

The PZs generally represent isolated service areas, usually defined by a reservoir elevation, pump station discharge pressure, or flow/pressure control facilities.

The existing potable water distribution system is divided into the former Capistrano Beach Water District<sup>3</sup> and South Coast<sup>4</sup> distribution systems. These water systems support two separate service areas under separate State of California drinking water permits. Emergency interconnections exist between the two water systems and with other nearby water agencies to enhance the District's water system reliability.

## 2.2.2 Water Distribution Planned Projects

The following present the water distribution CI Projects proposed to be completed in five years (2009 – 2013) that are addressed as part of this Initial Study:

**PW-1, PS #9** – The District will add an emergency generator or portable generator back-up to the fire pump at Pump Station 9 to increase pumping reliability during potential power outage. The District will also review and evaluate whether a second back-up fire pump is needed to serve the 470 PZ in the event one pump is out of service.

**PW-2, Misc. Pipeline Upgrades for Fire Flow** – To increase fire flow protection in selected areas, the District will replace approximately 16,000 feet of 4-inch and 6-inch diameter main with 8-inch main. These small upgrade projects will be coordinated with other local street or drainage improvements to minimize the frequency of disturbance to the public.

**PW-3, 345 PZ Conversion** – The District will construct two pressure reducing stations at each I-5 crossing in the 345 PZ in the Capistrano Beach area.

No Phase II or Phase III CI Projects have been identified for this system. Several of the water distribution projects proposed as part of the IMP are covered by project specific CEQA documents or are otherwise exempt from CEQA review.

## 2.3 WASTEWATER SYSTEM

A description of the existing wastewater system, system issues identified from the IMP, and the proposed CI Projects for the system are discussed in the following sections.

### 2.3.1 Existing Wastewater Collection and Treatment System

The District's wastewater collection system includes approximately 140 miles of sewer ranging in size from 6-inch to 24-inch diameter, 14 lift stations and 3 miles of force mains (Figure 2-2). The existing wastewater collection system is divided into three separate service areas/systems:

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<sup>3</sup> The Capistrano Beach System serves the southern portion of the District and consists of two separate subsystems (roughly divided by Lower San Juan Creek) that serve Dana Point and Capistrano Beach. The Dana Point Subsystem includes the 390, 470, and 217 PZs. The water system is normally supplied via connections to the Joint Transmission Main (JTM) and the GRF. The Capistrano Beach Subsystem consists only of the 345 PZ and is normally supplied by the Juanita Connection, a pressure reducing station connected to the JTM.

<sup>4</sup> The South Coast System serves the northern portion of the District, including portions of the cities of Laguna Beach and Dana Point. The water system is normally supplied by the Canyon Supply Line from the north and the WIP Line from the south. The GRF also feeds directly into the WIP and to the South Coast System.

South Coast, Dana Point, and Capistrano Beach.<sup>5</sup> A portion of each system lies outside the current District boundary.

In addition to the services provided within the District, the District also performs several levels of contracted operations for nearby districts. In July 1997, services for approximately 400 residential units in the communities of Laguna Sur and Monarch Point were transferred to the Moulton Niguel Water District (MNWD). The District continues to provide wastewater collection to these communities under contract with MNWD. In July 1999, the District transferred services for the South Laguna area<sup>6</sup> to the City of Laguna Beach. The District continues to provide potable water, recycled water and wastewater collection to this area under contract with the City of Laguna Beach.

