disposal

Wastewater districts are generally responsible for providing collection, transmission, and disposal of sewage. The following section provides an overview of 25 wastewater districts that serve the unincorporated County, divided into three categories including: 1) the City of San Diego Metropolitan Wastewater Department (SDMWD); 2) wastewater districts served by SDMWD; and 3) wastewater districts unaffiliated with SDMWD. Table 2.16-4 identifies the existing (2004) housing and population served for wastewater districts served by SDMWD and wastewater districts unaffiliated with SDMWD. Generally, those districts located near the City of San Diego use the SDMWD system for treatment and effluent disposal. A number of agencies also use a combination of the SDMWD system and inland treatment and disposal systems. Those districts located inland provide sewage treatment and disposal through percolation of effluent into the soil and/or reuse through irrigation of vegetation or agricultural crops. Figure 2.16-2 identifies the wastewater districts and the wastewater facilities that serve unincorporated areas of San Diego County.

Wastewater districts can be classified as dependent sanitation districts or independent sanitation districts. A dependent sanitation district is formed by resolution of the San Diego County Board of Supervisors (BOS) while independent sanitation districts have their own independently elected Board of Directors. Unincorporated areas not serviced by wastewater districts typically utilize septic systems for wastewater disposal. The most common type of septic system found in San Diego County consists of a septic tank connected to leach lines. Approximately 80,000 septic systems exist throughout the unincorporated County.

<u>SDMWD Operations and Facilities</u>

SDMWD provides regional wastewater treatment and disposal services for the City of San Diego and 15 other cities and sanitation districts. SDMWD has a service area of 450 square miles, stretching from the City of Del Mar to the north, the communities of Alpine and Lakeside to the east, and the U.S./Mexico international border to the south. SDMWD serves a population of approximately two million people and processes and treats approximately 180 mgd of wastewater. Improvements are planned to increase the wastewater treatment capacity of SDMWD to nearly 340 mgd to serve an estimated population of 2.9 million in year 2050.

SDMWD owns and operates the following wastewater support facilities: nine major pump stations, 84 small pump stations, the Point Loma Wastewater Treatment Plant, the Point Loma Ocean Outfall, the SDMWD Biosolids Center, the North City Water Reclamation Plant, the South Bay Water Reclamation Plant, and the South Bay Ocean Outfall. The Point Loma Wastewater Treatment Plant has a current treatment capacity of 240 mgd. Approximately 180 mgd of effluent produced at this plant is discharged through the Point Loma Ocean Outfall into the Pacific Ocean. The SDMWD Biosolids Center processes organic material produced from material collected in the wastewater treatment process. The biosolids may be used to promote growth of agricultural crops, to fertilize gardens and parks, or to reclaim and replenish worn and nutrient-depleted land. The North City Water Reclamation Plant has a treatment capacity of 30 mgd and distributes reclaimed water throughout the northern region of San Diego via an extensive reclaimed water pipeline system. The South Bay Water Reclamation Plant has a capacity of 15 mgd. Effluent produced at this facility is distributed for beneficial reuse through recycled water distribution systems operated by the OWD and/or discharged through the South Bay Ocean Outfall into the Pacific Ocean.

Wastewater Districts Served by SDMWD

Within a wastewater district, three measurements of capacity definitions exist: 1) Pass-through Capacity (measured in mgd), 2) Allocated Equivalent Dwelling Units (measured in EDU), and 3) Available Capacity (measured in EDU). An EDU is defined as the sewer service equivalent to one single family unit.

a. "Pass-through Capacity" can be either of the following:

    1. Sewage treatment capacity rights purchased by each metropolitan sanitation district from SDMWD; and

    2. Sewage treatment capacity permitted by the RWQCB for sewage treatment plants that are owned and operated by the County of San Diego.

b. "Allocated Equivalent Dwelling Unit" refers to the aggregate number of EDUs issued by each sanitation district to the customers within that particular district.

c. "Available Capacity" refers to the difference between the "Pass-through Capacity" and the "Allocated Equivalent Dwelling Unit" measured in EDU.

Alpine Sanitation District (ASD)

The ASD provides wastewater service to portions of the Alpine CPA. The ASD serves an area of 916 acres, and owns 21 miles of pipelines and two lift stations. The ASD conveys wastewater to SDMWD and has 0.72 mgd of SDMWD capacity rights with present discharges averaging 0.40 mgd. ASD has 2,560 allocated EDU within its service area, and 1,039 available EDUs. The County of San Diego Department of Public Works Wastewater Management Section (DPW WWM) is responsible for maintaining ASD wastewater service facilities.

East Otay Mesa Sewer Maintenance District (EOMSMD)

The EOMSMD serves the East Otay Mesa Specific Plan Area located near SR-905 and the U.S./Mexico international border within the Otay CPA. This dependent District has 1.0 mgd of SDMWD treatment/disposal capacity rights. This capacity was purchased from Spring Valley

Sanitation District. This District currently has a service area of 2,619 acres. The District operates two miles of pipeline, and conveys wastewater to the SDMWD system. The District has a pass-through capacity rights of 1.0 mgd. This District has 398 allocated EDUs and 3,768 available EDUs. DPW WWM is responsible for maintaining this District.

Lakeside Sanitation District (LSD)

The LSD is a dependent sanitation district that operates a public sewer system in portions of the Lakeside CPA. The LSD has a service area of over 5,045 acres. The District operates 87 miles of pipelines and two lift stations. Wastewater is conveyed to the SDMWD system. This District has a pass-through capacity rights of 4.13 mgd and an average flow of 2.80 mgd. The LSD has 13,296 allocated EDUs and 2,194 available EDUs. DPW WWM is responsible for maintaining LSD facilities.

Otay Water District (OWD)

OWD is an independent water and sanitation district with its own independently elected Board of Directors. The OWD service area is 80,320 acres and facilities serve the water and/or sewer service needs of people living in the communities of southern El Cajon, La Mesa, Rancho San Diego, Jamul, Spring Valley, Bonita, eastern Chula Vista, East Lake, and Otay Mesa along U.S./Mexico international border. The OWD wastewater system operates 85 miles of sewer pipelines, five pump stations and conveys wastewater to SDMWD. OWD operates one wastewater treatment facility, the Ralph W. Chapman Water Reclamation Facility, which has a capacity of 1.3 mgd and an average flow of 0.8 mgd. Effluent from the reclaimed water facility is transported into the eastern Chula Vista area where it is used to irrigate a golf course, elementary and high school playing fields, public parks, roadway landscapes, and various other approved uses. Reclaimed water is also pumped to the Salt Creek Basin for irrigation and other non-potable uses. OWD has 6,053 allocated EDUs and 10,000 available EDUs. Information regarding OWD water service is discussed in Section 2.16.1.1, Potable Water Supply and Distribution.

Padre Dam Municipal Water District (PDMWD)

PDMWD is an independent district that provides both potable water and wastewater service. The PDMWD wastewater service area is limited to an area almost entirely within the City of Santee. However, there are some portions of the unincorporated County served by PDMWD, including the Pepper Drive-Bostonia area, and areas adjacent to the City of Santee. PDMWD provides wastewater service over a service area of 13,236 acres. PDMWD has 159 miles of sewer pipelines, four pump stations and conveys wastewater to SDMWD. PDWMD operates the Padre Dam Water Recycling Facility that provides advanced tertiary treatment and water reclamation. The facility capacity is 2.0 mgd with an average flow of 1.95 mgd. Wastewater collected at the treatment plant is reclaimed and discharged at Santee Lakes Regional Park and Campground. PDMWD has allocated 23,500 EDUs and has 1,728 EDUs available. Information regarding PDMWD water service is discussed in Section 2.16.1.1, Potable Water Supply and Distribution.

Spring Valley Sanitation District (SVSD)

SVSD is a dependent sanitation district that operates and maintains a public sewer system in portions of the Valle de Oro, Spring Valley, Sweetwater, and County Islands CPAs. SVSD has

a service area of over 12,869 acres. SVSD operates 245 miles of pipeline, four pump stations and conveys wastewater to the SDMWD system. SVSD currently has 10.35 mgd of SDMWD capacity rights and an average flow of 6.50 mgd. SVSD has 32,448 allocated EDUs and 10,362 EDUs available. DPW WWM is responsible for maintaining SVSD facilities.

Winter Gardens Sewer Maintenance District (WGSMD)

WGSMD is a dependent sewer district serving the unincorporated neighborhood of Winter Gardens in the Lakeside CPA. WGSMD serves over 1,043 acres. The District operates 24 miles of pipeline and conveys wastewater to SDMWD and the City of El Cajon. The pass-though capacity is 1.3 mgd with an average flow of 0.88 mgd. All wastewater collected in the District is conveyed to the SDMWD for treatment and disposal, either through direct connections to the SDMWD system or via the City of El Cajon collection system. There are 3,731 EDUs allocated and 988 EDUs available in the WGSMD service area. DPW WWM is responsible for maintaining WGSMD facilities.

<u>Wastewater Districts Unaffiliated with SDMWD</u>

Borrego Springs Park Community Services District (BSPCSD)

BSPCSD is an independent sanitation district that provides water and sewer service to the Borrego Springs Country Club, located in the heart of the unincorporated community of Borrego Springs. BPSCSD is located entirely within the Borrego Springs Subregion and is completely surrounded by the separate independent district of BWD. BSPCSD provides sewer service over a service area of 1,200 acres. BSPCSD has a pass-through capacity of 0.1 mgd, an average flow of 0.03 mgd and conveys wastewater locally. BSPCSD has no additional EDUs allocated or available. BSPCSD owns and operates 10 miles of pipeline and one lift station. Information regarding BSPCSD water service is provided in Section 2.16.1.1, Potable Water Supply and Distribution.

Borrego Water District (BWD)

BWD provides both water and wastewater service. BWD provides sewer service to the areas within the Borrego Country Town area, the Rams Hill Country Club, and La Casa del Zorro. BWD is an independent sanitation district with its own independently elected Board of Directors. BWD provides wastewater service over a 1,000 acre service area. BWD operates 19 miles of sewer pipelines, one lift station and conveys wastewater locally to the Rams Hill Water Reclamation Plant. This facility has a capacity of 0.25 mgd and an average flow of 0.03 mgd. Effluent produced at this facility is used for groundwater recharge. Prior to the availability of sewer, the community of Borrego Springs relied solely on individual septic systems. Today, the majority of residential development in Borrego Springs is still dependent upon individual septic systems. BWD has 1,000 allocated EDUs and 550 available EDUs. Information regarding BWD water service is provided in Section 2.16.1.1, Potable Water Supply and Distribution.

Buena Sanitation District (BSD)

The BSD service area includes the neighborhood of Shadowridge, in addition to small portions of the North County Metro and Twin Oaks Subregions. BSD is an independent sanitation district with its own independently elected Board of Directors. BSD is administered by the City of Vista in the northwestern area of San Diego County. BSD owns approximately 100 miles of

pipelines. All sewage is treated at the Encina Wastewater Authority Plant in the City of Carlsbad. This facility has a treatment capacity of 3.25 mgd and an average flow of 2.8 mgd. The Shadowridge Reclamation Plant is also owned by BSD and has a capacity of 1.16 mgd, although it is currently not in use. BSD has 16,000 EDUs allocated and 2,000 EDUs available.

Campo Water and Sewer Maintenance District (CWSMD)

The CWSMD is located in the southeastern portion of the County of San Diego and provides sewer service to local residents. CWSMD is a dependent sewer district that provides wastewater service to private customers plus various County and other public facilities over an area of 418 acres. CWSMD operates five miles of pipelines and conveys wastewater locally to the Rancho Del Campo Wastewater Pollution Control Facility. This facility has a pass-through capacity of approximately 0.11 mgd with an average flow of 0.047 mgd. Effluent is discharged into percolation ponds and groundwater recharge. CWSMD has 253 allocated EDUs and 63 available EDUs. Per County Board of Supervisors (BOS) Policy, available capacity in the system is reserved for new connections in the Campo Hills subdivision and limited expansion of public services. The DPW WWM is responsible for maintaining CWSMD facilities.

Cardiff Sanitary Division – City of Encinitas (Cardiff)

The majority of the Cardiff service area is within incorporated lands. However, Cardiff continues to provide a handful of parcels in the San Dieguito Water District and Rancho Santa Fe neighborhood of the unincorporated County with reclaimed water service. Cardiff is an independent district with a service area of 4,202 acres. The district operates 77 miles of pipelines, four lift stations and conveys wastewater locally to the San Elijo Water Reclamation Facility. Cardiff has a pass-though capacity of 5.25 mgd and an average flow of 3.1 mgd. The San Elijo Water Reclamation Facility has a capacity of 2.48 mgd with an average flow of 1.0 mgd. Effluent from this facility is used for irrigation of landscaping for golf courses, Homeowners Associations, and roadways. Cardiff has allocated 7,900 EDUs and has 10,114 EDUs available.

Fairbanks Ranch Community Services District (FRCSD)

FRCSD provides sewer service to the unincorporated Fairbanks Ranch Specific Plan Area, a residential and commercial development to the southeast of the San Dieguito Town Center area. FRCSD is an independent district with a service area of 2,210 acres. The District operates 15 miles of pipelines, two lift stations and conveys wastewater locally to the Fairbanks Ranch Water Reclamation Facility. The pass-through capacity of the District is 0.28 mgd and the average flow is 0.23 mgd. FRCSD has been sized to serve the ultimate build-out of the area. FRCSD has 890 EDUs allocated and 917 EDUs available.

Fallbrook Public Utility District (FPUD)

FPUD provides both water and wastewater service. FPUD's current wastewater service boundary is limited to the Fallbrook CPA. FPUD is an independent sanitation district that provides sewer service over a service area of 4,200 acres. FPUD operates over 75 miles of sewer pipelines, six pump stations and conveys wastewater locally to the FPUD Water Treatment Plant. Effluent from this plant is discharged into a land outfall pipeline that joins with the City of Oceanside's outfall line for release into the Pacific Ocean. FPUD pass-though capacity is 2.7 mgd with an average flow of 1.9 mgd. The wastewater treatment plant has a

capacity of 3.1 mgd and an average flow of 1.9 mgd. Effluent is used for landscape irrigation, freeway landscape irrigation, nurseries, golf courses, and treatment plant reuse. FPUD has 8,400 EDUs allocated and 2,600 EDUs available. Information regarding FPUD water service is provided in Section 2.16.1.1, Potable Water Supply and Distribution.

Julian Sanitation District (JSD)

The JSD is a dependent district that provides public sewer service in portions of the Julian CPA. The JSD sewer system primarily serves the Julian central business district area. JSD provides wastewater service over a service area of 119 acres. JSD operates approximately three miles of pipelines, one lift station and the Julian Wastewater Pollution Control Facility, located approximately one-mile west of the Julian Town Center area. This facility has treatment capacity rights of 0.04 mgd. Effluent is used for irrigation. The treatment plant operates at maximum capacity, and therefore has an established moratorium. New sewer permits are only issued under very strict criteria, such as failing septic systems or previously purchased sewer commitments. Annexations are not allowed, except for failing septic systems. JSD has 316 EDUs allocated and 7 available EDUs. DPW WWM is responsible for maintaining JSD facilities.

Harmony Grove Sewer Maintenance District (HGSMD)

HGSMD will provide sewer service for the planned Harmony Grove Village development project located in the unincorporated community of Harmony Grove, west of the City of Escondido in the North County Metro Subregion. On February 7, 2007 the Harmony Grove Village development project received discretionary development entitlements, including approval of a Master Reclamation Plan for the District that includes planned collection, reclamation, and disposal facilities. Harmony Grove Village encompasses approximately 468 acres, with planned residential, commercial, institutional, and park uses.

The project developer will construct the wastewater collection, treatment, and disposal facilities. When the Harmony Grove Village project is fully occupied, the wastewater treatment facility, to be operated by the HGSMD, will receive an average flow of 0.20 mgd, and a projected peak flow of 0.71 mgd. Once the treatment facility is constructed, inspected, and subsequently accepted by the County, responsibility for future operations and ongoing maintenance will transfer to the HGSMD.

Olivenhain Municipal Water District (OMWD)

OMWD's is an independent sanitation district with boundaries that extend over the neighborhoods of Whispering Palms, Fairbanks Ranch, 4-S Ranch, Cardiff, Olivenhain, Carlsbad, La Costa, and Elfin Forest. OWMD provides water and wastewater service to over 30,720 acres of land. The District has a total of 375 miles of pipeline, 50,000 feet of which are dedicated to recycled water transportation. Wastewater from OWMD is conveyed to the District's 4S Wastewater Treatment Plant, which has a 2.0 mgd pass-through capacity and a 600,000 gpd facility capacity. Effluent from this facility is used for non-domestic purposes, such as green belt, agricultural, and landscape irrigation. Additional information regarding OMWD water service is provided in Section 2.16.1.1, Potable Water Supply and Distribution.

Pauma Valley Community Services District (PVCSD)

PVCSD is an independent district that encompasses approximately 1,500-acres northeast of Valley Center and west of Palomar Mountain. PVCSD provides sewer service and street lighting to a small residential development and commercial area in the unincorporated community of Pauma Valley. Approximately half of the PVCSD service area is undeveloped, with the exception of areas engaged in agricultural activities. PVCSD owns one 115,000 gpd sewage treatment facility that collects, treats, and disposes sewage. The plant provides secondary treatment and the treated effluent is then percolated into the ground.

Pine Valley Sanitation District (PVSD)

PVSD is a dependent sanitation district that operates and maintains sewer service in a small portion of Pine Valley. PVSD serves 28 acres and operates less than one mile of pipeline. Wastewater is conveyed locally to the Pine Valley Wastewater Pollution Control Facility. This facility has treatment capacity rights of 40,000 gpd and an average flow of 105,000 gpd. Effluent is used for groundwater recharge. All of PVSD capacity is either committed or allocated. DPW WWM is responsible for maintaining PVSD facilities.

Rainbow Municipal Water District (RMWD)

RMWD is an independent local governmental agency that provides water and sewer services to an unincorporated area of northern inland San Diego County. RMWD provides water and wastewater service to its 49,800-acre service area, which includes the unincorporated communities of Rainbow, Bonsall, and a portion of Fallbrook. Sewer service is primarily concentrated along the eastern side of SR-76 and northeast of I-15. RMWD has its own sewage treatment facility with a capacity of 1.0 mgd. Information regarding RWMD water service is provided in Section 2.16.1.1, Potable Water Supply and Distribution.

Ramona Municipal Water District (Ramona MWD)

The Ramona MWD is authorized to operate two sewer service areas: 1) San Diego Country Estates, which utilizes the San Vicente Wastewater Treatment Plant; and 2) the Ramona Town Center area, which utilizes the Santa Maria Wastewater Treatment Plant. Ramona MWD provides wastewater service over an area of 9,708 acres. It operates 78 miles of sewer pipelines, five lift stations and conveys wastewater locally to the Santa Maria and San Vicente Wastewater Treatment Facilities. The rated plant capacity for Santa Maria is 1.00 mgd and for San Vicente is 0.8 mgd. The annual moving average flow rate is 0.81 mgd for Santa Maria and 0.61 for San Vicente. However, the Santa Maria Wastewater Treatment Plant exceeded its rated capacity on several occasions during the last ten years and in 2005 experienced 30-day moving average flow of 1.14 mgd. These facilities also have a water reclamation capacity of 0.35 mgd and an average flow of reclaimed water at 0.33 mgd. Effluent is used for golf course irrigation. Information regarding Ramona MWD water service is discussed in Section 2.16.1.1, Potable Water Supply and Distribution.

Rancho Santa Fe Community Services District (RSFCSD)

RSFCSD is an independent district with a service area of 11,680 acres. RSFCSD operates 43.78 miles of pipeline, 12 pump stations and conveys wastewater to the San Elijo Wastewater Pollution Control Facility. In addition, RSFCSD operates the Rancho Santa Fe Water

Reclamation Facility with a pass-through capacity of 0.45 mgd and an average flow of 0.32 mgd. RSFCSD also operates the Santa Fe Valley Water Reclamation Facility which has a pass-through capacity of 0.49 mgd and an average flow of 0.05 mgd. These facilities provide secondary and tertiary treatment of wastewater. Effluent is used for spray irrigation. RSFCSD has 1,966 EDUs allocated and 3,830 EDUs available.

Vallecitos Water District (VWD)

VWD is an independent district that provides water and wastewater service to the City of San Marcos, portions of the Cities of Vista, Escondido, and Carlsbad, as well as portions of the North County Metro, Twin Oaks, Bonsall, and San Dieguito CPAs. VWD provides wastewater service to approximately 18,700 accounts. VWD operates 235 miles of sewer pipelines, three pump stations and conveys wastewater locally. There are two VWD treatment facilities utilized by VWD: Meadowlark Reclamation Facility and Encina Wastewater Authority Facility. The Meadowlark Reclamation Facility has a pass-through capacity of 2.25 mgd and an average flow of 1.95 mgd. The Encina Facility provides advanced secondary treatment and has a pass through capacity of 7.54 mgd. Effluent is sold to the Carlsbad Municipal Water District and used for irrigation. VWD has allocated 3,713 EDUs and has 11,447 EDUs available. Section 2.16.1.1, Potable Water Supply and Distribution, provides additional information on VWD water service.

Valley Center Municipal Water District (VCMWD)

The majority of VCMWD service area is served by individual septic systems. VCMWD is an independent district that provides wastewater service to a small portion of its 62,100 acres service area. VCMWD also provides water service, as discussed in Section 2.16.1.1, Potable Water Supply and Distribution. The VCMWD service area includes the following: 1) the I-15 corridor area, including Hidden Meadows, the Lawrence Welk Specific Plan Area and Castle Creek Country Club, which is served by the Lower Moosa Canyon Water Reclamation Facilities (WRF); and 2)the Woods Valley Ranch subdivision which is served by the Woods Valley Ranch WRF. VCMWD operates these two water reclamation facilities. The Lower Moosa Facility has a capacity of 0.5 mgd and an average flow of 0.35 mgd. The Woods Valley Ranch Facility has a capacity of 70,000 gpd and an average flow of 45,000 gpd.

Whispering Palms Community Services District (WPCSD)

WPCSD is an independent district that provides services to the unincorporated area southwest of Fairbanks Ranch and southeast of Rancho Santa Fe in the San Dieguito CPA. WPCSD has a service area of 2,140 acres. WPCSD operates 17.1 miles of pipeline, two pump stations and conveys wastewater locally to the Whispering Palms Wastewater Reclamation Facility. The pass-though capacity of the reclamation facility is 0.40 mgd with an average flow of 0.26 mgd. This facility is sized to meet the ultimate demand of the service area. WPCSD has 1,370 EDUs allocated and 1,667 EDUs available.

2.16.1.3 Solid Waste Disposal

Prior to 1989, solid waste planning and management was the prime responsibility of individual jurisdictions. However, the California State Legislature changed this approach when they enacted the Integrated Waste Management Act (IWMA) of 1989. The IWMA required

jurisdictions to reduce their dependence on landfills for disposal of solid waste, and to ensure an effective and coordinated approach to safe management of all solid waste generated within the State. In October 1997, the County sold its active landfills and other solid waste collection assets to a private company, Allied Waste Industries, Inc. Currently, solid waste generated by residents and businesses is disposed of locally at the landfill of the hauling contractor's choice. The following section discusses the seven active landfills, nine transfer stations, construction demolition and inert processing facilities, ten biomass processing facilities, and various recycling programs that currently serve the unincorporated area's solid waste disposal service needs. Figure 2.7-1 in Section 2.7, Hazards and Hazardous Materials, shows the location of active landfills within the unincorporated County. Closed landfills and land uses that surround active landfills are discussed in Section 2.7, Hazards and Hazardous Materials.

