

Santa Ana River

# SEWER AND WATER FACILITIES PLAN

## Newport Banning Ranch

Newport Beach, CA

**NEWPORT BANNING RANCH**

**NMUSD**

City Yard

ACOE Wetlands

Newport Shores

Oxbow Loop

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Newport

Project No. 0821.01.02

**NEWPORT BANNING RANCH**

Sunset Ridge Park

14th St

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## I. Introduction

### 1.1 Purpose of Study

The purpose of this report is to provide a conceptual level utilities servicing plan for the proposed Newport Banning Ranch project. The results of this report will be integrated into the Environmental Impact Report as applicable.

### 1.2 Location of the Project Site

Newport Banning Ranch is a 402-acre site located near the mouth of the Santa Ana River north of West Coast Highway. To the north is the Talbert Nature Preserve. To the south is West Coast Highway and residential areas of Newport Beach. To the east are commercial and residential developments in the cities of Costa Mesa and Newport Beach (see Figure 1).

### 1.3 Proposed Land Use

The Land Use Plan includes 1,375 residential units, a 75 room coastal inn, 75,000 sf of visitor-serving commercial, private and public parks, and open space (see Figure 2).

## II. Sanitary Sewers

### 2.1 Existing Condition

#### 2.1.1 *City of Newport Beach Facilities*

The City of Newport Beach has facilities adjacent the project on West Coast Highway, along 19<sup>th</sup> Street, and on Ticonderoga Street (see Figure 3). Discharge from the Ticonderoga and West Coast Highway sewer systems connect to the Orange County Sanitation District (OCSD) Bitter Point Pump Station (near the southwest corner of the site – see Figure 3). Discharge from the sewer in 19th Street flows northerly to a City operated pump station at the end of Walkabout Circle from which the discharge is directed to connect with OCSD facilities. Treatment of the effluent for these systems occurs at OCSD Wastewater Treatment Plant 2 in Huntington Beach.

#### 2.1.2 *City of Costa Mesa Facilities*

The City of Costa Mesa has facilities along the eastern edge of the project site (see Figure 3). Discharge from these systems connects into interceptor sewer lines maintained by OCSD. The system of interceptor sewers or trunk lines carry wastewater along Newport Boulevard and West Coast Highway to Wastewater Treatment Plan 2 via the Bitter Point Pump Station.

