# 4.15 UTILITIES

This section describes existing utilities for the Project area and identifies and addresses potential Project impacts related to the following utilities and service providers:

- Water Supply,
- Wastewater Facilities, and
- Energy (Electricity and Natural Gas).

This section also sets forth measures designed to mitigate identified significant adverse impacts. The Mitigation Program for water, wastewater, and energy is presented in Section 4.15.4.

## 4.15.1 WATER SUPPLY

### Introduction

This section analyzes the water resources available to support the proposed Project and the potential impacts associated with providing adequate water supplies for the proposed development. The analysis is presented for both buildout of the Project site and Tentative Tract Map (TTM) No. 17308. Please also refer to Section 5.0, Cumulative Impacts, of this EIR.

### Regulatory Setting

#### *Federal*

Drinking Water Quality Standards

*Safe Drinking Water Act*

The Safe Drinking Water Act (*California Health and Safety Code* §§116350–116405) is intended to protect public health by regulating the nation's public drinking water supply. The Act authorizes the U.S. Environmental Protection Agency (USEPA) to set national standards for drinking water to protect against both naturally occurring and man-made contaminants.

*National Primary Drinking Water Regulations*

The National Primary Drinking Water Regulations (primary standards), also known as maximum contaminant levels, are legally enforceable standards that are set and enforced by the USEPA and that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water.

*National Secondary Drinking Water Regulations*

The National Secondary Drinking Water Regulations are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. The USEPA recommends the secondary standards to water systems, but does not require the systems to comply. However, States may choose to adopt them as enforceable standards. Title 22 of the *California Code of Regulations* (CCR) (Division 4, Chapter 15, "Domestic Water Quality and Monitoring Regulations") provides the regulatory requirements for potable water quality in California.

### *State/Regional*

Domestic Water Quality and Monitoring Regulations

The requirements of Title 22 (as revised in 1978, 1990 and 2001) establish the quality and/or treatment processes required for a recycled effluent to be used for a non-potable application. In addition to recycled water uses and treatment requirements, Title 22 addresses sampling and analysis requirements at the treatment plant, preparation of an engineering report prior to production or use of recycled water, general treatment design requirements, reliability requirements, and alternative methods of treatment. Permits are issued to each water recycling project by one of the nine Regional Water Quality Control Boards (RWQCBs). These permits include water quality and public health protections. Title 22 is enforced by the RWQCBs and regulates the sources, uses, plumbing requirements, sampling and analysis, reporting, design, and treatment requirements of recycled water in California. Title 17 of the CCR regulates the protection of the potable water supply through the control of cross-connections with potential contaminants, including recycled water.

Urban Water Management Planning Act

The California Urban Water Management Planning Act (*California Water Code* §§10610–10656) requires urban water suppliers to develop urban water management plans. While generally aimed at encouraging water suppliers to implement water conservation measures, it also creates long-term planning obligations. The Urban Water Management Planning Act requires urban water suppliers that either provide over 3,000 acre-feet of water annually or serve more than 3,000 or more connections to assess the reliability of its water sources over a 20-year planning horizon and to update the data in the urban water plans every 5 years. In preparing their 20-year management plans, water suppliers must directly address the subject of future population growth. The suppliers must also identify sources of supply to meet demand during normal, dry, and multiple dry years.

Senate Bill 610 and Senate Bill 221

*California Public Resources Code,* Section 21151.9 and *California Water Code*, Sections 10631, 10657, 10910, 10911, 10912, and 10915 (herein referred to as Senate Bill [SB] 610), and *California Business and Professions Code,* Section 11010 and *California Government Code,* Sections 65867.5, 66455.3, and 66473.7 (herein referred to as SB 221) require cities and counties to obtain, use in the project approval process, and provide to the public certain critical information concerning water supply.

SB 610 amends State law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. It requires land use planning entities (in this case, the City of Newport Beach [City]) to request an assessment of the availability of water supplies from the water supply entity that would provide water to a project when a project is considered a "water-demand project" as defined in Section 15155 of the State CEQA Guidelines (14 *California Code of Regulations* [CCR]). In summary, a "water-demand project" is a residential development with more than 500 dwelling units (du); a shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf); a commercial office building employing more than 1,000 persons or having more than 250,000 sf; a hotel/motel with more than 500 rooms; an industrial, manufacturing, processing plant, or industrial park for more than 1,000 persons and occupying more than 40 acres of land or having more than 650,000 sf; or a mixed-use project that includes one or more of the above.

A water supply assessment (WSA) must be prepared in conjunction with the CEQA review process associated with a project, and must include an evaluation of the sufficiency of the water supplies available to the water supplier to meet existing and anticipated future demands, including the demand associated with the project in question over a 20-year horizon. The WSA must include water supply information for normal, single-dry, and multiple-dry years. An SB 610 WSA is required for any "project" that is subject to CEQA and that proposes, among other things, residential development of more than 500 dwelling units. The proposed Project meets this definition and therefore, a WSA has been prepared at the direction of the City, and is included in Appendix L to the EIR.

SB 221 requires cities and counties, such as Newport Beach, to include (as a condition in any tentative map that includes a subdivision involving more than 500 du) a requirement to obtain a written verification from the applicable public water system or, where there is no existing water supplier, from a consultant directed by the city or county, that sufficient water supplies are available for the subdivision.

Like SB 610, SB 221 also addresses the issue of land use and water supply, but at a different point in the planning process than does SB 610. Section 66473.7(b)(1) of the *California Government Code* requires a city or county to condition approval of a tentative tract map upon "a requirement that sufficient water supply be available" and requires verification prior to approval of the final tract map. The proposed Project includes a tentative tract map that meets the thresholds of SB 221. Further, a development agreement that includes a subdivision, as defined in Section 66473.7 of the *California Government Code*, cannot be approved unless the development agreement provides that any tentative map prepared for the subdivision will comply with the provisions of Section 66473.7 and includes a subdivision requirement that a sufficient water supply shall be available. Therefore, the Project would be required to comply with SB 221.

For projects that include tentative tract maps involving over 500 dwelling units, SB 221 requires that the retail water purveyor (or if there is none, the planning agency) verify that the water system operator that would supply the project with water has a sufficient water supply to serve the proposed project and all other existing and planned future uses, including agricultural and industrial uses, in its area over a 20-year period, even in multiple dry years. The verification must look at (1) the history of water availability over at least the previous 20 years; (2) the proposed supplier's urban water shortage contingency analysis; (3) reductions due to existing commitments of its supply; and (4) how much water the supplier can reasonably expect from other water supply projects, such as conjunctive use, recycled water programs, conservation, and water transfers from other areas. SB 221 is intended as a "fail safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs before construction begins. Cities and counties have an obligation to ensure that proposed developments (1) use water as efficiently as possible; (2) include reliable sources of sufficient water supply; and (3) accommodate growth in a sustainable fashion that minimizes conflicts with other demands on the State's source water resources.

### *City of Newport Beach*

City of Newport Beach Municipal Code

Chapter 14.16 of Title 14 of the City's Municipal Code was amended in December 2009 and renamed the "Water Conservation and Supply Level Regulations". This program seeks to reduce water consumption in the City through (1) permanent water conservation requirements during non-shortage conditions and (2) four levels of water supply shortage response actions to

be implemented within the City during times of declared water shortage. The program would prevent waste or unreasonable use of water; maximize the efficient use of water; and ensure a reliable and sustainable minimum supply of water for public health, safety, and welfare.

Chapter 14.17 of Title 14, Water Efficient Landscaping, also establishes procedures and standards for the design, installation, and maintenance of water-efficient landscapes in conjunction with new construction projects within the City to promote the conservation and efficient use of water and to prevent the waste of available water resources.

City of Newport Beach General Plan Natural Resources Element

The *City of Newport Beach General Plan's* Natural Resources Element identifies the City's natural resources and policies for their preservation, development, and use. The element addresses water supply (as a resource) and water quality (including potable drinking water). A consistency analysis of the proposed Project's specific goals and policies with the City's relevant plans, policies, and regulations is presented later in this section.

### *Water and Legal Background*

State Water Project Overview

In 1951, the California Legislature authorized construction of the State Water Storage and Delivery System. Eight years later, in 1959, the Legislature authorized the submission for voter approval of a $1.75 billion General Obligation Bond issue to build the State Water Project (SWP) system. The voters approved the measure, which enabled the California Department of Water Resources (DWR) to commence construction of that system (DWR 2009).

DWR operates and manages the SWP facilities. The SWP is the largest State-built, multi-purpose water project in the country. The SWP was designed and built (1) to deliver water; (2) to control floods; (3) to generate power; (4) to provide recreational opportunities; and (5) to enhance fish and wildlife habitats. SWP water supplies are used for both urban and agricultural uses throughout California. The SWP facilities consist of a system of dams, reservoirs, power plants, pumping plants, canals, and aqueducts to store and deliver water. Its main purpose is to divert and store surplus water during wet periods and to distribute it to areas in Northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California (DWR 2009).

At the inception of the SWP, the DWR entered into individual water supply contracts with agricultural and urban water suppliers (SWP contractors) throughout California. The contracts were the method used to fund construction and operation of the SWP facilities for the delivery of water to the SWP contractors. Signed in the 1960s, all contracts are in effect to at least year 2035 and are essentially uniform. Each contract sets forth a maximum annual allocation of SWP water to that contractor (assuming full buildout of the planned SWP facilities), which is identified in Table A in a contract (this allocation is therefore known as the "Table A Amount"). The annual amount was designed to increase each year, with most contractors reaching their maximum allocation in 1990. Because individual contractors may not have reached full growth/demand or have made use of other water sources (e.g., groundwater), they have not requested their full Table A Amounts. Therefore, SWP deliveries may reflect lower demand from contractors, not necessarily a limit on SWP capacity (DWR 2009).

There are 29 SWP contractors with long-term DWR water supply contracts totaling 4.173 maf per year. All available water is allocated annually in proportion to each contractor's annual SWP

Table A Amount. An SWP contractor may annually request that the DWR deliver water in the following year in any amount up to the SWP contractor's Table A Amount. The SWP contract provides that, in a year when the DWR is unable to deliver the full amount of contractor requests, deliveries to contractors will be reduced so that the total deliveries are equal to the total available supply for that year. Demand levels on the SWP supplies are derived from historical data and information received from the SWP contractors (DWR 2009).

However, because the SWP system has not been fully constructed and because its capacity has been constrained due to environmental considerations and evolving policies for the Sacramento-San Joaquin Delta (Delta) that were not contemplated in the 1960s, the SWP cannot reliably deliver the full amounts of supplies anticipated in the contracts in all years. However, in 25 percent of the years (i.e., during wet periods), the DWR estimates the annual water delivery of the SWP, using existing facilities, to be approximately 3.7 to 3.8 maf per year (approximately 89 to 92 percent of the full Table A Amount, which is the 4.17 maf maximum amount by year 2020). The most SWP Table A water that has been available for delivery to date (as of 2008) in any year, according to DWR's Notices to State Water Project Contractors, was approximately 4.13 maf in 2006. In 2007, total water deliveries were approximately 2.60 maf. In 2009, the DWR delivered 40 percent of the amount requested by public agencies or 2.49 maf. The average SWP allocation over the past 10 years was 68 percent. The final 2010 SWP allocation is 45 percent of requested amounts (DWR 2010b).

The Monterey Agreement and Amendments

In 1994, the DWR and a group of SWP contractors met to address disputes regarding the availability and distribution of water through SWP facilities. To avoid potential litigation, the DWR and agricultural and urban SWP contractors met in Monterey, California to attempt to resolve the ongoing disputes. After negotiations, the DWR and the agricultural and urban SWP contractor negotiators agreed to a statement of principles to modify the long-term SWP water supply contracts, which became known as the "Monterey Agreement" (Cooke 2010).

The Monterey Agreement principles were incorporated in contract amendments (the Monterrey Amendments), which were offered to the SWP contractors. All but 2 of the 29 SWP contractors accepted the amendments. The specific objectives of the Monterey Amendments are:

- To resolve conflicts and disputes among SWP contractors regarding water allocations and financial responsibilities for SWP operations;
- To restructure and clarify procedures for SWP water allocation and delivery during times of shortage and surplus;
- To reduce financial pressures on agricultural contractors in times of drought and supply reductions;
- To adjust the financial rate structure of the SWP to more closely match revenue needs;
- To facilitate water management practices and water transfers that improve reliability and flexibility of SWP water supplies in conjunction with local supplies; and
- To resolve legal and institutional issues related to storage of SWP water in Kern County groundwater basins and in other areas (Cooke 2010).

In its Principle 13, the Monterey Agreement provides that the proposal was an integrated package and contractors had to choose to participate in all of the provisions of the Monterey Agreement or none of them. The Monterey Agreement, therefore, resulted in a packaged deal of

negotiated concessions that require achieving all the objectives in order to settle significant disputes among the contractors; both agricultural and urban ("municipal and industrial" or "M and I") contractors gave up rights or benefits, and gained rights and benefits, to make the agreement work (Cooke 2010).

As an action covered by CEQA, an EIR was prepared on the Monterey Agreement by the Central Coast Water Agency, a joint powers agency composed of two SWP contractors, and the Final EIR was certified October 1995. In 1995, the adequacy of the Final EIR was challenged; the Sacramento Superior Court upheld the adequacy of the Final EIR. Before and after the trial court's decision, the DWR and the parties to the litigation who had executed the Monterey Amendment began implementing its various provisions, including the completion of permanent transfers of Table A Amounts among SWP contractors. In 2003, the parties to the litigation negotiated a settlement agreement, which was confirmed by the Superior Court, whereby the DWR committed to a process for including the plaintiffs and contractors in the development of a new EIR for the Monterey Amendment, and the parties agreed to certain additional elements (Settlement Agreement). In approving the Settlement Agreement and issuing its related orders, the Superior Court did not invalidate the Monterey Amendment or the approval of the Monterey Amendment. As such, the DWR has been operating pursuant to the Monterey Amendment since 1996 and implementing the Settlement Agreement and the Court Order that approves the Settlement Agreement since 2003 (Cooke 2010).

The Monterey Amendment and the Settlement Agreement together comprise the Monterey Plus project, which was the subject of the new EIR. On February 1, 2010, the DWR certified the *Monterey Amendment to the State Water Project* (SWP) *Contracts (Including Kern Water Bank Transfer) and Associated Actions* as *Part* of a *Settlement Agreement (Monterey Plus) Final EIR*. The EIR does not recommend any particular course of action for the DWR, but rather fully discloses potential environmental effects of the proposed Project (the Monterey Agreement and the Settlement Agreement), and analyzes a suitable range of alternatives (Cooke 2010).

National Marine Fisheries Service and Fish and Wildlife Service Biological Opinions

Over the past several years and in response to declining fish populations, the rules defined by the federal biological opinions issued by the National Marine Fisheries Service and the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA) regarding the operation of the SWP and Central Valley Project in the Delta have become more restrictive. In August 2007, in the case of *National Resources Defense Council (NRDC) v. Kempthorne,* the U.S. District Court ordered a temporary 30 percent reduction in pumping in the California Delta in order to protect the Delta smelt, an Endangered fish species. This reduction was ordered until such time that a new Biological Opinion could be prepared to evaluate impacts to the Delta smelt. During this time, the Metropolitan Water District (MWD) estimated a loss of approximately 250,000 acre-feet (af) of SWP water in 2008, which required MWD to pull water from storage accounts. In 2008, a new Biological Opinion was submitted, which further reduced pumping in the Delta (by as much as 50 percent in some cases) and continues to restrict local water supplies.

