Integrated Monitoring Plan

City of La Habra Heights

Submitted to:
Los Angeles Regional Water Quality Control Board
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1.0 Municipal Separate Storm Sewer System Permit

On November 8, 2012 the Los Angeles Regional Water Quality Control Board adopted *"Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4"*. Order R4-2012-0175 became effective 50 days later on December 28, 2013. Order R4-2012-0175 serves as the National Pollution Discharge Elimination System (NPDES) permit for Coastal Watershed storm water and non-storm water discharges originating from the Los Angeles County Region, excluding the City of Long Beach. The permit covers the land areas of the Los Angeles County Flood Control, unincorporated areas of Los Angeles County and 84 Cities within the County of Los Angeles. Permittees are subject to the requirements set forth in the MS4 permit for all storm water and non-storm water discharges into the MS4. The City of La Habra Heights is located in the Los Angeles Region and is identified in the MS4 Permit as a permittee under Order R4-2012-0175.

The MS4 permit regulates municipal discharges of storm water and non-storm water from the MS4s of the Permittees. Storm water and non-storm water discharges have been identified as a transport mechanism for pollutants into the receiving waters of the Los Angeles Region. Pollutants originating from various land uses are mobilized by surface flow of water which is then directed into the MS4 and eventually deposited into receiving water bodies. In many cases pollutant deposition into receiving water bodies has a noticeable impact on the local ecological system of the water body and recreational uses. It is the intent of the MS4 Permit to protect water quality and mitigate existing and potential sources of pollutants that are cause for impairment of receiving water bodies.

Conditions of the MS4 Permit require that all Permittees develop a monitoring plan on an individual or joint basis that will address water quality issues with in the Permittee's jurisdictional area. The monitoring program option selected will be utilized in conjunction with the City's watershed management plan to provide real water quality data for use in the assessment of program effectiveness and compliance with applicable water quality standards.

Attachment E of the MS4 Permit is the Monitoring and Reporting Program (MRP) which outlines the requirements that shall be included in a Permittee's MRP. The MRP is a critical portion of the City of La Habra Heights' overall approach for maintaining water quality and/or mitigating water quality issues

1.1 Integrated Monitoring Plan

The objectives of the Integrated Monitoring Plan (IMP) are to assess the water quality of receiving water and discharges from the municipal separate storm water sewer system (MS4). The MRP allows Permittees flexibility in how a monitoring program is implemented. The customizable monitoring programs allow the permittee to devote resources to areas that will result in the most effective use of available funds. The City of La Habra Heights is very different from most of the other Permittees. The City has a single "commercial" site, no industrial sites, no formal storm drain system and doesn't own most of the roadways or waterways within the jurisdiction. Due to how the City was originally parceled, most private properties own at least half of the streets and waterways adjacent their properties. Due to the configuration of the City of La Habra Heights' "MS4" and topography of the City, there is limited comingling of storm water prior to its discharge into receiving water bodies. The City is at the top of the watershed. As a result, the City of La Habra Heights has selected the individual IMP option for compliance with the MRP section of the MS4 Permit. The City's IMP will be synchronized with its Watershed Management Plan (WMP) to provide an effective NPDES program in compliance with Order R4-2012-0175.

1.2 Purpose and Scope

The IMP is structured to support the WMP's adaptive management process. Changes and annual data resulting from the monitoring program are intended to assist in evaluating the effectiveness of management actions and to regularly re-evaluate the monitoring plan to better identify sources of contaminants. This plan was developed to address five primary objectives listed in Part II.A.1 of the MRP, are as follows:

- Assess the chemical, physical, and biological impacts of discharges from the MS4s on receiving waters;
- Assess compliance with receiving water limitations and water quality-based effluent limitations (WQBELs) established to implement TMDL wet and dry weather load allocations;
- Characterize pollutant loads in MS4 discharges;
- Identify sources of pollutants in MS4 discharges; and
- Measure and improve the effectiveness of pollutant controls implemented under the new MS4 permits.

Preparation of the IMP is intended to allow for development and utilization of alternative approaches as well as providing for coordination of monitoring activities to more cost effectively address the pollutants of concern.

The IMP is organized into five subsections. Each of the sub sections focuses on an individual monitoring requirement set forth in the MS4 Permit.

- Receiving water monitoring
- Storm water outfall monitoring
- Non-storm water outfall monitoring
- New development/re-development effectiveness tracking
- Regional studies

1.3 City of La Habra Heights

La Habra Heights is a unique community in the greater Southern California metropolitan area because of its rural community character. This community character is not an accident, but reflects the intentional efforts and commitment of residents over the past 75 years. La Habra Heights is bounded on the north (but other side of ridgeline) by the unincorporated communities of Rowland Heights and Hacienda Heights, on the east by unincorporated Los Angeles County, on the south by the City of La Habra, and on the west by the City of Whittier.