The District conveys wastewater from homes and businesses in the service areas for treatment at one of two treatment plants (Figure 2-2):

**Coastal Treatment Plant** - The Coastal Plant is located just outside of the District's northeast boundary in unincorporated Orange County (Aliso and Wood Canyons Wilderness Park) and is owned and operated by SOCWA. This plant has a 6.7 MGD capacity and treats wastewater collected from the northern portion of the District. The District currently owns 2.0 MGD of wastewater treatment capacity in the Coastal Plant. It is estimated that the District will sewer approximately 2.0 MGD to the Coastal Treatment Plant at buildout. It is recommended that the District closely monitor their capacity in the Coastal Treatment Plant. Effluent from the Coastal Plant is treated to secondary or tertiary levels dependent on disposal or reuse of the wastewater. Recycled water is treated to Title 22 standards at an Advanced Water Treatment Plant (AWT) located adjacent to the Coastal Plant. This facility is also owned and operated by SOCWA. Treated effluent that is not recycled is disposed through the Aliso Creek Ocean Outfall. During the summer months, over 2 MGD of recycled water can be produced by the AWT.

**J.B. Latham Treatment Plant** - The J.B. Latham Treatment Plant is located in Dana Point and is owned and operated by the SOCWA. This plant has a 13 MGD capacity and treats wastewater from the southern part of the District. No recycled water is currently produced at the Latham Plant. Wastewater is treated to secondary levels and conveyed directly to the San Juan Creek Outfall. It is estimated that the District will sewer approximately 2.2 MGD to the J.B. Latham Treatment Plant at buildout.

### 2.3.2 Wastewater System Planned Improvements

A total of approximately 2,000 feet of sewer is proposed to be upgraded over the next 10 years to mitigate potential capacity constraints. The proposed upgrade length represents approximately 0.3 percent of the total 140 miles of system piping. The District's system, including generally steep topography, relatively short segments of collector sewer, and minimal inflow and infiltration problems, are favorable and only a few capacity upgrades are required to provide increase service reliability. It is not anticipated that upgrades will be needed to accommodate future development flow demands.

The following presents the sewer lift station (SLS) wastewater and sewer pipe (SP) CI Projects proposed to be completed in five years (2009 – 2013).

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<sup>5</sup> These areas were formerly were operated as the independent sewer districts of South Laguna Sanitary District, Dana Point Sanitary District, and Capistrano Beach Sanitary District, respectively.

<sup>6</sup> The South Laguna area begins at the community of Three Arch Bay and continues north to Nyes Place.

**SLS 1, Sewer Lift Station #2 Replacement** - Under peak flows, the dynamic hydraulic model predicted that the District will need a second pump to operate over short periods. However, operations staff confirmed that unless there was a high rainfall event, this usually does not occur. It is further recommended that the District consider a detailed capacity study of the lift station. Due to the age of the lift station and its internal accessibility, the District has slated it for replacement. As part of the Aliso Creek Redevelopment, a new lift station location is being discussed. The District has also been in discussions with the City of Laguna Beach to convey pumped flows from the North Coast Interceptor.

**SLS 2, Sewer Lift Station #11 Replacement** - Under peak flows, the dynamic hydraulic model predicted that the District will need additional pumping capabilities to operate over short periods. The current wet well does not provide the emergency storage capacity of 1-hour for response time. It is further recommended that the District consider a detailed capacity study of the lift station. Due to the age of the lift station, additional flow from storm drain systems and proposed Dana Point Harbor revitalization development and its internal accessibility, the District has slated this lift station for replacement.

**SLS 3, Sewer Lift Station #12 Replacement** - Under peak flows, the dynamic hydraulic model predicted that the District will need emergency storage capacity. Due to the supplemental flow from the Groundwater Recovery Facility and storm drain diversion units, additional pumping capacity will be required. Operations staff verified that during high rainfall events, pump cycle time is increased beyond requirements. It is further recommended that the District consider a detailed capacity study of the lift station. This station is located within the current flood plane and is on property scheduled for development. Due to the age of the lift station, the District has slated it for replacement and relocation.

**SP 1, Dana Point Harbor** – The District will replace approximately 400 feet of existing 8-inch diameter gravity main and 350 feet of existing 10-inch diameter gravity main with 12-inch diameter pipe (Figure 2-2). Minor traffic control measures and utility conflicts are anticipated for this project and coordination with Harbor businesses and general activity will need to be considered. This project may be constructed as part of the planned Harbor Redevelopment.