On December 15, 2008, the USFWS issued a new Biological Opinion for the Delta smelt. In June 2009, the National Marine Fisheries Service issued a new Biological Opinion covering winter-run and spring-run Chinook salmon, steelhead, green sturgeon, and killer whales. The Biological Opinions imposed additional operational requirements that restrict the amount of water supply that can be exported from the Delta. These Biological Opinions are summarized below.

*USFWS Biological Opinion*

The 2008 USFWS Biological Opinion includes additional requirements (beyond those set in *National Resources Defense Council [NRDC] v. Kempthorne*) in all but two months of each year. From December to June of each year, flow restrictions are in place but can begin as early as December 1 based on the USFWS determination. However, the restriction is more likely to start after December 21 and is based on turbidity and salvage triggers. The restriction has three phases that are intended to protect Delta smelt at various life stages. The USFWS determines the required target flow. Managing flow is accomplished primarily by reducing the Central Valley Project and SWP exports.

The USFWS Biological Opinion also imposes an additional salinity requirement in the Delta for September and October in wet and above-normal water years. In these years, fresher water must be maintained at locations farther west than during the other types of water years. During years when this requirement is in place, inflow into the SWP and Central Valley Project reservoirs is passed downstream to augment the outflow until the prior month's required location for the fresher water is reached.

*National Marine Fisheries Service Biological Opinion*

The requirements contained in the National Marine Fisheries Service's Biological Opinion also have flow requirements. However, the DWR expects that compliance with the USFWS Biological Opinion will satisfy or be sufficiently protective of the listed species under the National Marine Fisheries Service Biological Opinion.

The National Marine Fisheries Service's Biological Opinion also expands the duration of a springtime operation, which combines a reduction in Delta exports with a pulse flow on the San Joaquin River from one month to two months, further limiting exports. The Delta Cross Channel gates are closed more frequently from October through December 14, and completely closed between December 15 and January 31.

*Other Legislation and Actions*

In 2005, Governor Schwarzenegger, in his 20x2020 Plan, noted that daily water usage would need to be reduced for the State to support its growing population. The 20x2020 Plan calls for a reduction of 20 percent per capita use. Per capita daily consumption is measured in gallons per day per capita per day (GPCPD). The Water Conservation Act of 2009, SB SBx7-7 (Steinberg) is the water conservation component of the Delta package. It requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020 and the interim 10 percent goal by 2015. There are four options for meeting the water reduction requirements. Newport Beach selected Option 1, which requires a 20 percent reduction from the baseline by 2020 and a 10 percent reduction by 2015. Other options are variations of Option 1. The City is a member of the Orange County 20x2020 Regional Alliance formed by Metropolitan Water District of Orange County (MWDOC). This regional alliance consists of 29 retail agencies in Orange County, as described in MWDOC's 2010 Regional Urban Water Management Plan (RUWMP), which allows the alliance to meet its water use targets as a region. The Regional Alliance Weighted 2015 target is 174.1 GPCD and 2020 target is 156.5 GPCD. Under Compliance Option 1, the City's 2015 interim water use target is 228.1 GPCD and the 2020 final water use target is 202.8 GPCD.

In addition to the SWP pumping restrictions, the 2009 Water Year (October 1, 2008 through September 30, 2009) was the third consecutive year of below average precipitation for

California. Annual statewide precipitation totaled 76 percent, 72 percent, and 63 percent of average for Water Years 2009, 2008, and 2007, respectively (DWR 2010b).

MWD and many local agencies, including the City, called for voluntary water use reductions. Despite these efforts, MWD issued a Water Supply Allocation Plan on July 1, 2009, which initiated mandatory conservation throughout Southern California. The Plan, which is a part of the 2010 Regional Urban Water Management Plan (RUWMP), includes the formula for calculating member agency supply allocations and the key implementation elements needed for administering the allocation. In this Plan, delivery to a member agency of more than its allocated amount of MWD supplies subjects the member agency to a penalty of one to four times MWD's full service rate for untreated Tier 2 water.[1] In turn, the MWDOC implemented Stage 2 of its Water Supply Allocation Plan, which passes along the increased cost of imported water to its member agencies if the conservation measures are not met.

## Methodology

### *Water Supply*

The information presented in this section is based on the *Water Supply Assessment, Newport Banning Ranch*, prepared by AECOM (May 2010), which is included in its entirety in Appendix L of this EIR. The WSA was approved by the Newport Beach City Council on October 12, 2010. The WSA was prepared in accordance with Section 10910(d)–10910(f) of the *California Water Code,* which identifies that a WSA shall:

1. Identify any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for a proposed project, and provide a description of the quantities of water received in prior years by the public water system, under existing water supply entitlements, water rights, or water service contracts.
2. Identify other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts to the same source of water as the public water system if no water has been received in prior years by the public water system.
3. Identify the groundwater basin or basins from which a proposed project will be supplied and include any applicable documentation of adjudicated rights to pump if groundwater is included in the proposed supply. If the basin is not adjudicated, regardless of whether the basin has been identified as over-drafted, a WSA shall provide a detailed description and analysis of the amount and location of groundwater pumped by the public water system for the past five years from any groundwater basin from which a proposed project will be supplied, and provide a detailed description and analysis of the amount and location of groundwater from the basin or basins from which a proposed project will be supplied to meet the water demand associated with the proposed project.

[1] Tier 1 water supply rate: recovers the cost of maintaining a reliable supply amount; Tier 2 water supply rate: set at MWD cost of developing additional supply and to encourage efficient use of local resources.

The Project's WSA accounts for all probable development in the City's service area based on growth projections identified in the City's 2005 Urban Water Management Plan and validated in the 2010 Urban Water Management Plan,[2] which were based on existing and other planned developments in the City, including the Project site, and regional growth projections.

### *Water Facilities*

The Sewer and Water Facilities Plan for the Project (Appendix L) was prepared by Fuscoe Engineering, Inc. to analyze the required distribution and collection systems for water and sewer.

## Existing Conditions

### *Water Supply*

The City of Newport Beach 2010 Urban Water Management Plan was adopted by the Newport Beach City Council on June 14, 2011. The Project's WSA is consistent with the assumptions of both the 2005 and 2010 Urban Water Management Plans.

According to the WSA, water service in the City of Newport Beach is provided by three purveyors: the City, the Irvine Ranch Water District, and Mesa Consolidated Water District (AECOM 2010). The Project site is located near the service areas of the City and the Mesa Consolidated Water District. While the Project site is within the City's Sphere of Influence, it is located outside of the City's water service area. The City can provide service beyond its service boundaries as set forth in Municipal Code Ordinance 96-22. It is anticipated that the unincorporated area of the Project site, within the City's Sphere of Influence, will be annexed into the City of Newport Beach and the City's water agency boundary. Currently, domestic water services are provided on a limited basis to the Project site via (1) the Mesa Consolidated Water District, which provides approximately 2,119,000 gallons per year and (2) the City of Newport Beach, which provides approximately 64,000 gallons per year for existing oil operations (Fuscoe 2010a).

The City's Municipal Operations Department is responsible for the provision of water service. The Department includes the following subsections: Wastewater, Customer Service, Maintenance and Repair, Water Production, and Water Quality. These subsections provide services related to maintenance and operation of the City's wastewater system, meter reading, water shut-offs/turn-ons, service leaks, water main breaks, fire hydrants, valve turning, water pressure, water taste and odor, water production supply, water testing, safety, regulatory environmental issues, and education and conservation. The City's water system currently provides water services to its residents. The City supplies approximately 18,000 acre-feet per year (afy) through approximately 26,000 accounts (AECOM 2010). All connections in the City's service area are metered.

The City's water supply consists of groundwater, recycled water, and imported water although recycled water is not available in the Project area. The City receives water from two main sources: (1) the Orange County Groundwater Basin (or the Lower Santa Ana River Groundwater Basin), which is managed by the Orange County Water District (OCWD), and (2) imported water from the Municipal Water District of Orange County.

Groundwater

The OCWD manages local groundwater resources in the County. Groundwater is pumped from the Orange County Groundwater Basin, which encompasses approximately 350 square miles and lies beneath northern and central Orange County from Irvine to the Los Angeles County border and from Yorba Linda to the Pacific Ocean. More than 20 cities and retail water districts draw from this basin to provide water to homes and businesses. The City's groundwater supply is obtained from four wells: Dolphin Shallow Well, Dolphin Deep Well, Tamura Shallow Well, and Tamura Deep Well. These wells tap into the Orange County Groundwater Basin, also known as the Lower Santa Ana Basin, which is regulated by the OCWD. For 2009, the City's Basin Pumping Percentage (BPP) was set by OCWD at 62 percent (62 percent of the City's demand can be supplied by groundwater) (AECOM 2010).

Imported Water

According to the City of Newport Beach's *2009 Water Quality Report*, imported water is purchased from MWDOC, which supplies water to Orange County via MWD. MWD serves six counties: Orange, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego (MWDOC 2009a). Most of this imported water supply is obtained through the SWP and from the Colorado River Aqueduct. According to MWDOC, imported water from Northern California and the Colorado River meet approximately half of Orange County's water needs (AECOM 2010).

Recycled Water

The City began using recycled water in 1999 through an agreement with OCWD. OCWD provides water through the Green Acres Project, which has the capability to deliver up to 1,000 afy. In fiscal year 2009–2010, the City used approximately 400 afy of recycled water and has programs and policies in place to promote increased recycled water use in future years, including financial incentives as identified in the City's Urban Water Management Plan. There is no existing recycled water service in the Project area (AECOM 2010).

***Urban Water Management Plan***

In accordance with the California Urban Water Management Planning Act, the City updated its Urban Water Management Plan; the 2010 Urban Water Management Plan was adopted by the City Council on June 14, 2011. According to the *2010 Urban Water Management Plan,* the City of Newport Beach delivers water to its residents through a comprehensive system of reservoirs, transmission mains, and distribution lines. The City has three water system storage reservoirs: Big Canyon Reservoir, Zone 4 Reservoir, and 16$^{th}$ Street Reservoir. The Big Canyon Reservoir, located in Corona del Mar, is a distribution and storage, asphalt-lined, earthen dam reservoir that has a capacity of approximately 196 million gallons (MG) and a maximum water surface elevation of 302 feet. The City maintains this reservoir at an average level of approximately 286 feet, providing approximately 300 acre-feet (af, 98 MG) of storage. The Zone 4 Reservoir is a 1.5-MG, below-grade concrete tank that has a maximum elevation of 663 feet and is located on Muir Beach Circle. The 16$^{th}$ Street Reservoir is a buried, cast-in-place concrete tank that has a capacity of 3 MG; it is located at 951 West 16$^{th}$ Street, and it serves as a holding tank for well water (Newport Beach 2011).

Existing water lines range from 1 to 36 inches, with the majority of the pipelines ranging from 8 to 12 inches in diameter. Transmission mains convey water to various sections of the distribution system, and the distribution lines deliver water to local areas. In addition, the City's water infrastructure includes 5 domestic pump stations, 2 reclaimed pump stations, and

43 pressure-reducing stations. The water distribution system is divided into 5 major pressure zones that serve elevations from sea level to 725 feet above mean sea level (msl) (Newport Beach 2011).

### *Historical and Projected Water Demands*

For the Project's WSA, historical and projected water demands were estimated for the City service area based on the City's *2005 Urban Water Management Plan,* coordination with City staff, and MWDOC Member Agency Surveys. Future demand for MWDOC and MWD were based on the most recent regional growth forecasts from the Southern California Association of Governments (SCAG) to ensure consistency between the retail and wholesale water agency demand projections. SCAG's growth forecasts are based on the land use policies of its member cities; therefore, planned growth is included in its water demand forecasts. The historical and projected water demands for the City's service area are shown in Table 4.15-1. In the last five years, the City's water demand has decreased by approximately five percent while experiencing a small (approximately 1.5 percent) population increase.

**TABLE 4.15-1**
**CITY OF NEWPORT BEACH**
**HISTORICAL AND PROJECTED WATER DEMANDS**

| Water Use Sector | Demand (Acre-Feet Per Year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Historical Demand | | | | Projected Demand | | | | |
| | FY 2005–2006 | FY 2006–2007 | FY 2007–2008 | FY 2008–2009 | 2010 | 2015 | 2020 | 2025 | 2030 |
| Residential: Single-Family | 7,689 | 6,900 | 6,761 | 6,750 | 8,085 | 8,805 | 8,840 | 8,870 | 8,870 |
| Residential: Multi-Family | 2,761 | 2,585 | 2,529 | 2,184 | 2,820 | 3,072 | 3,084 | 3,095 | 3,095 |
| Other[a] | 7,370 | 9,524 | 9,056 | 8,495 | 8,886 | 9,678 | 9,716 | 9,751 | 9,751 |
| **Total** | **17,820** | **19,009** | **18,346** | **17,429** | **19,791** | **21,555** | **21,640** | **21,716** | **21,716** |

FY: fiscal year

Note: The 2010 Urban Water Management Plan reflects lower water demand than the AECOM report.

[a] Includes commercial, institutional, and landscaping land uses and unaccounted-for losses.

Source: AECOM 2010.

Demand Management (Water Conservation)

Demand management involves water conservation programs that are developed and implemented on the premise that water conservation increases water supply by reducing the demand on available supply, which is vital to the optimal use of the region's supply resources. Water conservation is addressed in the City's Urban Water Management Plan as an element of the long-term strategy for meeting present and future water needs.

The California Urban Water Conservation Council (CUWCC) was created to increase urban water efficiency statewide and to assist in increasing water conservation through partnerships among urban water agencies, public interest organizations, and private entities. The City of Newport Beach became a member of the CUWCC in August 2005 by signing *the Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU), which formalizes an agreement to implement 14 Best Management Practices (BMPs) for water conservation. Since becoming a member, the City has submitted annual reports to the CUWCC that identify

water demand management measures that are either currently being implemented or that are scheduled for implementation (AECOM 2010).

Chapter 14.16 (Water Conservation and Supply Level Regulations)

As discussed previously, 2009 marked California's third consecutive year of drought, which is a condition that has been exacerbated due to the restrictions on water pumped from the Delta. In response to these conditions, the City adopted an ordinance that was codified into Chapter 14.16, Water Conservation and Supply Level Regulations, of the City's Municipal Code. The Ordinance creates a Water Conservation and Supply Shortage Program that establishes (1) permanent water conservation requirements during non-shortage conditions and (2) four levels of water supply shortage response actions to be implemented during times of declared water shortages. Standard Condition (SC) 4.15-1 identifies the mandatory permanent water conservation requirements that are effective at all times. SC 4.15-2 identifies the four levels of mandatory water conservation and their requirements that are effective during a Water Supply Shortage period (AECOM 2010).