1.4 Watershed Location

The City is located at the headwaters of the Coyote Creek Watershed (CCW) and also the San Jose Creek Watershed (SJC). CCW is also classified as the Lower San Gabriel River-Coyote Creek Watershed. This watershed comprises an area that drains approximately 165 square miles of densely populated urbanized areas of residential, commercial, and industrial development as well as some areas of open space and natural land (see Figure 1 Watershed Map). The open and natural lands of this watershed exist mostly in the Puente Hills, Chino Hills, Coyote Hills, and Los Cerritos Wetlands. The CCW is located primarily within Orange and Los Angeles counties, with a small portion in San Bernardino County. The City is 2.8 % of the entire CCW subwatershed.

View of La Habra Heights (circa 1920)

Table 1.1: Proportion of La Habra Heights within the Coyote Creek Subwatershed

Coyote Creek Watershed	185.0 square miles[1]
City of La Habra Heights	5.1 square miles
City Percent of Watershed	2.8%

Source: LACDPW 2014a

San Jose Creek drains approximately 83 square miles of urbanized residential, commercial, and industrial development and open space and natural lands. The Creek is concrete lined in its eastern portion (Reach 1) and soft bottomed just before it joins the San Gabriel River. The City, at only 1.3% of the entire watershed, has very minimal impacts to this waterbody.

Table 1.2: Proportion of La Habra Heights within the San Jose Creek Subwatershed

San Jose Creek Watershed	83.4 square miles[1]
City of La Habra Heights	1.1 square miles
City Percent of Watershed	1.3%

Source: LACDPW 2014b

1.4.1 Watershed Characteristics

Surface water features within the CCW and SJC include, respectively, Coyote Creek-North Fork, Coyote Creek and upper San Jose Creek as are presented in Figure 1 San Gabriel Watershed Map. Surface water bodies within the City are seasonal drainage channels and include La Mirada Creek (draining to Coyote Creek), Coyote Creek –North Fork and upper San Jose Creek. The general pattern of drainage flow in the City, located from the ridgeline south, is from the north to the south and towards the west and center of the City until it reaches the developed channels which collect and transport the surface water flows in westerly and southwesterly directions through the City of La Habra to the Los Angeles County line. The portion of the City located from the ridgeline north, discharges to the north via unnamed creeks, which are part of the headwaters for San Jose Creek (lower Reach 1) and then downslope into Hacienda Heights. As presented in the RAA (URS 2014), Figure 2 shows the city of La Habra Heights local sub-watersheds.

La Mirada Creek and Coyote Creek are the two major southern drainage channels that collect and convey surface water from the City. These facilities' locations and directional flows are described as follows.

La Mirada Creek

La Mirada Creek (OCFCD Facility No. A08) is an earthen channel and flows southwest from the City, just west of Hacienda Road to the City limits of La Habra and Whittier, just south of La Habra Boulevard and north of Stanton Avenue. La Mirada Creek, within the City limits, is a combination of both natural soft-bottom drainages and short culvert (under the roadways. Most of La Mirada Creek is within private residential properties.

Coyote Creek

Coyote Creek (OCFCD Facility No. A01) has three forks—north, central, and southern—with only the north fork impacted by the City of La Habra Heights. This creek generally flows west and south through La Habra to the Los Angeles County line. Each fork of Coyote Creek combines sections of concrete lined channels, earthen channels, and underground pipelines. Coyote Creek's north fork leaves the City of La Habra Heights at Idaho Street as an earthen channel and generally flows south paralleling Idaho Street to the west. It then transitions into a concrete channel, then an underground pipeline, back to an earthen channel, and continues to transition between the three types of channels crossing under La Habra Boulevard and the Union Pacific Railroad until it converges north-easterly of Beach Boulevard and Imperial Highway with Coyote Creek's central and southern forks. Coyote Creek then flows as a pipeline under Beach Boulevard and continues as a concrete lined channel southwesterly adjacent to Beach Boulevard, exiting into the City of La Mirada.

Coyote Creek–North Fork

Coyote Creek–North Fork drains south through the City of Whittier and into Coyote Creek in the City of Cerritos. Coyote Creek–North Fork, also called "La Canada Verde Creek" is primarily a concrete-lined, trapezoidal channel. Several tributaries flow into Coyote Creek–North Fork. The dominant tributary is La Mirada Creek, which drains southwest from the west Puente Hills through parts of La Habra Heights, Whittier, and La Mirada before its confluence with Coyote Creek– North Fork in the City of Cerritos. Coyote Creek – North Fork is approximately 8.3 miles long, all of which is downstream from the City of La Habra Heights.