Landfills

Solid waste management has been recognized as an important regional issue in San Diego County because of limited landfill capacity, increased urban encroachment, applicable environmental regulations, increased cost of developing and managing active and closed waste management facilities, and increased environmental and social concerns affecting potential facility expansions and replacement sites. Due to factors such as population growth, economics and development, there has been a consistent increase in annual solid waste disposal tonnages. Historically, solid waste disposed in San Diego County landfills grew steadily from less than 400,000 tons in 1978 to over 4.1 million tons in 2005. From 1995 to 2005, solid waste disposal for the unincorporated County increased by 89 percent. Figure 2.16-3 shows the annual solid waste disposal increase from 1995-2004. Of the 4.1 million tons of solid waste disposed of in County landfills in 2005, approximately 98 percent of solid waste was from jurisdictions located in the County. The remaining tonnage was from Indian Nations (0.35 percent), Mexico (0.20 percent), other California jurisdictions (0.32 percent), and military waste (1.0 percent). Waste composition varies from year to year and is affected by a number of factors including recycling programs, the economy, and landfill bans.

Until 1997, the solid waste management system in San Diego County was serviced by eight landfill facilities. In March 1997, the San Marcos landfill facility was closed by court order. Currently, there are seven active landfills in the San Diego region that serve residents, businesses, and military operations in both incorporated and unincorporated areas. These landfills include Borrego, Miramar, Otay, Ramona, Sycamore, Las Pulgas, and San Onofre. The landfills currently operating in the County for public use are either privately owned and operated, or are operated by the City of San Diego. The Sycamore, Otay, Ramona, and Borrego landfills are owned and operated by a private company, Allied Waste Industries. Las Pulgas and San Onofre landfills are owned and operated by the U.S. Marine Corps (USMC), and the Miramar Landfill is owned and operated by the City of San Diego on leased U.S. Department of the Navy land. The USMC-operated landfills are not available for public disposal. At this time, there are two partially permitted new landfills located in the County, or contained therein. The first is located at Gregory Canyon in northern San Diego County. If/when it is constructed, the Gregory Canyon Landfill would provide an additional capacity of 600,000 to 1 million tons per year for a total of 33.4-million tons with a life expectancy of approximately 30 years. The Campo planned landfill is located on the Campo Indian Reservation, geographically surrounded by the County, and if/when it is constructed would provide an additional capacity of approximately 930,000 tons per year with 28 million tons of total capacity over a life expectancy of approximately 30 years. Table 2.16-5 identifies the existing capacity of the San Diego County landfills, excluding military landfills, and the Gregory

Canyon and Campo landfills. Gregory Canyon and Campo landfills are included in this discussion due to their locations within the County and stages in the permitting process.

Siting of a new solid waste disposal facility, or expansion of an existing solid waste facility, is often a controversial and lengthy process. All potential disposal facilities in the County must be included in a Countywide Siting Element Amendment to the San Diego County Integrated Waste Management Plan (IWMP). However, discussion of proposed sites in the Siting Element is only one step in the review and approval process. In addition, each proposed facility in the County is considered through the local jurisdictional land use permitting processes. The region may need to export approximately 7.6 percent of its waste in 2020 to meet the region's disposal needs. Continued availability of out of county disposal sites is not known. The Siting Element analyses determined that if the county would recycle at a rate of 75 percent, compared to the present 50 percent, there would be no need for additional landfills in the county (DPW 2005).

Transfer Stations

Solid waste not dumped directly in a landfill is deposited temporarily in several privately operated transfer stations located throughout the County. Seven transfer stations in the County assist with solid waste disposal services. Table 2.16-6 identifies these stations, their operators and permitted annual throughput. The region's transfer stations play a vital role in accommodating throughput to landfills, serving as collection and separation points of solid waste and recyclables. Transfer stations help reduce traffic congestion and provide the flexibility to haul waste to distant landfills or processing plants outside of the San Diego region. The network currently handles approximately 60 percent of the region's solid waste and services. The network has a permitted throughput of approximately three million tons per year, and currently utilizes about two million tons per year, or 67 percent of network capacity

Construction Demolition and Inert Processing Facilities

Construction, Demolition and Inert (CDI) debris waste not dumped directly in a landfill is deposited temporary for processing at privately operated construction demolition processing facilities. Two CDI processing facilities in the County assist with solid waste diversion from the landfill. Table 2.16-7 identifies these facilities, their operators and permitted annual throughput.

As of September 2008, there were two additional CDI facilities in the permitting process.

Organic Material Processing Facilities

Ten biomass processing facilities serve San Diego County that chip, grind and compost organic materials. Approximately 508,000 tons of organic materials are processed for compost chips and mulch annually. An estimated 450 tons per day are prepared for transport to several biomass-powered electrical generating plants in Imperial and Riverside Counties, which accrue to about 117,000 tons per year. Two additional biomass plants are planned for the County of San Diego; one in the City of Vista and the other in the Otay CPA. Organic materials used to cover unincorporated County landfills weighed 63,414 tons in 2007. As of January 2009, one new composting facility had applied for operating permits, which would produce about 37,000 additional tons of compost annually.

County Recycling Programs

In 1989, the IWMA required cities and counties to reduce their waste disposal levels by 25 percent by the year 1995 and 50 percent by the year 2000. The Solid Waste Planning and Recycling Program implemented by County DPW serves residents and businesses in the unincorporated communities of San Diego County and works to achieve IWMA goals through continual improvement of waste diversion programs. In 2005, the unincorporated San Diego communities attained a 50 percent diversion rate. Since 1991, the County has had a mandatory Recycling Ordinance (Ordinance 8866) for solid waste generators and waste haulers, and in 2007 a mandatory Construction and Demolition Ordinance (9840) was adopted for projects above 40,000 square feet in area.

The IWMA also requires the preparation of a County IWMP. The BOS adopted the County of San Diego IWMP on September 17, 1996. The comprehensive Plan discusses the need for a reduction in solid waste and includes a Source Reduction and Recycling Element, Household Hazardous Waste Element, Non-Disposal Facility Element, Countywide Siting Element, and Countywide Summary Plan. Currently, the County implements extensive programs for source reduction, recycling, and best-use practices for a variety of materials. Current programs include support of rural recycling programs, curbside and drop-off recycling for motor oil and filters, and public-private partnerships for development of additional construction/demolition and organics processing capacities. Over 60 privately owned non-disposal facilities operate in the County, not including the City of San Diego. These include recycling and reuse companies, transfer stations, organic processors, and construction/demolition facilities. This network of non-disposal facilities is integral to the collection and processing of recyclable materials and for helping the County meet its diversion goals.

2.16.1.4 Energy

Provision of adequate power and energy is a significant component of County services. The following section describes the current power and energy resources serving the unincorporated County, which include electricity, natural gas, nuclear energy, and alternative energy sources. Because energy supply and demand does not differentiate between jurisdictional boundaries, it is difficult to discuss energy in terms of the unincorporated area alone. Therefore, unless specified, data presented in this section represents current energy conditions for the entire San Diego County region.

Electricity

The San Diego region has natural gas-fired and renewable capacity to generate over 3,000 megawatt (MW) of electricity, or about 70 percent of the region's summer peak demand. This capacity consists of gas-fired steam and combined cycle plants, small and medium-sized peaking plants, and on-site generators (excluding backup generation). The San Diego region also has distributed generation sites with a combined capacity of 156 MW, or about four percent of current peak demand. There are 3,153 grid-connected photovoltaic installations, which provide 18.5 MW in total. The Cabrillo Power Plant in Carlsbad has a capacity of 960 MW, and the South Bay Power Plant in Chula Vista has a capacity of 703 MW. These units are quickly nearing technological and economical obsolescence. Fossil fuel-fired steam units such as these are designed to operate for 40 to 50 years, while the design-life of the combustion turbines in natural gas power plants is approximately 35 years. Although many units outlive

their design life, forced outage occurrences increase with time, leading to a higher likelihood that they will not be available when needed. State law requires utilities like San Diego Gas and Electric (SDG&E) to have 20 percent of the electricity it delivers come from renewable energy sources by 2017. The CPUC has accelerated that requirement to 2010. Table 2.16-8, identifies existing power plants located in San Diego County based on information provided by SDG&E.

Electricity Transmission

One essential component of the San Diego region's energy supply is high-voltage electric transmission connection to other energy markets. The current transmission system provides a number of functions including: 1) support for wholesale market transactions that help to stabilize electric prices; 2) improved system reliability and stability; 3) creation of opportunities to site new electric generation stations; 4) provision of additional voltage support. Currently, there are only two points of interconnection between the SDG&E service area and the external electric grid. These include the San Onofre Nuclear Generating Station (SONGS) switchyard in the northwestern area of the County and the Miguel Substation in the southern area of the County. Historically, the San Diego region has relied upon imports of electric power to meet over half of its supply needs. Transmission upgrades made in 2000 and 2001 raised the SDG&E simultaneous import capacity to 2,850 MW and the non-simultaneous import capacity to 2,500 MW.

Electricity Demand

Historical electricity consumption has increased in every decade of the 20th century, although at a decelerating rate. In recent decades, average annual growth was five percent during the 1970's, 3.9 percent during the 1980's, and 2.5 percent in the 1990's. During the energy crisis years of 2001 and 2002, electricity usage fell below the pre-crisis level. However, demand has rebounded since 2002 with growth averaging 2.7 percent per year between 2002 and 2005. In 2005, the San Diego region consumed 19,214 gigawatt-hours (GWh) of electricity, while peak utility-based demand was 4,058 MW. Both of these measures were down slightly from the previous year due to milder weather in 2005. Electricity demand is expected to increase by nearly 24 percent between 2005 and 2016 at an average growth rate of 1.9 percent per year.

Electricity Projections

During the short term, the region is looking to minimize energy demand by aggressively pursuing energy efficiency, conservation and demand response programs. From 2006 to 2010, SDG&E has a goal to reduce peak demand by a total of 268 MW. With respect to major power plants, South Bay Power Plant has a contract for operation that will expire on December 31, 2009. Due to its age, the long-term operational future of the South Bay Plant is undetermined. Both the South Bay and Encina plants are older facilities with high operation and maintenance costs. In addition, the Otay Mesa Energy Project is a modern, high efficiency combined-cycle power plant currently under development near the U.S./Mexico international border. The plant is expected to have a summer capacity of 562 MW. Electricity peak demand in the long term is expected to nearly double, increasing by more than 4,000 MW by 2030. This demand is expected to be met by a mix of energy technologies that include distributed generation and central plants.

Natural Gas

The San Diego region imports all of its natural gas from other parts of the U.S. and from outside the country. The San Diego region does not have facilities to store natural gas, which is primarily used in electrical generation and heating. However, SDG&E and other end-users have access to storage services from the Southern California Gas Company (SoCalGas), subject to tariffs approved by the CPUC. SDG&E, an investor-owned utility, is the local distribution company for natural gas in San Diego, with a gas customer base of over 800,000 natural gas meters. SDG&E, and its customers, obtain natural gas transportation service from SoCalGas on a wholesale customer basis. Although SDG&E is not the only purchaser of natural gas for smaller consumers, it provides natural gas transportation service to all gas customers, pursuant to CPUC-approved tariffs.

Capacity and Transmission

Natural gas supply capacity refers to the amount of gas that can be transported through existing pipelines. The current SDG&E gas system is capable of delivering an average of 635 million cubic feet/day (MMcfd) in the summer and 655 MMcfd the winter. These two operating capacities include a reserve margin of 45 MMcfd to account for various potential scenarios that could affect delivery. Two main pipelines carry natural gas into the San Diego region from the San Diego/Riverside County line at the Rainbow meter station. The larger 30-inch diameter pipeline carries gas to the Tecolote Regulator Station in the Linda Vista area of the City of San Diego. The smaller 16-inch diameter line carries gas south to the Mission City gate station. An additional 12-inch diameter SoCalGas pipeline supplies natural gas to customers along the coast from San Clemente in Orange County to La Jolla in the City of San Diego.

Natural Gas Demand

Currently, California and the western U.S. are experiencing a significant increase in the demand for natural gas as a result of plans to build several thousand megawatts of new natural gas-fired electric generating capacity facilities. The Palomar Energy Center in Escondido recently opened in 2006 and is a 550 MW generating plant that provides enough energy for approximately 350,000 homes. It is a combined-cycle, natural gas-fueled plant, which produces 45 percent more energy using the same amount of natural gas fuel as older plants. There are also two new major generating plants planned for San Diego County, including the Otay Mesa Project owned by CalPine, and the Community Power Project in San Diego. The longer-term growth in demand for natural gas for electrical generation will depend on the construction and operation of the plants listed above, as well as the disposition of the existing electrical generation facilities in the area. Estimated average annual growth for natural gas demand for San Diego is expected to be about 1.5 percent per year from 2005. Demand of natural gas is expected to grow from 1,423 million therms (MMtherms) in 2002 to 1,642 MMtherms in 2030.

Natural Gas Projections

Currently, there is sufficient natural gas pipeline infrastructure to meet expected gas demand in the County. However, significant increases in gas demand would likely necessitate increases in pipeline system capacities. The long-term outlook for natural gas-fired electrical generation is highly uncertain. A number of projects have been proposed that are still in the development stage, and the long-term operation of some of the older generation facilities remains uncertain. In addition, a number of liquefied natural gas (Lng) developers are proposing to develop

projects that would entail delivering some of that supply into the SDG&E natural gas transportation system.

Nuclear Power

Nuclear power comes from the nucleus of an atom, which holds a large amount of potential energy. This energy, when let out slowly can be harnessed to generate electricity. A nuclear power plant uses uranium as a fuel to feed this process. Uranium is an element that is mined from many places around the world. It is then processed into tiny pellets that are loaded into very long rods that are put into the power plant's reactor to produce energy.

The only nuclear power plant located within San Diego County is the San Onofre Nuclear Power Plant, operated by the Southern California Edison Company. The three-unit power plant occupies an 84 acre site located approximately four miles north of the City of Oceanside, south of San Clemente in Orange County. Unit 1 was shut down in 1992 after 25 years of operation because the costs to upgrade the unit made its continued operation economically infeasible. In 2007, Unit 2 generated approximately 8.30-billion kilowatt hours (kWh) of energy with a capacity factor of 88.5 percent. In the same year, Unit 3 generated 8.91-billion kWh, averaging 94.1 percent of its capacity.

Alternative Energy

Biomass/Bio-gas Energy

Biomass/bio-gas can be used as fuel and is often equated with garbage, and can include dead trees, tree branches, yard clippings, leftover crops, wood chips, bark, sawdust, tires, livestock manure, and gas produced by the decomposition of waste dumped at landfills. Burning biomass/bio-gas is a reasonable supplement to fossil fuels since California alone produces more than 60 million bone-dry tons each year. If all of it were utilized, California could generate close to 2,000 MW of electricity, which is enough energy for about two million homes. In the San Diego region, landfill gas currently produces approximately 13.8 MW.

Hydroelectric Power

Hydroelectric power uses the kinetic energy of moving water to make electricity. The water from a river or reservoir can be sent through a hydroelectric power plant or powerhouse. This method is one of the largest producers of renewable energy in the world. In California, about 15 percent of all electricity comes from hydroelectric means. In the San Diego region, hydroelectric power currently produces approximately 6.5 MW. Currently, California law limits the types of hydroelectric power that can be considered renewable energy due to growing concerns about the effects on fish and other wildlife. Hydroelectric facilities must be smaller than 30 MW and typically consist of hydrogenerators placed in water aqueducts. The SDCWA recently opened a hydroelectric facility in the Mira Mesa area of the City of San Diego called the Rancho Penasquitos Pressure Control Facility in Mira Mesa. This facility has a 4.5 MW electrical generator.

Solar Cells

Sunlight can also be changed directly into electricity using solar cells, also known as photovoltaic cells. Photovoltaic cells can be found on many small appliances, such as

calculators; however, they were first developed for use on space satellites. Electrical energy from solar cells can be used directly in a home or business for lights and appliances. In the San Diego region, photovoltaic cells currently produce approximately 18.5 MW of electricity per day.

Wind Energy

The kinetic energy of the wind can be changed into other forms of energy, namely mechanical or electrical energy. Blowing wind spins the blades on a wind turbine, which in turn rotates the turning shaft, which turns the generator to make electricity. This method can be used on both a large and small scale and one turbine could produce enough electricity to power either a school or a home. In addition, there are wind "farms" where turbines are grouped together in the windiest areas. About 11 percent of the world's wind-generated electricity is found in California, with three of the most prominently windy areas being: 1) Altamont Pass, east of San Francisco, 2) San Gorgonio Pass, near Palm Springs, and 3) Tehachapi, south of Bakersfield. Together, these three places make enough electricity to supply an entire city the size of San Francisco. Currently, there is one wind energy facility within the San Diego region, the 50 MW Kumeyaay Wind Project on the Campo Indian Reservation, which began producing power in 2005.

2.16.2 Regulatory Framework

2.16.2.1 Federal

Safe Drinking Water Act (SDWA)

Passed in 1974 and amended in 1986 and 1996, the SDWA gives the EPA the authority to set drinking water standards. Drinking water standards apply to public water systems, which provide water for human consumption through at least 15 service connections, or regularly serve at least 25 individuals. There are two categories of drinking water standards, the National Primary Drinking Water Regulations (NPDWR) and the National Secondary Drinking Water Regulations (NSDWR). The NPDWR are legally enforceable standards that apply to public water systems. NPDWR standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water.

Federal Water Pollution Control Act, 1972

In 1972, the Federal Water Pollution Control Act Amendments were enacted to address water pollution problems. After an additional amendment in 1977, this law was dubbed the Clean Water Act (CWA). Thereafter, it allowed for the regulation of discharges of pollutants into the waters of the U.S. by the EPA. Under the CWA, the EPA can implement pollution control programs and set water quality standards. Additionally, the CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit is obtained under its provisions.

2.16.2.2 State

California Drinking Water Standards

State drinking water standards are based on federal standards and are listed in Title 22 of the California Code of Regulations. The California Department of Health Services administers the State drinking water standards.

California Water Code

The California Water Code contains provisions that control almost every consideration of water and its use. Division 2 of the California Water Code provides that the SWRCB shall consider and act upon all applications for permits to appropriate waters. Division 6 of the Water Code controls conservation, development and utilization of the State water resources. Division 7 addresses water quality protection and management.

Senate Bill (SB) 610

On January 1, 2002, SB 610 took effect. SB 610, which has been codified in the Water Code beginning with Section 10910, requires the preparation of a water supply assessment (WSA) for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. SB 610 stipulates that when environmental review of certain large development projects is required, the water agency that is to serve the development must complete a WSA to evaluate water supplies that are or will be available during normal, single-dry and multiple-dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with the project. SB 610 requirements do not apply to the general plans of cities or counties, but rather to specific development projects.

Senate Bill (SB) 221

Enacted in 2001, SB 221, which has been codified in the Water Code beginning with Section 10910, requires that the legislative body of a city or county which is empowered to approve, disapprove or conditionally approve a subdivision map must condition such approval upon proof of sufficient water supply. The term “sufficient water supply” is defined in SB 221 as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the projected demand associated with the proposed subdivision. The definition of sufficient water supply also includes the requirement that sufficient water encompass not only the proposed subdivision, but also existing and planned future uses, including, but not limited to, agricultural and industrial uses. SB 221 requirements do not apply to the general plans of cities or counties, but rather to specific development projects.

California Code of Regulations Energy Efficiency Standards (Title 24, Part 6)

The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

California Integrated Waste Management Act (IWMA) (AB 939)

The IWMA was enacted by the California Legislature in 1989 with the goal of reducing dependence on landfills for the disposal of solid waste, and to ensure an effective and coordinated system for the safe management of all solid waste generated within the State. The IWMA established a hierarchy of preferred waste management practices which include: 1) source reduction; 2) reuse of resources, 3) recycling and composting; and 4) environmentally safe disposal by transformation or landfill. It addresses all aspects related to solid waste regulation including the details regarding the lead enforcement agency's requirements and responsibilities, the permit process including inspections and denials of permits, enforcement, and site clean-up and maintenance. It requires the County to prepare a Countywide IWMP that is reviewed at least once every five years to assure that waste management practices remain consistent with the practices defined in the Public Resources Code. Each City and the County is responsible to maintain its Source Reduction and Recycling, Household Hazardous Waste and Non-Disposal Facility Elements.

Porter-Cologne Water Quality Control Act

The 1969 Porter-Cologne Water Quality Control Act, codified in the California Water Code, authorizes the SWRCB to implement programs to control polluted discharges into State waters. This law essentially implements the requirements of the CWA. Pursuant to this law, the local RWQCB is required to establish the wastewater concentrations of a number of specific hazardous substances in treated wastewater discharge.

Groundwater Management Act (AB 3030)

Passed in 1992, AB 3030 (California Water Code Sections 10750-10756) provides a systematic procedure for an existing local agency to develop a groundwater management plan. This section of the code provides such an agency with the powers of a water replenishment district to raise revenue to pay for facilities to manage the groundwater basin (extraction, recharge, conveyance, quality).

State Water Resources Control Board (SWRCB)

In California, the SWRCB is responsible for ensuring the highest reasonable quality of waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The SWRCB's current challenge is exacerbated by California's rapid population growth, and the continuing struggle over precious water flows. It faces tough new demands which include fixing ailing sewer systems; building new wastewater treatment plants; and tackling the cleanup of underground water sources impacted by the very technology and industry that has catapulted California into global prominence. Additionally, the SWRCB will continue to focus on its most vexing problem of nonpoint source pollution, or polluted runoff, which is difficult to categorize, isolate and resolve.

Urban Water Management Planning Act (California Water Code Sections 10610-10656)

In 1983, the California State Legislature enacted the Urban Water Management Planning Act (California Water Code Sections 10610 through 10656) which requires every urban water supplier that provides water to 3,000 or more customers, or provides over 3,000 AF of water annually, to make every effort to ensure the appropriate level of reliability in its water service to

meet the needs of its customers during normal, dry, and multiple dry years. The Act describes the contents of UWMPs as well as how urban water suppliers should adopt and implement the plans. It was the Legislature's intent to permit levels of water management planning commensurate with the number of customers served and the volume of water supplied.

Water Conservation Projects Act

The State of California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (California Water Code Sections 11950 through 11954), which encourages local agencies and private enterprise to implement potential water conservation and reclamation projects.

2.16.2.3 Local

County of San Diego Groundwater Ordinance, County of San Diego Code of Regulatory Ordinances Section 9826 (N.S.)

The County currently manages anticipated future groundwater demand through the County Groundwater Ordinance. This Ordinance does not limit the number of wells or the amount of groundwater extraction from existing landowners. However, the Ordinance does identify specific measures to mitigate potential groundwater impacts of projects requiring specified discretionary permits. Existing land uses are not subject to the Ordinance unless a listed discretionary permit is required. Additionally, Major Use Permits or Major Use Permit Modifications which involve construction of agricultural and ranch support facilities or those involving new or expanded agricultural land uses are among the exemptions from the Ordinance. However, the agricultural exemption does not supersede or limit the application of any law or regulation, including CEQA. The Groundwater Ordinance separates the County into three areas of regulations: Borrego Valley, Groundwater Impacted Basins, and All Other Projects.

County of San Diego Water Services Ordinance, County of San Diego Code of Regulatory Ordinances Section 9678 (N.S.)

This ordinance establishes the terms and conditions under which the County will provide water service to customers using County-owned facilities.