### *Historical and Projected Water Supplies*

As discussed previously, the City purchases its imported water supply from MWDOC who purchases water from MWD. Similarly, the City's groundwater supply is pumped from the Orange County Groundwater Basin, which is regulated by OCWD. Due to the City's dependency on MWDOC, MWD, and OCWD, this analysis includes a review of water supplies from each of these agencies.

Metropolitan Water District of Southern California

MWD was formed in 1928 to develop, store, and distribute supplemental water in Southern California for domestic and municipal purposes. MWD's water supply is comprised of imported and local resources and serves the Counties of Orange, Ventura, Los Angeles, Riverside, San Bernardino, and San Diego. In November 2005, MWD adopted its 2005 Regional Urban Water Management Plan (2005 RUWMP), which contains a water supply reliability assessment, including an evaluation of the supplies necessary to meet demands over a 25-year period in average, single-dry, and multiple-dry year periods. The 2005 RUWMP based its growth assumptions for the region on SCAG's regional growth forecast (AECOM 2010).

In November 2010, the MWD completed and approved its 2010 RUWMP providing additional updated documentation of water supply availability for its service area. The 2010 RUWMP provides a comprehensive summary of MWD's demand and supply outlook through 2035. Section 15150 of the State CEQA Guidelines encourages "incorporation by reference" as a means of reducing redundancy and length of environmental reports. Therefore, the MWD's 2010 RUWMP is hereby incorporated by reference into this EIR.[3]

The RUWMP documents MWD's ability to meet the projected water demands of its service area, inclusive of the City of Newport Beach and the Newport Banning Ranch Project, from 2015 through 2035 even under worst drought conditions. In summary, the key reporting points of the 2010 RUWMP are as follows:

[3] The Metropolitan Water District's 2010 RUWMP is available at the City of Newport Beach Community Development Department during regular business hours.

- ***Supply Availability:*** MWD has supply capabilities that are sufficient to meet expected demands from 2015 through 2035 under average, single-dry-year, and multiple-dry-year hydrologic conditions.
- ***Contingency Supply Interruption Plans:*** MWD has comprehensive plans for stages of actions it would undertake to address a reduction in water supplies of up to 50 percent due to drought or catastrophic events through its Water Surplus and Drought Management and Water Supply Allocation Plans. MWD also developed an Emergency Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region, including seismic events along the San Andreas fault. In addition, MWD is working with the State of California to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region, such as a maximum probable seismic event in the Sacramento/San Joaquin River Delta (Delta) that would cause levee failure and disruption of State Water Project deliveries.
- ***Future Supply Development:*** MWD has plans for supply implementation and continued development of a diversified resource mix including programs in the Colorado River Aqueduct, SWP, Central Valley storage and transfer programs, water use efficiency programs, local resource projects, and in-region storage that will enable the region to meet its water supply needs.

MWD's RUWMP is based in part on the following assumptions regarding water supply capabilities:

- ***Hydrologic Conditions and Reporting Period***: The 2010 RUWMP presents MWD's supply capabilities from 2015 through 2035 under the three hydrologic conditions: single-dry-year (represented by a repeat of 1977 hydrology), multiple-dry-year (represented by a repeat of 1990 to 1992 hydrologies) and average year (represented by the average of 1922 to 2004 hydrologies).
- ***Colorado River Aqueduct Supplies***: Colorado River Aqueduct supplies include supplies that would result from existing and committed programs and from implementation of the Quantification Settlement Agreement and related agreements. The Quantification Settlement Agreement, which is the subject of current litigation, is a component of the California Plan and establishes the baseline water use for each of the agreement parties and facilitates the transfer of water from agricultural agencies to urban uses. Colorado River transactions are potentially available to supply additional water up to the Colorado River Aqueduct's annual capacity of 1.25 million acre-feet (maf) on an as-needed basis.
- ***State Water Project Supplies:*** SWP supplies are estimated using the draft 2009 SWP Delivery Reliability Report distributed by the DWR in December 2009. The draft 2009 reliability report presents the current DWR estimate of the amount of water deliveries for current (2009) conditions and conditions 20 years into the future. These estimates incorporate restrictions on SWP and Central Valley Project operations in accordance with the biological opinions of the USFWS and National Marine Fishery Service issued on December 15, 2008, and June 4, 2009, respectively. Under the 2009 draft reliability report, the delivery estimates for the SWP for current (2009) conditions as percentage of maximum delivery amounts, are: 7 percent, equivalent to 134 thousand acre-feet (taf), under a single-dry-year (1977) condition; and 60 percent, equivalent to 1.15 maf, under long-term average conditions.

In dry, below-normal conditions, MWD has increased the supplies received from the California Aqueduct by developing flexible Central Valley/SWP storage and transfer programs. Over the last two years under the pumping restrictions of the SWP, MWD has worked collaboratively with the other contractors to develop numerous voluntary Central Valley/SWP storage and transfer programs. The goal of this storage/transfer programs is to develop additional dry-year supplies that can be conveyed through the available pumping capacity to maximize deliveries through the California Aqueduct during dry hydrologic conditions and regulatory restrictions.

- ***Delta Improvements:*** The listing of several fish species as threatened or endangered under the Federal or California Endangered Species Acts (FESA and CESA, respectively) have adversely impacted operations and limited the flexibility of the SWP. In response to court decisions related to the Biological Opinions for fish species listed under the FESA and CESA, DWR altered the operations of the SWP. This resulted in export restrictions and reduced SWP deliveries. In June 2007, MWD's Board approved a Delta Action Plan that provides a framework for staff to pursue actions with other agencies and stakeholders to build a sustainable environment for the San Francisco Bay – Sacramento/San Joaquin River Delta ecosystem (Bay-Delta), and to reduce conflicts between water supply conveyance and the environment. The Delta Action Plan aims to prioritize immediate short-term actions to stabilize the Delta while an ultimate solution is selected, and mid-term steps to maintain the Bay-Delta while the long-term solution is implemented.

  In the near-term, the physical and operational actions in the Bay-Delta being developed include measures that protect fish species and reduce supply impacts with the goal of reducing conflicts between water supply conveyance and environmental needs. The potential for increased supply due to these near-term fixes is included in the 2010 RUWMP as a 10 percent increase in water supplies obtained from the SWP allocation for the year. In evaluating the supply capabilities for the 2010 RUWMP, additional supplies from this interim fix are reasonably calculated to materialize by 2013. Also included as a possible near-term fix for the Bay-Delta is the proposed Two-Gate System demonstration program, which would provide movable barriers on the Old and Middle Rivers to modify flows and prevent fish from being drawn toward the Bay-Delta pumping plants. The Two-Gate System is anticipated to protect fish and increase SWP supplies.

  Operational constraints likely will continue until a long-term solution to the problems in the Bay-Delta is identified and implemented. State and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay Delta Conservation Plan, which is aimed at addressing the basic elements that include the Delta ecosystem restoration, water supply conveyance, and flood control protection and storage development. In dealing with these basic issues, the ideal solutions sought are the ones that address both the physical changes required as well as financing and governance. In evaluating the supply capabilities for the 2010 RUWMP, MWD reasonably calculated that a new Delta conveyance would be fully operational by 2022 that would return supply reliability similar to 2005 condition, prior to supply restrictions imposed due to the Biological Opinions.

  This assumption is consistent with MWD's long-term Delta Action Plan that recognizes the need for a comprehensive global approach to the fundamental issues and conflicts to result in a sustainable Bay-Delta, sufficient to avoid biological opinion restrictions on planned SWP deliveries to MWD and the other SWP Contractors. Further, recently passed State legislation includes pathways for establishing governance structures and financing approaches to implement and manage the identified elements.

- ***Storage:*** A key component of MWD's water supply capability is the amount of water in MWD's storage facilities. Storage is a major component of MWD's dry-year resource management strategy. MWD's likelihood of having adequate supply capability to meet projected demands, without implementing the Water Supply Allocation Plan, is dependent on its storage resources.

  In developing the supply capabilities for the 2010 RUWMP, MWD reasonably calculated a simulated median storage level going into each of five-year increments based on the balances of supplies and demands. Under the median storage condition, there is an estimated 50 percent probability that storage levels would be higher than the assumption used, and a 50 percent probability that storage levels would be lower than the assumption used. All storage capability figures shown in the 2010 RUWMP reflect actual storage program conveyance constraints. It is important to note that under some conditions, MWD may choose to implement the Water Supply Allocation Plans in order to preserve storage reserves for a future year, instead of using the full supply capability. This can result in cost impacts at the retail level even under conditions where there may be adequate supply capabilities to meet demands.

In addition to the 2010 RUWMP, MWD has an Integrated Water Resources Plan (IRP) that outlines strategies for future water reliability. MWD first adopted its IRP in 1996 and updated it in 2004 to provide long-term targets for water resources development in MWD's service area through 2025. The goal of the 2010 IRP Update is to outline a strategy for water reliability through the year 2035. The 2010 IRP Update builds on MWD's core resources and programs and then adds a supply buffer, equivalent to 10 percent of total retail demand, and an adaptive management approach to address the challenge of uncertainty. As stated in the 2010 IRP Update, "inherent in an adaptive management approach is the ability to effectively respond to unforeseen water supply disruptions through cost-effective strategies that ensure water supplies and facilities are in place when needed". Effectively, the 2010 IRP Update will:

- Maintain a core resource strategy that will meet demands through 2035 under foreseeable hydrologic conditions;
- Commit to additional resource actions as part of a supply buffer to ensure reliability under uncertain circumstances beyond foreseeable hydrologic conditions;
- Increase the regional goals for water use efficiency, including recycling, in order to account for future uncertainty;
- Establish foundational, preparatory actions necessary to further develop options for alternative resources that may be needed in the future.

MWD knows that the tools needed to lower local demand and increase local supplies require a collaborative approach among water districts, local governments, and all stakeholder groups. The 2010 IRP Update identifies changes to the IRP and establishes a direction for addressing the present and future challenges brought by extended drought, climate change, and environmental concerns (AECOM 2010).

Municipal Water District of Orange County

MWDOC is the third largest member agency of MWD. Established in 1951 under the Municipal Water District Act of 1911, MWDOC provides and manages wholesale imported MWD water that is used by retail water agencies and cities throughout Orange County. According to the MWDOC, approximately half of Orange County's water supply comes from imported supplies.

These supplies are delivered to cities and water agencies via several aqueducts, including the Orange County Feeder and the East Orange County Feeder. The remainder of Orange County's water supply comes from a vast underground aquifer located below north and central Orange County, as well as from recycled wastewater produced by several local water agencies, and several small groundwater basins.

Orange County Water District

The OCWD was formed in 1933 to protect Orange County's water rights for local water supplies in the Santa Ana River and to manage the underground aquifer that exists below northern and central Orange County. As needed, the OCWD augments local water supplies with imported water provided through the MWD and the MWDOC to serve the County's retail water agencies (AECOM 2010). The OCWD regulates the use of groundwater supplies through a Groundwater Basin Management Plan. A Groundwater Management Plan 2009 Update was considered and adopted by the OCWD Board of Directors on July 15, 2009 (Miller 2009).

As part of the regulation of groundwater supplies, the OCWD is responsible for recharging local groundwater basins (including the La Habra Basin, the San Juan Basin, the Laguna Canyon Basin, and the Lower Santa Ana River Basin), which generally involves recharge with Santa Ana River flows, recycled water, and imported water to maintain groundwater levels. While the Orange County Basin is not regulated on an annual safe-yield basis, the OCWD aims to maintain a general balance of groundwater pumping and recharge over a period of several years through financial incentives available to member water agencies (AECOM 2010).

To augment imported water and groundwater supplies, the OCWD and the Orange County Sanitation District developed the Groundwater Replenishment System (GWR System) project in January 2008. The GWR System provides up to 72,000 afy of purified water for groundwater recharge by producing purified water to recharge the basin. OCWD's 2009 Draft Groundwater Management Plan Update estimates groundwater replenishment supplies of 61,000 afy (OCWD 2009). OCWD plans to expand the GWR System by 30,000 afy in late 2011 through an expansion of their secondary treatment processes. This phase is currently under design and would increase available recharge from 72,000 afy to 102,000 afy (AECOM 2010).

City of Newport Beach

The City's 2005 Urban Water Management Plan contains a comparison of projected water supply and estimated demands through year 2030. The potable water resources necessary to meet projected demands include imported water (30 percent) and groundwater (70 percent). Existing and projected supplies to the City are shown in Table 4.15-2.

As previously shown in the City's demand summary (Table 4.15-1), there has been an average reduction of four percent per year in actual demand (and supply requirements) over the last two years since Fiscal Year 2006–2007 due to drought conditions, SWP cutbacks, increased conservation through heightened public awareness, and implementation of the adopted water conservation and efficient landscape ordinances (refer to SC 4.15-1 and SC 4.15-2). These reductions are not accounted for in the 2005 Urban Water Management Plan's supply projections (presented in Table 4.15-2).

**TABLE 4.15-2**
**EXISTING AND PROJECTED SUPPLIES**

| Supply Source | Annual Amount (acre-feet/yr) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Historical Supplies | | | | Projected Supplies | | | | |
| | FY 2005–2006 | FY 2006–2007 | FY 2007–2008 | FY 2008–2009 | 2010 | 2015 | 2020 | 2025 | 2030 |
| MWDOC (imported) | 14,012 | 15,093 | 3,743 | 5,843 | 5,758 | 6,157 | 6,362 | 6,226 | 6,256 |
| OCWD (groundwater) | 3,558 | 3,605 | 14,338 | 11,287 | 13,590 | 14,921 | 14,778 | 14,990 | 14,960 |
| Recycled Water | 250 | 311 | 265 | 299 | 443 | 477 | 500 | 500 | 500 |
| **Total** | **17,820** | **19,009** | **18,346** | **17,429** | **19,791** | **21,555** | **21,640** | **21,716** | **21,716** |
| % Potable from Groundwater[a] | 20% | 19% | 79% | 66% | 70% | 71% | 70% | 71% | 71% |

MWDOC: Metropolitan Water District of Orange County; OCWD: Orange County Water District; FY: fiscal year

a. Any differences are due to rounding.

Source: AECOM 2010.