An existing monitoring site in the North Fork of Coyote Creek (NFC1) will be used to monitor trends in trace metals subject to the TMDL and responses to implementation of control measures. As has been documented, this monitoring site was installed in the North Fork of Coyote Creek as part of an early action measure designed to obtain initial data specifically to address the San Gabriel River Metals TMDL.

San Jose Creek

Draining the most undeveloped, smaller portion of the City, San Jose Creek is impacted by unnamed creeks along the northern portion of the jurisdiction. These creeks discharge to the north into San Jose Creek Reach 1 which consists of the portion of the waterbody from the San Gabriel River confluence to Temple Boulevard in Pomona. San Jose Creek drains a large urbanized watershed and includes waterwater treatment plant discharges, all of which are downstream of La Habra Heights.

It is noted that most of the City jurisdictional area draining to San Jose Creek is the land owned by the Puente Hills Landfill Native Habitat Preservation Authority (approximately 70%). The Authority's property in La Habra Heights is part of a wildlife corridor that extends from the San Gabriel River to the Cleveland National Forest. This corridor will persist if dedicated links of regional open space can continue to be acquired for natural conservation purposes. The balance of jurisdictional area (approximately 30%) draining to this waterbody is residential.

1.5 City of La Habra Heights MS4 System

Due to both the City's General Plan's rural emphasis and the topography, the City's storm drain system is not highly developed. Based on this rural character, runoff is controlled within the street right of way primarily by open channels and short pipe culverts crossing the roadway or property access driveways. As part of a city-wide inventory, the "system" was inventoried and structures defined as follows:

- Standard curb opening catch basin discharging into channels or short pipes
- Open channel inlet discharging into short underground pipes
- Vertical drop inlet
- Culverts under the roadway
- Driveway culverts

Unlike other Los Angeles County area MS4 systems, this system is considered a very basic rural system. There are 573 culvert/structures within the City jurisdiction. Most are located within private streets or on private property, located at known historical points of flooding concentration. Almost all of the structures are isolated, meaning that they are not connected to an overall system. The structures listed are primarily used for directing water flow away from a building structure, roadway or hillside. Catch basins are connected only in as much as they take water from a private driveway or property to a v-ditch or rural drainage channel. Open channels are connected through culverts at roadways. Vertical drop inlets are located where historical slope erosion had occurred as part of an

emergency landslide repair project. Where there are no structures the water flows are managed as sheet flow. Most of the City is managed as sheet flow.

It is noted that there are no catch basins in the area of the City Hall, Fire Department and Water District.

Another key issue is that the City is underlain by a geologic formation that is historically highly susceptible to landslides. Currently, mudslides and significant landslides still occur during larger rain events within the City jurisdiction. Future capital improvement projects are expected to be focused on managing flows where flood property damage is most likely to occur.

2.0 City Specific Water Quality Targets

It is the intent of the IMP to provide assessable water quality monitoring data for use in determining the effectiveness of the WMP and for determining compliance with effluent limitations, WQBELS or other numeric targets as established by Total Maximum Daily Loads (TMDLs) or the Los Angeles Region Basin Plan.

The IMP was developed to focus on existing water quality conditions. Based on 10 years of monitoring, data from 2002 to 2012 in Coyote Creek and in upper portions of the San Gabriel River (LA County Flood Control District (LACFCD) mass emission sites S13 and S14) most of the constituents listed in Table E-2 of the MRP have never been detected. Other, non-listed, constituents have been detected, but then, found to not have not exceeded the Receiving Water Limitations (RWLs). It is understood that the IMP approach is designed to target constituents that have been identified as constituents of concern in the receiving waters. Available data from historical monitoring were used to classify segments of the affected, City–specific watershed and establish water body-pollutant combinations into one of the following three categories:

- **Category 1 (Highest Priority):** Water body-pollutant combinations for which water quality-based effluent limitations and/or receiving water limitations are established in Part VI.E, TMDL Provisions, and Attachments L through R of the Municipal Separate Stormwater Sewer System (MS4) Permit.

- **Category 2 (High Priority):** Pollutants for which data indicate water quality impairment in the receiving water according to the State Water Resources Control Board's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State's Listing Policy) and for which MS4 discharges may be causing or contributing to the impairment.

- **Category 3 (Medium Priority):** Pollutants for which there are insufficient data to indicate water quality impairment in the receiving water according to the State's Listing Policy, but which exceed applicable water limitations contained in Order R4-2012-0175 and for which MS4 discharges may be causing or contributing to the exceedance.