San Diego County Department of Environmental Health (DEH)

The County DEH is the primary agency charged with regulating the design, construction, and maintenance of septic tanks, leach lines, seepage pits, and alternative on-site wastewater treatment systems (OWTS) throughout the County through a delegation from the Regional Water Quality Control Board. The County DEH regulates these facilities through a Septic Tank Permit Process. Any development proposing to use an OWTS must first demonstrate that the site can meet minimum design criteria with respect to soil type and groundwater separation. The size of the OWTS is a function of the soil permeability and peak daily sewage flow based on percolation testing and occupancy. As a result of the passage of AB 885, the County DEH is working with the SWRCB to develop Statewide performance and design standards for conventional and alternative OWTS. These standards are projected to be available for adoption in March of 2012. Additionally, the County DEH is the primary agency charged with conducting

inspections and providing technical assistance to the small drinking water systems in San Diego County. The purpose of the DEH Small Drinking Water System Program purpose is to protect public health by preventing waterborne disease and indentifying risks of bacterial, chemical and/or radiological contamination. DEH assists small drinking water systems to be in compliance with the California Safe Drinking Water Act.

County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance (WPO), County of San Diego Code of Regulatory Ordinances, Section 67.817

The RWQCB, San Diego Region Order No. R9-2007-0001, issued January 24, 2007, mandates that the County of San Diego, as one of the Copermittees, submit new and updated Urban Runoff Management Plans (URMPs) to the RWQCB on January 24, 2008, and implements these programs starting January 25, 2008. Requirements in the WPO are intended to: 1) prohibit polluted non-stormwater discharges to the stormwater conveyance system and receiving waters; 2) establish requirements to prevent and reduce pollution to water resources; 3) establish requirements for development project site design to reduce stormwater pollution and erosion; 4) establish requirements for the management of stormwater flows from development projects to prevent erosion and to protect and enhance existing water-dependent habitats; 5) establish standards for the use of off-site facilities for stormwater management to supplement on-site practices at new development sties; 6) establish notice procedures and standards for adjusting stormwater and non-stormwater management requirements, where necessary.

County of San Diego Uniform Sewer Ordinance (USO)

The County sanitation and sewer maintenance districts operate under the County USO. The USO sets forth rules and regulations for operation and maintenance of sewage collection and treatment systems. Classes of sewer service are categorized by land use type. Provisions for annexation are addressed, along with procedures for obtaining new or modified sewer service. Wastewater Discharge Permits are issued to each customer, with approximately 90 percent of permits issued to residential uses and 10 percent issued to commercial uses. Violations of the USO are subject to misdemeanor charges.

San Diego County Health and Sanitation Ordinance. County of San Diego Code of Regulatory Ordinances. Title 6. Division 8. Chapter 1. Sections 68.101-68.123

Title 6 of the County of San Diego Code of Regulatory Ordinances (Code) specifies conditions and procedures for connection and use of sewage facilities by sanitation district customers. The Code incorporated many, but not all, provisions of the USO. It appears that whenever changes to the USO occur, they may not always be incorporated into the Code in a consistent or timely manner.

County of San Diego Fee Ordinances

Each sanitation district has a fee structure that is adopted by separate ordinance. The ordinance includes annual sewer service fees, connection capacity fees (i.e., system buy-in charge) and annexation fees. Annual sewer service fees are collected on the County tax rolls, which are paid either once or twice per year. Annexation and capacity fees are collected at the time an application is submitted or when a Wastewater Discharged Permit is issued.

San Diego County Board of Supervisors (BOS) Policy F-16, Cleaning and Repair of Sewer Laterals

BOS Policy F-16 defines the policy and outlines the procedure for cleaning and repair of sewer laterals. This policy will be reviewed for continuance by 12-31-09.

San Diego County BOS Policy I-25, Establishment of Assessment Districts to Provide for Public Improvements and Facilities for Sanitary Sewers

BOS Policy I-25 establishes conditions for the use of Assessment Act proceedings for the construction of public improvements and facilities for sanitary sewers in unincorporated areas of the County. This policy will be reviewed for continuance by 12-31-09.

San Diego County BOS Policy I-36, Sewer Extensions and Connections in Areas Not Annexed to a Sanitation District

BOS Policy I-36 prohibits extension of sewer lines to areas not located within a sanitation district unless annexation has occurred. Where a public health problem has been determined, application to LAFCO for annexation must occur. A temporary connection agreement (subject to LAFCO approval) can then be issued prior to completion of annexation proceedings.

San Diego County BOS Policy I-48, Sewer Extensions in Areas Not Annexed to a Sanitation District

BOS Policy I-48 requires all sewer extensions within sanitation districts to be accomplished by private contract rather than by County forces. This is due to limited County staffing and availability of private contractors. The policy will be reviewed for continuance by 12-31-10.

San Diego County BOS Policy I-51, Connection to Districts Interceptor Sewers

BOS Policy I-51 is intended to prevent connections to sewer interceptors constructed through undeveloped land which is not planned for urban services. The policy will be reviewed for continuance by 12-31-09.

San Diego County BOS Policy I-78, Small Wastewater Treatment Facilities

BOS Policy I-78 allows for construction of small wastewater treatment facilities under certain conditions. This policy generally applies to certain unincorporated areas where public sewer facilities are unavailable. The policy will be reviewed for continuance by 12-31-10.

San Diego County BOS Policy I-84, Project Facility Availability and Commitment for Public Sewer, Water, School and Fire Services

BOS Policy I-84 requires the applicable agency to issue an availability letter for prospective discretionary projects as a condition of County approval. This is to ensure that adequate facilities and capacity will be available at the time it is needed. The policy will be reviewed for continuance by 12-31-10.

San Diego County BOS Policy I-99, Expenditures and Use of Revenue for Replacement and Expansion of Liquid Waste Facilities

BOS Policy I-99 defines the financial planning and budgeting requirements to provide funding for replacement and improvement of sanitary sewerage systems and facilities within the various County Dependent Sanitation and Sewer Maintenance Districts. The policy was to be reviewed for continuance in 2003 but, to date, this review has not occurred.

San Diego County BOS Policy I-106, Establishment of Priorities for Limited Sewer Capacity in the Mission Gorge Trunk Sewer Line

BOS Policy I-106 was originally established in 1986 at a time when the City of San Diego expressed concerns that the Mission Gorge Trunk Sewer, which conveys wastewater generated in the Lakeside and Alpine Sanitation Districts, was experiencing surcharges during periods of peak sewage flow, particularly during wet weather conditions. Subsequent to adoption of the policy, the City of San Diego constructed additional sewer facilities that relieved capacity constraints in the Mission Gorge Trunk Sewer, effectively eliminating the need for Policy I-106. This policy is set to expire on 12-31-09 and will no longer be applicable.

San Diego County BOS Policy I-107, Policy on Long-Term Availability of Sewer Services to Certain Portions of East County

BOS Policy I-107 has been adopted as a mitigating measure for the Rancho San Diego Interceptor in order to use this interceptor to assure long-term availability of sewer services to appropriately urbanizing areas and to prevent the untimely introduction of sewer service. This policy is designed to regulate connections to the Rancho San Diego Sewer Interceptor, which is jointly shared by the Spring Valley Sanitation District and the OWD. This policy will be reviewed for continuance by 12-31-09.

San Diego County BOS Policy I-109, Subcommittee and Plans to Guide Development of the Otay Ranch Project

BOS Policy I-109 provides direction to County decision-makers and staff, owners of the subject land, and other public agencies concerned with development of the Otay Ranch project, for purposes of implementing Volume 2 of the Otay Subregional Plan.

San Diego County BOS Policy I-113, Establishment of Priorities for Limited Sewer Capacity in the Julian Sanitation District

BOS Policy I-113 defines priorities and criteria for determining future sewer service in the Julian Sanitation District which is served by the Julian Water Pollution Control Facility. This policy will be reviewed for continuance by 12-31-09.

San Diego County BOS Policy I-135, Allocation of Excess Capacity in the Campo Water and Sewer Service Areas

BOS Policy I-135 provides guidelines for the allocation of limited capacity in the existing CWSMD. The policy establishes criteria for the issuance of water use permits, sewer capacity commitments and wastewater discharge permits for proposed development within the Campo service area. This policy will be reviewed for continuance by 12-31-12.

Non-Exclusive Solid Waste Management Agreement

The Non-Exclusive Solid Waste Management Agreement was created to allow the County of San Diego to participate in the solid waste collection market to ensure orderly operation and to minimize the potential for adverse effects on the local environment. The agreement is based on the declaration of the California IWMA that it is in the interest of the public to require local agencies to make adequate provisions for solid waste handling. In addition, the County BOS has determined that the agreement shall be awarded to qualified companies for the collection and subsequent transfer, transportation, recycling, processing and disposal of solid waste. The Solid Waste Agreement allows the County of San Diego to regulate waste collection in a market-driven business.

County of San Diego Integrated Waste Management Plan (IWMP)

The BOS adopted the County of San Diego IWMP on September 17, 1996. The Plan discusses the need for a reduction in solid waste and includes a Source Reduction and Recycling Element, Household Hazardous Waste Element, Non-Disposal Facility Element, Countywide Siting Element, and the Countywide Summary Plan. The Countywide Siting Element of the 1996 IWMP was updated in 2005, as required by the IWMA. It provides a description of the facilities and strategies which will provide adequate capacity for the disposal of solid waste within the County over the next 15 years, including alternatives such as additional waste diversion programs and waste export. The Countywide Siting Element presents a strategy to assist local governments and private industry in planning for integrated waste management and the siting of solid waste disposal facilities. The goals and policies listed in the Countywide Siting Element are intended to assist all jurisdictions to plan and implement a solid waste management program.

2.16.3 Analysis of Project Effects and Determination of Significance

2.16.3.1 Issue 1: Wastewater Treatment Requirements

Guidelines for Determination of Significance

Based on Appendix G of the CEQA guidelines, the proposed County General Plan Update would have a significant impact if it would exceed the wastewater treatment requirements of the RWQCB.

Impact Analysis

The unincorporated County of San Diego is under the control of the RWQCB and the Colorado River Basin Regional Water Quality Control Board (CRBRWQCB). RWQCB regulates wastewater discharge in the majority of the eastern, central and western unincorporated County, while CRBRWQCB regulates wastewater discharge in a smaller portion of the eastern unincorporated County.

Implementation of the proposed General Plan Update would direct the majority of the anticipated population growth within the unincorporated County into the western portion of the

County, which contains areas that already have existing infrastructure and services, including wastewater treatment facilities. The demand for wastewater treatment capacity would potentially increase upon implementation of the proposed General Plan Update land uses from new developments that require wastewater service, such as residential, commercial and industrial. An increase in wastewater demand would require the need for new or expanded facilities to be constructed in order to meet the demand of the proposed project. In order to be permitted, new facilities would be required to meet the wastewater treatment requirements for the RWQCB and CRBRWQCB. However, if the demand for wastewater treatment services increased at a rate disproportionate to capabilities of wastewater treatment facilities, a violation in wastewater treatment standards would occur. For example, the FPUD (Fallbrook) treatment plant is currently operating at maximum capacity. The General Plan Update proposes village residential, semi-rural residential, and village core mixed use land uses within the FPUD service area. Development of these land uses would require additional wastewater service. Because the FPUD treatment plant is currently operating at capacity, an increase in wastewater demand would require the expansion of the existing facility or the construction of a new wastewater treatment facility. A violation in wastewater treatment standards would occur if the proposed land uses are developed and connected to the FPUD system without expansion of the FPUD treatment plant. Therefore, this would be considered a potentially significant impact.

The existing service capacities and service area for many wastewater districts are based on the existing General Plan land use designations. Implementation of the proposed General Plan Update would increase land use densities within wastewater district service areas in a manner that would not be currently planned for, particularly in the western portion of the unincorporated County where the majority of population would be distributed under implementation of the General Plan Update. Development of the land uses proposed under the General Plan Update would exceed wastewater district capacities if proper planning does not occur for the updated land use plan in a timely manner.

Additionally, approximately 80,000 septic systems exist throughout the unincorporated County. The majority of these systems are located in the eastern portion of the unincorporated County, in areas under jurisdiction of the RWQCB or CRBRWQCB. Implementation of the General Plan Update would direct the majority of the anticipated population growth into the western portion of the County, generally within the SDCWA service boundary and where wastewater treatment facilities exist. However, some development utilizing septic systems would occur in the eastern portion of the County and some areas in the western portion of the County where wastewater treatment facilities are not available, such as portions of Fallbrook, Bonsall, and Valley Center. Any septic system located in the unincorporated County has the potential to impair water quality. For example, the General Plan Update Groundwater Study (DPLU 2009f) found that under soil conditions conducive for successful leach fields for septic tanks, 90 to 99 percent of leachate from leach fields reached the water table. This finding indicates that if a septic system contains harmful constituents, there is a high probability that these contaminants will reach the groundwater table and impair water quality. To address this issue, the RWQCB has issued a waiver of waste discharge requirements for septic systems and delegated oversight to DEH, who is responsible for ensuring that unincorporated County septic systems are properly sited and installed. Under a waiver of waste discharge requirements, leachate from a properly sited and installed septic system may still reach the groundwater table, but this would not be considered a violation of water quality standards if the septic system is meeting the requirements of the waiver. In this event, a violation of water quality standards would not occur but the septic system would still have the potential to impair water quality.

Federal, State and Local Regulations and Existing Regulatory Ordinances

Numerous federal, State and local regulations exist that would reduce the potential for the proposed project to exceed the wastewater treatment requirements of the RWQCB or CRBRWQCB. These include the: Federal Water Pollution Control Act, which regulates discharges of pollutants into waters of the U.S.; California Water Code, which controls almost all considerations of water and its use; Porter-Cologne Water Quality Control Act, which controls polluted discharges into State waters; Water Conservation Projects Act, which encourages local agencies to implement potential water conservation and reclamation projects; County DEH, which sets standards to regulate septic tank discharges; San Diego Code of Regulatory Ordinances Section 68.101, which specifies conditions and procedures for sewage facilities; and County Fee Ordinances, which require annual sewer service, connection and annexation fees.

The County also requires that development projects proposing to use sewer include in their applications the necessary availability and commitment letters demonstrating sufficient wastewater treatment capacity and access to available sewer facilities. This requirement is further enforced with BOS Policies I-25, I-36, I-48, and I-84.

Proposed General Plan Update Goals and Policies

The General Plan Update contains several policies in within the Land Use Element that related to wastewater treatment requirements. These goals and supporting polices are intended to assure that wastewater treatment requirements are not violated. Goal LU-9 requires well defined, planned, and developed community cores, such as villages and town centers that contribute to a community's identity and character. Policy LU-9.4 supports this goal by prioritizing infrastructure improvements and the provision of public facilities in community cores. Goal LU-12 establishes sustainable infrastructure, public facilities and essential services that meet community needs and are provided concurrent with growth and development. Policies LU-12.1 and LU-12.2 support this goal by requiring concurrency of infrastructure and services with development and maintenance of adequate services. Goal LU-14 promotes adequate wastewater facilities that address potential hazards to human health and the environment. Policies LU-14.1, LU-14.2, LU-14.3 and LU-14.4 support this goal by requiring adequate wastewater facility plans, disposal, treatment facilities, and sewer facilities.

Summary

The development of future land uses as designated in the proposed General Plan Update would have the potential to result in the increased demand for wastewater treatment services at a rate disproportionate to treatment facility capabilities. If new or expanded facilities are not provided to serve new development, a violation in wastewater treatment standards would occur. While the existing County policies and regulations and proposed General Plan Update goals and policies are intended to preclude violations in wastewater treatment requirements, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project would result in a potentially significant impact related to wastewater treatment requirements and specific implementation programs are identified as mitigation.

2.16.3.2 Issue 2: New Water and Wastewater Treatment Facilities

Guidelines for Determination of Significance

Based on Appendix G of the CEQA guidelines, the proposed County General Plan Update would have a significant impact if it would require or result in new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Analysis

The development of future land uses, as designated in the proposed General Plan Update, would result in the construction of residential, commercial and industrial structures, which would result in an increased need for water and wastewater treatment services. In order to meet the increased demand, new and expanded water and wastewater treatment facilities would need to be constructed. Additionally, new land uses proposed in the backcountry areas would not currently be served by water or wastewater systems and would require the provision of new water and wastewater treatment facilities.

Tables 2.16-1, 2.16-2 and 2.16-4 identify water and wastewater districts that service the unincorporated County in terms of their existing (year 2004) housing and population statistics compared to projected housing and population statistics under implementation of the General Plan Update. Generally, districts that provide both water and wastewater service to the unincorporated County would experience the greatest population and housing growth under implementation of the General Plan Update. As shown in these tables, the water/wastewater districts that would experience the greatest growth under implementation of the General Plan Update include BWD (964 percent increase in both housing units and population); BSPCSD (600 percent increase in housing units and 602 percent increase in population); CWSMD (622 percent increase in housing and 627 percent increase in population); and VCMWD (96 percent increase in housing units and 98 percent increase in population). Some groundwater dependent water districts would experience substantial growth under implementation of the proposed General Plan Update, including: CCWD (400 percent increase in housing units and 433 percent increase in population); DCSD (330 percent increase in housing units and 333 percent increase in population); and CWD (160 percent increase in housing units and 175 percent increase in population). An increase in population and housing would increase the potential need for new water and wastewater treatment facilities to be constructed.

There are multiple water and wastewater facilities currently planned that would accommodate the projected growth under the General Plan Update. The SLRMWD is proposing a new connection to SDCWA 2nd Aqueduct. RMWD has a moratorium for new septic systems because of high groundwater, and would need a wastewater treatment plant for future development. FPUD is currently at capacity and needs to be expanded or requires the construction of a new wastewater treatment plant. Any annexation of territory for PVSD would require improvements to the existing plant to allow operation at maximum permitted capacity or upgrade of plant if flows exceed permit limits. LSD recently annexed territory from PDMWD that requires extension or expansion of LSD sewer facilities, including sewer mains and pump stations. Additionally, proposed development in Jacumba Valley would require a new wastewater treatment plant.

The construction of new or expanded water and/or wastewater facilities to serve new development occurring in designated areas under the proposed General Plan Update would have the potential to cause secondary environmental effects to air quality, cultural resources, noise, hydrology or other environmental issues. The complexity of the environmental impacts is often a function of how extensive or complex the development is. For example, water and wastewater treatment plants require the construction of buildings and structures in addition to transmission lines. Additionally, the construction of new septic systems to service development would require the installation of septic tanks and leach lines. The greater the dispersal of development, the greater potential the project has to have associated environmental impacts because more infrastructure would be required. One of the guiding principles of the proposed General Plan Update is to promote sustainability by locating new development near existing infrastructure; thereby reducing the potential for environmental impacts associated with extensive infrastructure improvements over long tracts of land.

Any future water and/or wastewater treatment projects in the County would be required to conduct environmental review pursuant to CEQA prior to approval. CEQA requires proposed projects to provide detailed information on the potentially significant environmental effects they are likely to have, list ways in which the significant environmental effects would be minimized, and identify alternatives that would reduce or avoid the significant impacts identified for the project. To the extent feasible, significant environmental impacts would be mitigated to below a level of significance, consistent with CEQA. However, some environmental impacts associated with the construction of water or wastewater treatment plants would be significant and require mitigation, such as hydrology, biology, and air quality. It should be noted that the development of water or wastewater treatment facilities is usually undertaken directly by a water or sewer district and is outside the jurisdiction of the County.

Federal, State and Local Regulations and Existing Regulatory Processes

Numerous federal, State and local regulations exist which regulate environmental impacts related to water and wastewater treatment facilities. These include SDWA, which sets national drinking water standards for public water systems; Federal Water Pollution Control Act, which regulates discharges of pollutants into waters of the U.S.; California Water Code, which controls almost all considerations of water and its use; California Drinking Water Standards, which establishes state drinking water standards; Porter-Cologne Water Quality Control Act, which controls polluted discharges into State waters; Water Conservation Projects Act, which encourages local agencies to implement potential water conservation and reclamation projects; USO, which regulates sewage collection and treatment systems; County Code Section 68.101, which specifies conditions and procedures for sewage facilities; and County Fee Ordinances, which require annual sewer service, connection and annexation fees.

New water and wastewater facilities proposed under the County's jurisdictional authority are required to obtain a Major Use Permit. The Major Use Permit process is subject to CEQA review as well as certain land use compatibility findings. For those facilities proposed by other public agencies in the project area, CEQA and/or NEPA review is also typically required.

Proposed General Plan Update Goals and Policies

The General Plan Update contains several policies in the Land Use Element and Housing Element related to the development of new water or wastewater facilities. Within the Land Use Element, Goal LU-1 requires a land use plan that sustains the intent and integrity of the

Community Development Model and the boundaries between regional categories. Policy LU-1.2 supports this goal by prohibiting leapfrog development that would require the construction of new infrastructure facilities. Goal LU-4 requires coordination with the plans and activities of other agencies that relate to issues such as land use, safety, community character, transportation, energy, and other infrastructure in the unincorporated County and the natural resources of the region. Policy LU-4.3 supports this goal by requiring consideration of the relationship of plans in adjoining jurisdictions. Considering and forming agreements with infrastructure utilities in surrounding jurisdictions would reduce environmental impacts by maximizing existing infrastructure and reducing the need for additional facilities construction.

In the Housing Element, Goal H-1 encourages a housing stock with a variety of housing and tenancy types at a range of prices, which meets the varied needs of existing and future unincorporated County residents. Policy H-1.3 supports this goal by encouraging housing near public infrastructure which would reduce the need for new infrastructure, the construction of which could have significant environmental effects.

Summary

The development of future land uses as designated in the proposed General Plan Update would have the potential to require or result in the construction of new water or wastewater treatment facilities or an expansion of existing facilities, the construction of which would have the potential to cause significant environmental effects in areas such as hydrology, biology, and air quality. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to reduce environmental impacts associated with the construction of new water or wastewater treatment facilities, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project would result in a potentially significant impact associated with new water and wastewater treatment facilities and specific implementation programs are identified as mitigation.

2.16.3.3 Issue 3: Sufficient Stormwater Drainage Facilities

Guidelines for Determination of Significance

Based on Appendix G of the CEQA guidelines, the proposed County General Plan Update would have a significant impact if it would result in new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Analysis

The development of new residential, commercial and industrial land uses consistent with the land use designations proposed in the General Plan Update would increase the amount of impermeable surfaces within the unincorporated County from the development of rooftops, parking lots, roads and driveways; thereby increasing the stormwater runoff within the unincorporated County. An increase in the amount of impermeable surfaces throughout the County would potentially result in an excess of runoff that would exceed the capacity of existing stormwater drainage systems, requiring the construction of new or expanded facilities. A vast amount of the unincorporated area is rural land that does not support or require stormwater

drainage facilities. In contrast, most urban areas within the incorporated areas of San Diego County have a range of stormwater drainage facilities, managed by the County. Development projects in the County must comply with the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance in order to receive project approval. This regulation requires development projects to demonstrate that they have provided stormwater facilities sized appropriately to accommodate runoff flows.

Pursuant to CEQA, projects in the County involving the construction of stormwater drainage facilities would be required to conduct an environmental review prior to approval. CEQA requires proposed projects to provide detailed information on the potentially significant environmental effects they are likely to have, list ways in which the significant environmental effects would be minimized, and identify alternatives that would reduce or avoid the significant impacts identified for the project. To the extent feasible, significant environmental impacts would be mitigated to below a level of significance.