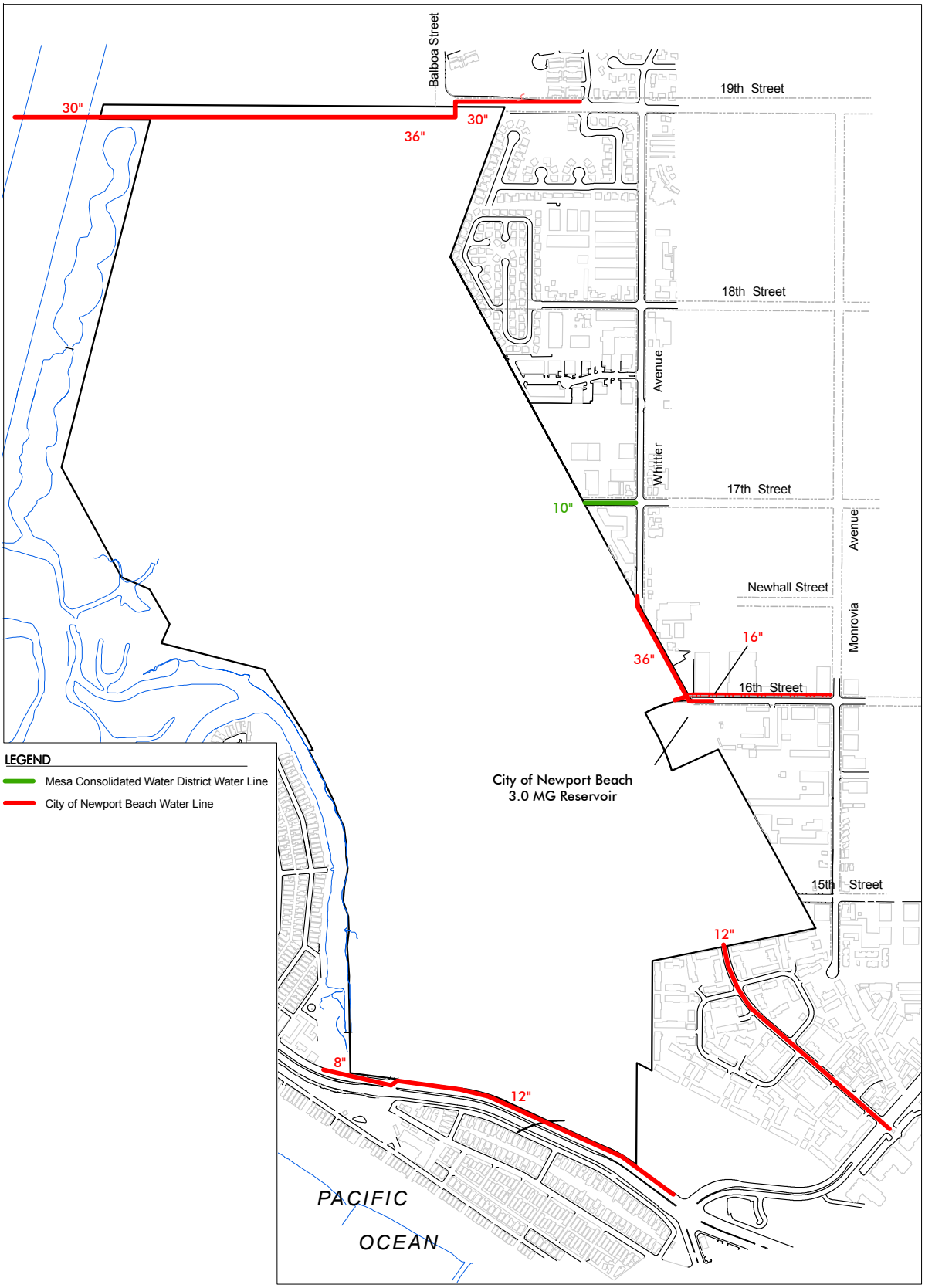
### *Water Facilities*

Domestic Water

Domestic water services are currently provided on a limited basis to the Project site via Mesa Consolidated Water District and the City of Newport Beach. Although the site is neither located within the City of Newport Beach or Mesa Consolidated Water District's service area, the Project site is located within MWDOC and OCWD service areas; these unincorporated areas are proposed, as part of the Project, to be annexed into the City of Newport Beach as well as the City of Newport Beach's retail water agency boundary. Mesa Consolidated Water District operates domestic water facilities adjacent to the Project site at 19th Street and within surrounding areas in the City of Costa Mesa. The City of Newport Beach also operates domestic water distribution facilities in the vicinity of the Project site. Specifically, City of Newport Beach domestic water facilities are located adjacent to the site at West Coast Highway, 16th Street, and Ticonderoga Street. A City transmission main also exists at the northern end of the Project site, which transports well water to a City-operated treatment facility and reservoir at the terminus of 16th Street (Fuscoe 2010a). Existing water facilities are shown on Exhibit 4.15-1, Existing Water Systems.

Recycled Water

The Project site is not currently served by recycled water facilities as the City of Newport Beach does not have any recycled water facilities in the Project area. The nearest recycled water facility is a Mesa Consolidated Water District-operated water line along Adams Street that is located approximately three miles north of the Project site (Fuscoe 2010a).




Source: Fuscoe 2008

# Existing Water Systems

Exhibit 4.15-1

*Newport Banning Ranch EIR*

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## Project Design Features and Standard Conditions

### *Project Design Features*

**PDF 4.15-1** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require the use of native and/or drought-tolerant landscaping in public common areas to reduce water consumption.

**PDF 4.15-2** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require the use of Smart Controller irrigation systems in all public and common area landscaping. Community landscape areas will be designed on a "hydrozone" basis.

**PDF 4.15-3** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan include a plan for a domestic water system designed to take advantage of existing water transmission facilities that connect to the Project site to minimize off-site impacts.

**PDF 4.15-4** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan include a plan for the Project's water system to provide a level of redundancy by making a connection between the City of Newport Beach Zone 1 and Zone 2 water lines.

The following PDFs are addressed in Section 4.11, Greenhouse Gas Emissions, and are also applicable to water supply.

**PDF 4.11-1** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that the Project be consistent with a recognized green building program that exists at the time of final Project approval such as, but not limited to, Build It Green, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND™), California Green Builder, or National Association of Home Builders' National Green Building Standard.

**PDF 4.11-4** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that all residential development incorporate the following measures, which will be reflected on and incorporated into every application for a final subdivision map that creates residential lots:

a. Builder-installed indoor appliances, including dishwashers, showers, and toilets, will be low water-use. Homeowners Association (HOA) owned and operated public and/or common area men's restrooms will be required to feature waterless urinals.

b. Smart Controller irrigation systems will be installed in all public and common area landscaping. Community landscape areas will be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure.

c. Air conditioning units will be Freon-free.

d. Concrete for paving in public infrastructure and Project common areas will not be acid-washed unless mandated by agency requirements.

e. The future homeowners association for Newport Banning Ranch will be required to provide educational information on recycling to all homeowners prior to individual purchase of property and again annually.

f. Multimetering "dashboards" will be provided in each dwelling unit to visualize real-time energy use.

g. Single-family detached residential roofs, commercial building roofs, and HOA owned public building roofs, which have adequate solar orientation shall be designed to be compatible with the installation of photovoltaic panels or other current solar power technology.

***Standard Conditions and Requirements***

**SC 4.15-1** Chapter 14.16, Water Conservation and Supply Level Regulations, of the *City of Newport Beach Municipal Code* establishes the following mandatory permanent water conservation requirements, as summarized, during non-shortage conditions:

- No customer shall use potable water to irrigate landscaping unless such irrigation is limited to no more than ten minutes of watering per day per station.
- No person shall use water to irrigate landscaping that causes or allows excessive flow or runoff.
- No person shall use water to wash down hard or paved surfaces, except when necessary to alleviate safety or sanitary hazards.
- No person shall permit excessive use, loss, or escape of water through breaks, leaks, or other malfunctions in the user's plumbing or distribution system.
- No customer shall use potable water for irrigation during a rainfall event.
- By July 1, 2012, all landscape irrigation systems connected to dedicated landscape meters shall include rain sensors that automatically shut off such systems during periods of rain or include evapotranspiration systems that schedule irrigation based on climatic conditions.
- No customer shall operate a water fountain or other decorative water feature that does not use a recirculating water system.
- No customer shall use water to clean a vehicle, except by use of a hand-held bucket or hand-held hose equipped with a water shut-off nozzle or device.
- Effective January 1, 2010, all new commercial conveyor car wash systems shall have recirculating water systems. By January 1, 2013, all commercial conveyor car wash systems shall have recirculating water systems.
- Eating or drinking establishments shall not provide drinking water unless expressly requested by the patron.
- Hotel, motel, and other commercial lodging establishments shall provide customers the option of not having towels and linen laundered daily.
- No customer shall install a new, single pass cooling system in a building or on premises requesting new water service.
- Effective January 1, 2010, all new washing machines installed in commercial and/or coin-operated laundries shall be *EnergyStar® and CEE Tier III qualified.*

*By January 1, 2014, all washing machines installed in commercial and/or coin-operated laundries* shall be *EnergyStar® and CEE Tier III qualified.*

- No customer shall use water from any fire hydrant for any purpose other than fire suppression or emergency aid.
- Commercial kitchens shall employ water-conservation practices and technology.
- Construction Site Requirements:
  - No person shall use potable water for soil compaction or dust control on a construction site where there is an available and feasible source of recycled water or non-potable water approved by the Department of Public Health and appropriate for such use.
  - No person shall operate a hose within a construction site that is not equipped with an automatic shut-off nozzle, provided that such devices are available for the size and type of hose in use.

**SC 4.15-2** Chapter 14.16, Water Conservation and Supply Level Regulations, of the *City of Newport Beach Municipal Code* establishes the following four levels of water supply shortage response actions to be implemented during times of declared water shortages.

| Water Conservation Level | Requirements |
|---|---|
| Level One | Limit outdoor watering to scheduled irrigation days |
| | Cutbacks in water usage (up to 10%) |
| | Increased response time to fix broken/leaking plumbing (within 72 hours of notification from City) |
| | Limit filling of ornamental water features/pools (once per week) |
| Level Two | Further reduction in scheduled irrigation days and no watering between 9:00 AM and 5:00 PM on any day |
| | Increased cutbacks in water usage (11–25%) |
| | Increased response time to fix broken/leaking plumbing (within 48 hours of notification from the City) |
| | Increase limitations for filling of ornamental water features/pools (once every other week) |
| Level Three | Further reduction in scheduled irrigation days and no watering between 9:00 AM and 5:00 PM on any day |
| | Increased cutbacks in water usage (26–40%) |
| | Increased response time to fix broken/leaking plumbing (within 24 hours of notification from the City) |
| | No filling of ornamental water features/pools |
| Level Four | No outdoor watering |
| | Increased cutbacks in water usage (more than 40%) |
| | No new potable water services/meters |
| | Increased response time to fix broken/leaking plumbing (within 24 hours of notification from City) |
| | No filling of ornamental water features/pools |

## Thresholds of Significance

The following threshold criteria are from the City of Newport Beach Environmental Checklist. The Project would result in a significant impact related to water supply if it would:

**Threshold 4.15-1** Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

**Threshold 4.15-2** Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

**Threshold 4.15-3** Conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

## Environmental Impacts

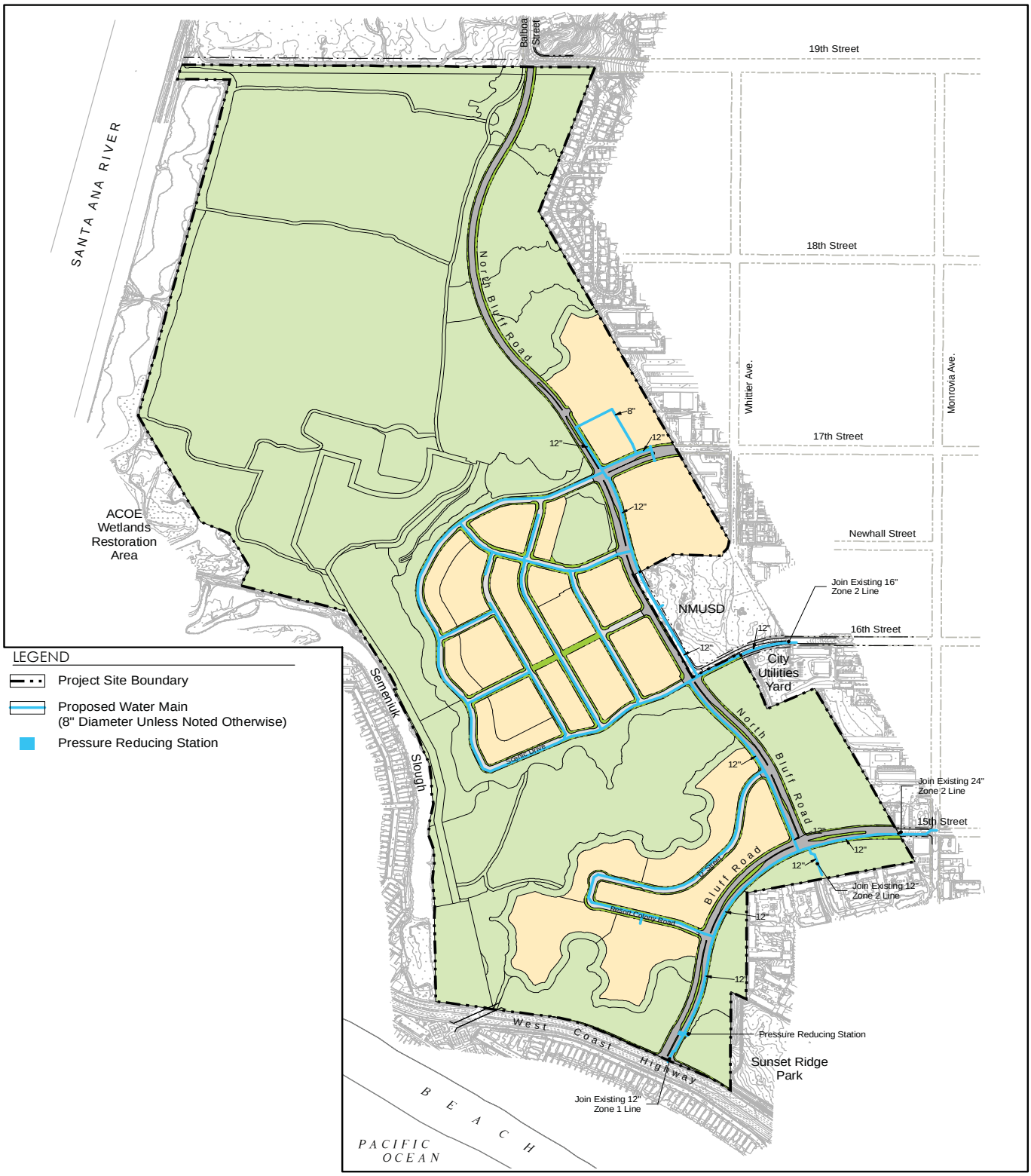
***Threshold 4.15-1 Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

### *Water Infrastructure*

The Sewer and Water Facilities Plan for the Project indicates that the following would be required to serve domestic water demands: (1) 8- and 12-inch water mains and (2) a pressure-reducing station proposed along the southern side of "A" Street in the southern portion of the Project site. These domestic water facilities would be constructed within the Project site and would occur within the identified development footprint evaluated throughout this EIR.

Exhibit 4.15-2, Master Water Plan, depicts the existing and proposed water facilities. Implementation of the water distribution system for the proposed Project would require connections to the City's existing water infrastructure at West Coast Highway, 15th Street, 16th Street, and Ticonderoga Street. Within the Project site, a network of 8- to 12-inch-diameter water mains is proposed to provide potable, irrigation, and fire flow water service to the proposed on-site land uses. Connections to an existing 12-inch line in West Coast Highway and a 12-inch line in Ticonderoga Street would occur within the Project's development footprint. In addition to these connections, a proposed 12-inch domestic water main would extend east of the Project site into the 15th Street right-of-way to the intersection with Monrovia Avenue and connect with an existing 24-inch water line. Another 12-inch water main would extend east of the Project site into 16th Street and connect with an existing 14-inch water line. A pressure-reducing station is proposed adjacent to Bluff Road near West Coast Highway. Both these off-site connections would occur within existing street rights-of-way and would not result in significant environmental effects beyond those addressed as part of this EIR.