Three water bodies were considered while reviewing data potential impairment of the receiving waters (Table 2-1). These included the San Jose Creek Reach 1 (SJC1), Coyote Creek (CC) and the North Fork of Coyote Creek (NFC). Table 2-1 identifies selected

applicable water bodies and their respective pollutant water quality targets that have been established. These pollutants will be the central focus of the monitoring program in addition to the standard base line water quality related parameters required under the MS4 Permit and the first year monitoring program required pollutants identified in Table E-2 of Attachment E in the MS4 Permit (See Appendix A).

Table 2-1: City Specific Applicable Waterbodies, Associated Pollutants and Categories

City Specific Pollutants: Categorized Priority			
	Category 1	**Category 2**	**Category 3**
Water Body	**TMDL**	**303(d) List**	**Other Pollutants of Concern**
North Fork Coyote Creek	Metals -Lead (W) -Copper[1] (W,D) -Zinc (W,D)	Indicator Bacteria (W,D) Cyanide (W,D)[3] Selenium (W,D)[2]	Mercury (W,D)[3] pH (D)
Coyote Creek	Metals -Lead (W) -Copper[1] (W,D) -Zinc (W,D)	Indicator Bacteria (W, D) Diazinon (W,D)[4]	pH (W,D) MBAS (W) Nickel (D)[3]
San Jose Creek Reach 1	Selenium (D)[2]	Coliform Bacteria (W,D) pH (W,D) Total Dissolved Solids (D)	Lead (W) Zinc (W,D) Copper (W,D) PAH (W,D)[3] Chloride (D) Cyanide (W)[3] Dissolved Oxygen (W)
San Gabriel River, Reach 2	Lead (W)		
Harbor Toxics	Copper Lead PAHs DDT PCBs		

[1] - Dissolved Copper
[2] - No typical source land uses within jurisdiction
[3] - Likely source - vehicles on County-owned roads
[4] - Diazinon has been banned for use since 2004
W and D = Wet (W) and Dry (D) Weather Flows respectively

The City of La Habra Heights is subject to the following Category 1 (Highest Priority) pollutants as established in Part VI.E TMDL Provisions and Attachment P of the MS4 Permit. The San Gabriel River Metals TMDL was established by USEPA (March 26, 2007) that includes Waste Load Application (WLAs) for MS4 and other dischargers to the San Gabriel River and Coyote Creek. This TMDL includes a dry weather WLA for selenium in San Jose Creek. Attachment P lists both Coyote Creek and San Jose Creek as impaired with waste load allocations for a combination of wet weather and dry weather critical conditions as outlined in Table 2.2 below. The City is also included in the Harbors Toxics TMDL management area which will be managed through participation in a regional monitoring plan.

Table 2-2: TMDLs in San Gabriel River Watershed Management Area

Name	Pollutant	Waste Load Allocations[1]		Source
		Wet[3]	Dry	
Coyote Creek	Copper	24.71 µg/L x daily storm volume (L)	0.941 kg/day	Vehicle brake pads, atmospheric deposition, soil erosion
	Lead	96.99 µg/L x daily storm volume (L)	N/A	Automobile operation, industry, legacy pollutant
	Zinc	144.57 µg/L x daily storm volume (L)	N/A	Vehicle tires, galvanized metal, atmospheric deposition
San Jose Creek (Reach 1 and 2)	Selenium	N/A	0.232 kg/day 5 µg/L[2]	Soil erosion
San Gabriel River, Reach 2[3]	Lead	81.34 µg/L x daily storm volume (L)	N/A	Automobile operation, industry, legacy pollutant

Notes:
[1] In Coyote Creek, wet weather Total Maximum Daily Loads apply when the maximum daily flow in the creek is equal to or greater than 156 cubic feet per second (as measured at Los Angeles County Department of Public Works flow gage station F354-R; Dry weather waste load allocations apply when flow at F354-R are below 156 cfs (USEPA 2007, p. 37).

[2] The dry weather Total Maximum Daily Load for selenium in San Jose Creek is based on the median flow at Los Angeles County Department of Public Works flow gage station F312B of 19 cubic feet per second (USEPA 2007, p. 43).

3- As per the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL, a wasteload allocation for lead is included to address the lead water quality impairment in Reach 2 of the San Gabriel River. Wet-weather allocations are assigned to all upstream reaches and tributaries of San Gabriel River Reach 2 and Coyote Creek because they

potentially drain to these impaired reaches during wet weather. In San Gabriel River Reach 2, wet-weather TMDLs apply when the maximum daily flow in the river is equal to or greater than 260 cfs as measured at USGS station 11085000, located at the bottom of Reach 3 just above the Whittier Narrows Dam. (USEPA 2007, p. 37)

4- The mass-based dry-weather MS4 allocations are shared by all of the MS4 permittees and Caltrans within the drainage area. The City is 2.8% of the entire Coyote Creek subwatershed, thus its share of the dry weather copper MS4 allocation is approximately 0.026 kg/day.

