

To characterize the runoff quality in Los Angeles County, mass emission sites have been selected for monitoring. To evaluate the runoff quality of various subwatersheds, tributary sites were established in the Los Angeles River watershed.

2.1 MASS EMISSION SITE SELECTION

The LACDPW monitored at seven mass emission stations, Ballona Creek, Malibu Creek, Los Angeles River, Coyote Creek, San Gabriel River, Dominguez Channel, and Santa Clara River. Four of the mass emission monitoring stations installed under the original 1990 Permit were retained under the 1996 and the 2001 Municipal Storm Water Permit; specifically Ballona Creek, Malibu Creek, Los Angeles River, and San Gabriel River. The Coyote Creek monitoring station was monitored under the 1990, 1996, and 2001 Municipal Storm Water Permit, though monitoring was not required under the 1996 Municipal Storm Water Permit. Monitoring began at Dominguez Channel mass emission station during the 2001-2002 season. Sampling at the Santa Clara mass emission station began during the 2002-2003 season. The seven mass emission monitoring stations were used to collect water quality data from 2060 square miles.

2.2 MASS EMISSION MONITORING LOCATIONS AND DRAINAGE AREAS

Figure 2-1 is an overview of the study area with all mass emission monitoring sites shown. Table 2-1 also indicates the dominant land use associated with each monitoring site and the total drainage area.

Provided below is a description of the seven mass emission stations, Ballona Creek, Malibu Creek, Los Angeles River, San Gabriel River, Coyote Creek, Dominguez Channel, and Santa Clara River, required by the Municipal Storm Water Permit for the 2005-2006 monitoring period. 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 (Stream Gage No. F38C-R) between Sawtelle Boulevard and Sepulveda Boulevard in the City of Los Angeles. At this location, which 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. At the gauging station, Ballona Creek is a concrete lined trapezoidal channel.

Malibu Creek Monitoring Station (S02)

The Malibu Creek monitoring station is located at the existing stream gage station (Stream Gage No. F130-9-R) near Malibu Canyon Road, south of Piuma Road. At this location, the tributary watershed to Malibu Creek is 104.9 square miles. The entire Malibu Creek Watershed is 109.9 square miles.

Los Angeles River Monitoring Station (S10)

The Los Angeles River Monitoring Station is located at the existing stream gage station (Stream Gage No. F319-R) between Willow Street and Wardlow Road in the City of Long Beach. At

this location, which was chosen to avoid tidal influences, 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 Los Angeles County. At the site, the river is a concrete lined trapezoidal channel.

Coyote Creek Monitoring Station (S13)

The Coyote Creek Monitoring Station is located at the existing ACOE stream gage station (Stream Gage No. 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. At this location, 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. Coyote Creek, at the gauging station, is a concrete lined trapezoidal channel. The Coyote Creek sampling location has been an active stream gauging station since 1963.

San Gabriel River Monitoring Station (S14)

The San Gabriel River Monitoring Station is located at an historic stream gage station (Stream Gage No. F263C-R), below San Gabriel River Parkway in Pico Rivera. At this location the upstream tributary area is 450 square miles. The San Gabriel River, at the gauging station, 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 feet. The San Gabriel River sampling location has been an active stream gauging station since 1968.

Dominguez Channel Monitoring Station (S28)

The Dominguez Channel Monitoring Station is located at Dominguez Channel and Artesia Boulevard in the City of Torrance. At this location, which was chosen to avoid tidal influence, the upstream tributary area is 33 square miles. The portion of the river where the monitoring site is located is a concrete-lined rectangular channel.

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 has a soft bottom for the most part, which makes flow monitoring extremely difficult. This location was chosen because flow monitoring was possible from the existing USGS 11108000 Santa Clara River near Saugus California stream gauging station. The upstream tributary area is 411 square miles.

2.3 TRIBUTARY SITE SELECTION

All six of the tributary monitoring stations, Centinela Creek, Sepulveda Channel, Benedict Canyon, Adams Drain, Fairfax Drain, and Cochran, were established in accord with the 2001 Municipal Storm Water Permit. Monitoring began during the 2004-2005 season. The six tributary monitoring stations were used to collect water quality data from subwatersheds in the Ballona Creek WMA.

2.4 TRIBUTARY MONITORING LOCATIONS AND DRAINAGE AREAS

Figure 2-9 is an overview of the study area showing all the tributary monitoring sites.

Provided below is a description of the six tributary monitoring stations required by the Municipal Storm Water Permit for the 2005-2006 monitoring period. From the furthest downstream to the furthest upstream, these stations were identified as Centinela Creek, Sepulveda Channel, Benedict Canyon, Adams Drain, Fairfax Drain, and Cochran. Figures 2-10 through 2-15 show the location of each monitoring station. Two of these monitoring sites (Centinela Creek and Sepulveda Channel) were located on tributaries downstream of the long-term Ballona Creek mass emission station.

Centinela Creek (TS07)

The Centinela Creek tributary monitoring site is located on Centinela Creek near the intersection of Centinela Boulevard and Highway 90. The confluence with Ballona Creek is downstream of the mass emission station. The upstream tributary watershed area of Centinela Creek is approximately 9.83 square miles.

Sepulveda Channel (TS08)

The Sepulveda Channel tributary monitoring site is located on the Sepulveda Channel at Culver Boulevard. The confluence of Sepulveda Channel with Ballona Creek is downstream of the mass emission station. The upstream tributary watershed area of Sepulveda Channel is approximately 23.11 square miles.

Benedict Canyon (TS09)

The Benedict Canyon tributary monitoring site is located in Culver City where Duquesne Avenue crosses Ballona Creek. The tributary monitoring site is designed to monitor flow from Benedict Canyon channel. The upstream tributary watershed area of Benedict Canyon is approximately 11.59 square miles.

Adams Drain (TS10)

Adams Drain is located in the northern portions of Culver City near the intersection of La Cienega Boulevard and Ballona Creek. The upstream tributary watershed area of Adams Drain is approximately 2.11 square miles.

Fairfax Drain (TS11)

The Fairfax Drain tributary monitoring site is located in the City of Los Angeles where Fairfax Avenue crosses Ballona Creek. The upstream tributary watershed area of Fairfax Drain is approximately 1.20 square miles.

Cochran Drain (TS12)

The Cochran tributary monitoring site is located in the Mid-City Community of Los Angeles near the upstream extent of Ballona Creek at Cochran Avenue. The upstream tributary watershed area of Benedict Canyon is approximately 24.76 square miles.