***Impact Summary:*** ***Less Than Significant Impact.*** Implementation of the Project would increase demand for water supply. Anticipated water demand would require construction of water facilities pursuant to Section 3.0, Project Description, which would primarily occur within the Project's development




Source: FORMA 2011

# Master Water Plan

Exhibit 4.15-2

*Newport Banning Ranch EIR*

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footprint. Potential impacts are addressed as a component of the overall Project. PDFs 4.15-1 through 4.15-4, PDF 4.11-1, and PDF 4.11-4 are designed to reduce water consumption through measures such as the use of drought-tolerant plants, Smart Controller irrigation systems, and the green building program. SC 4.15-1 and SC 4.15-2 incorporate water conservation and drought-response measures. No significant impacts are anticipated associated with water infrastructure.

***Threshold 4.15-2 Are there sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

***Water Supply***

Table 4.15-3 identifies the projected water demand for the proposed Project. As shown in the table, water demand is estimated at 613.5 afy.

**TABLE 4.15-3**
**PROJECTED WATER DEMAND**

| Land Use | Unit Demand Factor (gpm/ac) | Area (ac) | Density (du/ac) | Average Annual Water Demand | |
|---|---|---|---|---|---|
| | | | | Demand (gpm) | Demand (afy) |
| **Open Space/Public Parks/Recreation** | | | | | |
| Open Space | N/A | 251.6 | | N/A | N/A |
| Community Park | 2.00 | 28.0 | | 56.0 | 90.3 |
| Bluff Park | 1.20 | 20.6 | | 24.7 | 39.8 |
| Interpretive Park | 2.00 | 3.7 | | 7.4 | 11.9 |
| *Subtotal Open Space/Public Parks/Recreation* | | *303.9* | | *88.1* | *142.0* |
| **Visitor-Serving Resort Inn/Residential/Commercial** | | | | | |
| Visitor-Serving Resort | 2.00 | 5.3 | 2.0 | 10.6 | 17.1 |
| Low Density Residential | 2.03 | 26.1 | 2.0 | 53.0 | 85.5 |
| Low-Medium Density Residential | 2.16 | 11.8 | 2.2 | 25.5 | 41.1 |
| Medium Density Residential | 2.53 | 27.2 | 2.5 | 68.8 | 111.0 |
| Medium High Density Residential | 2.87 | 5.8 | 15.0 | 16.6 | 26.8 |
| High Density Residential | 6.03 | 19.2 | 38.0 | 115.8 | 186.8 |
| Commercial | 1.20 | 1.7 | | 2.0 | 3.2 |
| *Subtotal Visitor-Serving Resort Inn/Residential/ Commercial* | | *97.1* | | *292.3* | *471.5* |
| **Total** | | **401.0** | | **380.4** | **613.5** |

gpm/ac: gallons per minute per acre; ac: acre; du/ac: dwelling units per acre; gpm: gallons per minute; afy: acre-feet per year.
Source: AECOM 2010.

Development of the Project site consistent with the Residential Village General Plan land use designation that is assumed in the infrastructure assumptions for the *City of Newport Beach General Plan* and the City's 1999 Water Master Plan (AECOM 2010). While the General Plan anticipated development of the Project site with a Project of similar density to that which is

currently proposed, the 1999 Water Master Plan anticipated development of the Project site with a higher density project, as shown in Table 4.15-4.

**TABLE 4.15-4**
**PROJECTED WATER DEMAND COMPARISON TO**
**CITY OF NEWPORT BEACH 1999 WATER MASTER PLAN**

| | 1999 Water Master Plan Assumptions | Proposed Project | Net Change |
|---|---|---|---|
| Area | 482 acres | 401 acres | (81 acres) |
| Dwelling Units | 2,329 du | 1,375 du | (954 du) |
| Commercial Space | 65,000 sf | 75,000 sf | 10,000 sf |
| Demand | 623.0 gpm<br>1,005 afy<br>0.90 mgd | 380.4 gpm<br>613.5 afy<br>0.55 mgd | (242.6 gpm)<br>(391.5 afy)<br>(0.35 mgd) |

afy: acre feet per year; du: dwelling unit; gpm: gallons per minute; mgd: million gallons per day; sf: square feet.

Source: AECOM 2010.

The water demand for the Project site was included in the City's water demand forecasts (as identified by City staff and the 1999 Water Master Plan) and is reflected in the City's 2005 Urban Water Management Plan and in MWDOC, OCWD, and MWD planning documents. More intensive development with higher water demands than the Project was considered and accounted for in the City's 2005 Urban Water Master Plan. Thus, the water demand of the currently proposed Project could be served by the resources identified in the City's 2005 Urban Water Master Plan.

As shown in Table 4.15-4 and based on the proposed Project's total anticipated demand for water supply (i.e., 613.5 afy, refer to Table 4.15-3), there would be a decrease of 391.5 afy of water demand from the site when compared to the assumptions in the 1999 Water Master Plan. There would be adequate water supplies to meet the demands of the Project when considered with the demands of existing customers and other future planned uses during normal year conditions.

Table 4.15-5 identifies anticipated water supplies for the City during normal year, single-dry year, and multiple-dry years based on information provided in the City's 2005 Urban Water Management Plan and derived from MWDOC's water balance model. During dry years, it is assumed that local supplies would be reduced and the reliability of imported supply would increase through MWD's water transfer and storage programs. As an example, groundwater supply decreases from 70 percent during normal years to between 60 and 64 percent during the first multiple dry year. During the third multiple dry year, the groundwater supply further decreases to between 49 and 59 percent.

## TABLE 4.15-5
## PROJECTED WATER SUPPLY AND DEMAND
## (NORMAL AND DRY YEAR PERIODS)

| Supply Source | Amount (acre-feet/year) | | | | |
|---|---|---|---|---|---|
| | | | Multiple-Dry Years | | |
| | Normal Year | Single-Dry Year | Year 1 | Year 2 | Year 3 |
| **Projected Year 2010** | | | | | |
| **Total Projected Demand** | **19,791** | **20,889** | **20,553** | **20,193** | **20,889** |
| **Available Supply** | | | | | |
| MWDOC (Imported) | 5,758 | 8,450 | 7,260 | 8,099 | 8,450 |
| OCWD (Groundwater) | 13,590 | 11,996 | 12,850 | 11,651 | 11,996 |
| Recycled Water | 443 | 443 | 443 | 443 | 443 |
| **Total Available Supply** | **19,791** | **20,889** | **20,553** | **20,193** | **20,889** |
| % Potable Supply from Groundwater[a] | 70% | 59% | 64% | 59% | 59% |
| *Projected Difference* | *0* | *0* | *0* | *0* | *0* |
| **Projected Year 2015** | | | | | |
| **Total Projected Demand** | **21,555** | **22,751** | **22,376** | **22,155** | **22,751** |
| **Available Supply** | | | | | |
| MWDOC (Imported) | 6,157 | 9,911 | 8,706 | 10,114 | 9,911 |
| OCWD (Groundwater) | 14,921 | 12,363 | 13,193 | 11,564 | 12,363 |
| Recycled Water | 477 | 477 | 477 | 477 | 477 |
| **Total Available Supply** | **21,555** | **22,751** | **22,376** | **22,155** | **22,751** |
| % Potable Supply from Groundwater[a] | 71% | 56% | 60% | 53% | 56% |
| *Projected Difference* | *0* | *0* | *0* | *0* | *0* |
| **Projected Year 2020** | | | | | |
| **Total Projected Demand** | **21,640** | **22,840** | **23,053** | **22,423** | **22,840** |
| **Available Supply** | | | | | |
| MWDOC (Imported) | 6,362 | 11,314 | 8,978 | 10,771 | 11,314 |
| OCWD (Groundwater) | 14,778 | 11,026 | 13,575 | 11,152 | 11,026 |
| Recycled Water | 500 | 500 | 500 | 500 | 500 |
| **Total Available Supply** | **21,640** | **22,840** | **23,053** | **22,423** | **22,840** |
| % Potable Supply from Groundwater[a] | 70% | 49% | 60% | 51% | 49% |
| Projected Difference | 0 | 0 | 0 | 0 | 0 |
| **Projected Year 2025** | | | | | |
| **Total Projected Demand** | **21,716** | **22,921** | **23,144** | **22,511** | **22,921** |
| **Available Supply** | | | | | |
| MWDOC (Imported) | 6,226 | 10,726 | 9,006 | 10,168 | 10,726 |
| OCWD (Groundwater) | 14,990 | 11,695 | 13,638 | 11,843 | 11,695 |
| Recycled Water | 500 | 500 | 500 | 500 | 500 |
| **Total Available Supply** | **21,716** | **22,921** | **23,144** | **22,511** | **22,921** |
| % Potable Supply from Groundwater[a] | 71% | 52% | 60% | 54% | 52% |
| *Projected Difference* | *0* | *0* | *0* | *0* | *0* |

**TABLE 4.15-5 (Continued)**
**PROJECTED WATER SUPPLY AND DEMAND**
**(NORMAL AND DRY YEAR PERIODS)**

| Supply Source | Amount (acre-feet/year) | | | | |
|---|---|---|---|---|---|
| | | | Multiple-Dry Years | | |
| | Normal Year | Single-Dry Year | Year 1 | Year 2 | Year 3 |
| **Projected Year 2030** | | | | | |
| **Total Projected Demand** | **21,716** | **22,921** | **23,170** | **22,519** | **22,921** |
| **Available Supply** | | | | | |
| MWDOC (Imported) | 6,256 | 11,104 | 8,639 | 10,308 | 11,104 |
| OCWD (Groundwater) | 14,960 | 11,317 | 14,031 | 11,711 | 11,317 |
| Recycled Water | 500 | 500 | 500 | 500 | 500 |
| **Total Available Supply** | **21,716** | **22,921** | **23,170** | **22,519** | **22,921** |
| % Potable Supply from Groundwater[a] | 71% | 50% | 62% | 53% | 50% |
| *Projected Difference* | *0* | *0* | *0* | *0* | *0* |

MWDOC: Metropolitan Water District of Orange County; OCWD: Orange County Water District

a. Any differences are due to rounding.

Source: AECOM 2010.

As previously discussed, the City's water demand and supply requirements have declined by an average of four percent per year in the last two years since Fiscal Year 2006–2007 due to drought conditions, SWP cutbacks, and increased conservation through heightened public awareness and implementation of the newly adopted water conservation and efficient landscape ordinances. It should be noted that these reductions are not reflected in the projections from the 2005 Urban Water Management Plan and used in the WSA. Also, the demands shown for the single-dry and multiple-dry year projections are larger than the normal year demands. This is likely because the preparation of the Urban Water Management Plan followed a very wet year (Winter 2004–2005) when water was more abundant. Now, with the current cutbacks and restrictions in place, actual demands would likely be less.

Although the WSA concludes that the City would have sufficient water to meet its current and future demand, it bears mentioning that the City of Newport Beach, the MWDOC, the MWD, and the OCWD have developed plans and are implementing various projects and programs to ensure that existing and future water users within the City service area have an adequate water supply. In response to water supply uncertainties, the MWD developed a Supply Plan in April 2008 to identify specific resource and conservation actions to manage water deliveries for the next five years under continued drought conditions and court-ordered restrictions. The MWD completed the IRP 2010 Update to identify changes to the long-term plan and to establish direction to address the present and future challenges brought by record drought, climate change, and environmental concerns. In addition to MWD's efforts, OCWD's GWR System project, which was completed and on-line in January 2008, augments existing groundwater supplies by producing purified water to recharge the Orange County Groundwater Basin. Phase 2 is now under design to increase production from 72,000 afy to 102,000 afy. Within the City, the Water Conservation and Supply Level Regulations Ordinance from Chapter 14.16 of the Municipal Code was adopted in December 2009 and establishes permanent water conservation requirements during non-shortage conditions.

Based on the WSA, the City, as water purveyor, has determined that a sufficient supply is available during average, single-dry, and multiple-dry years that would meet the anticipated water demand associated with the Project, in addition to the water demands of existing and planned future uses through year 2030. Based on this information, the WSA determined that adequate water supply is available to meet the needs of the Project along with the demands of future development within the City (AECOM 2010). Therefore, the proposed Project's contribution to the cumulative impact on water supply is considered less than significant. Cumulative impacts are addressed in greater detail in Section 5.0 of this EIR.

***Impact Summary:*** ***Less Than Significant Impact.*** Implementation of the Project would not exceed available water supply according to the WSA; therefore, no impact would occur.

***Threshold 4.15-3*** ***Would the project conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***

Tables 4.15-11 and 4.15-12[4] evaluate the consistency of the proposed Project with the applicable goals and policies of SCAG and the City's General Plan with respect to water supply.

***Impact Summary:*** ***No Impact.*** As identified in Tables 4.15-11 and 4.15-12, the proposed Project would be consistent with the intent of the water supply goals and policies of SCAG and the *City of Newport Beach General Plan*.

## 4.15.2 WASTEWATER FACILITIES

### Regulatory Setting

#### *Federal*

Capacity Assurance, Management, Operation, and Maintenance Program

In January 2001, the USEPA published a proposed rule intended to clarify and expand permit requirements under the Clean Water Act to further protect public health and the environment from impacts associated with sanitary sewer overflows. The proposed rule is generally referred to as the "Capacity Assurance, Management, Operation, and Maintenance Program Regulation". The proposed Program's regulation requires development and implementation of programs intended to meet the performance standard of eliminating sanitary sewer overflows; to provide overflow emergency response plans, system evaluations, and capacity assurance plans; to conduct program audits; and to implement public communication efforts.

### Methodology

The Project's *Sewer and Water Facilities Plan* (Appendix L) was prepared by Fuscoe Engineering, Inc. (2010) to analyze the required wastewater distribution and collection systems.

[4] For ease of reading, the policy tables are located at the end of this section.

## Existing Conditions

Existing oil operations on the Project site produce limited amounts of wastewater. An operations building exists near the 17th Street entrance to the Project site and is served by a septic system. The oil extraction operation produces wastewater that is treated and then directed to a 12-inch pipe that connects with the existing Orange County Sanitation District (OCSD) facilities located upstream of the siphon at the Santa Ana River.

In addition to these on-site facilities, sanitary sewer facilities exist in the Project vicinity. Exhibit 4.15-3, Master Wastewater Plan, depicts the existing and proposed backbone wastewater facilities. The City of Newport Beach operates wastewater facilities adjacent to the Project site on West Coast Highway, along 19th Street, and on Ticonderoga Street. Discharge from the Ticonderoga Street and West Coast Highway sewer systems connect to the OCSD Bitter Point Pump Station (near the southwest corner of the Project site). Discharge from the 19th Street system flows to a City of Newport Beach-operated pump station at the end of Walkabout Circle, which connects with OCSD facilities. Wastewater treatment from each of these systems occurs at OCSD's Wastewater Treatment Plant 2 in the City of Huntington Beach. The City of Costa Mesa also has facilities near the Project site. These facilities, located along the eastern edge of the Project site, connect with OCSD interceptor sewer lines. This system of interceptor sewer (trunk) lines transports wastewater along Newport Boulevard and West Coast Highway to the Bitter Point Pump Station and is then treated at Wastewater Treatment Plant 2.