The San Gabriel River and impaired Tributaries Metals and Selenium TMDL, as established by the USEPA, has an approved implementation plan as of June 2013 which does include a timeline for compliance with the WLAs and interim milestones established. The first milestone is a monitoring plan submittal by September 30, 2015. Related to this, The final approval date of this TMDL was October 13, 2014 for which the Basin Plan amendment became effective for regulatory purposes. the City of La Habra Heights proposed BMP implementation schedule and compliance criteria, as is applicable to the pollutant sources/land uses in the City, are identified in the WMP.

The Category 2 pollutants are founded on the 303 (d) listing constituents. The 303(d) listed pollutants numerical criteria are as follows:

Table 2-3: Category 2 – 303(d) Listing

Water Body	**303(d) List**	**Basin Plan or Numerical Criteria**
North Fork Coyote Creek	Indicator Bacteria (W,D)	235 E. coli/100ml[1]
	Cyanide (W,D)	CTR Freshwater (1 hr. avg.) = 22 ug/L
		CTR Freshwater (4 day avg.) = 5.2 ug/L
	Selenium (W,D)	CTR Freshwater (1 hr. avg.) = 20 ug/L
		CTR Freshwater (4 day avg.) = 5.0 ug/L
Coyote Creek	Diazinon (W,D)	California Dept. of Fish and Game Freshwater (4-day avg.) = 0.05 ug/L
		California Dept. of Fish and Game Freshwater (1-hr. avg.) = 0.08 ug/L
	Indicator Bacteria (W, D)	235 E. coli/100ml

San Jose Creek Reach 1	Coliform Bacteria (W,D)	Bacteria WQBEL: 235 E. coli/100ml
	pH (W,D)	6 to 8.5
	Total Dissolved Solids (D)	500 mg/L
	Toxicity (W,D)	See Section XIII of MS4 Permit Attachment E

1- WQBEL based on potential REC-1 beneficial use

It is noted that Ammonia has been determined to be from a known point sources, Municipal Wastewater. Toxicity will be managed through regional SCCWRP efforts. No additional monitoring is required. Only Indicator Bacteria, Coliform Bacteria, Selenium, Lead, Zinc and Copper were modeled in the RAA. (URS,2014)

The San Gabriel River and impaired Tributaries Metals and Selenium TMDL, as established by the USEPA, has an approved implementation plan as of June 2013 which does include a timeline for compliance with the WLAs and interim milestones established. The first milestone is a monitoring plan submittal by September 30, 2015

Other potential pollutants of concern have not been identified due to a lack of conclusive monitoring data. It is anticipated that if other pollutants of concern exist, the inclusion of Table E-2 of Attachment E in the MS4 permit with first year monitoring requirements will serve as an adequate process for screening and identifying the other unidentified pollutants of concern should they exist in MS4 discharges from the City of La Habra Heights.

3.0 Receiving Water Monitoring

The primary goal of receiving water monitoring is to determine whether the applicable receiving water quality goals are being achieved. MS4 discharges can impact the receiving water quality and potentially contribute pollutants mobilized by storm water or non-storm water flows captured the MS4. Over time, results of the monitoring will be analyzed for trends in pollutant concentrations in the receiving water body. As a result of MS4 discharges exceeding allowable pollutant limits, beneficial uses identified in the Los Angeles Region Basin Plan may be impacted. Results from the receiving water monitoring program will also be used to determine if beneficial uses are fully supported as determined by water chemistry as well as aquatic toxicity and bio-assessment monitoring.

The City of La Habra Heights is located in the San Gabriel River Watershed Management Area. The City drains to Coyote Creek, North Fork Coyote Creek and a small portion to Reach 1 of the San Jose Creek. San Jose Creek and Coyote Creek are both tributary to Reach 3 of the San Gabriel River which eventually flows into the Pacific Ocean.

Permittees have been directed to utilize previously designated mass emission stations for receiving water sampling. The closest station with respect to the City is located in Reach 2 of the San Gabriel River. Los Angeles County monitoring station S14 is located below San Gabriel River Parkway in Pico Rivera. The upstream tributary area is 450 square miles at this location. The City is directly tributary to San Jose Creek Reach 1 which is located upstream of monitoring station S14. Monitoring Station S13, located on Coyote Creek, is also to be used by the City as supplemental data. Figure 3 notes the approximate location of stations S14 and S13 on a map of the San Gabriel River Watershed Map developed by Los Angeles County. Receiving water monitoring data from these stations will be utilized in this IMP, however due to vast size of area that drains to the station, all data will be supplemental to results of outfall monitoring from the City. The City reserves the right to change the receiving water monitoring location should a more representative alternative location be identified at a later date. Changes to the proposed receiving water monitoring location will be at the discretion of the City.

