

## 2.0 SITE DESCRIPTION

MES were established and monitored throughout the LACFCD in an effort to characterize the water quality of the channels and streams. Tributary sites were selected to characterize the water quality of channels and streams in the sub-watersheds.

### 2.1 Mass Emission Site Selection

The LACFCD monitored at seven MES, including Ballona Creek, Malibu Creek, Los Angeles River, Coyote Creek, San Gabriel River, Dominguez Channel, and Santa Clara River. The collective drainage area from the seven mass emission monitoring sites encompass approximately 2,060 square miles.

Four of the mass emission monitoring sites installed under the original 1990 Municipal Stormwater Permit were retained under the 1996 and the 2001 Municipal Stormwater Permit, including Ballona Creek (S01), Malibu Creek (S02), Los Angeles River (S10), and San Gabriel River (S14). The Coyote Creek (S13) monitoring station was monitored under the 1990, 1996, and 2001 Municipal Stormwater Permit, though monitoring was not required under the 1996 Municipal Stormwater Permit. Monitoring began at Dominguez Channel (S28) MES during the 2001–2002 season. Sampling at the Santa Clara (S29) MES began during the 2002–2003 season.

### 2.2 Mass Emission Station Monitoring Locations and Drainage Areas

Figure 2-1 provides an overview of the study area, showing all mass emission station monitoring locations. Table 2-1a indicates the dominant land use associated with each monitoring site and the total drainage area.

The following are descriptions of the seven MES, required by the Municipal Stormwater Permit for the 2009–2010 Monitoring Season, including Ballona Creek, Malibu Creek, Los Angeles River, San Gabriel River, Coyote Creek, Dominguez Channel, and Santa Clara River. Figures 2-2 through 2-8 show the location of each monitoring station along with a description of its land use.

#### **Ballona Creek Monitoring Station (S01)**

The Ballona Creek monitoring station is located at the existing stream gage station (i.e., Stream Gage F38C-R) between Sawtelle Boulevard and Sepulveda Boulevard in the City of Los Angeles and was chosen to avoid tidal influences. The upstream tributary watershed of Ballona Creek is 88.8 square miles. The entire Ballona Creek Watershed is 127.1 square miles. Ballona Creek is a concrete-lined trapezoidal channel at the gauging station. This station can be found on Thomas Guide page 672 G-4.

#### **Malibu Creek Monitoring Station (S02)**

The Malibu Creek monitoring station is located at the existing stream gage station (i.e., Stream Gage F130-9-R) near Malibu Canyon Road, south of Piuma Road. The tributary watershed to

Malibu Creek at this location is 104.9 square miles and the entire Malibu Creek Watershed is 109.9 square miles. This station can be found on Thomas Guide page 628 H-1.

### **Los Angeles River Monitoring Station (S10)**

The Los Angeles River monitoring station is located at the existing stream gage station (i.e., Stream Gage F319-R) between Willow Street and Wardlow Road in the City of Long Beach and was chosen to avoid tidal influences. The river is a concrete-lined trapezoidal channel at this site. The total upstream tributary drainage area for the Los Angeles River is 825 square miles. This river is the largest watershed outlet to the Pacific Ocean in the LACFCD. This station can be found on Thomas Guide page 795 C-1.

### **Coyote Creek Monitoring Station (S13)**

The Coyote Creek monitoring station is located at the existing Army Corps of Engineers stream gage station (i.e., Stream Gage F354-R) below Spring Street in the lower San Gabriel River Watershed. The site assists in determining mass loading for the San Gabriel River Watershed. The upstream tributary area is 150 square miles (extending into Orange County). The sampling site was chosen to avoid backwater effects from the San Gabriel River to ensure that all water being sampled is from Coyote Creek only. Coyote Creek is a concrete-lined trapezoidal channel at this location. The Coyote Creek sampling location has been an active stream gauging station since 1963. This station can be found on Thomas Guide page 796 H-2.

### **San Gabriel River Monitoring Station (S14)**

The San Gabriel River monitoring station is located at an historic stream gage station (i.e., Stream Gage F263C-R), below San Gabriel River Parkway in Pico Rivera. The upstream tributary area is 450 square miles at this location. The San Gabriel River is a grouted rock-concrete stabilizer along the western levee and a natural section on the eastern side. Flow measurement and water sampling are conducted in the grouted rock area along the western levee of the river. The length of the concrete stabilizer is nearly 70 ft. The San Gabriel River sampling location has been an active stream gauging station since 1968. This station can be found on Thomas Guide page 676 J-2.