Federal, State and Local Regulations and Existing Regulatory Processes

Numerous federal, State and local regulations exist that regulate environmental impacts related to stormwater drainage facilities and stormwater discharges. These include the following: Federal Water Pollution Control Act, which regulates discharges of pollutants into waters of the U.S.; California Water Code, which controls almost all considerations of water and its use; Porter-Cologne Water Quality Control Act, which controls polluted discharges into State waters, and the County WPO, which protects water resources and improves water quality. In some instances, adherence to these regulations would result in the need for new or expanded stormwater drainage facilities the construction of which would have the potential to adversely affect the environment. However, in most cases application of stormwater management requirements include the provision that the least environmentally damaging designs and methods be used. In addition, these regulations often result in alternative ways of managing stormwater runoff other than constructing new conveyance systems or drainage facilities, such as reducing impervious surfaces in site design, incorporating Low Impact Development (LID) techniques, and employing low-impact best management practices (BMPs).

For new development that would result in new stormwater drainage facilities or expansion of existing facilities, the County evaluates all potentially significant impacts that could result from the associated infrastructure. Such improvements must comply with the County Grading Ordinance as well as other applicable regulations protecting environmental resources, such as Section 2940 et seq. of the Zoning Ordinance, Noise Ordinance, RPO, Biological Mitigation Ordinance (BMO), Habitat Loss Permit (HLP) Ordinance, and relevant BOS Policies. In addition, environmental impacts shall be minimized and mitigated to the extent feasible for all projects pursuant to CEQA.

Proposed General Plan Update Goals and Policies

The General Plan Update contains several goals and policies within the Land Use Element and Conservation Element to promote sufficient stormwater drainage facilities throughout the unincorporated County. In the Land Use Element, Goal LU-6 requires that the built environmental be in balance with the natural environment, scarce resources, natural hazards, and the unique local character of individual communities. Policies LU-6.5 and LU-6.9 support this goal by ensuring sustainable stormwater management and development conformance with topography. In the Conservation and Open Space Element, Goal COS-4 requires a balanced

and regionally integrated water management approach to achieve the long-term viability of San Diego County's water quality and supply. Policy COS-4.3 supports this goal by requiring that stormwater filtration development utilize natural drainage patterns in order to reduce environmental impacts from the alteration of existing drainage patterns or construction of new drainage facilities.

Summary

The development of future residential, commercial and industrial land uses as designated in the proposed General Plan Update would have the potential to increase the amount of impermeable surfaces within the unincorporated County, thereby increasing stormwater runoff. The increase in stormwater runoff would require the construction or expansion of new stormwater facilities to handle the increased runoff flows, which would have the potential to result in significant environmental impacts. While the existing County policies and regulations and proposed General Plan Update goals and policies are intended to provide sufficient stormwater drainage facilities, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project would result in a potentially significant impact to stormwater drainage facilities and specific implementation programs are identified as mitigation. Stormwater drainage facilities are further discussed in Section 2.8, Hydrology and Water Quality.

2.16.3.4 Issue 4: Adequate Water Supplies

Guidelines for Determination of Significance

Based on Appendix G of the CEQA Guidelines, the proposed County General Plan Update would have a significant impact if it would: 1) result in a demand for water that exceeds existing entitlements and resources, or necessitates new or expanded entitlements; or 2) substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits are granted).

Impact Analysis

Within the unincorporated County, potable water is primarily obtained by imported water supplies from water districts or pumping water from local groundwater basins. The majority of the western portion of the unincorporated County is served by water districts that import water supplies from SDCWA, through MWD, while the remainder of the County is provided with water service through groundwater dependant water districts/companies or private and public wells. The following section examines the potential for adequate water supplies to occur under implementation of the proposed General Plan Update in terms of SDCWA member districts and groundwater dependent water districts. Each discussion includes an evaluation of the potential growth within each district's service area, in addition to describing applicable water agency planning documents, reasonably foreseeable water supply projects planned for the future, and potential environmental impacts associated with developing additional water supply projects.

SDCWA Member Districts

Future Water Demand

Table 2.16-1 identifies the existing conditions (year 2004) for housing units and population within each SDCWA member district's service area, in addition to the projected increase in housing units and population within these service areas under implementation of the proposed General Plan Update. This table provides a conservative estimate of the potential housing and population increases within each SDCWA member district service area by evaluating the expected increase in population and housing units that would occur upon complete build-out of the proposed General Plan Update. As shown in Table 2.16-1, all 15 SDCWA member districts that serve the unincorporated County would experience growth in both population and number of housing units with implementation of the General Plan Update. SDCWA member districts that would experience the greatest percentage of growth under implementation of the proposed project include YMWD (159 percent increase in both housing and population); VCMWD (96 percent increase in housing and 98 percent increase in population); RDDMWD (91 percent increase in housing and 92 percent increase in population); and VID (89 percent increase in housing and 92 percent increase in population). Any increase in population and housing units within a SDCWA member district's service area would result in an increase in the demand for potable water service.

SDCWA member districts that would serve the largest population and number of housing units under the proposed project include OWD (79,539 housing units and 236,309 persons); PDMWD (74,422 housing units and 211,348 persons); HWD (31,915 housing units and 94,295 persons); and Ramona MWD (27,273 housing units and 83,719 persons). It should be noted that although these SDCWA member districts would serve the greatest population and housing units under implementation of the General Plan Update, they generally would not experience substantial growth when compared to existing conditions (year 2004).

As population and housing units increase, so does the demand for potable water service. Therefore, regional water supply planning is needed to ensure that available water supplies meet increasing demand as the region grows. In 1992, SDCWA and SANDAG entered into an agreement to ensure ongoing communication on future growth and water supply planning. This agreement called for SDCWA to use SANDAG's most recent growth forecast for planning purposes and for water supply to be a component of the region's overall growth management strategy. SANDAG's growth forecast is based on the land use policies of the incorporated cities and the County. Because SDCWA does not have land use approval authority, it can neither directly cause nor prevent growth. How and where development occurs in the SDCWA service area is decided by the 18 incorporated cities and the County, which have local land use approval authority. SDCWA's job is to make sure water is available when it is needed.

SANDAG updates its growth forecast approximately every five years. Water districts update their demand forecasts and supply needs based on the most recent SANDAG forecast approximately every five years to coincide with preparation of their UWMPs. Because the proposed General Plan Update has undergone multiple revisions over the past years, the planning documents upon which various water districts rely to secure a sustainable long term supply of potable water to the unincorporated County, including UWMPs, IRPs and the Regional Water Facilities Master Plan, do not currently account for the growth proposed under the General Plan Update. Therefore, the proposed General Plan Update would result in increases in population and housing in areas that may not have been accounted for in the most current

water planning documents. If the proposed General Plan Update is adopted, SANDAG and SDCWA will incorporate the new population and housing data for the County when they review the Regional Water Facilities Master Plan in conjunction with the SDCWA UWMP. Development and construction of the facilities outlined in the Regional Water Facilities Master Plan will be accelerated or delayed, as appropriate, based on the updated SANDAG information (SDCWA 2003).

Urban Water Management Plans

In the 2005 UWMPs, MWD, SDCWA and all 15 SDCWA member agencies that serve the unincorporated County determined that adequate water supplies would be available to serve existing service areas under normal water year, single dry water year and multiple dry water year conditions through the year 2030, if Water Authority and member agency supplies are developed as planned, along with the implementation of MWD's IRP. Single dry year, normal year and multiple dry year UWMP supply and demand assessments are included in Appendix J of this EIR. These projections are intended to describe the reliability of the water supply and vulnerability of the water supply to seasonal or climatic shortages, to the extent practical.

In addition to SANDAG's population and demographic forecasts, described above, SDCWA considers historic weather patterns, anticipated and planned water projects in the region, and other demographic information supplied by SANDAG to forecast regional water demand and the availability of imported water supplies. It is important to note that the supply and demand projections contained within 2005 UWMPs were based on SANDAG Series 10 population projections, which were based on the Draft Land Use Map Alternative for the proposed General Plan Update rather than the proposed project (Referral Map).

While the Draft Land Use Map population projection includes the majority of the growth planned for in the General Plan Update, a variety of circumstances have changed since the 2005 UWMPs were prepared. For example, much of California faces an unprecedented combination of water supply challenges including regulatory restrictions to protect the Delta smelt (fish) in the Sacramento-San Joaquin Delta which has dramatically reduced water deliveries from Northern California, and may remain in effect for years. Three consecutive years (2006-2008) of drought have also constrained potable water supplies and substantially depleted storage in reservoirs throughout the entire SWP area. Many of the State's major reservoirs have been drawn down to very low water levels as a result. The 2005 UWMPs' supply and demand projections accounted for multiple dry water year drought conditions, but did not account for the current regulatory restrictions on pumping from the State Water Project. In April 2009, the SDCWA, in response to reduced water supplies caused by regulatory restrictions on water deliveries from Northern California, lingering drought, and cutbacks from MWD, approved cutting water deliveries to its member water agencies by 8 percent (effective July 1, 2009). To help achieve the required reduction in regional water use, SDCWA also immediately declared a Level 2 "Drought Alert" condition. That action enables the SDCWA's 24 member agencies to adopt mandatory conservation measures for residences and businesses, such as use restrictions or tiered water rates that charge more for excessive water use.

Due to the above mentioned reasons, it is unlikely that the supply and demand projections provided in the MWD, SDCWA and SDCWA member district's 2005 UWMPs accurately portray 2009 water conditions in the unincorporated County. Implementation of the proposed General Plan Update would increase both population and housing units within each County water district's service area in a manner that is not currently planned for in the most recent (2005)

water planning documents. Since UWMPs are updated every five years, the 2010 UWMPs prepared by MWD, SDCWA and the SDCWA member districts will be required to consider the abovementioned conditions, in addition to the revised population and housing data proposed by the General Plan Update (if adopted), when updating their supply and demand projections.

Future Water Supply

Generally, the planning documents for MWD, SDCWA and the SDCWA member districts account for future water supply projects that would provide adequate water supply through the year 2030. This is also the horizon year for the proposed General Plan Update. However, unexpected factors, such as record drought conditions and court-issued cutbacks to imported water increase the uncertainty that the water supply projects included in the water planning documents will be sufficient to meet future demand. Additional complicating factors, such as difficulty obtaining permits for desalination projects, unexpected water quality contamination of supply sources, erratic weather patterns associated with climate change, and competing demands for water supply could further impair the development of new water supply projects. The factors mentioned above would increase the potential for future water supply to be unable to meet future water demand.

Reasonably foreseeable water supply projects for MWD and SDCWA, which together provide the majority of the water supply for the SDCWA member districts, are summarized below and discussed above in Section 2.16.1.1. Although water district planning documents, such as the IRP, Regional Water Facilities Master Plan, and UWMPs, indicate that obtaining additional water supplies is feasible, it is possible that unforeseen barriers exist or will exist in the future. Therefore, due to uncertainties surrounding the implementation of future water supply projects, water supplies may be inadequate to serve the build out of the proposed General Plan Update.

MWD's long-term strategy for a sustainable water supply is outlined in its IRP, which is currently being updated. As discussed in Section 2.16.1.1, the IRP identifies a mix of resources (imported and local) that would provide 100 percent reliability for full-service demands. This mix of resources includes implementing conservation measures, local supplies, SWP supplies, Colorado River supplies, groundwater banking, and water transfers through the year 2030. In addition, MWD is active in increasing local supplies through sponsoring recycling, conservation, groundwater recovery, and desalination efforts. However, as discussed above, unexpected climatic and legal factors and the regulatory constraints (i.e., cutbacks) on pumping of MWD water supplies from the State Water Project have increased the uncertainty that projects included in MWD planning documents will be able to adequately serve future demand.

SDCWA has determined that the best way to ensure a reliable water supply for the future is to diversify its water supply portfolio. Diversification includes water that originates locally, such as recycled water and desalinated seawater. SDCWA selected seawater desalination as the preferred method for providing a new, safe and reliable water supply for the region. However, the development of desalination facilities has been delayed due to issues associated with the permitting process. In addition to pursuing the construction of desalination facilities, the SDCWA has reduced the severity of cutbacks from MWD by developing additional water supplies as part of its long-term water supply diversification strategy. SDCWA has a water transfer agreement with the Imperial Irrigation District (beginning in 1998) that will last up to 75 years, as well as a 110-year agreement (beginning in 2003) that brings water conserved by canal-lining projects in the Imperial Valley to San Diego County. SDCWA has also been working with its member agencies to develop greater local water supplies, from sources such as

groundwater and recycled water. In April 2009, SDCWA also decided to use 16,000 AF of water from short-term "dry year" transfers to minimize the required regional water cutback for 2009. An integral assumption in the SDCWA's water demand projections is that water conservation will increase significantly, more than tripling by 2020. Increased water recycling and increased use of groundwater also play important roles in making sure SDCWA is able to provide enough water in the future (SDCWA 2009). Although SDCWA is exploring multiple venues for providing adequate water supply in the future, unexpected factors including difficulty permitting desalination plants and record drought conditions, increase the uncertainty that projected supplies identified in SDCWA planning documents will meet future demand.

Alternative Water Supplies

In the event that preferred water supply projects do not come to fruition, alternative water supply projects are identified within water planning documents. For example, within the SDCWA Regional Water Facilities Master Plan, five reasonably foreseeable alternatives were evaluated, in addition to the preferred method for obtaining future water supply (seawater desalination). The five alternatives to seawater desalination include: 1) conveyance of supplies from the north or MWD with Pipeline no. 6; 2) conveyance of supplies from the east or Regional Colorado River Conveyance Facility (RCRCF); 3) increase local supply above planned yield through a combination of recycled water and groundwater projects; 4) increase water conservation; and 5) no project. These alternatives are discussed below.

The alternative conveyance of supplies from the north or the east is discussed above in Section 2.16.1.1, Potable Water Supply and Distribution, and is unlikely to be implemented by SDCWA. Additionally, the SDCWA alternative to increase local supply above planned yield would increase the development of local supply projects, above what is currently planned, to determine if these supplies can satisfy projected future demands. To obtain the high level of local supply resources identified in this alternative, significant obstacles that have historically hindered development of recycled water and groundwater projects in San Diego County would have to be overcome. For these reasons, it is unlikely this alternative would be feasibly implemented by SDCWA. SDCWA and other local and regional water agencies are currently implementing increased short-term and long term water conservation measures to overcome water shortage obstacles and increase water supplies. For example, SDCWA has implemented a number of short-term conservation strategies, which include limiting irrigation of landscaping to certain days; prohibiting the washing down of paved surfaces; regulating individual car washing procedures; requiring the use of recycled or non-potable water during construction; prohibiting the use of ornamental fountains that do not utilize recycled water; and regulating restaurant and hotel operations.

Long-term water conservation strategies occur on both local and regional levels and are outlined in respective UWMPs, IRPs, Drought Management Plans and Regional IRWMPs. Additionally, in 2008 Governor Schwarzenegger created a new State water conservation goal to achieve a 20 percent reduction in per capita water use statewide by 2020. To achieve this goal, the Governor created a "20 x 2020 Agency Team on Water Conservation" with the focus of developing a Water Conservation Plan to achieve this water conservation goal. Several agencies will help the 20 x 2020 Agency Team on Water Conservation create the Water Conservation Plan, including: the DWR, the SWRCB, the California Energy Commission, the Department of Public Health, the California Public Utilities Commission, the Bureau of Reclamation, and the California Water Conservation Council. In addition to the creation of a Water Conservation Plan, the Governor has identified the following existing long-term water

conservation tools that water users and water agencies may use to achieve the 20 percent reduction in per capita water use statewide by 2020 (SWRCB 2010):

The California Water Plan. The latest update published in 2005 provides a strategic plan for water management, laying the foundation for water conservation and other resource management activities.

Bond funding. There is grant funding (Proposition 50 and Proposition 84) available to help agencies and regions plan and implement water management programs.

Access to funds. A new law enacted in 2007, Assembly Bill (AB) 1420, requires most water agencies to implement a series of water conservation measures in order to be eligible for water management grant funds.

Efficiency standards. Showerheads, faucets, toilets, and clothes washers are all more water-efficient because California has led the nation in establishing strong standards. New laws will require even more efficient toilets in the future, new standards for irrigation controllers are planned, and other new building and appliance standards are possible in the future.

New programs and tools. The California DWR is working on programs that will help communities and customers conserve water. A Model Water Efficient Landscape Ordinance was developed in 2009 that local governments can adopt as their own. Landscape conservation offers more potential savings than any other single conservation measure. Also, DWR is upgrading the California Irrigation Management Information System, a network of automated weather stations around the State that measure how much water landscapes or crops need. System upgrades will enable the system to communicate with a new generation of automated irrigation controllers.

Collaboration. Hundreds of water agencies, environmental organizations, and others work together under the banner of the California Urban Water Conservation Council (CUWCC). Since 1991, this organization has set voluntary standards for conservation programs. CUWCC's approach and standards ensure that California conservation programs are cost-effective and achieve the required savings.

Regulatory protection. The SWRCB is entrusted with the responsibility to ensure beneficial use of water in California and prevent waste and unreasonable use.

Although there are many long-term water conservation programs and plans that currently exist, it is likely new programs and approaches would be developed (outside of the 20 x 2020 Agency Team Water Conservation Plan) to meet the Governor's target and help ensure water supply reliability. For example, the California Public Utilities Commission is conducting several water conservation/efficiency pilots to determine associated energy savings pairing water and energy utilities' programs. The option of curtailing development (i.e., no project alternative) in the unincorporated County in locations where sufficient water is potentially not available at build-out would be the responsibility of the County, which has the land use authority to approve or deny proposed development projects. Reducing the development densities identified in the proposed General Plan Update would result in the proposed project not meeting its project objectives. Chapter 4.0, Project Alternatives, provides a discussion of several land use alternatives to the proposed project that would result in reduced impacts associated with water supply as compared to the proposed project.

Environmental Impacts of Water Supply Sources

To evaluate the potential impacts of the methods that may be used to obtain additional water supply, this document hereby incorporates by reference the Final EIR for the SDCWA Regional Water Facilities Master Plan dated November 2003 (SCH No. 2003021052). This document can be found on SDCWA's website at www.sdcwa.org and is summarized below.

The EIR for the SDCWA Regional Water Facilities Master Plan evaluates a program of water supply projects. The Master Plan does not describe every proposed facility in detail, but describes the types of facilities needed to meet the region's future water needs. For example, while the Master Plan describes a proposal to develop seawater desalination as a new regional water supply, it does not provide an in-depth analysis of any specific seawater desalination project.

The EIR for the SDCWA Regional Water Facilities Master Plan determined that multiple environmental impacts associated with the construction of water supply projects would potentially occur. Of all of the potential methods to ensure additional water supply, water conservation is the only approach which would not result in adverse environmental impacts. Other water supply projects, including desalination projects, the conveyance of supplies from the north, east or west, or increasing local supply above planned yield have the potential to result in significant environmental impacts. A summary of potentially significant environmental effects from implementation of proposed SDCWA water supply projects is identified in Table 2.16-9. As shown in this table, potentially significant environmental impacts associated with the following environmental issues may occur: land use, water resources, biological resources, transportation and traffic, noise, air quality, utilities and public services, aesthetics, geology and soils, cultural resources, public safety and hazardous materials, paleontological resources, agricultural resources, and recreation. The Final EIR for the SDCWA Regional Water Facilities Master Plan determined that mitigation proposed in the document would reduce all potentially significant environmental impacts to a level that is less than significant (SDCWA 2003). Therefore, the water supply projects contained in the SDCWA Regional Water Facilities Master Plan, which would provide additional future water supply to the 15 SDCWA member agencies in the unincorporated County, have been adequately evaluated and mitigated on a programmatic level, consistent with CEQA.

On a project level, any future facility development of a specific water supply project in the unincorporated County would be required to conduct environmental review pursuant to CEQA (and/or NEPA if a federal agency is involved) prior to approval. CEQA and NEPA require detailed information to be provided regarding the potentially significant environmental effects that a proposed project is likely to have, list ways in which the significant environmental effects would be minimized, and identify alternatives that would reduce or avoid the significant impacts identified for the project. To the extent feasible, significant environmental impacts would be mitigated to below a level of significance. However, some environmental impacts associated with the construction of a specific water supply project may be significant and unavoidable, such as impacts associated with noise, cultural resources, hydrology/water quality, and/or biological resources. Projects proposing the construction or expansion of water supply projects would be approved by the individual water districts and would not be subject to discretionary approval by the County. Water districts are able to serve as their own lead agency under CEQA.

Groundwater Dependent Water Districts

Future Water Demand

Table 2.16-2 identifies the existing conditions (year 2004) housing units and population within each groundwater dependant water district's service area, in addition to identifying the projected housing and population for these service areas under implementation of the proposed General Plan Update. The percentage of growth each water district would experience in housing units and population is also identified in this table. As shown in Table 2.16-2, all 14 groundwater dependent water districts that serve the unincorporated County would experience growth in population and housing under implementation of the proposed General Plan Update. Groundwater dependent districts that would experience the greatest percentage growth under implementation of the General Plan Update include BWD (964 percent increase in both population and housing); CWSMD (622 percent increase in housing and 627 percent increase in population); BSPCSD (600 percent increase in housing and 602 percent increase in population); CCWD (400 percent increase in housing and 433 percent increase in population); and DSCD (330 percent increase in housing and 333 percent increase in population). Implementation of the proposed General Plan Update would increase population and housing within all groundwater dependent water districts service area, thereby increasing the demand for potable water service. This would potentially result in some groundwater dependent districts having inadequate water supply to serve the projected demand of the proposed General Plan Update.

Groundwater dependent water districts that would serve the largest population and number of housing units under implementation of the General Plan Update include BWD (13,832 housing units and 21,342 persons), SLRMWD (1,019 housing units and 2,953 persons), and PMWD (566 housing units and 1,689 persons). It should be noted that although these groundwater dependent districts would serve the most people and homes under the General Plan Update, they generally would not experience substantial percentage growth when compared to existing conditions.

Future Water Supply

As part of this EIR, a groundwater study was prepared to evaluate the impacts of the proposed General Plan Update land uses on groundwater resources within the groundwater dependent portion of the County. The groundwater study results provide a regional level screening tool to evaluate impacts of the proposed General Plan Update land uses by identifying localized areas within each basin which would be currently impacted with groundwater constraints and determining the potential for constraints to be exacerbated upon implementation of the General Plan Update.

Each groundwater dependent district's groundwater supply is shared with a variety of private and public well users. Therefore, these water districts must be evaluated in the context of the basin in which it lies to determine potential supply issues. For groundwater dependent areas, the County Groundwater Study calculated recharge to 86 basins on a month by month basis through 34 years, estimating the amount of groundwater in storage within each basin, and then applying groundwater demand under existing conditions as well as at build out of the various land uses proposed under the General Plan Update. This modeling determined whether there would be a sustainable supply of groundwater to meet the demand of the General Plan Update through the 34 year period. Additional information regarding the results and methodology used for the County Groundwater Study can be found in Section 2.8, Hydrology and Water Quality.

The complete study is provided in Appendix D, County of San Diego General Plan Update Groundwater Study.

As discussed in Section 2.8, Hydrology and Water Quality, 10 groundwater basins have been identified as potentially experiencing substantial depletion in groundwater in storage from build-out of the proposed General Plan Update. These include Ballena Basin, Barona Basin, Engineer Springs Basin, Guatay Basin, Las Lomas Muertas Basin, Lee Basin, Lyon Basin, Morena South Basin, San Felipe Basin and Spencer Basin. Table 2.16-10 identifies the groundwater dependent water districts that serve the unincorporated County, in terms of the watersheds, hydrological areas and hydrologic subareas from which they obtain their groundwater supplies. This information provides context as to what groundwater basin each groundwater dependent water district utilizes to supply users with potable water. As shown in this table, both the JCSWD and the MPCSD utilize the Spencer and San Felipe Groundwater Basins, which would experience substantial declines in groundwater in storage under buildout of the land uses proposed under the General Plan Update. This could potentially result in inadequate groundwater water supplies for these districts.