As part of the comments on the first IMP submittal, the Water Board recommended that the City participate in monitoring programs managed by both the Lower and Upper San Gabriel Valley Watershed Groups. The City has, since the first IMP submittal, formally agreed to participate in the following two regional monitoring programs:

Upper San Gabriel River EWMP Group:

- MOU for participation (currently in process)
- Participation to include: USGR_SJC_C-1

Harbor Toxics TMDL Program:

- Approved Participation Agreement (May 21, 2015)
- Participation to include: Meeting objectives of the Harbor Toxic Pollutants TMDL by installing one monitoring station in the Los Angeles River at Wardlow Road, one monitoring station in the San Gabriel River near Spring Street, and one monitoring station in the Coyote Creek, also near Spring Street and conducting monitoring at said monitoring stations (collectively "Monitoring Stations") to ensure consistency with other regional monitoring programs and usability with other TMDL related studies.

Copies of the agreements are included in Appendix B.

3.1 TMDL Monitoring

TMDL monitoring and tracking is a critical component of the IMP. The City is named in Table K-6 of the MS4 Permit as being subject to the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL. The San Gabriel River Metals TMDL is a USEPA established TMDL with a Basin Plan amendment date of October 13, 2014, which is the date used for regulatory purposes. The required implementation schedule is found in this TMDL and Basin Plan.. Table 2-2 highlights the applicable TMDL Waste Load Allocations (WLAs) established for the City. TMDL WLAs to which the City's MS4 discharges are subject has been established for San Jose Creek Reach 1, Coyote Creek and San Gabriel River Reach 2. WLAs for Reach 2 of the San Gabriel River apply to all upstream reaches and tributaries, including San Jose Creek Reach 1 to which the City's MS4 discharges. As previously mentioned, the City is participating in the USGR EWMP and LSGR WMP groups for collaboration on receiving water monitoring. ThesePlans include utilizing the monitoring data from mass emissions stations S14 and S13 identified in Figure 3, Mass Emissions Monitoring Station Locations, and a location in North Fork of Coyote Creek (LSGR WMP). It is also noted that for both the Coyote Creek and San Jose Creek watersheds the City of La Habra Heights is at the top of the watershed, meaning there are no comingled flows into the jurisdiction. This arrangement will allow the City to better establish its direct contribution to water quality in the watershed.

3.2 Wet Weather Receiving Water Monitoring Requirements

Minimum required receiving water monitoring frequencies are defined in section VI.C of Attachment E in the MS4 Permit. There are multiple definitions of wet weather in the Permit and related documents. The simple wet weather definition is in Attachment A of the MS4 Permit, and which defines the wet season as the time period between October 1st and April 15th unless a storm event that is qualified to be targeted as the first event of the

year is forecasted within a reasonable amount of time prior to October 1st. A second definition is defined as when the flow with the receiving water is at least 20% greater that the base flow or as defined in an approved IMP, CIMP or TMDL. Lastly, a third definition is founded in the TMDL where wet weather is defined consistent with the San Gabriel River Metals and Selenium TMDL. In this case wet weather is when the maximum daily flow in Reach 2 of the San Gabriel River is greater than or equal to 260 cfs and in Coyote Creek is greater than or equal to 156 cfs. The wet weather parameters are varying depending on the measured pollutant.

Wet weather monitoring will occur at least three times per year for all applicable parameters with the exception for aquatic toxicity. As a constituent, aquatic toxicity monitoring is not currently scheduled for implementation. If aquatic toxicity monitoring is found necessary, the implementation schedule and approach will be developed based on the regional programs. The City is currently advancing participation in regional aquatic toxicity testing. Likely programs would be to participate in the Lower SGR River and/or the Southern California Coastal Research Project. At the time of writing, the City is in initial stages of participation and will provide the Water Board a bi-weekly report-out on the progress made.

The aquatic toxicity monitoring in the receiving waters (per the USGR and LSGR CIMPs) and at the City's designated outfall monitoring locations will be consistent with Permit Order Attachment E and the clarification memorandum dated August 7, 2015.
Receiving water monitoring shall be coordinated to start as soon as possible following storm water outfall monitoring to better reflect the potential impact from MS4 discharges.