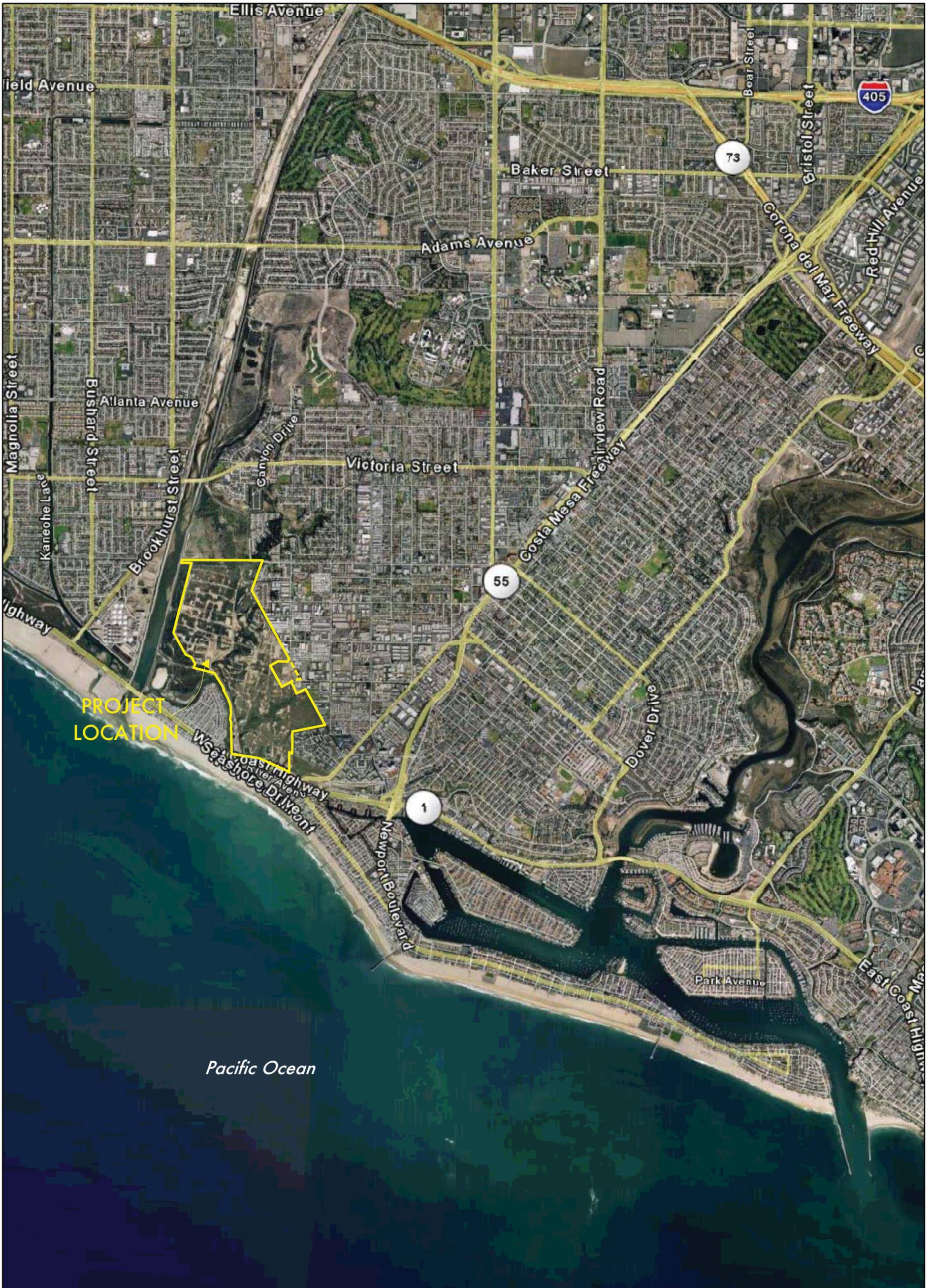


Figure 1  
Vicinity Map



Figure 2  
Land Use Plan

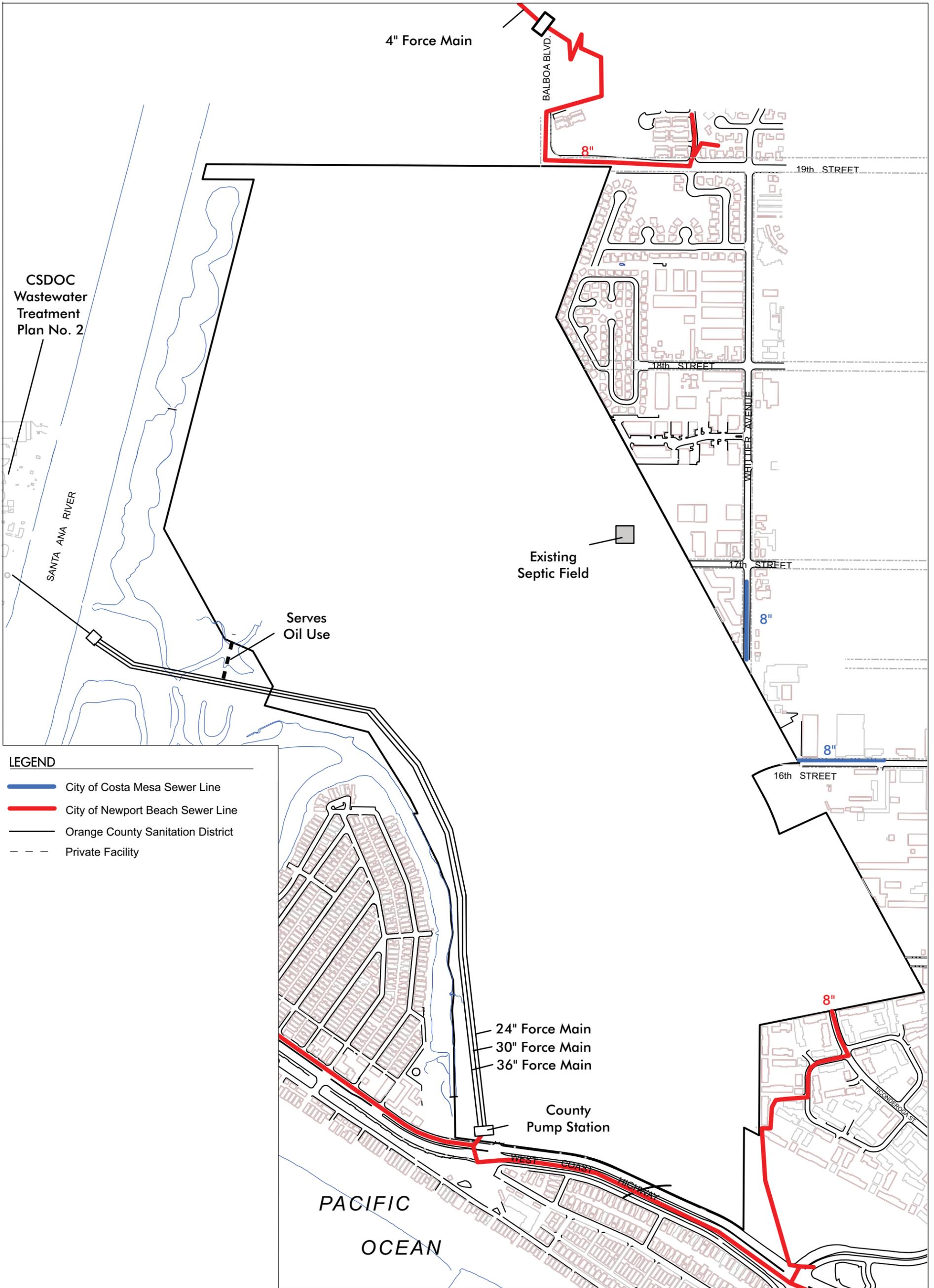


Figure 3  
Existing Sewer Systems

2.1.3 Orange County Sanitation District (OCSD)

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. The trunk system in West Coast Highway is part of the Newport Beach Trunk Sewer system which serves the southeastern portion of OCSD Districts No. 5 and No. 6. From the Bitter Point Pump Station the effluent is pumped through the force mains on site and then flows via a siphon under the Santa Ana River to the Wastewater Treatment Plant 2.

The OCSD is currently processing construction documents, reports and specifications for improvements to the Bitter Point Pump Station and the force mains. The planned capacity for the Bitter Point Pump Station is 40 mgd.

2.1.4 Existing Project Site Sewer Facilities

The project site is currently used for oil operations. An operations building exists near the 17<sup>th</sup> Street entrance to the site. Discharge from this building and the other outbuildings goes to a septic system.

The oil extraction operation produces water which is treated and then directed to a 12" pipe that joins the County Sanitation District Facility upstream of the siphon at the Santa Ana River (see Figure 3). Approximately 168,000 gallons of "produced" water is discharged annually.

2.1.5 OCSD Strategic Plan Update

The OCSD April 2006 Strategic Plan Update includes a capacity evaluation and recommendations for assuring trunk system capacity through the year 2030. Buildout flow projections for the Banning Ranch project assumed estate residential development for the entire project area. Table 1 shows the Dry Weather Flow for the assumed land use.

Table 1 2006 Strategic Plan Dry Weather Flow			
<i>Land Use</i>	<i>Acres</i>	<i>Unit Flow Rate gpd/ac</i>	<i>Dry Weather Flow mgd</i>
Estate Residential	402	727	0.29
<b>Total</b>			<b>0.29</b>

2.2 Project Impacts

The Dry Weather Flow for the proposed land use with the strategic plan flow rates is shown in Table 2.