It should also be noted that both BSPCSD and BWD utilize the Borrego Valley aquifer, which has a well documented groundwater overdraft condition. Year after year groundwater extraction in Borrego Valley exceeds the amount of groundwater that is recharged back into the aquifer. As discussed in the County Groundwater Study, groundwater impacts from the overdraft condition in Borrego Valley are already occurring and would continue to worsen as groundwater usage continues from development of land uses consistent with the General Plan Update. Current impacts include dry wells, decreased well efficiency and increased pumping costs as water levels continue to decline. Under implementation of the General Plan Update, these impacts would continue and more wells would need to be replaced as water levels drop below perforated levels. Also, water quality impacts would occur as decreased water levels would induce flow of high salinity, poor quality connate water found in deeper formational materials of the aquifer. This would eventually necessitate additional expensive treatment of groundwater to make the water suitable as a drinking water supply. According to the County Groundwater Study, the proposed General Plan Update would allow for up to 8,689 additional residential units to be developed in Borrego Valley, which would be anticipated to use approximately 8,255 acre-feet of groundwater per year (0.95 acre-feet per residential unit). This would increase the overdraft condition to over 22,000 acre-feet per year and the aquifer would be depleted much quicker than is currently estimated. The results of the County Groundwater Study indicate that under buildout of the proposed General Plan Update, BSPCSD District and BWD would potentially have inadequate water supply to serve its service area.

Water districts that are reliant upon groundwater may consider alternative supply sources such as trucking in water to supplement declining groundwater supply, importing groundwater from another basin, groundwater recharge and groundwater banking, or importing water from the SDCWA. However, these alternative supply sources are generally considered infeasible due to the required infrastructure improvements and expansions, extensive costs, lack of sustainability, and associated environmental impacts.

Environmental Impacts of Water Supply Sources

The drawdown of groundwater supplies from increased water supply sources would result in impacts on ecosystems because groundwater withdrawals can significantly lower groundwater levels in an area and therefore cause a loss of flow in a surrounding river or other water body

due to seepage through the riverbed. This reduced flow can affect plant and animal species in local water bodies in addition to the hydrology and water quality of the affected water body. Additionally, high salinity, poor quality water often occurs in deeper formational materials of an aquifer, such as Borrego Valley aquifer. Water quality impacts occur as decreased water levels induce flows of poor quality water found in deeper formational materials of the aquifer. This may necessitate additional expensive treatment of groundwater to make the water suitable as a drinking water supply. In addition to the impacts of groundwater extraction and recharge, there would be environmental impacts related to the construction of groundwater pumping and recharge facilities. For example, land subsidence could result from the lowering of groundwater levels and air quality, traffic and noise could increase by trucking in water from alternative groundwater basins.

Groundwater recharge (groundwater banking) coupled with the additional pumping could cause water tables to vary up and down more widely and frequently. Artificial recharge by any means will add water to the aquifer at a rate higher than the natural rate, potentially raising groundwater tables to levels that are higher than those that presently occur. Additionally, recovering this banked water could cause groundwater levels to be drawn down to levels that are lower than naturally occur. These wider fluctuations in groundwater levels can exacerbate localized flooding where the water table is very close to the surface, and in drier years draw water tables to levels below the bottom of existing wells. These effects would generally be confined to the local area of recharge and pumping and could be minimized by strategic placement of facilities.

Federal, State and Local Regulations and Existing Regulatory Processes

Numerous federal, State and local regulations exist to ensure adequate water supplies are available. These include the following: California Water Code, which controls almost all considerations of water and its use; SB 610, which requires water supply assessments for large projects within cities and counties; SB 221, which requires proof of sufficient water supply for various projects; Urban Water Management Planning Act, which requires water suppliers ensure a reliable water supply; and the Water Conservation Projects Act, which encourages local agencies to implement potential water conservation and reclamation projects.

SB 610 mandates that a city or county request a water supply assessment from a public water purveyor for certain kinds of projects enumerated in Water Code Section 10912. In response to such request, SB 610 requires that the water purveyor of the public water system prepare the water supply assessment to be included in CEQA documentation and approval process for such projects. SB 221 requires affirmative written verification from the purveyor of the public water system that sufficient water supplies are planned to be available for certain residential subdivisions of property prior to approval of a tentative map.

The County also requires that development projects proposing to use imported water provide availability and commitment letters demonstrating sufficient water resources and access to available water facilities. The County of San Diego currently manages anticipated future groundwater demand through the County Groundwater Ordinance (Ordinance #9826, N.S.) and application of CEQA to proposed discretionary permits. The Groundwater Ordinance does not limit the number of wells or the amount of groundwater extraction by existing landowners. However, the Ordinance does have specific measures to mitigate potential groundwater impacts of projects requiring specified discretionary permits. The Groundwater Ordinance has a specific section for Borrego Valley (Section 67.720) which imposes requirements on projects of more than 100 acres, projects requiring a General Plan Amendment, and projects with an annual

demand of more than 20 acre-feet of water. Proposed discretionary permits proposing the use of groundwater in Borrego are subject to the County DPLU Policy Regarding CEQA Cumulative Analyses for Borrego Valley Groundwater Use.

Proposed General Plan Update Goals and Policies

The General Plan Update contains several policies in the Land Use Element and Conservation Element to assist in planning for an adequate water supply. Goal LU-8 would promote sustainable aquifers and functional groundwater recharge areas. Policies LU-8.1 and LU-8.2 support this goal by requiring that densities and development in groundwater dependent areas be consistent with the long-term sustainability of groundwater supplies. Goal LU-13 requires a balanced and regionally integrated water management approach to ensure the long-term viability of San Diego County's water quality and supply. Policies LU-13.1 and 13.2 support this goal by committing water districts and future development to achieving an adequate water supply.

In the Conservation and Open Space Element, Goal COS-4 requires a balanced and regionally integrated water management approach to achieve the long-term viability of San Diego County's water quality and supply. Policies COS-4.1, COS-4.2, COS-4.3, and COS-4.4 support this goal by increasing water conservation, requiring drought-efficient landscaping, maximizing stormwater filtration, and reducing groundwater contamination. Goal COS-5 ensures the protection and maintenance of local reservoirs, watersheds, aquifer-recharge areas, and natural drainage systems to maintain high quality water resources. Policies COS-5.2 and COS-5.5 support this goal by establishing policies to minimize impervious surfaces and prevent groundwater contamination.

Summary

Implementation of the proposed General Plan Update would increase the number of housing units and populations served within the service areas of SDCWA member water districts and groundwater dependent water districts. Although multiple planning documents exist to ensure a reliable water supply is available for future growth within the County, issues such as cutbacks in imported water due to regulatory restrictions on pumping from the State Water Project were unaccounted for in these documents. Additionally, the combined effect of the impacts related to obtaining additional water supplies, the uncertainties inherent in obtaining those supplies, and construction impacts related to extraction, processing and/or conveyance of additional water supply leads to the conclusion that implementation of the proposed General Plan Update would be potentially significant.

In addition, the County Groundwater Study (DPLU 2009f) projects that some groundwater basins throughout the County would be impacted upon build out of the proposed General Plan Update. This would result in some groundwater dependent water districts having a potentially inadequate water supply. While existing County policies and regulations and the proposed General Plan Update goals and policies are intended to assist in securing an adequate water supply, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project would result in a potentially significant impact to water supply and specific implementation programs are identified as mitigation.

2.16.3.5 Issue 5: Adequate Wastewater Facilities

Guidelines for Determination of Significance

Based on Appendix G of the CEQA Guidelines, the proposed County General Plan Update would have a significant impact if it would result in a determination by the wastewater provider which serves or may serve the project area that it has inadequate capacity to service the project's projected demand in addition to the provider's existing commitments.

Impact Analysis

Twenty-five wastewater districts service the unincorporated County. Unincorporated areas not serviced by wastewater districts typically utilize septic systems for wastewater disposal. As required by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, the San Diego LAFCO conducted multiple Municipal Service Reviews (MSRs) of wastewater districts that service the unincorporated area, including the 2007 MSR of County Sanitation Districts and the 2004 Southern San Diego County Water and Sewer MSR. The MSRs evaluated the future wastewater service capabilities of the following wastewater service providers: SVSD, Lakeside Sanitation District, ASD, JSD, PVSD, PDMWD, OWD, HWD, and SA/SB. Results of these MSRs indicated that while some wastewater service providers would have adequate capacity to provide service to the development of future land uses as designated in the proposed General Plan Update, others would require upgrades or have inadequate capacity to serve projected growth within the County. The results of the LAFCO MSRs are discussed below.

SVSD would have adequate system capacity reserves available to support future service needs. Lakeside Sanitation District was found to potentially require additional SDMWD capacity in the future to support further sewer-dependent growth in the Lakeside area. This capacity would or would not be available depending on overall SDMWD service demands at that time. ASD would require additional SDMWD capacity in the future to support continued sewer dependent growth in the Alpine area. JSD is currently under a sewer moratorium, however most future growth would occur in the greater Julian area outside sanitation district boundaries. PVSD is near capacity and may not be able to support additional sewer dependent growth without collection and treatment facility expansion. PDMWD, OWD, HWD, and SA/SB would have adequate sewer infrastructure to provide efficient services for the projected future population. The MSRs also determined that anticipated growth would be unevenly distributed throughout the region and each of the region's sewer service providers would experience distinctly different impacts on existing facilities, planning, capital needs, and staffing.

Implementation of the proposed General Plan Update would require additional demand on existing sewer systems from increased sewage flows from future residential, commercial and industrial land uses. San Diego LAFCO MSRs from 2004 and 2007 have evaluated various wastewater districts' abilities to service future wastewater demand based on anticipated regional population forecasts. Generally, these MSRs determined that while some wastewater districts have capacity to serve the projected increase in demand under the proposed General Plan Update, others would have inadequate capacity to serve the projected demand in addition to their existing commitments.

As shown in Table 2.16-4, the majority wastewater districts that serve the unincorporated County would experience growth in both population and housing under implementation of the proposed General Plan Update. Wastewater districts that would experience the greatest growth under implementation of the General Plan Update include BWD (964 percent increase in both housing units and population); BSPCD (600 percent increase in housing and 602 percent increase in population); CWSMD (622 percent increase in housing and 627 percent increase in population); PMWD (308 percent increase in housing and 344 percent increase in population) and ASD (268 percent increase in housing and 269 percent increase in population). Implementation of the proposed General Plan Update would result in an additional demand on existing sewer systems from increased sewage flows created by additional population and housing units. This would result in some wastewater districts having inadequate facilities to serve the projected demand.

Wastewater districts that would serve the largest populations and number of housing units under implementation of the General Plan Update include OWD (79,539 housing units and 236,309 persons); PDMWD (74,422 housing units and 211,348 persons); SVSD (28,199 housing units and 86,999 persons); and Ramona MWD (14,174 housing units and 43,510 persons). It should be noted that although these wastewater districts would service the greatest population and housing units under implementation of the General Plan Update, they generally would not experience substantial percentage growth when compared to existing conditions.

An additional way to evaluate the likelihood that the development of future land uses, as designated in the proposed General Plan Update, would result in a determination by a wastewater provider that it has inadequate capacity to service the demand can be evaluated by examining allocated EDUs and available EDUs. Allocated EDUs refer to the aggregate number of EDUs issued by each sanitation district to the customers within that particular district. Available EDUs refers to the difference between the pass-through capacity and the allocated EDU, measured in EDU. If a wastewater district has more allocated EDUs than available EDUs, this indicates that the service system capabilities are not sufficient to serve the projected growth of the community. As discussed in Section 2.16.1.2, the following wastewater districts have a greater number of allocated EDUs than available EDUs, indicating insufficient facilities to service the community at build out: ASD; Lakeside Sanitation District, PDMWD, Ramona MWD, SVSD, WGSMD, BWD, BSD, CWSMD, FPUD, and JSD. Wastewater districts that have larger available EDUs than allocated EDUs, indicating sufficient growth for build out of the community and beyond, include OWD, Cardiff, FRCSD, RSFCSD, VWD, and WPCSD. The General Plan Update would designate land uses that would increase population and housing in areas where wastewater districts do not have adequate service systems in place to serve the projected growth of the community.

Additionally, the development of future land uses as designated in the proposed General Plan Update would result in the construction of residential, commercial and industrial structures in the western portion of the unincorporated County. The wastewater districts that serve this area include Lakeside Sanitation District, ASD, and SVSD, which do not have adequate capacity to serve the projected population growth. Therefore, designating land uses that would require wastewater treatment services in these areas would result in a determination that wastewater service is inadequate to serve the new development.

Federal, State and Local Regulations and Existing Regulatory Processes

In addition to the goals and policies proposed as part of the General Plan Update, numerous federal, State and local regulations exist to ensure safe and adequate wastewater facilities are available. These include the: Federal Water Pollution Control Act, which regulates discharges of pollutants into waters of the U.S.; Porter-Cologne Water Quality Control Act, which controls polluted discharges into State waters; USO, which regulates sewage collection and treatment systems; County Code 68.101, which specifies conditions and procedures for sewage facilities; and County Fee Ordinances, which require annual sewer service, connection and annexation fees.

The County also requires that development projects proposing to use sewer include in their applications the necessary availability and commitment letters demonstrating sufficient wastewater treatment capacity and access to available sewer facilities. This requirement is further enforced with BOS Policies I-25, I-36, I-48, and I-84.

Proposed General Plan Update Goals and Policies

The General Plan Update contains one goal and supporting policy within the Land Use Element to assist in providing adequate wastewater facilities throughout the unincorporated County. In the Land Use Element, Goal LU-4 would require coordination with the plans and activities of other agencies that relate to issues such as land use, safety, community character, transportation, energy, and other infrastructure in the unincorporated County and the natural resources of the region. Policy LU-4.3 supports this goal by requiring projects to consider the plans and projects of overlapping or neighboring agencies in the planning of unincorporated lands, and invite comments and coordination when appropriate. Regional planning and coordination reduces the risk that development will not be served by adequate wastewater facilities.

Summary

The development of future land uses as designated in the proposed General Plan Update would result in increased demand on existing sewer systems due to increased sewage flows from residential, commercial and industrial land uses. While some wastewater districts have capacity to serve additional wastewater users, others would have inadequate capacity to serve increased demand, in addition to their existing commitments. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to assist in providing adequate wastewater facilities, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project would result in a potentially significant impact related to adequate wastewater facilities and specific implementation programs are identified as mitigation.

2.16.3.6 Issue 6: Sufficient Landfill Capacity

<u>Guidelines for Determination of Significance</u>

Based on Appendix G of the CEQA Guidelines, the proposed County General Plan Update would have a significant impact if it would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

Impact Analysis

Physical landfill capacity is defined as the remaining volumetric capacity of existing landfills. Physical capacity represents the volume available to be filled, and is different from the rate at which materials would enter the landfill. Table 2.16-5 identifies landfills located in San Diego County and their capacity information. As shown in this table, the total remaining capacity for active landfills open to the public is 120,982,940 tons. The total remaining capacity for all landfills, including Las Pulgas, San Onofre, Gregory Canyon (proposed) and Campo (proposed), is 188,369,512 tons. The Las Pulgas and San Onofre landfills are owned and operated by the USMC, and are not available for public disposal. As of February 2009, the Gregory Canyon and Campo landfills were continuing to obtain various permits and had not yet begun construction. The rate at which materials would enter these landfills is restricted by daily traffic and tonnage limits at disposal and transfer facilities, even though there may be sufficient physical capacity. The permitted daily disposal tonnages are specified in the Solid Waste Facility Permit (SWFP) for the facility, and sometimes in other permits. These limits are a matter of traffic control and health and welfare protection, and are changed through the permit review, modification or revision process.

Due to factors such as population growth, economics and development, there has been a consistent increase in annual solid waste disposal tonnages. The 2005 IWMP Siting Element for the County estimates that the annual rate of increase in solid waste disposal was approximately 5.4 percent from 2002 to 2003, which is the most current model available. This rate is projected to gradually decrease to approximately 3.4 percent from 2016 to 2017. The 2005 IWMP Siting Element predicts disposal will increase from 3.7 million tons in 2002 to 6.1 million tons in 2017. Based on the 1995 - 2001 disposal tonnages, imported and exported tonnages, and a 50 percent diversion rate by the year 2005, it is estimated that San Diego County jurisdictions will need to accommodate disposal capacity for over 5.6 million tons of solid waste in 2017 and 6.1 million tons in 2020. These numbers reflect the most current solid waste disposal projections from the Siting Element. Within the Siting Element, the existing landfill disposal and capacity analysis was based upon historical rates of solid waste disposal, rather than population projections. The annual rate of increase in the disposal rate was approximately 5.4 percent from 2002 to 2003 and estimated to gradually decrease to approximately 3.4 percent from 2016 to 2017, due to recycling and conservation efforts. Implementation of the proposed General Plan Update is unlikely to increase the annual disposal rate above the Siting Element projections. Rather, it is more likely that implementation of the proposed General Plan Update would reduce disposal rates more than those projected, due to the proposed goals and policies discussed below that support additional recycling efforts and waste reduction measures. Regardless, the solid waste disposal needs in the General Plan Update horizon year (2030) would be greater than 6.1 million tons and additional landfill capacity would be required, or diversion technologies would have to be implemented, such as recycling. Therefore, the development of future land uses as designated in the proposed General Plan Update would have the potential to be served by landfills with insufficient capacity to accommodate future solid waste disposal needs.

The Siting Element also states that if no additional in-County capacity is added, the County will run out of physical landfill capacity in 2016. This projection is shown in Table 2.16-11. The proposed Gregory Canyon Landfill, when built, would provide an additional 33.4 million tons of capacity, and the Campo landfill, if/when built would provide an additional 28 million tons of capacity. The recently approved Master Plan for the Sycamore Landfill would also add 116.6

million tons to the capacity in the County. The additional capacity of the three proposals would provide an excess of 179 million tons of capacity.

However, the siting of a new solid waste disposal facility, or expansion of an existing solid waste facility, is often a controversial and lengthy process. Implementation of the proposed General Plan Update would result in an increase in solid waste disposal needs from future residential, commercial and industrial land uses that require solid waste disposal facilities. If the Gregory Canyon Landfill Project, Sycamore Landfill Project, Campo Landfill Project or other solid waste capacity increasing project does not occur, the San Diego Siting Element estimates that the County will run out of physical landfill capacity in 2016. Therefore, implementation of the proposed General Plan Update has the potential to be served by landfills with insufficient capacities to accommodate future solid waste disposal needs. As an alternative, waste recycling at a 75 percent rate County-wide would also reduce or eliminate the necessity for additional landfill space (County of San Diego Siting Element 2005).

Federal, State and Local Regulations and Existing Regulatory Processes

Numerous federal, State and local regulations exist to ensure adequate solid waste facilities are available. These include IWMA, which regulates the management of solid waste within the State; Non-Exclusive Solid Waste Management Agreement, which regulates waste collection in a market driven business; and IWMP, which presents strategies to assist in the siting of solid waste disposal facilities.

Proposed General Plan Update Goals and Policies

The General Plan Update contains several goals and policies within the Land Use Element to assist in ensuring adequate landfill capacity are available to the unincorporated County. Goal LU-12 requires sustainable infrastructure, public facilities and essential services that meet community needs and are provided concurrent with growth and development. Policies LU-12.1 and LU-12.2 support this goal by requiring concurrency of infrastructure and services with development while requiring the maintenance of such services. Goal LU-16 promotes appropriately sited solid waste management facilities in order to reduce environmental impacts and potential land use incompatibilities. Policies LU-16.1, LU-16.2 and LU-16.3 support this goal by encouraging additional recycling facilities and minimizing environmental impacts with solid waste facilities.

In the Conservation and Open Space Element, Goal COS-17 encourages sustainable solid waste management. Policies COS-17.1, COS-17.2, COS-17.3, COS-17.4, COS-17.6, COS-17.7 and COS-17.8 support this goal by requiring landfill waste management, composting, methane recapture, and recycling.

Summary

If additional landfills are not constructed and existing landfills are not expanded, the IWMP Siting Element estimates that the County will run out of physical landfill capacity by 2016. Therefore, the development of future land uses as designated in the proposed General Plan Update would have the potential to be served by landfills with insufficient capacity to accommodate the future solid waste disposal needs. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to provide adequate solid waste disposal facilities for the future, specific measures that implement these

policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project would result in a potentially significant impact related to landfill capacity and specific implementation programs are identified as mitigation. The 2005 Siting Element determined that if the entire San Diego County, including incorporated and unincorporated areas, could achieve a waste recycling rate of 75 percent, compared to the present rate of 50 percent, there would be no need for additional landfills in the County, including the Gregory Canyon and Campo landfills (DPW 2005).

2.16.3.7 Issue 7: Solid Waste Regulations

Guidelines for Determination of Significance

Based on Appendix G of the CEQA guidelines, the proposed County General Plan Update would have a significant impact if it would not comply with federal, State and local statues and regulations related to solid waste.

Impact Analysis

The development of future land uses as designated in the proposed General Plan Update would be required to comply with all applicable federal, State and local statues and regulations related to solid waste. The San Diego Solid Waste Local Enforcement Agency (LEA) has the primary responsibility for ensuring the proper operation and closure of solid waste facilities and disposal sites in San Diego County, excluding the City of San Diego. They also have responsibilities for ensuring the proper storage and transportation of solid wastes. The LEA: 1) provides solid waste inspection and permitting services to the various jurisdictions within the County; 2) conducts enforcement, inspection and permitting for solid waste facilities, operations, and disposal sites, including those which are permitted, exempt, illegal, inactive, closed, or abandoned; 3) maintains LEA certification in good standing with CIWMB; 4) maintains communication with the CIWMB as well as other local enforcement and regulatory agencies; and, 5) promotes interagency cooperation with all entities involved in solid waste management and disposal in San Diego County.

Additionally, the CIWMB is the State agency responsible to oversee, manage, and track California's 92 million tons of waste generated each year. The CIWMB promotes a sustainable environment where resources are not wasted but can be reused or recycled in partnership with all California. In addition to many innovative programs and incentives, the CIWMB promotes the use of new technologies for the practice of diverting California's resources away from landfills. California passed the IWMA of 1989 (AB 939) when California was disposing 90 percent of its waste and recycling only 10 percent. The act mandated that California's 450 jurisdictions implement waste management programs to achieve a 25 percent diversion rate by 1995 and a 50 percent diversion rate by 2000. In 2005, California diverted 52 percent of its waste stream from landfills. Therefore, the State, including San Diego County, is in compliance with this law. The development of future land uses as designated in the proposed General Plan Update would also be required to comply with this law.

Federal, State and Local Regulations and Existing Regulatory Processes

In addition to the goals and policies proposed as part of the General Plan Update, numerous federal, State and local regulations exist that are related to solid waste. These include

California IWMA, which regulates the management of solid waste within the State; Non-Exclusive Solid Waste Management Agreement, which regulates waste collection in a market-driven business; and IWMP, which presents strategies to recycle as well as assist in the siting of solid waste disposal facilities.

Proposed General Plan Update Goals and Policies

The goals and policies discussed above under Section 2.16.3.6, Issue 6: Sufficient Landfill Capacity, would also reduce the potential for future projects to be in non-compliance with the California IWMA, the Countywide IMWP and other applicable solid waste regulations and are hereby incorporated by reference.

Summary

Development of future land uses, as designated in the proposed General Plan Update, would be required to comply with federal, State and local statutes and regulations related to solid waste. Additionally, General Plan Update goals and policies regarding solid waste disposal would further ensure compliance with applicable regulations. Therefore, impacts associated with solid waste regulations would be less than significant.