In the vicinity of the Project site, the OCSD operates facilities in West Coast Highway as well as the Bitter Point Pump Station and three force mains located within the Project site, all of which flow to Wastewater Treatment Plant 2. The OCSD discharges treated water into the Pacific Ocean through a 120-inch-diameter outfall pipe that extends 5 miles offshore to the discharge point. A standby 78-inch-diameter outfall pipeline stretches 1 mile offshore. Treatment levels meet all federal and State requirements. The OCSD also provides up to 10 mgd of treated wastewater to the OCWD for further processing for landscape irrigation and injection into the groundwater seawater intrusion barrier.

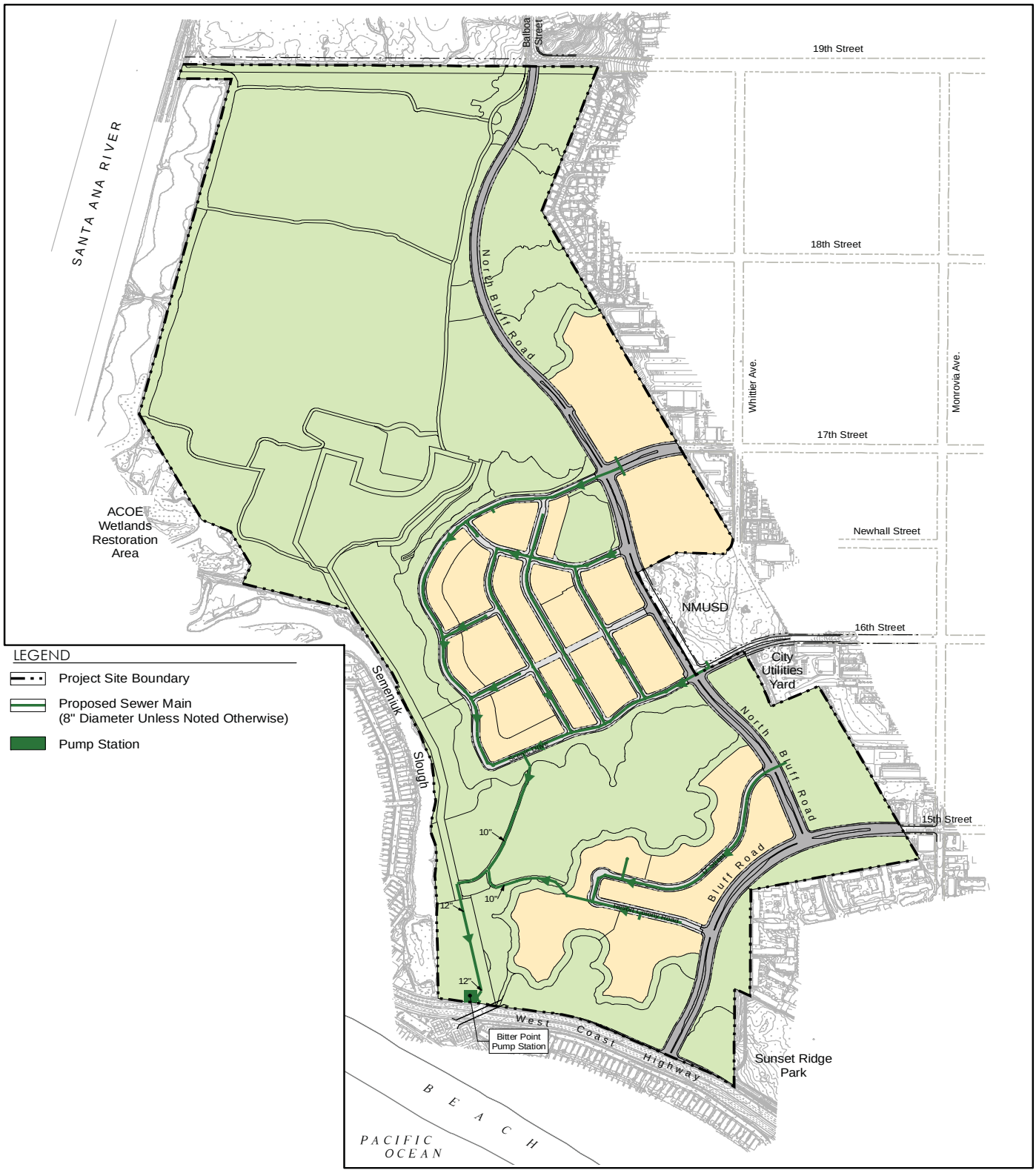
Table 4.15-6 identifies the past, current, and projected wastewater volumes collected and treated, and the quantity of wastewater treated to recycled water standards for treatment plants within the OCSD service area.

**TABLE 4.15-6**
**ORANGE COUNTY SANITATION DISTRICT**
**WASTEWATER COLLECTION AND TREATMENT**

| Type of Wastewater | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|---|---|
| Wastewater Collected and Treated in Service Area | 273,017 | 232,348 | 302,400 | 312,704 | 321,104 | 329,392 | 333,536 |
| Volume That Meets Recycled Water Standards | 12,156 | 75,000 | 105,000 | 105,000 | 105,000 | 105,000 | 105,000 |
| Note: quantities are in acre-feet per year; dates reflect "fiscal year ending". | | | | | | | |
| Source: City of Newport Beach 2010 Urban Water Management Plan. | | | | | | | |

## Project Design Features and Standard Conditions

No project design features or standard conditions have been identified for wastewater facilities.

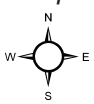



Source: FORMA 2011

# Master Wastewater Plan

## Exhibit 4.15-3

*Newport Banning Ranch EIR*




BonTerra CONSULTING

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## Thresholds of Significance

The following threshold criteria are from the City of Newport Beach Environmental Checklist. The Project would result in a significant impact related to wastewater facilities if it would:

**Threshold 4.15-4** Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

**Threshold 4.15-5** Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

**Threshold 4.15-6** Conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

## Environmental Impacts

***Threshold 4.15-4 Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?***

***Threshold 4.15-5 Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Wastewater originating from the Project site would ultimately be treated by facilities owned and operated by the OCSD. Project wastewater flows would be directed to OCSD's Treatment Plant No. 2 in Huntington Beach, which maintains a primary treatment capacity of 168 mgd and currently treats an average influent wastewater flow of approximately 110 mgd. Currently Plant No. 2 is operating at 65 percent of design capacity. The OCSD has indicated that it has existing and future treatment capacity to serve the proposed Project (McNelly 2010).

According to the April 2006 OCSD Strategic Plan Update (Fuscoe 2010a), buildout flow projections for the Newport Banning Ranch site assume estate residential development for the entire Project site with an anticipated dry weather flow rate of 0.29 mgd. Based on the unit flow factors provided in the OCSD Strategic Plan Update and the proposed land use plan for the Newport Banning Ranch Project, dry weather wastewater flows associated with development of the proposed Project were calculated and are provided in Table 4.15-7.

As shown, the total sewage generation for the proposed Project is estimated to be 0.259 mgd, which is less than the total sewage generation allocated to the Project in the April 2006 OCSD Strategic Plan Update. According to the 2006 Strategic Plan, based on the projected flow rates, the Sewer and Water Facilities Plan recommends an on-site sewer system that would discharge to the Bitter Point Pump Station which has a 40 mgd capacity (Exhibit 4.15-3). Therefore, a wastewater lift station would be used if gravity flows are not sufficient to convey sewage flows emanating from the Project to the OCSD Bitter Point Pump Station.

**TABLE 4.15-7**
**DRY WEATHER FLOW VOLUMES**

| Land Use | Acres | Unit Flow Rate (gpd/ac) | Dry Weather Flow (mgd) |
|---|---|---|---|
| Open Space/Parks | 295 | 0[a] | 0.000 |
| Commercial | 6 | 2,262 | 0.014 |
| Low Density Residential | 26 | 1,488 | 0.038 |
| Medium Density Residential | 60 | 3,451 | 0.207 |
| Roadway | 16 | 0 | 0.000 |
| **Total** | **403** | – | **0.259** |

gpd/ac: gallons per day per acre; mgd: million gallons per day.

a OCSD does not assign a sewer demand to parks since the demand is negligible in a regional setting. Therefore, a separate line in the table is not needed.

Source: Fuscoe 2010a.

The facility would be enclosed in a structure which would contain the equipment and controls for the pump station. The enclosed structure would also serve to attenuate any noise associated with the operation of the lift station and prevent potential visual effects associated with the equipment. Odor-control facilities, such as a hydrogen peroxide storage tank and metering pump, are standard design requirements for such facilities. Other equipment may include a surge tank, a chemical feed tank, and a storage tank. The entire building pad for the lift station would be between 10,000 and 15,000 square feet (sf) and would be enclosed in a structure approximately 2,000 sf feet in size. Although this is not preferred, if it is deemed to be necessary, the lift station could be located within the limits of disturbance assumed in the EIR.

Effluent from the development areas would be collected and directed to the OCSD trunk sewer upstream of the Bitter Point Pump Station via 10- and 12-inch pipes. The majority of the proposed wastewater pipelines would be constructed within the Project site and would occur within the identified development footprint evaluated throughout this EIR. An off-site connection would be required on 16th Street, adjacent to the Newport-Mesa Unified School District property. However, the connection would occur within an existing oil access road and would not result in significant environmental effects beyond those addressed as part of this EIR. Therefore, no additional direct impacts related to construction and operation of the on-site wastewater system would occur.

The wastewater treatment requirements issued by the RWQCB for OCSD's treatment plant were developed to ensure that adequate levels of treatment would be provided for the wastewater flows emanating from all land uses within its service area. The proposed Project has been developed with site design BMPs aimed at avoiding or reducing the water quality impacts of the Project and would incorporate all applicable BMPs for construction, post-construction/ operation, and water quality treatment to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) multiple separate storm sewer system (MS4) permit, Construction General Permit, the Drainage Area Management Plan (DAMP), the Project's Water Quality Management Plan (WQMP), and the City's water quality policies (refer to Section 4.10, Hydrology and Water Quality). As indicated above, the OCSD has indicated that it has treatment capacity to serve the proposed Project. Therefore, the wastewater from the Project site would not cause the treatment plant to exceed these treatment requirements.

***Impact Summary:*** ***Less Than Significant Impact.*** Although implementation of the Project would increase generation of wastewater, Project flows would not exceed

the established wastewater treatment requirements. Anticipated wastewater generation would require construction of water and sewer pipeline facilities within the development footprint, pursuant to Section 3.0, Project Description. One off-site connection would be required on 16th Street; however, the connection would occur within an existing oil access road and would not result in significant environmental effects beyond those addressed as part of this EIR.

***Threshold 4.15-6*** ***Would the project conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***

Tables 4.15-11 and 4.15-12[5] evaluate the consistency of the proposed Project with the applicable goals and policies of SCAG and the City's General Plan with respect to wastewater service.

***Impact Summary:*** ***No Impact.*** As identified in Tables 4.15-11 and 4.15-12, the proposed Project would be consistent with the intent of wastewater-related goals and policies of SCAG and the *City of Newport Beach General Plan*.

### 4.15.3 ENERGY

#### Introduction

The State CEQA Guidelines, Appendix F, Energy Conservation, requires EIRs to include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary energy consumption. Energy use (electricity and natural gas) is discussed in this section, and the energy conservation features of the Project's Green and Sustainable Program are described in this section; in Section 4.11, Greenhouse Gas Emissions; and throughout the EIR, as applicable. The information presented in this section is based on *Dry Utility Due Diligence, Newport Banning Ranch*, prepared by M.E. Nollkamper, Inc. (July 2008), which is included in Appendix L to this EIR. Cumulative impacts are addressed in Section 5.0 of this EIR.

#### Regulatory Setting

##### *Federal*

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the EISA includes other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202);
- Appliance and Lighting Efficiency Standards (Sections 301–325);
- Building Energy Efficiency (Sections 411–441).

[5] For ease of reading, the policy tables are located at the end of this section.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs".

### *State*

Title 24 Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Non-residential Buildings were established in 1978 in response to a mandate to reduce the State's energy consumption. These standards are promulgated under CCR, Title 24, Part 6, and are commonly referred to as "Title 24". The Title 24 standards are periodically updated to reflect new or improved energy efficiency technologies and methods. The 2008 Title 24 standards have been adopted and apply to any project requesting a building permit on or after August 1, 2009. A new development project is required to incorporate the most recent Title 24 standards in effect at the time the building permit application is submitted.[6]

## Existing Conditions

According to the U.S. Department of Energy, in 2007, California's total energy consumption—including for electricity generation—was 8,491.5 trillion British thermal units (Btu), representing approximately 8 percent of the United State's energy consumption (USDOE 2007). The major sources of consumed energy were petroleum (46.5 percent) and natural gas (28.7 percent) (USDOE 2007). Other sources include coal, nuclear electric power, hydroelectric power, geothermal power, and biomass (USDOE 2007). Approximately 18 percent of this energy was consumed by residential users, 19 percent by commercial users, 23 percent by industrial users, and 40 percent by the transportation sector. In 2008, the California Energy Commission (CEC) found that California's major sources of electricity were natural gas (46.5 percent), nuclear (14.9 percent), large hydroelectric (9.6 percent), coal (15.5 percent), and renewable sources (13.5 percent) (CEC 2009). Approximately 73.2 percent of California's electricity is generated in state; approximately 8.4 percent comes from the Pacific Northwest; and approximately 18.4 percent comes from the Southwest (CEC 2009).

As noted above, natural gas represents the largest source of electricity in California, and is the second-largest type of consumed fuel. Petroleum is the most-consumed source of energy in the state, and the transportation sector consumes approximately 40 percent of the State's energy. The State's natural gas comes from a variety of places. In 2007, approximately 12.9 percent came from California, 22.1 percent came from Canada, 24.2 percent came from the Rocky Mountains, and 40.8 percent came from the Southwest (CEC 2009). Similarly, the crude oil consumed in California comes from both in-state and out-of-state sources. In 2007, approximately 38.12 percent came from California, 13.41 percent came from Alaska, and 48.46 percent came from foreign countries (CEC 2009).

### *Electricity*

Electrical service to the Project area is provided by Southern California Edison (SCE). SCE is an independently owned utility that provides electrical power to a business and residential population of approximately 13 million people within a 50,000-square-mile service area that covers Central, Coastal, and Southern California, including the City of Newport Beach and the Project site (SCE 2009). SCE distributes electricity purchased through the California Power

[6] Please also refer to Section 4.11, Greenhouse Gas Emissions.

Exchange. SCE is regulated by the California Public Utilities Commission (CPUC), which protects customers from overcharge and promotes energy efficiency, system reliability, and financial integrity of utilities. According to the CEC, the SCE service area experienced a peak demand of 19,408 megawatts (MW) in 2000 (CEC 2009). The CEC estimates that electricity consumption and peak demand within SCE's service territory will continue to grow annually from 2010 to 2018 by 1.26 percent and 1.40 percent, respectively. In 2006, the CEC projected a peak demand in SCE's service territory of 24,960 megawatts (MW) in 2012 and a net energy load of 125.2 million megawatt hours (MWH). In 2009, the CEC projected a peak energy demand of 24,543 MW in 2015 and a peak energy demand of 25,561 MW in 2018.