Table 2 Proposed Land Use Plan Dry Weather Flow			
<i>Land Use</i>	<i>Acres</i>	<i>Unit Flow Rate gpd/ac</i>	<i>Dry Weather Flow mgd</i>
Open Space/Parks	295	0	0
Commercial	6	2,262	0.014
Low Density Res.	26	1,488	0.038
Medium Density Res.	60	3,451	0.207
Roadway	16	0	0
<b>Total</b>	<b>403</b>		<b>0.26</b>

Based on the above estimates the total sewage generation for the proposed project using the 2006 Strategic Plan generation factors is 0.26 million gallons per day. This amount is 94% of the total sewage generation allocated to the project in the 2006 Strategic Plan.

The City of Newport Beach Master Plan of Sewers (August 1996) includes the entire project site in its service area. The Master plan indicates a mixed use development including 2,329 new dwelling units and 65,000 square feet of commercial. The City is in the process of updating the sewer master plan to reflect the General Plan land uses approved by the City. Further analysis of the City Master Plan is not included because the project will connect to the City system immediately above the OCSD trunk line.

Figure 4 shows a conceptual layout for the on-site sewer collection system. The City of Newport Beach will be the servicing agency and that the on-site sewer system will connect directly to the OCSD facilities upstream of the Bitter Point Pump Station. Consideration has also been given for a potential city operated sewer lift station in the event a gravity system cannot be incorporated through the open space and consolidated oil operation site at West Coast Highway.



- LEGEND**
- Sewer Main (8" Unless Noted Otherwise)
  - Topography
  - Pump Station

### III. Domestic Water

#### 3.1 Existing Condition

##### 3.1.1 *City of Newport Beach Facilities*

The project site is included in the City of Newport Beach's service area. Newport Beach distribution facilities are adjacent to the site in West Coast Highway, 16<sup>th</sup> Street and Ticonderoga Street. A transmission main exists at the north edge of the site, which transports well water to the treatment facility and reservoir on 16<sup>th</sup> Street (see Figure 5).

The City operates a reservoir and treatment facility at the terminus of 16<sup>th</sup> Street at the project boundary. Seventy-five percent of the City's water supply is from well water with the remaining supply derived from the Metropolitan Water District.

##### 3.1.2 *Mesa Consolidated Water District (MCWD)*

MCWD has facilities adjacent to the project site in 19<sup>th</sup> Street and the surrounding residential, commercial and industrial area of Costa Mesa. Seventy-five percent of MCWD's water is developed from ground water sources and 1% from reclaimed water received. The balance of the water is from Metropolitan Water District.

##### 3.1.3 *Project Site Services*

The existing oil operations domestic water needs are currently being supplied by both MCWD and the City of Newport Beach. Current annual usage is approximately 2,119,000 gallons and 64,000 gallons from MCWD and Newport Beach respectively.

##### 3.1.4 *Municipal Water District of Orange County (MWDOC)*

The project lies within the MWDOC service area although it is not in a retail water agency boundary. It is anticipated that the property will be annexed into the City of Newport Beach and the City's water agency boundary.

#### 3.2 Project Impacts

Domestic water needs for the project will include temporary construction water use, landscaping and irrigation needs, fire flow requirements and all associated consumption required from normal operation and occupancy of the project.