2.16.3.8 Issue 8: Energy

Guidelines for Determination of Significance

The proposed General Plan Update would be considered to have a significant impact if it would require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

Impact Analysis

Development of land uses as designated in the proposed General Plan Update would require energy for construction and operation, thereby increasing energy demand in the County. The increase in energy demand would affect energy facilities located within the unincorporated County as well as energy facilities that serve unincorporated areas but are located outside the County. Because energy supply and demand does not differentiate between jurisdictional boundaries, it is difficult to discuss energy in terms of the unincorporated area alone. Therefore, unless otherwise specified, data presented in this section represents current energy conditions for the entire San Diego County region. Electricity demand is projected to increase by nearly 24 percent between 2005 and 2016 at an average growth rate of 1.9 percent per year. By the year 2030, electricity peak demand is projected to nearly double, increasing by more than 4,000 MW. Demand for natural gas is expected to grow from 1,423 MMtherms in 2002 to about 1,642 MMtherms in 2030, an increase of approximately 15 percent.

To accommodate the projected increase in energy demand, energy facilities would need to be constructed or expanded, which would have the potential to cause significant environmental effects. The projected increase in demand is anticipated to be met by a mix of energy technologies that include generation plants located both within and outside the unincorporated County, many of which have not yet been constructed. Any future energy projects would be

required to conduct environmental review pursuant to CEQA and/or NEPA depending on the lead agency approving the project. CEQA and NEPA require proposed projects to provide detailed information on the potentially significant environmental effects they are likely to have, list ways in which the significant environmental effects would be minimized, and identify alternatives that would reduce of avoid the significant identified for the project. To the extent feasible, significant environmental impacts would be mitigated to below a level of significance. However, some environmental impacts associated with the construction or expansion of energy facilities would be significant and unavoidable, such as impacts associated with aesthetics, biological resources, air quality, and noise.

The need for additional energy facilities would also be compounded by the fact that many power plant units in the region are quickly nearing technological and economical obsolescence. The San Diego region also has no facilities to store natural gas, and would need to build such facilities in the future to meet projected demand. The development of most new energy facilities would be proposed by other agencies and districts, and would not be subject to discretionary approval by the County. The development of future land uses as designated in the proposed General Plan Update would have the potential to increase the energy demand through the year 2030, and would require the need for energy facilities to be constructed or expanded either within or outside of the County's jurisdiction.

Federal, State and Local Regulations and Existing Regulatory Processes

The California Energy Efficiency Standards for residential and non-residential buildings would reduce the potential for impacts related to excessive energy usage and the need for expansion or construction of energy facilities.

For new development projects in the County jurisdiction that would result directly in new or expanded facilities, the County evaluates all potentially significant impacts that can result from the associated infrastructure. Such improvements must comply with applicable regulations protecting environmental resources, such as the Zoning Ordinance, Noise Ordinance, RPO, BMO, HLP Ordinance, and relevant BOS Policies. In addition, environmental impacts shall be minimized and mitigated to the extent feasible for all such projects pursuant to CEQA.

Proposed General Plan Update Goals and Policies

The proposed General Plan Update contains several goals and polices within the Conservation and Open Space Element that would reduce energy consumption and the need to develop new energy facilities. Goal COS-14 promotes sustainable land use development techniques. Policy COS-14.7 supports this goal by encouraging alternative energy sources for development projects. Goal COS-15 would reduce of energy usage through energy efficiency, conservation measures, and renewable technologies. Policies COS-15.1, COS-15.2, COS-15.3, COS-15.4, and COS-15.5 support this goal by encouraging energy efficiency, green building programs, and energy recovery.

Summary

Development of land uses as designated in the proposed General Plan Update would require energy for construction and operation, thereby increasing energy demand in the County. To accommodate the projected increase in energy demand, energy facilities would need to be constructed or expanded, which would have the potential to cause significant and unavoidable

environmental effects. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to reduce energy demand related environmental impacts, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project would have the potential to result in a significant impact associated with the construction of energy facilities and specific implementation programs are identified as mitigation.

2.16.4 Cumulative Impacts

The geographic scope of the cumulative impact analysis for utilities is the entire County, including incorporated areas, whose population is served by many individual utility, service system, and energy providers within specific service areas.

2.16.4.1 Issue 1: Wastewater Treatment Requirements

Cumulative projects within the region, such as those proposed under adjacent city and county general plans or on tribal land, would result in an increase in residential, commercial and industrial development that would require wastewater treatment services. Similar to the proposed General Plan Update, an increase in wastewater treatment demand that is disproportionate to wastewater treatment capabilities would result in a violation of the treatment requirements of the RWQCBs. However, compliance with regulations such as the Federal Water Pollution Control Act, California Water Code, Porter-Cologne Water Quality Control Act, Water Conservation Projects Act, DEH regulations, specific jurisdictional ordinances, and CEQA would reduce cumulative impacts related to potential wastewater treatment violations to below a significant level and a significant cumulative impact would not occur. Therefore, implementation of the General Plan Update, in combination with the identified cumulative projects, would not result in a significant cumulative impact.

2.16.4.2 Issue 2: New Water and Wastewater Treatment Facilities

Cumulative projects, such as those proposed under adjacent city and county general plans or on tribal land, would result in an increase in residential, commercial and industrial development that would increase the demand for water and wastewater treatment services. An increase in the demand for these services has the potential to require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which would cause significant environmental effects. Most future water treatment or wastewater treatment projects would be required to conduct environmental review pursuant to CEQA or NEPA. To the extent feasible, significant environmental impacts would be mitigated to below a level of significant, consistent with CEQA or NEPA. In addition, most cumulative projects would be required to comply with some or all of the following regulations: SDWA, Federal Water Pollution Control Act, California Water Code, California Drinking Water Standards, Porter-Cologne Water Quality Control Act, Water Conservation Projects Act, USO, County Code 68.101, County Fee Ordinances, and BOS Policies, which would also reduce the potential for significant impacts to occur. Therefore, cumulative impacts associated with the development of water and wastewater facilities from cumulative projects would not be significant. Therefore, implementation of the proposed General Plan Update, in combination with the identified cumulative projects, would not result in a significant cumulative impact.

2.16.4.3 Issue 3: Sufficient Stormwater Drainage Facilities

Cumulative projects, such as those proposed in the SCAG RTP, SANDAG RTP, and adjacent city and county general plans, would result in an increase in impervious surfaces from development which would increase stormwater runoff volumes. To effectively manage the increased runoff, the construction of new stormwater drainage facilities or the expansion of existing facilities would be required, the construction of which would have the potential to result in significant environmental effects. Most future stormwater drainage facilities would be required to conduct environmental review pursuant to CEQA or NEPA. To the extent feasible, significant environmental impacts would be mitigated to below a level of significant. In addition, cumulative projects would typically be required to comply with some or all of the following regulations, which would also reduce the potential for a significant cumulative impact to occur: Federal Water Pollution Control Act, California Water Code, and Porter-Cologne Water Quality Control Act. Therefore, impacts associated with the construction of new stormwater drainage facilities from cumulative projects would not be significant. Therefore, the proposed General Plan Update, in combination with the identified cumulative projects, would not result in a significant cumulative impact.

2.16.4.4 Issue 4: Adequate Water Supplies

Many water districts that would serve cumulative project areas have prepared and adopted UWMPs and/or other planning documents that include supply and demand projections and procurement strategies to ensure a reliable water supply exists to meet the projected demand within the region. However, the most recent UWMPs available are from 2005 and do not account for factors such as unprecedented multiple dry years in the Colorado River Basin or cutbacks in water imports from other areas of the State, such as those caused by the U.S. District Court decision regarding the endangered Delta smelt (fish). Therefore, cumulative projects would have the potential to increase the demand for potable water in the region in a manner that exceeds existing entitlements and resources. Although regulations such as the California Water Code, SB 610, SB 221, Urban Water Management Planning Act, Water Conservation Projects Act, and San Diego Groundwater Ordinance, are intended to reduce impacts to water supply, impacts in the San Diego region would remain significant and unavoidable. Therefore, a significant cumulative impact would occur.

As discussed above, the proposed project has the potential to result in water demand that exceeds surface water and groundwater availability. Therefore, the proposed project, in combination with the identified cumulative projects, would have the potential to result in a significant cumulative impact. The proposed project's contribution would be cumulatively considerable.

2.16.4.5 Issue 5: Adequate Wastewater Facilities

Cumulative projects, such as those proposed under adjacent city and county general plans, private projects not included in the proposed General Plan Update, or projects on tribal land, would have the potential to increase demand for wastewater facilities to the point that the wastewater provider has inadequate capacity to serve the projected demand, in addition to the provider's existing commitments. Therefore, cumulative projects would require new facilities, the construction of which could have significant environmental impacts. However, most development of new facilities would be subject to CEQA or NEPA review and would be required

to mitigate environmental impacts to below a level of significance, to the extent feasible. Additionally, multiple federal, State and local regulations exist that pertain to the construction and operation of wastewater facilities, such as the Federal Water Pollution Control Act, Porter-Cologne Water Quality Control Act, USO. Therefore, a significant cumulative impact would not occur. The proposed General Plan Update, in combination with the identified cumulative projects, would not contribute to a significant cumulative impact.

2.16.4.6 Issue 6: Sufficient Landfill Capacity

Many cumulative projects, such as those proposed under adjacent city and county general plans, private projects not included in the proposed General Plan Update, or projects on tribal land, would increase solid waste disposal and management needs within the region. The existing regional landfill facilities do not have the capacity to accommodate the solid waste disposal needs of the cumulative projects. Either new landfill facilities and/or recycling facilities would be needed to meet the anticipated disposal needs. However, in many areas included in the cumulative analysis, such as incorporated cities, it is often difficult to find suitable sites to provide additional landfill facilities that would increase capacity. Therefore, cumulative projects would have a significant cumulative impact associated with insufficient capacity of landfill facilities.

As discussed above, although the establishment of new recycling facilities including mixed recycling facilities, construction and demolition recycling facilities, composting facilities, and biomass-driven electrical generating stations would occur, the proposed project has the potential to be served by a landfill with insufficient capacity to accommodate projected solid waste disposal needs. Therefore, the proposed project, in combination with the identified cumulative projects, would result in a significant cumulative impact. The proposed project's contribution would be cumulatively considerable.

2.16.4.7 Issue 7: Solid Waste Regulations

Cumulative projects, such as those proposed under adjacent city and county general plans, and private projects not included in the proposed General Plan Update, would be required to comply with all applicable federal, State and local statues and regulations related to solid waste. Projects on tribal lands would be subject to only federal and tribal regulations, unless solid waste was transported off tribal lands, which would then require compliance with State and local laws and regulations. Therefore, compliance with applicable regulations would ensure that cumulative projects would not result in a significant cumulative impact. The proposed project, in combination with the identified cumulative projects, would not contribute to a significant cumulative impact.

2.16.4.8 Issue 8: Energy

Multiple cumulative projects relating to energy are considered in this analysis: the California Energy Commission has identified energy projects within the region that will be constructed to meet future energy demands; the Wide-west Energy Corridor project would establish electric and multi-modal transmission corridors within BLM and NFS lands in San Diego and surrounding counties; the Sunrise Powerlink Transmission Project would be constructed to meet the energy demands of the region; and both SDG&E and Southern California Edison have

procurement plans that identify energy projects to be constructed in the future. Cumulative projects would result in the construction of new energy production facilities, transmission facilities, or expansion of existing facilities. Any future energy project would be required to conduct environmental review pursuant to CEQA or NEPA prior to approval. Identified significant environmental impacts would be mitigated to below a level of significance, to the extent feasible. However, due to the large scale nature of these projects, it is reasonably foreseeable that the construction of these facilities would cause significant and unavoidable environmental impacts, such as those associated with air quality, aesthetics, noise, or climate change, that in combination with other cumulative projects would result in a significant cumulative impact.

As discussed above, prior to mitigation, the proposed project has the potential to increase energy demand and require the construction or expansion of energy facilities, which would result in potentially significant direct environmental impacts. The proposed project, in combination with the identified cumulative projects, would also have the potential to contribute to a significant cumulative impact. Therefore, the proposed project's contribution would be cumulatively considerable.

2.16.5 Significance of Impact Prior to Mitigation

Prior to mitigation, the proposed General Plan Update would result in potentially significant impacts to wastewater treatment requirements, new water and wastewater treatment facilities, sufficient storm water drainage facilities, adequate water supply, adequate wastewater facilities, sufficient landfill capacity, and energy. However, the potential for solid waste regulations to be violated would be less than significant and would not require mitigation. The proposed project would have a potentially significant cumulative impact associated with adequate water supplies, sufficient landfill capacity and energy facilities. The proposed project would not result in a significant cumulative impact related to wastewater treatment requirements, new water and wastewater facilities, sufficient stormwater drainage facilities, and adequate wastewater facilities.

2.16.6 Mitigation

2.16.6.1 Issue 1: Wastewater Treatment Requirements

The following General Plan Update policies and mitigation measures would mitigate direct and cumulative impacts to wastewater treatment requirements to below a significant level.

General Plan Update Policies

Policy LU-9.4: Infrastructure Serving Villages and Community Cores. Prioritize infrastructure improvements and the provision of public facilities for Villages and community cores for the intensity of development allowed by the Land Use Map.

Policy LU-12.1: Concurrency of Infrastructure and Services with Development. Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing. In addition to

utilities, roads, bicycle and pedestrian facilities, and education, police, and fire services, transit-oriented infrastructure, such as bus stops, bus benches, turnouts, etc, should be provided, where appropriate.

Policy LU-12.2: Maintenance of Adequate Services. Require development to mitigate significant impacts to existing service levels of public facilities or services for existing residents and businesses. Provide improvements for Mobility Element roads in accordance with the Mobility Element Network Appendix matrices, which may result in ultimate build-out conditions that achieve an improved LOS but do not achieve a LOS of D or better.

Policy LU-14.1: Wastewater Facility Plans. Coordinate with wastewater agencies and districts during the preparation or update of wastewater facility master plans and/or capital improvement plans to provide adequate capacity and assure consistency with the County's land use plans.

Policy LU-14.2: Wastewater Disposal. Require that development provide for the adequate disposal of wastewater concurrent with the development and that the infrastructure is designed and sized appropriately to meet reasonably expected demands.

Policy LU-14.3: Wastewater Treatment Facilities. Require wastewater treatment facilities serving more than one private property owner to be operated and maintained by a public agency. Coordinate the planning and design of such facilities with the appropriate agency to be consistent with applicable sewer master plans.

Policy LU-14.4: Sewer Facilities. Prohibit sewer facilities that would induce unplanned growth. Require sewer systems to be planned, developed, and sized to serve the land use pattern and densities depicted on the Land Use Map. Sewer systems and services shall not be extended beyond either Village boundaries or extant Urban Limit Lines, whichever is more restrictive, except:

- When necessary for public health, safety, or welfare;
- When within existing sewer district boundaries;
- When necessary for a conservation subdivision adjacent to existing sewer facilities; or
- Where specifically allowed in the Community Plan.

Mitigation Measures

USS-1.1 Participate in interjurisdictional reviews to gather information on and review and provide comments on plans of incorporated jurisdictions and public agencies in the region.

USS-1.2 Implement and revise as necessary Board Policy I-84 to ensure adequate availability of sewer /sanitation service for development projects that require it. Also revise Board Policy I-78 to include additional criteria and regulatory requirements restricting the location of small wastewater treatment facilities.

USS-1.3 Ensure County planning staff participation in the review of wastewater facility long range and capital improvement plans.

2.16.6.2 Issue 2: New Water and Wastewater Facilities

The following General Plan Update policies and mitigation measures would mitigate direct and cumulative impacts related to new water and wastewater facilities to below a significant level.

General Plan Update Policies

Policy LU-1.2: Leapfrog Development. Prohibit leapfrog development which is inconsistent with the Community Development Model. Leapfrog Development restrictions do not apply to new villages that are designed to be consistent with the Community Development Model, that provide necessary services and facilities, and that are designed to meet the LEED-Neighborhood Development Certification or an equivalent. For purposes of this policy, leapfrog development is defined as village densities located away from established Villages or outside established water and sewer service boundaries. (See applicable community plan.)

Policy LU-4.3: Relationship of Plans in Adjoining Jurisdictions. Consider the plans and projects of overlapping or neighboring agencies in the planning of unincorporated lands, and invite comments and coordination when appropriate.

Policy H-1.3: Housing near Public Services. Maximize housing in areas served by transportation networks, within close proximity to job centers, and where public services and infrastructure are available.

Mitigation Measures

USS-2.1 Revise Board Policy I-63 to minimize leapfrog development and to establish specific criteria for GPAs proposing expansion of areas designated village regional category. This is intended to limit unexpected demands for new water and wastewater facilities.

USS-2.2 Perform CEQA review on privately initiated water and wastewater facilities and review and comment on water and wastewater projects undertaken by other public agencies to ensure that impacts are minimized and that projects are in conformance with County plans.

USS-2.3 Implement, and revise as necessary, the Green Building Program to encourage project designs that incorporate water conservation measures, thereby reducing the potential demand for new water purveyors with the buildout of General Plan Update.

2.16.6.3 Issue 3: Sufficient Stormwater Drainage Facilities

The following General Plan Update policies and mitigation measures would mitigate direct and cumulative impacts related to sufficient stormwater drainage facilities to below a significant level.

General Plan Update Policies

Policy LU-6.5: Sustainable Stormwater Management. Ensure that development minimizes the use of impervious surfaces and incorporates other Low Impact Development techniques as well as a combination of site design, source control, and stormwater best management practices, where applicable and consistent with the County's LID Handbook.

Policy LU-6.9: Development Conformance with Topography. Require development to conform to the natural topography to limit grading; incorporate and not significantly alter the dominant physical characteristics of a site; and to utilize natural drainage and topography in conveying stormwater to the maximum extent practicable.

Policy COS-4.3: Stormwater Filtration. Maximize stormwater filtration and/or infiltration in areas that are not subject to high groundwater by maximizing the natural drainage patterns and the retention of natural vegetation and other pervious surfaces. This policy shall not apply in areas with high groundwater, where raising the water table could cause septic system failures, moisture damage to building slabs, and/or other problems.

Mitigation Measures

USS-3.1 Amend the Subdivision Ordinance to add additional design requirements for subdivisions that encourage conservation oriented design. Also amend it to require new residential development to be integrated with existing neighborhoods by providing connected and continuous road, pathway/trail and recreation/open space networks. This will reduce scattered development footprints and increase pervious surfaces in site design, thereby minimizing the need for new stormwater drainage facilities.

USS-3.2 Prepare Subdivision Design Guidelines that establish a process to identify significant resources on a project site, identify the best areas or development and create a conservation oriented design for both the project and open space areas.

USS-3.3 Use the County Guidelines for Determining Significance for Surface Water Quality and Hydrology to identify adverse environmental effects on water quality.

USS-3.4 Implement the LID handbook and establish LID standards for new development to minimize runoff and maximize infiltration.

USS-3.5 Evaluate the environmental effects of all proposed stormwater drainage facilities and ensure that significant adverse effects are minimized and mitigated.

2.16.6.4 Issue 4: Adequate Water Supplies

The General Plan Update policies and mitigation measures provided below under the Mitigation Measures section would minimize the proposed project's potentially significant impact associated with adequate water supply. However, even with mitigation in place, implementation of the proposed General Plan Update would accommodate an increase in population and housing within the unincorporated County, which would increase water demand and thereby potentially result in an inadequate water supply. The General Plan Update policies and feasible mitigation measures (described below), would reduce impacts associated with water supply; however, not to below a significant level. Additional mitigation measures have been identified

that would fully reduce impacts to below a level of significance; however, the County has determined that their implementation would be infeasible. A discussion of infeasible mitigation measures, as well as General Plan policies and feasible mitigation measures is provided below.

Infeasible Mitigation for Areas Dependent on Groundwater

As described in Section 2.8.6.2, Hydrology and Water Quality, Issue 2: Groundwater Supplies and Recharge, additional mitigation measures were considered in attempting to reduce impacts associated with inadequate groundwater supply to a less than significant level; however, the County determined that these measures would be infeasible for the reasons outlined in Section 2.8.6.2. Therefore, the infeasible mitigation measures identified in Section 2.8.6.2, Hydrology and Water Quality, Issue 2: Groundwater Supplies and Recharge would not be implemented as part of the General Plan Update project, and impacts associated with groundwater supply would remain significant and unavoidable.

Infeasible Mitigation for Areas Dependent on Imported Water

- Implement a Countywide moratorium on building permits and development applications in any areas of the County that would have an inadequate imported water supply to serve future development until adequate supplies are procured. This would effectively result in no increase in the amount of imported water demand within the unincorporated County. However, this measure would impede the County's ability to implement the General Plan Update because it would prohibit future development in areas identified for increased growth in the General Plan Update. This mitigation measure would also conflict with the project objective to support a reasonable share of projected regional population growth. Therefore, for the reasons listed above, this mitigation measure would not be implemented.

Because the measures listed above have been found to be infeasible by the County and would not be implemented, impacts would be significant and unavoidable. Chapter 4.0, Alternatives, provides a discussion of several land use alternatives to the proposed project that would result in some reduced impacts associated with water supply as compared to the proposed project. However, without significant reductions in the overall growth of the County, impacts would still remain significant and unavoidable.

General Plan Update Policies

The following policies would reduce impacts associated with water supply availability, although not to below a significant level.

Policy LU-8.1: Density Relationship to Groundwater Sustainability. Require land use densities in groundwater dependent areas to be consistent with the long-term sustainability of groundwater supplies, except in the Borrego Valley.

Policy LU-8.2: Groundwater Resources. Require development to identify adequate groundwater resources in groundwater dependent areas, as follows:

- In areas dependent on currently identified groundwater overdrafted basins, prohibit new development from exacerbating overdraft conditions. Encourage programs to alleviate overdraft conditions in Borrego Valley.

- In areas without current overdraft groundwater conditions, evaluate new groundwater-dependent development to assure a sustainable long-term supply of groundwater is available that will not adversely impact existing groundwater users.

Policy LU-13.1: Adequacy of Water Supply. Coordinate water infrastructure planning with land use planning to maintain an acceptable availability of a high quality sustainable water supply. Ensure that new development includes both indoor and outdoor water conservation measures to reduce demand.

Policy LU-13.2: Commitment of Water Supply. Require new development to identify adequate water resources, in accordance with State law, to support the development prior to approval.

Policy COS-4.1: Water Conservation. Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources.

Policy COS-4.2: Drought-Efficient Landscaping. Require efficient irrigation systems and in new development encourage the use of native plant species and non-invasive drought tolerant/low water use plants in landscaping.

Policy COS-4.3: Stormwater Filtration. Maximize stormwater filtration and/or infiltration in areas that are not subject to high groundwater by maximizing the natural drainage patterns and the retention of natural vegetation and other pervious surfaces. This policy shall not apply in areas with high groundwater, where raising the water table could cause septic system failures, moisture damage to building slabs, and/or other problems.

Policy COS-4.4: Groundwater Contamination. Require land uses with a high potential to contaminate groundwater to take appropriate measures to protect water supply sources.

Policy COS-5.2: Impervious Surfaces. Require development to minimize the use of directly connected impervious surfaces and to retain stormwater run-off caused from the development footprint at or near the site of generation.

Policy COS-5.5: Impacts of Development to Water Quality. Require development projects to avoid impacts to the water quality in local reservoirs, groundwater resources, and recharge areas, watersheds, and other local water sources.

Mitigation Measures

The following mitigation measures would reduce impacts associated with water supply availability, although not to below a significant level.