The City's Municipal Operations Department is also responsible for the maintenance and operation of approximately 6,800 street lights within the City. In addition, this department provides service to the City-owned facilities which are used by City staff and the general public.

SCE derives its electricity from a variety of sources, as shown in Table 4.15-8. Nearly half of its electricity comes from natural gas, with renewable resources constituting another nearly 20 percent.

Standard electricity generation rates used by SCE currently exist under tariff schedules General Service (GS-2) and Time-of-Use (TOU), as filed with the CPUC. The primary distribution voltage levels serving the Newport Beach area are 12,000 kilovolts (kV) for commercial uses and 4,000 kV for residential uses.

**TABLE 4.15-8**
**SOUTHERN CALIFORNIA EDISON POWER CONTENT**

| Energy Resources | 2009 SCE Power Mix[a] (Projected) |
|---|---|
| Eligible Renewable | 16% |
| Biomass and Waste | 2% |
| Geothermal | 9% |
| Small Hydroelectric | 1% |
| Solar | 1% |
| Wind | 3% |
| Coal | 10% |
| Large Hydroelectric | 5% |
| Natural Gas | 51% |
| Nuclear | 18% |
| Other | <1% |
| **Total** | **100%** |

[a] 98 percent of SCE System Power Mix is specifically purchased from individual suppliers.

Source: SCE 2009.

SCE currently has overhead and underground facilities at various locations that are capable of providing service to the Project area. The following locations are likely points of service:

- ***19th Street.*** Overhead facilities consist of one 66-kilovolt Amperes (kVA) transmission circuit and one 12-kVA circuit. The transmission circuit crosses the Project site from east to west. The overhead 12-kVA circuit terminates at the eastern boundary of the Project

site and dips into an underground feed to serve the immediate area. This circuit may serve as the backbone system for the proposed Project.

- ***West Coast Highway.*** An underground backbone system is located along the southern side of the highway and has the potential to serve as the backbone feed for the proposed Project.

Additional overhead facilities are in place at the easterly boundary of the Project site at Whittier Avenue and 17th Street; at 16th Street near the tract boundary; and at 15th Street at Monrovia Avenue.

***Natural Gas***

The Southern California Gas Company (The Gas Company), is the nation's largest gas distribution utility, providing energy to 20.5 million customers over an area of approximately 20,000 square miles. The Gas Company provides natural gas service for the City of Newport Beach. The Gas Company purchases natural gas from several bordering states.

The CPUC regulates The Gas Company, which is the default provider required by State law for natural gas delivery to the City. The Gas Company has the capacity and resources to deliver gas except in certain situations that are noted in State law. As development occurs, The Gas Company will continue to extend its service to accommodate development and to supply necessary gas lines. It does not base its service levels on existing demands; rather, it makes periodic upgrades to provide service for particular projects and new development. The Gas Company requests that the developer contact the company with detailed information about a project's natural gas requirements. If necessary, The Gas Company customizes pipelines and mains to better serve newly constructed facilities. The cost for such service differs from project to project.

The Gas Company is continuously expanding its network of gas pipelines to meet the needs of new commercial and residential developments in Southern California. California has not experienced a widespread natural gas shortage in many years. Current supplies are adequate to meet demands, although natural gas storage could be expanded to improve reliability. As stated above, California imports 87 percent of its statewide natural gas supply.

The likely points of future natural gas service are from:

- ***19th Street.*** An underground four-inch main is located in the street right-of-way and serves the surrounding area.
- ***West Coast Highway.*** A gas pressure regulator station is located on the northern side of the highway in an oil pump station property.

Additional gas main facilities are located at the eastern boundary of the Project site at Whittier Avenue and 17th Street; at 16th Street near the tract boundary; and at 15th Street at Monrovia Avenue.

**Project Design Features and Standard Conditions**

The following PDFs are addressed in Section 4.6, Biological Resources, and Section 4.11, Greenhouse Gas Emissions, and are also applicable to energy resources.

### *Project Design Features*

The following PDF is addressed in Section 4.6, Biological Resources, and is also applicable to Energy.

**PDF 4.6-4** The Master Development Plan requires that street lights be utilized only in key intersections and safety areas. The Planned Community Development Plan requires that a "dark sky" lighting concept be implemented within areas of the Project that adjoin habitat areas. Light fixtures within these areas will be designed for "dark sky" applications and adjusted to direct/reflect light downward and away from adjacent habitat areas. The Newport Banning Ranch Planned Community Development Plan will restrict exterior house lighting to minimize light spillage into adjacent habitat areas.

The following PDFs are, addressed in Section 4.11, Greenhouse Gas Emissions, and are also applicable to Energy. PDFs 4.11-1 and 4.11-4, both listed under Section 4.15.1, Water Supply, also apply.

**PDF 4.11-2** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require the Project to exceed adopted 2008 Title 24 energy conservation requirements by a minimum of five percent.

**PDF 4.11-5** The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that the following measures be implemented during initial Project grading activities and will be incorporated into all grading permit applications submitted to the City:

a. Construction waste diversion will be increased by 50 percent from 2010 requirements.

b. To the extent practical, during the oilfield clean-up and remediation process, the Landowner/Master Developer will be required to recycle and reuse materials on site to minimize off-site hauling and disposal of materials and associated off-site traffic.

### *Standard Conditions and Requirements*

**SC 4.15-3** The proposed Project shall meet or exceed all State Energy Insulation Standards and City of Newport Beach codes in effect at the time of application for building permits. Commonly referred to as Title 24, these standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Title 24 covers the use of energy-efficient building standards, including ventilation; insulation; construction; and the use of energy-saving appliances, conditioning systems, water heating, and lighting. Plans submitted for building permits shall include written notes or calculations demonstrating compliance with energy standards and shall be reviewed and approved by the City of Newport Beach Community Development Department, Building Manager, prior to issuance of building permits.

The following SC from Section 4.11, Greenhouse Gas Emissions, would also be applicable to energy resources:

**SC 4.11-1** ***Energy Efficiency Standards.*** The Project shall be built in accordance with the California 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, commonly identified as the "2008 Title 24 Energy Efficiency Standards".[7]

The following SCs addressed in Section 4.10, Air Quality, and Section 4.12, Noise, would minimize the secondary construction-related impacts associated with the Project:

**SC 4.10-1** ***Dust Control.*** During construction of the proposed Project, the Project Developer shall require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 in order to minimize short-term emissions of dust and particulates. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with Best Available Control Measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. This requirement shall be included as notes on the contractor specifications. Table 1 of Rule 403 lists the Best Available Control Measures that are applicable to all construction projects. The measures include, but are not limited to, the following:

a. ***Clearing and grubbing:*** Apply water in sufficient quantity to prevent generation of dust plumes.

b. ***Cut and fill:*** Pre-water soils prior to cut and fill activities and stabilize soil during and after cut and fill activities.

c. ***Earth-moving activities*****:** Pre-apply water to depth of proposed cuts; re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and stabilize soils once earth-moving activities are complete.

d. ***Importing/exporting of bulk materials:*** Stabilize material while loading to reduce fugitive dust emissions; maintain at least six inches of freeboard on haul vehicles; and stabilize material while transporting to reduce fugitive dust emissions.

e. ***Stockpiles/bulk material handling:*** Stabilize stockpiled materials; stockpiles within 100 yards of off-site occupied buildings must not be greater than 8 feet in height, must have a road bladed to the top[8] to allow water truck access, or must have an operational water irrigation system that is capable of complete stockpile coverage.

f. ***Traffic areas for construction activities:*** Stabilize all off-road traffic and parking areas; stabilize all haul routes; and direct construction traffic over established haul routes.

[7] Note that PDF 4.11-2 commits the Project to exceed the energy requirements of these standards by at least five percent.

[8] Refers to a road to the top of the pile.

Rule 403 defines large operations as projects with 50 or more acres of grading or with a daily earth-moving volume of 5,000 cubic yards at least 3 times in 1 year. The Project is considered a large operation. Large operations are required to implement additional dust-control measures (as specified in Tables 2 and 3 of Rule 403); provide additional notifications, signage, and reporting; and appoint a Dust Control Supervisor. The Dust Control Supervisor is required to:

- Be employed by or contracted with the Property Owner or Developer;
- Be on the site or available on site within 30 minutes during working hours;
- Have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements; and
- Have completed the AQMD Fugitive Dust Control Class and have been issued a valid Certificate of Completion for the class.

**SC 4.12-1** To ensure compliance with Newport Beach Municipal Code Section 10.28.040, grading and construction plans shall include a note indicating that loud noise-generating Project construction activities (as defined in Section 10.28.040 of the Newport Beach Noise Ordinance) shall take place between the hours of 7:00 AM and 6:30 PM on weekdays and from 8:00 AM to 6:00 PM on Saturdays. Loud, noise-generating construction activities are prohibited on Sundays and federal holidays.

## Thresholds of Significance

The following threshold criteria are from the City of Newport Beach Environmental Checklist. The Project would result in a significant impact related to energy if it would:

**Threshold 4.15-7** Result in substantial adverse physical impacts associated with the provision of new or physically altered energy transmission facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service.

**Threshold 4.15-8** Conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

## Environmental Impacts

***Threshold 4.15-7*** ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered energy transmission facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service?***

### *Electricity*

The proposed Project would increase the demand for SCE electrical service in the Project area. Table 4.15-9 summarizes the projected demand for electricity based on maximum development

of the Project site and assuming 1,375 residential units, including a 75-room resort inn (94,000 sf) and 75,000 sf of commercial/retail uses based on the SCAQMD's 1993 CEQA Air Quality Handbook (SCAQMD Handbook).

**TABLE 4.15-9**
**ESTIMATED ANNUAL ELECTRICAL CONSUMPTION**

| Land Use | Units | Electrical Demand Factor | Annual Demand (million kWh)[a] |
|---|---|---|---|
| Residential | 1,375 du | 7,300 kWh/Unit/Year | 10.0 |
| Resort Inn | 94,000 sf | 13.28 kWh/sf/Year | 1.2 |
| Commercial/Retail | 75,000 sf | 13.63 kWh/sf/Year | 1.0 |
| | | **Total Annual Electricity Demand** | **12.2** |

du: dwelling units; sf: square feet; kWh: kilowatt-hours.
[a] All figures are rounded to the nearest tenth.
Source: Itron 2006; SCAQMD 2009.

Based on the factors presented in Table 4.15-9, the proposed Project has the potential to consume approximately 12.2 million kilowatt-hours (kWh) of electricity annually. However, the actual electrical use is expected to be lower than this estimate due to stricter Title 24 requirements and advances in technology for energy-efficient building materials and appliances that have occurred since the demand estimates presented in Table 4.15-9 were developed. This figure is provided as a gross estimate for informational purposes rather than an exact estimate.

SCE has indicated, via written communication dated May 19, 2008, its ability to serve the proposed Project based on their current projected growth (M.E. Nollkamper Inc. 2008). The Project would be served in accordance with all applicable tariff schedules, which are SCE's effective rates and rules on file with and approved by the CPUC, and subject to the receipt of such permits or other authorizations from public agencies as may be required for such installation. Therefore, projected electrical demand for the proposed Project would not significantly impact SCE's current level of service.

The Project is designed to avoid inefficient, wasteful, and unnecessary energy consumption and to otherwise reduce energy consumption as compared to standard construction practices, and includes the following measures: PDF 4.6-4 (street lights only in certain areas), PDF 4.11-2 (exceeding adopted 2008 Title 24 requirements by 5 percent), PDF 4.11-4 (subdivision map requirements), and PDF 4.11-5 (efficient grading operations). Additionally, SC 4.11-1 and SC 4.15-3 would ensure that energy conservation efforts would be incorporated into the Project to reduce the overall demand for electricity. In addition, PDF 4.11-1 requires the Project to be consistent with a recognized green building program (such as, but not limited to, Build It Green, U.S. Green Building Council [USGBC] Leadership in Energy and Environmental Design for Neighborhood Development [LEED-ND™], or the National Association of Home Builders' National Green Building Standard™) that exists at the time of final Project approval. Consistency with green building standards will require the incorporation of many energy efficiency measures identified in the Master Development Plan. As discussed above, SCE currently has electric facilities within and adjacent to the Project site that would serve the proposed Project. SCE facilities that may require relocation include an overhead circuit located along 19th Street.

SCE facility design for the proposed Project would be determined via coordination between SCE, the Developer, and the City of Newport Beach once more detailed development plans become available.

The impact of the proposed Project related to additional demand for electrical service would be less than significant. Physical impacts related to on-site electrical infrastructure are addressed as part of the Project analyzed throughout this EIR. The primary environmental impacts associated with on-site infrastructure installation would be related to air quality and noise, as this component of construction involves mainly grading, excavation, and movement and placement of the infrastructure materials. With implementation of SC 4.12-1 and Mitigation Measure (MM) 4.12-1 through MM 4.12-5 in Section 4.12, Noise, and SC 4.10-1 and MMs 4.10-1, 4.10-2, and 4.10-4 through 4.10-8 in Section 4.10, Air Quality, these potential impacts would be reduced to a less than significant level.

### *Natural Gas*

The proposed Project would increase the demand for The Gas Company-provided natural gas services and facilities for heating of homes and/or operation of certain appliances (i.e., heating and natural gas powered stoves and/or ovens). The use of fossil fuels (natural gas and petroleum) during construction is analyzed fully in Section 6.2, Significant Irreversible Changes Due to the Project, as part of the discussion of non-renewable resource use. Table 4.15-10 summarizes the projected demand for natural gas based on maximum development of the Project site and assuming 1,375 residential units, including a 75-room resort inn (94,000 sf) and 75,000 sf of commercial uses, based on the SCAQMD's 1993 CEQA Air Quality Handbook.

**TABLE 4.15-10**
**ESTIMATED ANNUAL NATURAL GAS CONSUMPTION**

| Land Use | Units | Natural Gas Demand Factor[a] | Annual Demand (million cf)[a] |
|---|---|---|---|
| Residential | 1,375 units | 79,980.0 cf/du/year | 58.2 |
| Resort Inn | 94,000 sf | 57.6 cf/sf/year | 5.4 |
| Commercial/Retail | 75,000 sf | 34.8 cf/sf/year | 2.6 |
| **Total Annual Natural Gas Demand** | | | **66.2** |

cf: cubic feet; du: dwelling units; sf: square feet.
[a] Natural gas demand factors are presented in monthly demand; all numbers are rounded to the nearest tenth.
Source: SCAQMD 1993.

Based on the SCAQMD's factors, the proposed Project would demand approximately 66.2 cubic feet (cf) of natural gas annually. The actual natural gas demand is expected to be lower than this estimate due to stricter Title 24 requirements and advances in technology for energy-efficient building materials and appliances since the development of the SCAQMD demand estimates in 1993. This figure is provided as a gross estimate for informational purposes rather than an exact estimate.

The Gas Company has indicated, via written communication dated June 18, 2008, its ability to serve the proposed Project from existing gas mains adjacent to the Project site in accordance with its policies and extension rules on file with the CPUC. Therefore, the projected demand for natural gas resulting from the proposed Project would not significantly impact The Gas Company's current level of service. Furthermore, implementation of SC 4.15-3 ensures that

energy-conservation efforts are incorporated into the Project to reduce the overall demand for natural gas.