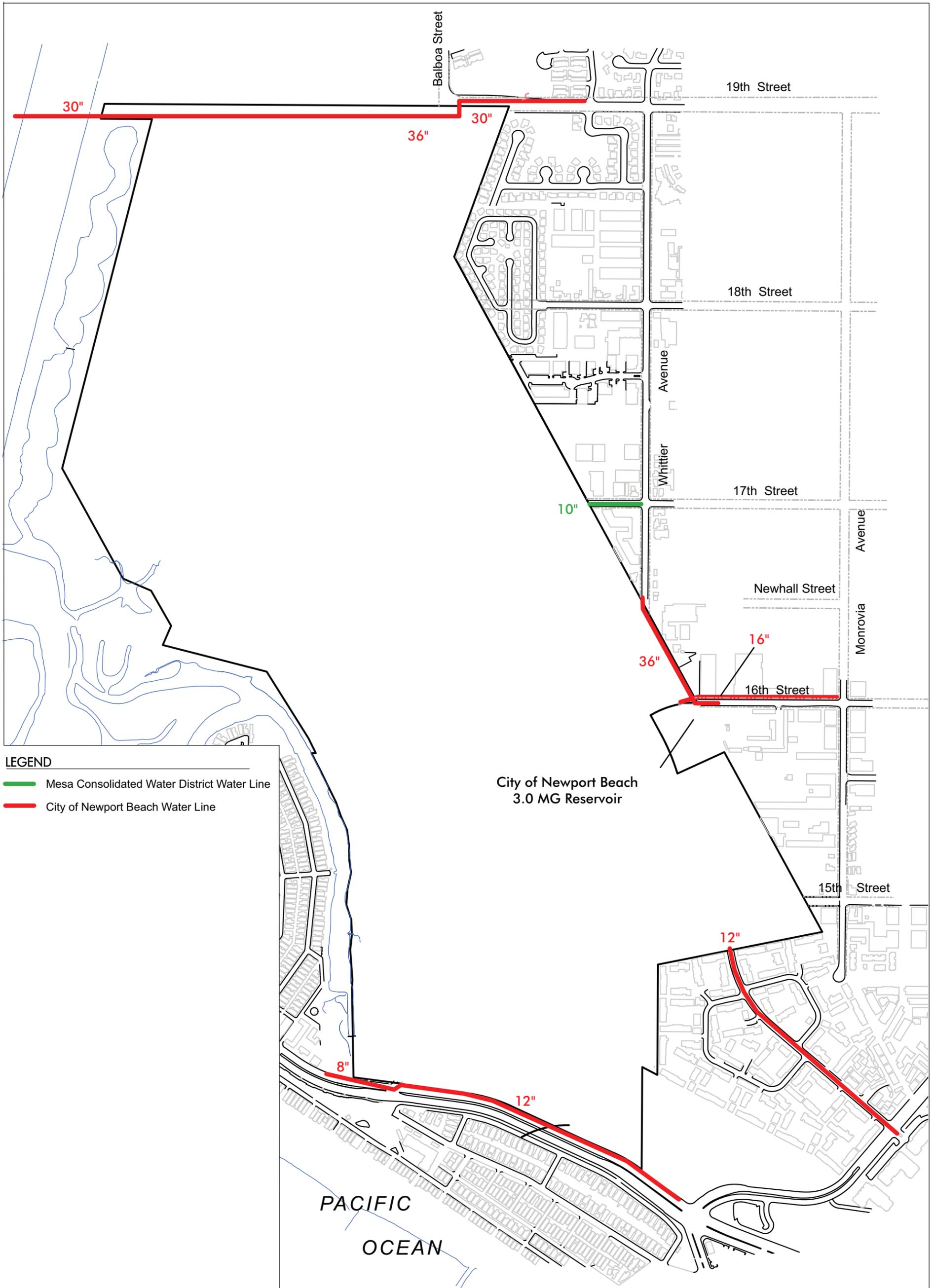


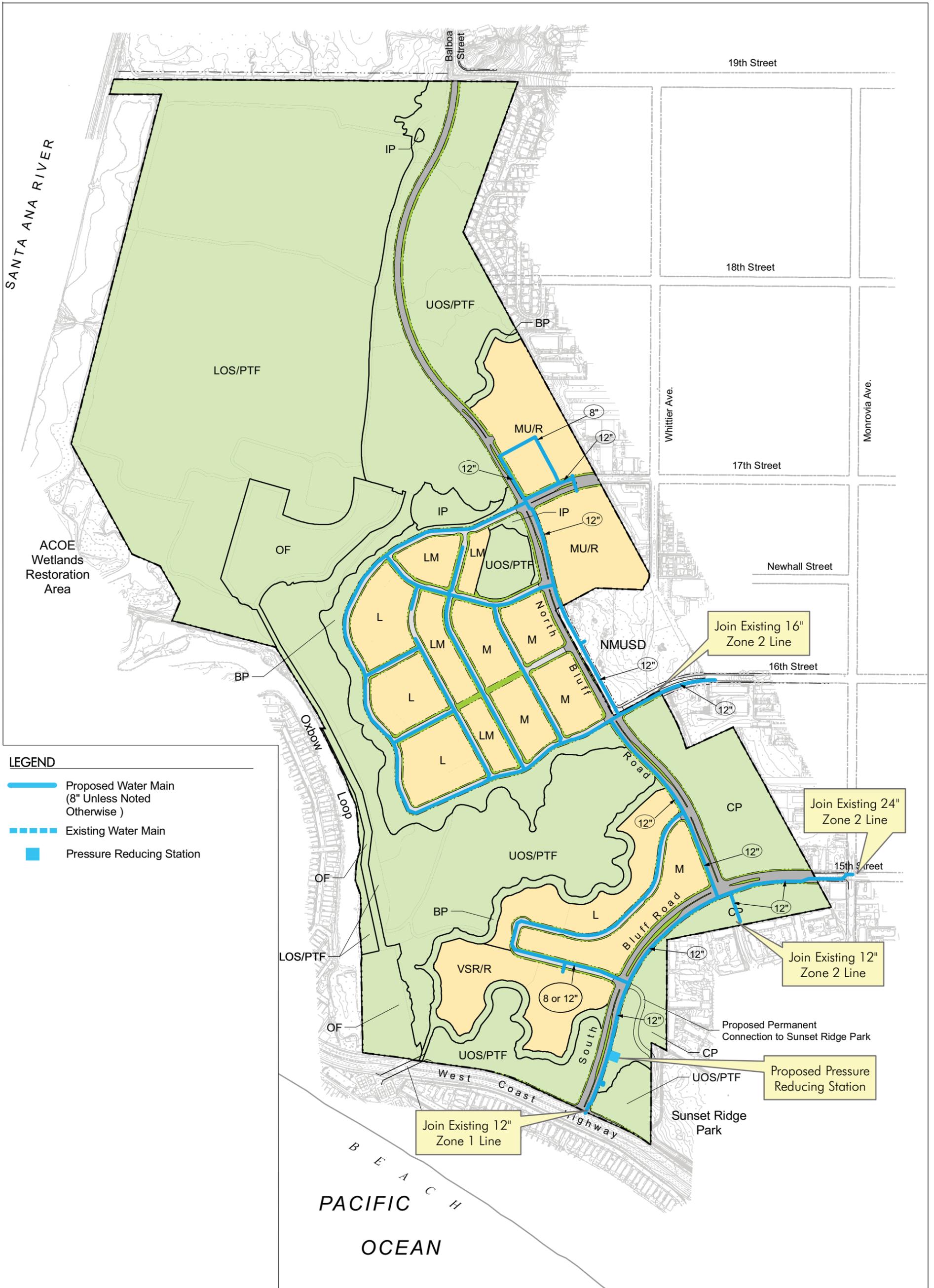
Figure 5  
Existing Water Systems

It is proposed that the City of Newport Beach be the serving agency for the following reasons:

- The development area is concentrated on the upland areas adjacent West Coast Highway and the City of Newport Beach.
- The availability of the existing City of Newport Beach water infrastructure.
- The plan for the development to be processed through the City of Newport Beach and ultimately annexed.

See Figure 6 for Proposed Domestic Water Facilities Plan.

A Water Supply Assessment has been prepared as part of the CEQA process and was approved by the City of Newport Beach in October 2010.



**LEGEND**

- Proposed Water Main (8" Unless Noted Otherwise)
- - - Existing Water Main
- Pressure Reducing Station

#### IV. Reclaimed Water

##### 4.1 Existing Condition

###### 4.1.1 *City of Newport Beach*

The City does not currently have reclaimed water facilities.

###### 4.1.2 *Mesa Consolidated Water District*

MCWD has reclaimed water facilities. The nearest reclaimed water line to the site roughly follows Adams Street, approximately three miles north of the project site.

##### 4.2 Project Impacts

At this time, neither the City of Newport Beach nor the Mesa Consolidated Water District plan to extend reclaimed water to the project vicinity and therefore a reclaimed water system is not proposed.