USS-4.1 Review General Plan Amendments for consistency with the goals and policies of the General Plan. This shall include designating groundwater dependent areas with land use density/intensity that is consistent with the long-term sustainability of groundwater supplies; locating commercial, office, civic, and industrial development in villages, town centers or at transit nodes; and ensuring that

adequate water supply is available for development projects that rely on imported water.

USS-4.2 Implement, and revise as necessary, the County Green Building Program with incentives for development that is energy efficient and conserves resources, including both groundwater and imported water.

USS-4.3 Implement Policy I-84 requiring discretionary projects obtain water district commitment that water services are available. Also Implement and revise as necessary Board Policy G-15 to conserve water at County facilities.

USS-4.4 Implement the Groundwater Ordinance to balance groundwater resources with new development and implement and revise as necessary the Watershed Ordinance to encourage the removal of invasive species to restore natural drainage systems, thereby improving water quality and surface water filtration. Also revise the Ordinance Relating to Water Efficient for Landscaping to further water conservation through the use of recycled water.

USS-4.5 Use the County Guidelines for Determining Significance for Groundwater Resources, Surface Water Quality, and Hydrology to identify and minimize adverse environmental effects on groundwater resources.

USS-4.6 Establish a water credits program between the County and the Borrego Water District to encourage an equitable allocation of water resources.

USS-4.7 Coordinate with the San Diego County Water Authority and other water agencies to coordinate land use planning with water supply planning and support continued implementation and enhancement of water conservation programs.

2.16.6.5 Issue 5: Adequate Wastewater Facilities

The following General Plan Update policies and mitigation measures would mitigate direct and cumulative impacts related to adequate wastewater facilities to below a significant level.

General Plan Update Policies

Policy LU-4.3: Relationship of Plans in Adjoining Jurisdictions. Consider the plans and projects of overlapping or neighboring agencies in the planning of unincorporated lands, and invite comments and coordination when appropriate.

Mitigation Measures

The mitigation measures listed under Section 2.16.6.1 above would mitigate impacts to adequate wastewater facilities and are incorporated here by reference.

2.16.6.6 Issue 6: Sufficient Landfill Capacity

The General Plan Update policies and mitigation measures provided below under the Mitigation Measures section would minimize the proposed project's potentially significant impact associated with sufficient landfill capacity. However, even with mitigation measures in place,

the proposed General Plan Update would allow for the development of land uses that would increase the demand for landfill capacity, thereby resulting in potentially inadequate landfill capacity. The General Plan Update policies and feasible mitigation measures described below would be implemented to reduce impacts associated with sufficient landfill capacity; however, not to below a significant level. Additional mitigation measures have been identified that would reduce the potentially significant impact to landfill capacity. However, the County has determined that their implementation would be infeasible. A discussion of infeasible mitigation measures, as well as General Plan policies and feasible mitigation measures is provided below.

Infeasible Mitigation Measures

The following measures (and variations of these measures) were considered in attempting to reduce impacts associated with sufficient landfill capacity to below a level of significance. However, the County has determined these measures to be infeasible for the reasons listed below. Therefore, these mitigation measures would not be implemented.

- Require all proposed development to obtain written verification of sufficient landfill capacity for the next 20 years. This mitigation measure would prove infeasible because existing landfill facilities are not projected to have sufficient capacity to serve future demand. Therefore, this measure would impede the County's ability to implement the General Plan Update because it would prohibit future development in areas identified for increased growth in the General Plan Update. This mitigation measure would conflict with the project objective to support a reasonable share of projected regional population growth because new development would be unable to obtain verification of adequate landfill capacity for the next 20 year and, therefore, future growth in the unincorporated County would be prohibited. For the reasons listed above, this mitigation measure would not be implemented.

- Require any proposed project that is expected to result in an increase in solid waste disposal demand to construct a solid waste disposal facility, concurrent with development, to meet the needs of the project. This mitigation measure would prove infeasible because it places the burden of development of new solid waste disposal facilities on the developer, would require permits from local and State agencies, and would have the potential result in environmental consequences from creating multiple solid waste facilities throughout the unincorporated County. This mitigation measure would result in significant environmental impacts from the construction of multiple solid waste facilities throughout various areas of the unincorporated County. Implementing multiple solid waste disposal sites would increase environmental degradation throughout the unincorporated County, which would contradict the proposed project's objective to promote environmental stewardship that protects the range of natural resources and habitats that uniquely define the County's character and ecological importance.

Because the measures listed above have been found to be infeasible by the County and would not be implemented, impacts would be significant and unavoidable. Chapter 4.0, Project Alternatives, provides a discussion of several land use alternatives to the proposed project that would result in some reduced impacts associated with sufficient landfill capacity as compared to the proposed project.

General Plan Update Policies

The following policies would reduce impacts associated with sufficient landfill capacity, although not to below a significant level.

Policy LU-12.1: Concurrency of Infrastructure and Services with Development. Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing. In addition to utilities, roads, bicycle and pedestrian facilities, and education, police, and fire services, transit-oriented infrastructure, such as bus stops, bus benches, turnouts, etc, should be provided, where appropriate.

Policy LU-12.2: Maintenance of Adequate Services. Require development to mitigate significant impacts to existing service levels of public facilities or services for existing residents and businesses. Provide improvements for Mobility Element roads in accordance with the Mobility Element Network Appendix matrices, which may result in ultimate build-out conditions that achieve an improved LOS but do not achieve a LOS of D or better.

Policy LU-16.1: Location of Waste Management Facilities. Site new solid waste management facilities identified in the San Diego County Integrated Waste Management Plan in a manner that minimizes environmental impacts, prevents groundwater degradation, and complies with applicable local land use policies.

Policy LU-16.2: Integrity of Waste Management Facilities. Avoid encroachment of incompatible land uses upon solid waste facilities in order to minimize or avoid potential conflicts.

Policy LU-16.3: New Waste Management Facilities. Encourage the establishment of additional recycling and resource recovery facilities in areas with Industrial land use designations or other appropriate areas based on the type of recycling.

Policy COS-17.1: Reduction of Solid Waste Materials. Reduce greenhouse gas emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of solid waste that is generated. Divert solid waste from landfills in compliance with State law.

Policy COS-17.2: Construction and Demolition Waste. Require recycling, reduction and reuse of construction and demolition debris.

Policy COS-17.3: Landfill Waste Management. Require landfills to use waste management and disposal techniques and practices to meet all applicable environmental standards.

Policy COS-17.4: Composting. Encourage composting throughout the County and minimize the amount of organic materials disposed at landfills.

Policy COS-17.6: Recycling Containers. Require that all new land development projects include space for recycling containers.

Policy COS-17.7: Material Recovery Program. Improve the County's rate of recycling by expanding solid waste recycling programs for residential and non-residential uses.

Policy COS-17.8: Education. Continue programs to educate industry and the public regarding the need and methods for waste reduction, recycling, and reuse.

Mitigation Measures

The following mitigation measures would reduce impacts associated with sufficient landfill capacity, although not to below a significant level.

USS-6.1 Participate in interjurisdictional reviews to gather information on and provide comments on plans of incorporated jurisdictions and public agencies in the region. Also work with jurisdictions in the County to facilitate regulations to site recycling facilities.

USS-6.2 Review all plans for large scale projects and planned developments to insure there is space allocation for on-site storage to separate recyclable solid waste.

USS-6.3 Promote and enforce the Management of Solid Waste Ordinance requiring mandatory recycling. Evaluate the Zoning Ordinance and other County ordinances, codes and policies to allow the development of the most environmentally sound infrastructure for solid waste facilities including recycling, reuse and composting businesses. Also implement the Zoning Ordinance requirements for a Major Use Permit for new landfills to ensure the facilities are sited in accordance with the San Diego County IWMP.

USS-6.4 Promote the use of Board Policy B-67 requiring the County to purchase products containing recycled and recyclable materials.

USS-6.5 Regulate refuse hauling companies through County Franchise Hauler Agreement permits. Coordinate with solid waste facility operators to extend and/or expand existing landfill capacity by encouraging on-site materials diversion options. Also develop incentives to encourage pilot projects with unincorporated area landfills to use anaerobic digesters to process organic materials currently being landfilled.

USS-6.6 Permit and regulate solid waste operators and closed solid waste disposal sites to ensure compliance with California Code of Regulations and Titles 14 and 27.

USS-6.7 Maintain and monitor inactive solid waste disposal sites to ensure compliance with all applicable environmental regulations. Also establish additional compatible uses for inactive solid waste sites, where possible, that generate cost-saving revenue and provide desirable community resources.

USS-6.8 Conduct recycling and composting public education programs for residents, schools, and businesses. Develop programs to assist farmers, residents, and businesses to divert organic materials. Also encourage the County and private contractors and developers to practice deconstruction and recycling of construction, demolition and land clearing debris.

2.16.6.7 Issue 7: Solid Waste Regulations

As discussed in Section 2.16.3.7 above, impacts associated with federal, State and local solid waste regulations would be less than significant. Therefore, mitigation is not required.

2.16.6.8 Issue 8: Energy

The following General Plan Update policies and mitigation measures would mitigate direct and cumulative impacts related to energy facilities to below a significant level.

General Plan Update Policies

Policy COS-14.7: Alternative Energy Sources for Development Projects. Encourage development projects that use energy recovery, photovoltaic, and wind energy.

Policy COS-15.1: Design and Construction of New Buildings. Require that new buildings be designed and constructed in accordance with "green building" programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.

Policy COS-15.2: Upgrade of Existing Buildings. Promote and, as appropriate, develop standards for the retrofit of existing buildings to incorporate architectural features, heating and cooling, water, energy, and other design elements that improve their environmental sustainability and reduce GHG.

Policy COS-15.3: Green Building Programs. Require all new County facilities and the renovation and expansion of existing County buildings to meet identified "green building" programs that demonstrate energy efficiency, energy conservation, and renewable technologies.

Policy COS-15.4: Title 24 Energy Standards. Require new development to reduce the energy impacts from new buildings by applying in accordance with or exceeding Title 24 energy standards as required by law.

Policy COS-15.5: Energy Efficiency Audits. Encourage energy conservation and efficiency in existing development through energy efficiency audits and adoption of energy saving measures resulting from the audits.

Mitigation Measures

USS-8.1 Implement, and revise as necessary, the County Green Building Program through incentives for development that is energy efficient and conserves resources.

USS-8.2 Revise Board Policy F-50 to strengthen the County's commitment and requirement to implement resource-efficient design and operations for County funded renovation and new building projects. Also revise Board Policy G-15 to require County facilities to comply with Leadership in Energy and Environmental Design (LEED) standards or other Green Building rating systems.

USS-8.3 Revise Board Policy G-16 to require the County to:

- Adhere to the same or higher standards it would require from the private sector when locating and designing facilities concerning environmental issues and sustainability
- Require government contractors to use low emission construction vehicles and equipment.

USS-8.4 Prepare a County Climate Change Action Plan with a baseline inventory of greenhouse gas emissions from all sources; greenhouse gas emissions reduction targets and deadlines, and enforceable greenhouse gas emissions reduction measures.

2.16.7 Conclusion

The discussion below provides a synopsis of the conclusion reached in each of the above impact analyses, and the level of impact that would occur after mitigation measures are implemented.

2.16.7.1 Issue 1: Wastewater Treatment Requirements

The development of future land uses as designated in the proposed General Plan Update would result in the demand for wastewater treatment services to increase at a rate disproportionate to facility capabilities, which would result in a violation in wastewater treatment standards. Therefore, the proposed project would result in a potentially significant impact. However, implementation of the proposed General Plan Update policies, mitigation measures and required regulations would mitigate this impact to below a level of significance. Additionally, the proposed project would not contribute to a significant cumulative impact associated with wastewater treatment requirements.

2.16.7.2 Issue 2: New Water and Wastewater Facilities

The development of future land uses as designated in the proposed General Plan Update would increase the demand for water and wastewater services, thereby requiring the construction of new facilities. Therefore, the proposed project would result in a potentially significant impact. However, implementation of the proposed General Plan Update policies, mitigation measures and required regulations would mitigate this impact to below a level of significance. Additionally, the proposed project would not contribute to a significant cumulative impact associated with new water and wastewater facilities.

2.16.7.3 Issue 3: Sufficient Stormwater Drainage Facilities

The development of future land uses as designated under the proposed General Plan Update would require the construction of new stormwater facilities if existing facilities are not sized adequately to handle increased runoff flows. Therefore, the proposed project would result in a potentially significant impact. However, implementation of the proposed General Plan Update policies, mitigation measures and required regulations would mitigate this impact to below a

level of significance. Additionally, the proposed project would not contribute to a significant cumulative impact associated with stormwater drainage facilities.

2.16.7.4 Issue 4: Adequate Water Supplies

The development of future land uses as designated in the proposed General Plan Update could result in development with an inadequate water supply. Therefore, the proposed project would result in a potentially significant impact. The proposed General Plan Update policies and mitigation measures, in addition to compliance with applicable regulations such as the SDWA, California Water Code, California Drinking Water Standards, SB 610, SB 221, Urban Water Management Planning Act, Water Conservation Projects Act, and San Diego Groundwater Ordinance, would reduce impacts to water supplies, but not to below a level below significant. Impacts would remain significant and unavoidable. Additionally, the proposed project would result in a cumulatively considerable contribution to a significant cumulative impact associated with water supplies.

2.16.7.5 Issue 5: Adequate Wastewater Facilities

The development of future land uses as designated in the proposed General Plan Update would generate additional demand on the existing wastewater system that would result in inadequate capacity to serve the projected demand. Therefore, the proposed project would result in a potentially significant impact. However, implementation of the proposed General Plan Update policies, mitigation measures and required regulations would mitigate this impact to below a level of significance. Additionally, the proposed project would not contribute to a significant cumulative impact associated with wastewater facilities.

2.16.7.6 Issue 6: Sufficient Landfill Capacity

The development of future land uses as designated in the proposed General Plan Update has the potential to be served by a landfill with insufficient capacity to accommodate the solid waste disposal needs. Therefore, the proposed project would result in a potentially significant impact. The proposed General Plan Update policies, mitigation measures and required regulations would mitigate this impact, but not to a level below significance. Impacts would remain significant and unavoidable. Additionally, the proposed project would result in a cumulatively considerable contribution to a significant cumulative impact associated with landfill capacity.

2.16.7.7 Issue 7: Solid Waste Regulations

The development of future land uses as designated in the proposed General Plan Update would be required to comply with federal, State and local statues and regulations related to solid waste. Therefore, the proposed project would not result in a significant impact. Additionally, the proposed project would not contribute to a significantly cumulative impact associated with solid waste regulations.

2.16.7.8 Issue 8: Energy

The development of future land uses as designated in the proposed General Plan Update would require energy facilities to be constructed or expanded, which would have the potential to result

in significant environmental effects. Therefore, the proposed project would result in a potentially significant direct impact. Additionally, the proposed project would result in a potentially significant cumulative impact. However, implementation of the proposed General Plan Update policies and mitigation measures, in addition to the California Energy Efficiency Standards for residential and non-residential buildings would reduce direct impacts related to the need for the expansion or construction of energy facilities to a level below significance. Additionally, with implementation of the proposed General Plan Update policies and mitigation measures, the proposed project's cumulative contribution would be reduced to a less than significant level.

Table 2.16-1. SDCWA Member Water Districts Existing and Future Housing and Population

SDCWA Member Water Districts	Housing Units (2004)	Population (2004)	Housing Units – (Proposed Project)	Population (Proposed Project)	Growth in Housing (percent)	Growth in Population (percent)
1. Fallbrook Public Utility District	10,647	30,833	14,248	41,338	34	34
2. Helix Water District	28,075	83,033	31,097	91,954	11	11
3. Lakeside Water District	4,730	13,544	5,111	14,638	8	8
4. Olivenhain Municipal Water District	5,273	13,646	6,005	15,541	14	14
5. Otay Water District	20,783	62,687	23,267	70,187	12	12
6. Padre Dam Municipal Water District	22,270	63,562	28,407	80,755	28	27
7. Rainbow Municipal Water District	7,106	20,083	11,803	33,265	66	66
8. Ramona Municipal Water District	8,337	25,592	14,174	43,510	41	41
9. Rincon del Diablo Municipal Water District	4,199	12,596	8,403	25,250	100	100
10. Santa Fe Irrigation District	2,600	6,729	2,923	7,563	12	12
11. Sweetwater Authority/South Bay Irrigation District	5,710	17,714	6,551	20,331	15	15
12. Vallecitos Water District	3,731	11,083	5,648	16,660	51	50
13. Valley Center Municipal Water District	8,398	23,352	16,457	46,219	96	98
14. Vista Irrigation District	5,894	17,140	11,142	32,873	89	92
15. Yuima Municipal Water District	719	2,150	2,037	6,090	183	183

Source: DPLU GIS 2008

Table 2.16-2. Groundwater Dependent Water Districts Existing and Future Housing and Population

Groundwater Dependant Districts	Housing Units (2004)	Population (2004)	Housing Units (Proposed Project)	Population (Proposed Project)	Growth in Housing (percent)	Growth in Population (percent)
1. Borrego Springs Park Community Service District	39	60	273	421	600	602
2. Borrego Water District	989	1,526	8,624	13,308	772	772
3. Campo Water and Sewer Maintenance District	9	22	65	160	622	627
4. Canebrake County Water District	2	3	10	16	400	433
5. Cuyamaca Water District	5	8	13	22	160	175
6. Descanso Community Services District	20	46	86	199	330	333
7. Jacumba Community Services District	11	25	32	72	191	188
8. Julian Community Services District	20	41	34	69	70	68
9. Majestic Pines Community Services District	67	138	129	266	93	93
10. Mootamai Municipal Water District	30	90	47	141	56	56
11. Pauma Municipal Water District	175	523	566	1,689	223	223
12. Questhaven Municipal Water District	26	68	56	146	115	115
13. San Luis Rey Municipal Water District	317	920	1,019	2,953	221	221
14. Wynola Water District	18	36	38	78	111	117

Source: DPLU GIS 2008

Table 2.16-3. Historical Borrego Valley Aquifer Water Demand

Year	Municipal (AFY)	Agricultural (AFY)	Golf Course and Landscape (AFY)	Total (AFY)
1950	170	11,435	190	11,795
1958	225	22,455	790	23,470
1962	265	13,455	1,725	15,820
1968	475	7,260	1,720	9,455
1972	530	5,320	2,270	8,120
1978	600	5,705	2,050	8,355
1980	430	10,600	2,100	13,130
1999	2,272	15,590	4,435	22,297
2007	1,920	14,650	5,240	21,810

AFY = Acre-feet per Year
Source: DPLU 2009f

Table 2.16-4. Wastewater Districts Existing and Future Housing and Population

Wastewater Districts	Housing Units (2004)	Population (2004)	Housing Units (Proposed Project)	Population (Proposed Project)	Growth in Housing (percent)	Growth in Population (percent)
Alpine Sanitation District	214	587	787	2,166	268	269
East Otay Mesa Sewer Maintenance District	1	3	1	3	0	0
Lakeside Sanitation District	10,324	29,563	12,419	35,565	20	20
Otay Water District	70,362	208,820	79,539	236,309	13	13
Padre Dam Municipal Water District	22,270	63,562	28,407	80,755	28	27
Spring Valley Sanitation District	26,067	80,354	28,199	86,999	8	8
Winter Gardens Sewer Maintenance District	3,835	5,481	4,019	6,007	5	10
Borrego Springs Park Community Services District	39	60	273	421	600	602
Borrego Water District	989	1,526	8,624	13,308	772	772
Buena Sanitation District	3,302	9,932	6,364	19,167	93	93
Campo Water and Sewer Maintenance District	9	22	65	160	622	627
Fairbanks Ranch Community Services District	476	1,232	476	1,232	0	0
Fallbrook Public Utility District	10,647	30,833	14,248	41,338	34	34
Julian Sanitation District	9	18	16	33	78	83
Olivenhain Municipal Water District	5,273	13,646	6,005	15,541	14	14
Pauma Valley Community Services District	251	751	1,023	3,331	308	344
Pine Valley Sanitation District	2	5	2	5	0	0
Rainbow Municipal Water District	7,768	21,947	13,052	36,759	68	67
Ramona Municipal Water District	8,337	25,592	14,174	43,510	41	41
Rancho Santa Fe Community Services District	2,578	6,666	3,083	7,972	20	20
Vallecitos Water District	11,125	33,409	14,812	44,327	33	33
Valley Center Municipal Water District	8,398	23,352	16,457	46,219	96	98
Whispering Palms Community Services District	1,284	3,323	1,366	3,535	6	6

Note: Cardiff Sanitary Division – City of Encinitas is not expected to experience growth under implementation of the General Plan Update and is therefore not included in this table.
Source: DPLU GIS 2008

Table 2.16-5. San Diego County Landfill Capacity Information

Landfill	Owner	Operator	Current Remaining Capacity (cubic yards)	Current Remaining Capacity (April 2007) (tons)
Borrego	Allied Waste Industries, Inc.	Borrego Landfill, Inc.	427,775	238,271
Miramar	U.S. Navy	City of San Diego	87,760,000[(1)]	44,574,720[(1)]
Otay	Allied Waste Industries, Inc.	Otay Landfill, Inc.	31,665,198	31,813,474
Ramona	Allied Waste Industries, Inc.	Ramona Landfill, Inc.	389,500	241,490
Sycamore	Allied Waste Industries, Inc.	Sycamore Landfill, Inc.	44,832,302[(1)]	44,114,985[(1)]
Las Pulgas	U.S. Marine Corps	U.S. Marine Corps	9,038,158[(1)]	5,422,895[(1)]
San Onofre	U.S. Marine Corps	U.S. Marine Corps	1,409,193[(1)]	563,677[(1)]
Gregory Canyon	Gregory Canyon Limited	Gregory Canyon Limited	49,500,000	33,400,000[(2)]
Campo	Campo Indian Reservation	Campo Indian Reservation	48,000,000	28,000,000
		Total All Landfill	273,022,126	188,369,512
Las Pulgas, San Onofre San Onofre , Campo and Gregory Canyon[(1)]			-107,947,351	-67,386,572
		Remaining Capacity	**166,074,775**	**120,982,940**

Note: Las Pulgas and San Onofre landfills are owned and operated by the USMC, and are not available for public disposal. As of February 2009, the Gregory Canyon landfill and Campo landfill were in the permitting process and had not yet begun construction.

(1) Data provided by DPLU, April 2008

(2) Data provided by DPLU, May 2002

Source: DPLU 2007c; Final EIS Campo. U.S. Dept Interior 1992.