3.3 Dry weather Receiving Water Monitoring Requirements

Dry weather monitoring requirements are defined in section VI.D of Attachment E in the MS4 Permit. Monitoring shall take place a minimum of two times per year for all parameters, or more if required by a TMDL monitoring plan. At least one of the monitoring events shall take place during the historically driest month of the year. Typically the driest month of the year is in August, which will be utilized for the time period of which at least one of the monitoring events occurs. As part of the dry weather monitoring the City is also photographing five key locations along La Mirada Creek and a tributary drainage on a daily (Monday through Friday) basis to document the frequency and volume of dry weather flows. Another dry weather photograph location is at the northern outfall along Hacienda Boulevard which discharges into San Jose Creek. All five locations will be photographed on a daily (Monday through Friday) basis throughout the entire year. At a minimum 12 months of photos will be captured. If anomalies are noted during the year, a maximum of

18 months of photos will be captured. Figure 6 presents the photograph locations on a City-wide map.

Table 3-1 City Drainage Photograph Locations

Photo Name	Location	Longitude/Latitude	Notes
Location 1	Behind LHH Fire Department	33°56'50.97"N 117°57'56.88"W	Through gate/down slope
Location 2	Behind LHH County Water District Building	33°56'53.09"N 117°57'55.45"W	From fence
Location 3	West and Hacienda	33°57'9.07"N 117°57'38.77"W	At side of drainage
Location 4	Encanada at the creek	33°57'28.31"N 33°57'28.31"N	At side of drainage
Location 5	East side of golf course	33°57'37.04"N 117°56'31.67"W	At side of drainage; primarily golf course flows
Location 6	Hacienda Road north of Skyline Drive	33°58'12.85"N 117°57'48.62"W	San Jose Creek subarea

3.4 Outfall Monitoring

Outfall monitoring will play a key role in determining the water quality of both storm water and non-storm water discharges from the City's MS4. Similarly to the receiving water monitoring program, the outfall monitoring program will be utilized to determine whether the applicable water quality goals are being achieved. MS4 discharges can impact the receiving water quality and potentially contribute pollutants mobilized by storm water or non-storm water flows deposited to the receiving water body. Over time, results of the monitoring will be analyzed for trends in pollutant concentrations. The program will also be utilized in the elimination of prohibited non –storm water discharges.

The City has conducted an inventory of its MS4 outfalls based on storm drain as-built records from the City's files, the Los Angeles County Storm Drain Records and a physical field reconnaissance. The findings from the MS4 outfall inventory process are outlined in Table 3-2.

Table 3-2 Stormwater Outfall Locations

Outfall	Receiving Water Body	Location/Description	Longitude/Latitude	Condition
LHH-1	Coyote Creek-North Fork	Behind Fire Station	117°57'54.14" W 33°56'50.73" N	Soft bottom; adjacent private property
LHH-2	San Jose Creek	Off of Hacienda Blvd.; roadside drainage	117°58'03.45" W 33°58'28.24" N (approximate)	Soft bottom; adjacent private property
LHH-3	Coyote Creek-North Fork	West of Le Flore Drive; approximately 1700 feet south west of roadway	117°58'57.06" W 33°57'32.79" N (approximate)	Private property; resource management land use

The photo documentation and field notes are saved chronologically within the City's electronic filing system. A spreadsheet noting the days of non-stormwater and wet weather flows will also be developed and maintained beginning March 2015. The field work and documentation methods will be reassessed October 2015 as part of the 12 month review of the LHH-1 location then again in January 2016 for the LHH-2 location. At that time a determination will be made about changes to the program.

3.5 Storm Water Outfall Based Monitoring

Storm water outfall monitoring will be utilized to determine compliance with wet weather TMDL and WQBEL requirements. The outfall chosen for monitoring has a representative drainage area for the land uses found within the City.

3.5.1 Outfall Monitoring Site Selection

Outfall locations selected for storm water monitoring were considered based on a number of criteria. Per the MRP section of the MS4 Permit, the City must monitor at least one location per the three sub watershed drainage areas (HUC-12). Within the jurisdictional boundaries of the City there are ten subwatershed areas within the three HUC-12 areas as shown in Figure 2 and 2a. The County of Los Angeles developed HUC-12 equivalent areas which are based on more detailed information of the existing topography and storm drain systems. When comparing both sub-watershed boundaries it is apparent that some

differences exist, however in regards to the monitoring requirement of one outfall per sub-watershed, there effectively is no difference in the number of HUC-12 boundaries in the City's jurisdiction. To simplify the outfall location selection, the RAA utilized HUC-12 equivalent boundaries per the requirements of the MS4 Permit for determining locations.