As discussed above, The Gas Company currently has off-site facilities surrounding the Project site. However, more in-depth studies would be required to determine if the existing pressure regulator station may need to be upgraded and/or regulated. The Gas Company facility design for the proposed Project would be determined via coordination between The Gas Company, the Applicant, and the City once more detailed development plans become available.

The impact of the proposed Project related to additional demand for natural gas service would be less than significant. Physical impacts related to on-site natural gas infrastructure are addressed as part of the Project. The primary environmental impacts associated with on-site infrastructure installation would be related to air quality and noise, as this component of construction involves mainly grading, excavation, and movement and placement of the infrastructure materials. These potential impacts would be reduced to a less than significant level with implementation of SC 4.15-3 (discussed above); SC 4.12-1 and MM 4.12-1 through MM 4.12-5 in Section 4.12, Noise; and SC 4.10-1 and MMs 4.10-1, 4.10-2, and 4.10-4 through 4.10-8 in Section 4.10, Air Quality.

***Impact Summary:*** ***Less Than Significant Impact.*** There are existing electrical and natural gas facilities within and adjacent to the Project site to serve the proposed Project. All utility providers have indicated their ability to serve the proposed Project without adversely affecting their ability to continue serving the Project area. There would be less than significant impacts to additional demand for electric and natural gas services and infrastructure with implementation of the proposed Project. Physical impacts related to installation and/or relocation of necessary infrastructure are addressed as part of the proposed Project analyzed throughout this EIR. As discussed above, these potential impacts would be reduced to a less than significant level with implementation of SC 4.15-3, discussed above; SC 4.12-1, and MM 4.12-1 through MM 4.12-5 in Section 4.12, Noise; and SC 4.10-1 and MMs 4.10-1, 4.10-2, and 4.10-4 through 4.10-8 in Section 4.10, Air Quality.

***Threshold 4.15-8*** ***Would the project conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***

Tables 4.15-11 and 4.15-12[9] evaluate the consistency of the proposed Project with the applicable goals and policies of SCAG and the City's General Plan with respect to energy.

***Impact Summary:*** ***No Impact.*** As identified in Tables 4.15-11 and 4.15-12, the proposed Project would be consistent with the intent of the energy-related goals and policies of SCAG and the *City of Newport Beach General Plan*.

[9] For ease of reading, the policy tables are located at the end of this section.

## 4.15.4 MITIGATION PROGRAM

### Project Design Features

The following PDFs are applicable to water supply: PDF 4.11-1, PDF 4.11-4, PDF 4.15-1, PDF 4.15-2, PDF 4.15-3, and PDF 4.15-4. The following PDFs are applicable to energy: PDF 4.6-4, PDF 4.11-1, PDF 4.11-2, PDF 4.11-4, and PDF 4.11-5. No PDFs have been identified for wastewater facilities.

### Standard Conditions and Requirements

#### *Water*

The following standard conditions are applicable to water supply: SCs 4.15-1 and 4.15-2. The following condition is applicable to energy: SC 4.10-1, SC 4.11-1, SC 4.12-1, and SC 4.15-3. No standard conditions have been identified for wastewater facilities.

### Mitigation Measures

No mitigation is required. However, MMs 4.10-1, 4.10-2, and 4.10-4 through 4.10-8 in Section 4.10, Air Quality, and MM 4.12-1 through MM 4.12-5 in Section 4.12, Noise, would be applicable to minimize construction-related impacts.

## 4.15.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would not result in a significant impact to water supply, water and wastewater facilities, or energy.

## TABLE 4.15-11
## SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

| Relevant Goals and Policies | Consistency Analysis |
|---|---|
| ***Regional Comprehensive Plan Policies (Voluntary)[a]: Water*** | |
| **WA-9**<br>Developers and local governments should consider potential climate change hydrology and resultant impacts on available water supplies and reliability in the process of creating or modifying systems to manage water resources for both year-round use and ecosystem health. | The Project is consistent with this policy. The WSA for the Project looks at normal year, single-dry year, and multiple-dry year scenarios and has determined that the Project can be adequately served. The Project assumes the use of native and/or drought-tolerant landscaping in public common areas. The Project's domestic water system would be designed to take advantage of existing water transmission facilities that connect to the Project site to minimize off-site impacts. The Project's water system would also provide a level of redundancy by making a connection between the City of Newport Beach Zone 1 and Zone 2 water lines. The Project would comply with all City requirements, including its Water Conservation and Supply Level Regulations.<br>In addition, refer to the response to Goal WA-9 for further description on water conserving measures incorporated into the proposed Project. |
| **WA-10**<br>Developers and local governments should include conjunctive use as a water management strategy when feasible. | The City is consistent with this policy. The City uses imported water, groundwater, and recycled water. It is anticipated that the Project site will be annexed into the City of Newport Beach and the City's water agency boundary. Because the City is consistent with the policy, the proposed Project would, therefore, also be consistent with this policy. |
| **WA-11**<br>Developers and local governments should encourage urban development and land uses to make greater use of existing and upgraded facilities prior to incurring new infrastructure costs. | The Project is consistent with this policy. The Project would connect to existing off-site water lines within existing rights-of-way. In addition to these connections, a proposed 12-inch domestic water main would extend east of the Project site into 15th Street's right-of-way to the intersection with Monrovia Avenue, and connect with an existing 24-inch water line. Another 12-inch water main would extend east of the Project site into 16th Street and connect with an existing 14-inch water line. On-site infrastructure would be constructed within the limits of disturbance for the Project. |
| **WA-12**<br>Developers and local governments should reduce exterior uses of water in public areas, and should promote reduced use in private homes and businesses, by shifting to drought-tolerant native landscape plants (xeriscaping), using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives. | The Project is consistent with this policy. Please refer to the response to WA-9. The City of Newport Beach Water Conservation Ordinance (City of Newport Beach Municipal Code §14.16) is applicable to the Project. The Ordinance includes but is not limited to LID and requires an approved water use plan.<br>Builder-installed indoor appliances (including dishwashers, showers, and toilets) will be low water use. HOA-owned and operated public and/or common area men's restrooms will be required to feature waterless urinals (PDF 4.11-4a).<br>Smart Controller irrigation systems will be installed in all public and common area landscaping. Community landscaped areas will be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure (PDF 4.11-4). All plant materials in Upland and Lowland Open Space Areas (excluding public park and recreation areas), Oil Facilities Areas, and common Fuel Management Areas |

## TABLE 4.15-11 (Continued)
## SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

| Relevant Goals and Policies | Consistency Analysis |
|---|---|
| | maintained by the HOA are required to be California natives (Green and Sustainable Program; 3.3.1-1). Drought-tolerant, native landscaping will be used in public common areas to reduce water consumption (Green and Sustainable Program; 3.3.1-b). |
| **WA-32**<br>Developers and local governments should pursue water management practices that avoid energy waste and create energy savings/supplies. | The Project is consistent with this policy. Please refer to the response to WA-9. The City of Newport Beach Water Conservation Ordinance (City of Newport Beach Municipal Code §14.16) is applicable to the Project. The Project includes several water conservation PDFs including PDF 4.11-4 which requires builder-installed indoor appliances (including dishwashers, showers, and toilets) to be low water use. HOA-owned and operated public and/or common area men's restrooms will be required to feature waterless urinals. (PDF 4.11-4a).<br>Smart Controller irrigation systems will be installed in all public and common area landscaping (PDF 4.15-2). Community landscaped areas will be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure (PDF 4.11-4).<br>Refer to the response to Goal EN-10 for further description on energy conserving measures incorporated into the proposed Project. |
| ***Regional Comprehensive Plan Policies (Voluntary)[a]: Energy*** | |
| **EN-10**<br>Developers and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. Energy saving measures that should be explored for new and remodeled buildings include:<br>• Using energy efficient materials in building design, construction, rehabilitation, and retrofit.<br>• Encouraging new development to exceed Title 24 energy efficiency requirements.<br>• Developing Cool Communities measures including tree planting and light-colored roofs. These measures focus on reducing ambient heat, which reduces energy consumption related to air conditioning and other cooling equipment.<br>• Utilizing efficient commercial/ residential space and water heaters: This could include the advertisement of existing and/or development of additional incentives for energy efficient appliance purchases to reduce excess energy use and save money. Federal tax incentives are provided online at http://www.energystar.gov/index.cfm?c=Products.pr_tax_credits.<br>• Encouraging landscaping that requires no additional irrigation: utilizing native, drought tolerant plants can reduce water usage up to 60 percent compared to traditional lawns. | The Project is consistent with this policy. The Project must be consistent with a recognized green building program, such as, but not limited to, Build It Green, USGBC LEED-ND™, or the National Association of Home Builders' National Green Building Standard™ that exists at the time of final Project approval (PDF 4.11-1). This consistency will require the incorporation of many energy efficiency measures identified in the Master Development Plan.<br>The Project will exceed adopted 2008 Title 24 energy requirements by a minimum of 5 percent (PDF 4.11-2).<br>With respect to water consumption, please refer to the response to WA-12. Please also refer to Section 4.11, Greenhouse Gas Emissions. |

## TABLE 4.15-11 (Continued)
## SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

| Relevant Goals and Policies | Consistency Analysis |
|---|---|
| • Encouraging combined heating and cooling (CHP), also known as cogeneration, in all buildings.<br>• Encouraging neighborhood energy systems, which allow communities to generate their own electricity<br>• Orienting streets and buildings for best solar access.<br>• Encouraging buildings to obtain at least 20% of their electric load from renewable energy. | |
| **EN-11**<br>Developers and local governments should submit projected electricity and natural gas demand calculations to the local electricity or natural gas provider, for any project anticipated to require substantial utility consumption. Any infrastructure improvements necessary for project construction should be completed according to the specifications of the energy provider. | The Project is consistent with this policy. As identified in this EIR section, all utility providers have indicated their ability to serve the proposed Project without adversely affecting their ability to continue serving the Project area. There would be less than significant impacts to additional demand for electric and natural gas services. Physical impacts related to installation and/or relocation of necessary infrastructure are addressed as part of the overall impact analysis provided in this EIR. |
| **EN-12**<br>Developers and local governments should encourage that new buildings are able to incorporate solar panels in roofing and tap other renewable energy sources to offset new demand on conventional power sources. | The Project is consistent with this policy. PDF 4.11-4 requires that single-family detached residential roofs, commercial building roofs, and HOA-owned public building roofs (which have adequate solar orientation such as being south-facing roofs with sufficient sun exposure) shall be designed and constructed to be compatible with the installation of photovoltaic panels or other current solar power technology. |

LID: Low-Impact Development; HOA: Homeowners Association; USGBC LEED-ND™: U.S. Green Building Council Leadership in Energy and Environmental Design-Neighborhood Development;

[a] All SCAG Regional Comprehensive Plan policies listed are voluntary local government and developer practices.

## TABLE 4.15-12
## CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

| City of Newport Beach General Plan Relevant Goals, Policies, and Programs | Consistency Analysis |
|---|---|
| **Land Use Element** | |
| **Policies** | |
| **LU Policy 2.8: Adequate Infrastructure**<br>Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, storm drainage, energy, and so on) and public services (schools, parks, libraries, seniors, youth, police, fire, and so on). | The Project is consistent with this policy. The analysis provided in this EIR section identifies that adequate utility infrastructure and utility supply can be provided to serve the Project. |
| **Policies and Programs** | |
| **LU Policy 6.4.10: Sustainable Development Practices**<br>Require that any development of Banning Ranch achieve high levels of environmental sustainability that reduce pollution and consumption of energy, water, and natural resources to be accomplished | The Project is consistent with this policy. With respect to the topics addressed in this Section, the Project proposes both water and energy conservation measures as set forth in the Mitigation Program, which includes Project Design Features and Standards Conditions applicable to the Project. |

## TABLE 4.15-12 (Continued)
## CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

| City of Newport Beach General Plan Relevant Goals, Policies, and Programs | Consistency Analysis |
|---|---|
| through land use patterns and densities, site planning, building location and design, transportation and utility infrastructure design, and other techniques. Among the strategies that should be considered are the concentration of development, reduction of vehicle trips, use of alternative transportation modes, maximized walkability, use of recycled materials, capture and re-use of storm water on-site, water conserving fixtures and landscapes, architectural elements that reduce heat gain and loss, and preservation of wetlands and other habitats. | |
| **Natural Resources Element** | |
| **Natural Resources General Plan Goal NR 1** | |
| Minimized water consumption through conservation methods and other techniques. | The Project is consistent with this goal. The City of Newport Beach Water Conservation Ordinance (*City of Newport Beach Municipal Code* §14.16) is applicable to the Project. The ordinance includes but is not limited to LID and requires an approved water use plan.<br>Builder-installed indoor appliances (including dishwashers, showers, and toilets) will be low water use. HOA-owned and operated public and/or common area men's restrooms will be required to feature waterless urinals (PDF 4.11-4a).<br>Smart Controller irrigation systems will be installed in all public and common area landscaping. Community landscaped areas will be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure (see PDF 4.11-4b). All plant materials in Upland and Lowland Open Space Areas (excluding public park and recreation areas), Oil Facilities Areas, and common Fuel Management Areas maintained by the HOA are required to be California natives (Green and Sustainable Program; 3.3.1-a). Drought-tolerant, native landscaping will be used in public common areas to reduce water consumption (Green and Sustainable Program; 3.3.1-b). |
| **Policies** | |
| **NR Policy 1.1: Water Conservation in New Development**<br>Enforce water conservation measures that limit water usage, prohibit activities that waste water or cause runoff, and require the use of water–efficient landscaping and irrigation in conjunction with new construction projects. | The Project is consistent with this policy. Please refer to the response to Goal NR 1. |
| **NR Policy 1.2: Use of Water Conserving Devices**<br>Establish and actively promote use of water conserving devices and practices in both new construction and major alterations and additions to existing buildings. This can include the use of rainwater capture, storage, and reuse facilities. | The Project is consistent with this policy. Although the Project does not include rainwater capture and reuse facilities, it does include many other water-conserving design features, devices, and practices. Please refer to the response to Goal NR 1. As noted in that response, the Project will include water conserving appliances and fixtures as well as water conserving and low-water-demand landscape design. |

## TABLE 4.15-12 (Continued)
## CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

| City of Newport Beach General Plan Relevant Goals, Policies, and Programs | Consistency Analysis |
|---|---|
| **Natural Resources Element Goal NR 5: Sanitary Sewer Outlets** | |
| Minimal adverse effects to water quality from sanitary sewer outflows. | The Project is consistent with this goal. The City has adequate sewer system capacity to serve the requirements of the proposed Project. The Project would be able to tie into the existing sewer system without adversely affecting the system or causing any water quality effects. |
| **Policies** | |
| **NR Policy 5.1: City Sewer Management and Master Plans**<br>Implement the Sewer System Management Plan and the Sewer Master Plan. | The Project is consistent with this policy. Please refer to the response to Goal NR 5. Facilities required for the proposed Project would be implemented consistent with the City's Sewer System Management Plan and Sewer Master Plan. |

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