Table 2.16-6. Solid Waste Transfer Stations Serving Unincorporated San Diego County

Transfer Stations	Operator	Permitted Annual Throughput (tons)
Dalbergia	EDCO	547,500
Escondido Resource Recovery	Escondido Disposal	902,500
Fallbrook	EDCO	180,500
La Mesa	EDCO	361,000
Palomar/Carlsbad	Allied Waste Industries	728,200
Ramona	EDCO	252,700
Universal Refuse & Recycling – El Cajon	Waste Management	722,000
Total		**3.7 million**

Source: DPLU 2007c, updated data provided by DPLU, April 2008

Table 2.16-7. Construction Demolition and Inert (CDI) Processing Facilities Serving Unincorporated San Diego County

CDI Processing Facilities	Operator	Permitted Annual Throughput (tons)
SANCO Resource Recovery	SANCO Services	365,000
San Marcos CDI Operation	EDCO Waste & Recycling Services	53,418
Total		**418,418**

Source: DPLU 2008

Table 2.16-8. Power Plants Located in San Diego County (as of 2006)

Name	Peak (MWs)	Owner
Combined Cycle Plants		
Palomar	542.0	SDG&E
Combined Cycle Total	**542**	
Gas Turbines		
El Cajon / Calpeak	42.0	Cal PeaK
Border / Calpeak	45.0	Cal PeaK
Escondido / Calpeak	45.0	Cal PeaK
ELCAJNGT	13.0	Cabrillo II
ENCINAGT	14.0	Cabrillo II
KEARN2AB (Kearney GT2)	14.0	Cabrillo II
KEARN2AB (Kearney GT2)	14.0	Cabrillo II
KEARN2CD (Kearney GT2)	14.0	Cabrillo II
KEARN2CD (Kearney GT2)	13.0	Cabrillo II
KEARN3AB (Kearney GT3)	15.0	Cabrillo II
KEARN3AB (Kearney GT3)	14.0	Cabrillo II
KEARN3CD (Kearney GT3)	14.0	Cabrillo II
KEARN3CD (Kearney GT3)	14.0	Cabrillo II
KEARNGT1	15.0	Cabrillo II
Larkspur/Border	49.0	Diamond/Coral
Larkspur/Border	49.0	Diamond/Coral
MCC/Chula Vista	42.0	MCC
MCC/Escondido	42.0	MCC
Miramar	46.0	SDG&E
MIRAMARGT (Miramar GT1)	17.0	Cabrillo II
MIRAMARGT (Miramar GT1)	16.0	Cabrillo II
SOUTHBGT	13.0	Duke
Gas Turbine Total	**560.0 MW**	

Table 2.16-8 (Continued)

Name	Peak (MWs)	Owner
Steam Units		
ENCINA 1	106.0	Cabrillo 1
ENCINA 2	103.0	Cabrillo 1
ENCINA 3	109.0	Cabrillo 1
ENCINA 4	299.0	Cabrillo 1
ENCINA 5	329.0	Cabrillo 1
SOUTHBY1	145.0	Duke
SOUTHBY2	149.0	Duke
SOUTHBY3	174.0	Duke
SOUTHBY4	221.0	Duke
Steam Total	**1635.0 MW**	
Qualifying Facility/Cogeneration/ Renewables		
Naval Station	47.0	AEI
GOALLINE	50.0	PurEnergy
NOISLMTR (North Island)	36.0	AEI
POINTLMA (NTC/MCRD)	25.0	AEI
Landfill Gas (Otay)	7.4	Covanta
Landfill Gas (Sycamore)	3.5	Fortistar
Kelco Nutrasweet	30.0	
Kumeyaay	51.0	Kumeyaay Wind LLC
Misc. Renewable Resources	28.5	Misc.
Misc. PhotoVoltaic	18.5	Misc.
QF/CoGen/Renewable Total	**286.0 MW**	
Grand Total	**3023.0 MW**	

(1) Duke is currently in the process of selling this plant to LS Power.
Source: DPLU 2007b

Table 2.16-9. Summary of Potentially Significant Environmental Effects from Implementation of SDCWA Water Supply Projects

Land Use
Land Use Impact 1: Construction of proposed water supply facilities could cause conflicts with sensitive land uses.
Land Use Impact 2: Construction of proposed water supply facilities could result in the permanent displacement of existing, developing, or approved residential, commercial, industrial, extractive, governmental, or institutional land uses.
Land Use Impact 3: Construction of proposed water supply facilities could conflict with existing rights-of-ways and potentially disrupt utility service.
Land Use Impact 4: Elements of the proposed water supply facilities could be inconsistent with applicable land use plans, zoning ordinances, applicable HCPs or other land use planning objectives.
Water Resources
Water Resources Impact 1: Construction of the proposed water supply facilities could result in the degradation of downstream water quality.
Water Resources Impact 2: Discharge of effluent during operation of seawater desalination facilities may degrade near shore water quality.
Biological Resources
Biological Resources Impact 1: Construction of the proposed water supply facilities could result in loss or degradation of various habitats, direct loss of individual special-status species, filling of wetland areas, or increased disturbance or degradation of riparian and/or wildlife habitats.
Biological Resources Impact 2: Construction of the proposed water supply facilities could result in a possible disturbance to marine wildlife resources.
Transportation and Traffic
Transportation and Traffic Impact 1: Construction of the proposed water supply facilities could result in: 1) temporary increases in traffic levels (i.e., existing LOS to levels of D or lower); 2) increased traffic delays; or 3) increased traffic hazards.
Transportation and Traffic Impact 2: Construction activities could result in damage to local roadways.
Noise
Noise Impact 1: Noise generated during construction of proposed water supply facilities could result in temporary increases in noise levels at sensitive receptors.
Noise Impact 2: Blasting that may be necessary during construction could create a nuisance at local sensitive receptors.
Noise Impact 3: Noise generated during the operation of proposed water supply facilities could result in increased noise levels at sensitive receptors.
Air Quality
Air Quality Impact 1: Construction of the proposed water supply facilities could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors); or could expose sensitive receptors to substantial pollutant concentrations.
Air Quality Impact 2: Operation of proposed water supply facilities could create objectionable odors affecting sensitive receptors.
Utilities and Public Services
Utilities and Public Services Impact 1: Construction of the proposed water supply facilities could require that existing utility infrastructure be relocated. Such relocations could result in long-term interruptions in service.
Utilities and Public Services Impact 2: Construction of the proposed water supply facilities could impact school service.

Table 2.16-9 (Continued)

Aesthetics
Aesthetics Impact 1: Permanent structures associate with the proposed water supply facilities could have an adverse impact on scenic vistas or substantially degrade the existing visual character or quality of the project sites and their surroundings.
Aesthetics Impact 2: Proposed water supply facilities could substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway corridor.
Aesthetics Impact 3: Proposed water supply facilities could create new sources of light or glare that would adversely affect day or nighttime views in surrounding areas.
Aesthetics Impact 4: Construction-related ground disturbance would result in short-term aesthetic effects.
Geology and Soils
Geology and Soils Impact 1: Seismic activity in the project area could expose humans to the risk of injury or death and could cause damage to proposed water supply facilities.
Geology and Soils Impact 2: Shrink and swell actions of expansive soils could damage proposed water supply facilities structures or foundations.
Geology and Soils Impact 2: Ground disturbance and vegetation removal during construction could result in increased soils erosion.
Cultural Resources
Cultural Resources Impact 1: Construction of the proposed water supply facilities could affect cultural resources.
Public Safety and Hazardous Materials
Public Safety and Hazardous Materials Impact 1: Activities associated with construction, operation and maintenance of the proposed water supply facilities could increase the potential for accidental wildfires.
Public Safety and Hazardous Materials Impact 2: Transportation, use, or disposal of hazardous materials during construction, operation and maintenance of the proposed water supply facilities or upsets and accidental releases of hazardous materials would create the potential for exposure of workers, the public, and the environment.
Public Safety and Hazardous Materials Impact 3: During construction of the proposed water supply facilities, workers and the public could be exposed to existing hazardous materials present at proposed water supply facilities sites, including the possible exposure to unexploded ordnance.
Public Safety and Hazardous Materials Impact 4: The presence of proposed water supply facilities at lakes, reservoirs, parks, and open space areas could create potential risks to recreational users of these areas due to construction activities, potential vehicle accidents involving Water Authority operation and maintenance vehicles, and unauthorized public access to Water Authority facilities.
Paleontological Resources
Paleontological Resources Impact 1: Construction of the proposed water supply facilities could directly or indirectly destroy unique paleontological resources or sites due to site grading or other ground disturbing activities.
Agricultural Resources
Agricultural Resources Impact 1: Conversion of Farmland of Local Importance and Grazing Land as shown on the maps prepared pursuant to the FPPA and the Farmland Mapping and Monitoring Program of the CDC to non-agricultural use could occur.
Recreation
Recreation Impact 1: The proposed water supply facilities could result in direct disturbance or displacement of established recreation facilities.
Recreation Impact 2: During construction of the proposed water supply facilities, construction activities could result in the disruption of existing recreational activities.
Recreation Impact 3: Operation of the proposed water supply facilities could result in the reduction of recreation quality.

Source: SDCWA 2003

Table 2.16-10. Groundwater Dependent Water Districts' Water Supply Sources

Groundwater Dependant Water Districts	Watershed Name	Hydrologic Area Name	Hydrologic Subarea Name
Borrego Springs Park Community Service District	Anza Borrego	Borrego	Borrego Sink
Borrego Water District	Anza Borrego/ Clark	Borrego/ Clark	Borrego Sink/ Clark
Campo Water and Sewer Maintenance District	Tijuana	Campo	Canyon City
Canebrake County Water District	Anza Borrego	Agua Caliente	Carrizo
Cuyamaca Water District	San Diego	Boulder Creek	Cuyamaca/ Inaja
Descanso Community Services District	Sweetwater	Upper Sweetwater	Descanso
Jacumba Community Services District	Anza Borrego	Jacumba	Jacumba Valley
Julian Community Services District	San Diego/ Anza Borrego	Boulder Creek/Santa Ysabel/San Felipe	Spencer/Witch Creek/San Felipe
Majestic Pines Community Services District	San Diego/ Anza Borrego	Boulder Creek/ San Felipe	Spencer/San Felipe
Mootamai Municipal Water District	San Luis Rey	Monserate	Pauma
Pauma Municipal Water District	San Luis Rey	Monserate	Pauma/Pala
Questhaven Municipal Water District	Carlsbad	Escondido Creek	San Elijo/Escondido
San Luis Rey Municipal Water District	San Luis Rey	Lower San Luis/ Monserate	Bonsall/Pala
Wynola Water District	San Diego	Boulder Creek	Inaja

Source: DPLU GIS 2008

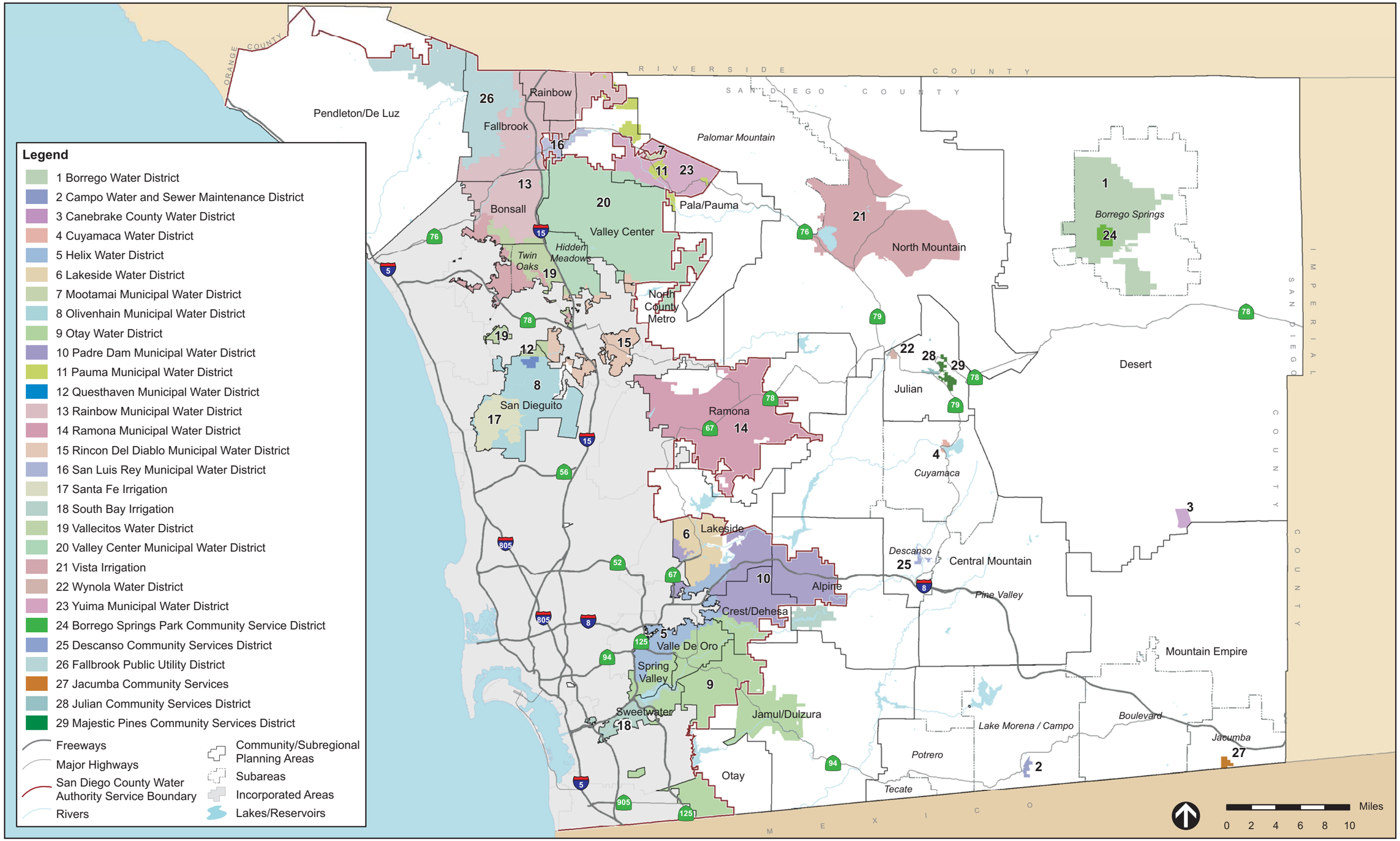
Table 2.16-11. San Diego County Physical Landfill Capacity Projection (Millions of Tons)

Year	In-County Landfill Rate of Disposal	Existing Physical Capacity	In-County Excess[1]	Sycamore Canyon Expansion[2]		Proposed Gregory Canyon[2]		In-County Excess[1] (Existing + Sycamore + Gregory)
				Proposed Expansion Capacity In-County Excess[1] (Existing + Sycamore)		Proposed Additional Capacity In-County Excess[1] (Existing + Gregory)		
1995	2.4							
1996	2.4							
1997	2.5							
1998	2.7							
1999	2.8							
2000	3.2							
2001	3.6							
2002	3.5	62.9	59.4					59.4
2003	3.6	59.4	55.8					55.8
2004	3.8	55.8	52.0					52.0
2005	3.8	52.0	48.2	116.6	164.9			164.9
2006	3.9	48.2	44.3		160.9	33.4	77.7	194.3
2007	4.1	44.3	40.2		156.8		73.6	190.2
2008	4.3	40.2	35.9		152.6		69.3	186.0
2009	4.4	35.9	31.5		148.2		64.9	181.6
2010	4.6	31.5	27.0		143.6		60.4	177.0
2011	4.7	27.0	22.3		138.9		55.7	172.3
2012	4.9	22.3	17.4		134.0		50.8	167.4
2013	5.0	17.4	12.4		129.0		45.8	162.4
2014	5.2	12.4	7.2		123.8		40.6	157.2
2015	5.3	7.2	1.8		118.5		35.2	151.9
2016	5.5	1.8	-3.6		113.0		29.8	146.4
2017	5.6	-3.6	-9.3		107.4		24.1	140.8
2018	5.8	-9.3	-15.1		101.6		18.3	135.0
2019	5.9	-15.1	-21.0		95.6		12.4	129.0
2020	6.1	-21.0	-27.1		89.6		6.3	123.0

(1) Excess is calculated: [Existing Physical Capacity + Proposed Capacity – Rate of Disposal]. The difference is defined as the additional tons per year that could be handled.

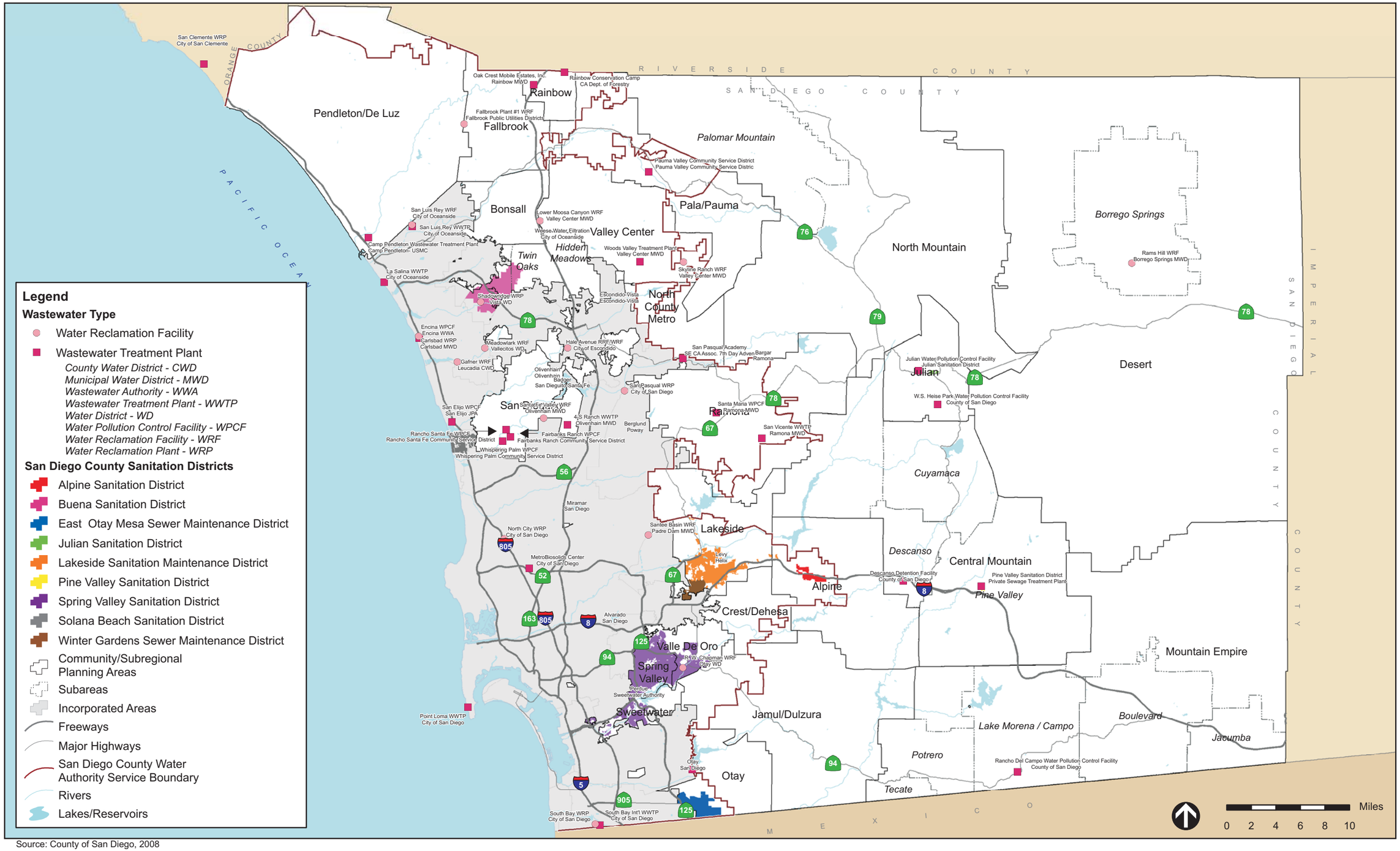
(2) The opening dates and annual permitted tonnages for these landfills are proposed at this time. The Local Enforcement Agency and local land use authority must approve both proposals. CIWMB votes to concur. Issues and concerns of the region and the adjoining jurisdictions will be addressed during the permitting processes.

Source: DPW 2005



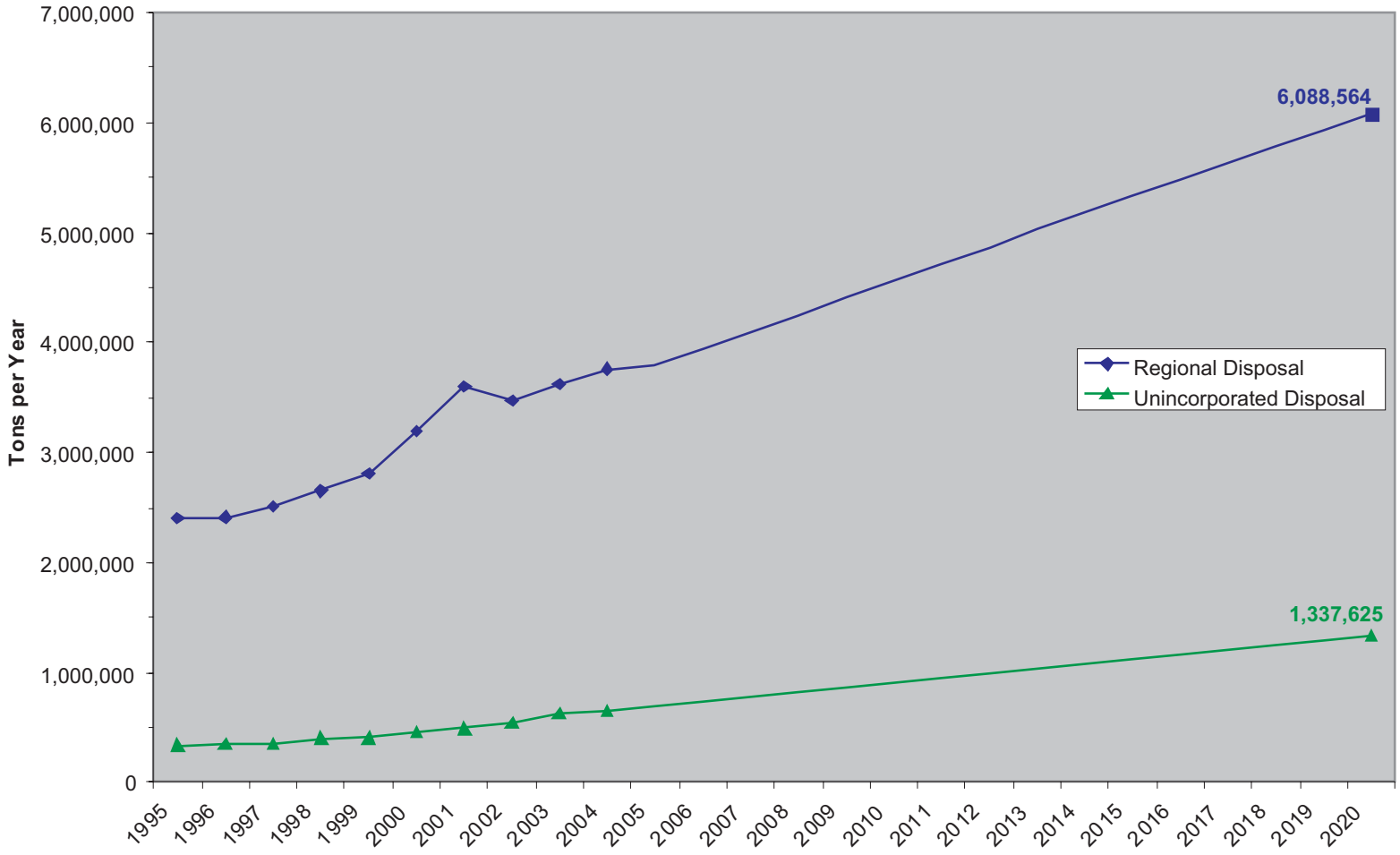
Source: County of San Diego, 2008

WATER SERVING DISTRICT BOUNDARIES **FIGURE 2.16-1**



Source: County of San Diego, 2008

WASTEWATER DISTRICT BOUNDARIES AND FACILITIES **FIGURE 2.16-2**



ANNUAL DISPOSAL PROJECTIONS FOR UNINCORPORATED COMMUNITIES AND THE SAN DIEGO COUNTY REGION (1995-2004 ACTUAL DATA)

FIGURE 2.16-3