### **Dominguez Channel Monitoring Station (S28)**

The Dominguez Channel monitoring station is located at Dominguez Channel and Artesia Boulevard in the City of Torrance and was chosen to avoid tidal influence. Flow at this station is measured by the flow meter attached to the autosampler. The upstream tributary area is 33 square miles. The Dominguez Channel monitoring site is located in a concrete-lined rectangular channel. This station can be found on Thomas Guide page 733 H-7.

### **Santa Clara River Monitoring Station (S29)**

The Santa Clara monitoring station is located at the Santa Clara River and The Old Road in Santa Clara. The Santa Clara River is primarily a soft bottom channel, which makes accurate flow monitoring extremely difficult. This location was originally chosen because flow monitoring was possible from the existing United States Geological Survey (USGS) 11108000 Santa Clara River near Saugus, California, Stream Gauging Station. Currently, the Public Works Water Resources Division operates a real-time stream gauging station at the site. The flow gauging operation has been subject to shifting river conditions in recent years. The upstream tributary area is approximately 411 square miles. This station can be found on Thomas Guide page 4550 B-2.

### **2.3 Tributary Site Selection**

All six of the tributary monitoring stations (i.e., Project No. 1232 (TS19), PD 669 (TS20), Project Nos. 5246 & 74 (TS21), PD 21-Hollypark Drain (TS22), D.D.I. 8 (TS23), and Dominguez Channel at 116<sup>th</sup> Street (TS24)) were established in accordance with the 2001 Municipal Stormwater Permit. Monitoring began during the 2008–2009 season. The six tributary monitoring stations were used to collect water quality data from subwatersheds in the Dominguez Channel Watershed Management Area.

### **2.4 Tributary Monitoring Locations and Drainage Areas**

Figure 2-9 is an overview of the study area showing all the tributary monitoring sites. Table 2-1b contains the dominant land uses for each site.

Provided below is a description of the six tributary monitoring stations required by the Municipal Stormwater Permit for the 2008–2009 Monitoring Season. In order of furthest upstream to furthest downstream, stations were identified as TS19, TS20, TS21, TS22, TS23, and TS24. Figures 2-10 through 2-15 show the location of each tributary monitoring station.

#### **Project No. 1232 (TS19)**

Tributary monitoring site Project No. 1232 is located on the northeast corner of Project No. 1232 and South Main Street, south of Del Amo Boulevard, in the City of Carson. The upstream tributary watershed area is approximately 5,203 acres. This station can be found on Thomas Guide page 754 C-4.

#### **PD 669 (TS20)**

Tributary monitoring site PD 669 is located in the south right-of-way of PD 669, on the southeast corner of Avalon Boulevard and PD 669, just north of Del Amo Boulevard in the City of Carson. The upstream tributary watershed area is approximately 2,197 acres. This station can be found on Thomas Guide page 764 E-4.

#### **Project Nos. 5246 & 74 (TS21)**

Tributary monitoring site Project Nos. 5246 & 74 is located north of Artesia Blvd. (State Route 91), east of Vermont Avenue, and is accessed from 169<sup>th</sup> Street to the west right-of-way of Project No. 5246 in the City of Los Angeles. The upstream tributary watershed area is approximately 1,338 acres. This station can be found on Thomas Guide page 734 B-7.

#### **PD 21-Hollypark Drain (TS22)**

Tributary monitoring site PD21-Hollypark Drain is located on the northeast corner of 135<sup>th</sup> Street at Dominguez Channel in the City of Gardena. The upstream tributary watershed area is approximately 1,656 acres. This station can be found on Thomas Guide page 733 G-2.

#### **D.D.I. 8 (TS23)**

Tributary monitoring site D.D.I. 8 is located on the northwest corner of Dominguez Channel and the easterly prolongation of 132<sup>nd</sup> Street in the City of Gardena. The upstream tributary

watershed area is approximately 1,449 acres. This station can be found on Thomas Guide page 733 F-2.

### **Dominguez Channel at 116<sup>th</sup> Street (TS24)**

This tributary monitoring site is located at the corner of 116<sup>th</sup> Street and Isis Avenue in the City of Lennox. The upstream tributary watershed area of this site is approximately 2,269 acres. This station can be found on Thomas Guide page 703 A-7.