**SP 2, Del Obispo at Village Road** – The District will replace approximately 600 feet of existing 12-inch diameter gravity main with 18 inch diameter pipe (Figure 2-2). Traffic control measures and utility conflicts are anticipated with this project.

**SP 3, Del Obispo at Stonehill Drive** – The District will replace approximately 150 feet of existing 8-inch diameter gravity main with 12-inch diameter pipe (Figure 2-2). Traffic control measures and minor utility conflicts are anticipated with this project.

**SP 4, Headlands Off Site** – The District will replace an approximately 285-foot-long section of existing 12-inch diameter gravity main with a 15-inch diameter pipe. Alternatively, the District will install a parallel 12-inch diameter relief sewer. This project is currently in design and will be constructed by Headlands.

The following present the wastewater CI Projects proposed to be completed in between 2014 and 2018:

**SP 6, Links at Monarch Beach** – The District will install approximately 150 feet of existing 8-inch diameter gravity main in parallel with an existing 8-inch diameter main

(Figure 2-2). No traffic control measures or utility conflicts are anticipated for this project since, despite its location, the project appears to be highly accessible.

**SP 7, Monarch Bay Drive** - The District will replace approximately 375 feet of existing 8-inch diameter gravity main with 10-inch diameter pipe (Figure 2-2). Utility conflicts are anticipated for this project due to the parallel water main. Additionally, the project is located on a narrow street, which may cause some traffic and mobility issues.

No Phase III CI Projects have been identified for this system.

## 2.4 RECYCLED WATER

Recycled water demands have steadily increased since the system's inception and reached approximately 940 AFY of demand with 171 meters served in 2006. Recycled water now accounts for approximately 11 percent of the total water used in the District. Since increasing the recycled water system and the utilization of recycled water would further reduce dependence on domestic water, the District's Board of Directors has expressed an active interest in expanding the recycled water system.

A description of the existing recycled water system, system issues identified from the IMP, and the proposed CI Projects for the system are discussed in the following sections.

### 2.4.1 Existing Recycled Water System

The District began distributing recycled water in 1984. The District's existing recycled water system provides the District with a supplemental, non-interruptible supply of irrigation water. The District's recycled water system consists of 15 miles of pipeline, three pump stations three storage tanks with a total capacity of 4.7 MG. The District delivers approximately 960 AFY of recycled water to 98 accounts (33 customers; 171 meters) in Laguna Beach and Dana Point, including MNWD, which annually uses about 15 percent of the average supply. The District is also contracted to supply up to 1.44 MGD to MNWD from the Joint Reservoir. However, MNWD only takes flow from the District in an emergency or during routine maintenance periods.

The system is supplied by the SOCWA Coastal Treatment Plant and Advanced Water Treatment (AWT) facility. The AWT facility receives influent from the adjacent SOCWA Coastal Treatment Plant (discussed further in Section 2.3). The AWT is designed to produce 2.61 MGD of recycled water. With additional treatment, filtration, and disinfection, the secondary effluent from the Coastal Treatment Plant is converted to recycled water that meets California's health criteria for landscape irrigation use. This recycled water is used to irrigate parks, golf courses, sports fields and greenbelts and helps free drinking water for human consumption.

Monarch Beach Golf Links is the District's largest recycled water customer and used approximately 282 AF of recycled water in 2006. The second largest customer of recycled water in the District is the Niguel Shores Home Owners Association (50 irrigation meters in total) which used approximately 130 AF in 2006. The third largest recycled water customer in the District is MNWD, which has an agreement with SCWD to receive a contracted amount of recycled water not to exceed 1.44 MGD. In 2006, the total average annual use for MNWD was 128 AFY or 0.11 MGD. Excluding MNWD, the District uses an average of 0.72 MGD of recycled water from the AWT facility and an approximate maximum of 1.3 MGD.

SOCWA is the general permit holder for water reclamation activities in most of southern Orange County. Waste Discharge Permit Order 97-52, issued through the San Diego Regional Water