Other parameters that were taken into account when selecting the storm water outfall monitoring locations includes correlation between the outfall drainage area land use and the land uses within the City's jurisdiction. The majority of the City is devoted to signal family residential development and open space. Figure 4 is a map of the land uses with in the City as developed for the RAA (URS, 2014). Establishing an outfall that accurately reflects the City's land use limits the available monitoring sites to a few key points. Land uses within individual HUC-12 sub watersheds with in the City's boundaries do not reflect the City's land use in all cases. Due to the limited municipal, public and recreational land uses in the City and the centralized concentration of open space, not all of the potential HUC-12 based outfall monitoring locations will reflect the City's overall land use.

Prospective storm water monitoring outfall locations were first selected based on HUC-12 boundaries. The list of outfalls was further refined on the basis of having a similar representative land use in the drainage area as the land use in the city. The best available outfall of each HUC-12 area was then selected for further investigation. The following tables summarize relevant land use and drainage area information:

Table 3-3 Land Use Breakdown

Land Use	**Institutions**	**Open Space - Conservation**	**Open Space - Recreation**	**Open Space – Resource Production**	**Public Facilities**	**Residential Parcels**	**Roads**
Total Acres	19.90	721.30	175.85	193.29	15.76	2715.09	100.66
% of Total Area	.50	18.3	4.5	4.9	.40	68.9	2.5

Note that the City's total acreage is 3941.7 acres. 92.6 percent of the City is institution, conservation, recreation, public facilities, and residential land use. With the remaining land use being roads (County roads) and resource production.

The next table presents the watersheds by acreage including the percent of the subwatersheds within the City.

Table 3-4 Subwatershed Areas

Watershed	WMMS Watershed	Area of Subwatershed within the City (acres)	Total Subwatershed Area (acres)	Percent of Subwatershed within the City (%)
Coyote Creek	5046	901.3	4873.7	18.5
Coyote Creek	5065	751.5	1140.5	65.9
Coyote Creek	5066	1170	1170	100
Coyote Creek	5079	140.4	1477.6	9.5
Coyote Creek	5080	270.3	150.1	18
Coyote Creek	5083	8.5	1028.5	0.8
San Jose Creek	5173	156.9	2409.3	6.5
San Jose Creek	5175	81.1	1603.8	5.1
San Jose Creek	5183	78.1	1318.3	5.9
San Jose Creek	5189	383.6	2274.8	16.9
Total acreage		3941.7		

Lastly, Table 3-5 presents the breakdown for monitoring location LHH-1. Subarea 5066, the largest of the drainage areas (30% of the City and 100% within City jurisdiction), is the primary drainage subarea monitored at LHH-1. The remaining drainage to LHH-1 includes subarea 5065 which is 65.9% within City jurisdiction.

Table 3-5 Land use breakdown for LHH-1 (Drainage Area 5066/5065)

Land Use	Institutions	Open Space Conservation	Open Space - Recreation	Open Space – Resource Production	Public Facilities	Residential Parcels	Roads
5066	4.99	205.75	175.85	15.24	6.43	733.91	27.87
5065	6.05	.02	0.0	83.03	7.42	631.66	23.29
% of Total City Area	.28	5.2	4.5	2.49	.35	34.6	1.29

The selection of LHH-1 is the most conservative as it includes each of the land use types and relatively appropriate percentages for each type.

The final parameters reviewed in selecting the proposed storm water outfall location were the location conditions and potential safety concerns. Ideal outfall monitoring sites would allow for safe access and accurate sampling practices with little impact to surrounding communities and traffic.

Outfall monitoring locations selected to be included in this portion of the IMP are at manmade structures, and are relatively accessible. None of the selected monitoring locations are in the path of traffic, however to allow for safe access, adequate safety practices and traffic control measures must be utilized when field crews are conducting sampling or maintenance. The proposed storm water outfall monitoring locations are listed in Table 3-6 below. Figure 5 illustrates the geographical locations on a map of the City.

Table 3-6 Proposed Stormwater Outfall Monitoring Locations

Outfall	Receiving Water Body	Location/Description	Longitude/Latitude	Condition
LHH-1	Coyote Creek- North Fork	Behind Fire Station	117°57'54.14" W 33°56'50.73" N	Soft bottom; adjacent private property
LHH-2	San Jose Creek	Off of Hacienda Blvd.; roadside drainage	117°58'03.45" W 33°58'28.24" N (approximate)	Soft bottom; adjacent private property

Storm water outfall monitoring site LHH-1 will serve as a primary monitoring location for a majority of the City. LHH-1 is at the bottom of a drainage area calculated at approximately 1,921.5 Acres (49% of the City). LHH-1 is located west of Hacienda Boulevard behind the Fire Station. The point where monitoring will take place is within the natural bottom creekbed. The point of monitoring is located approximately 1,000' north of the City limits. Further upstream of the selected location is the continuation of La Mirada Creek and related unnamed tributaries. Further downstream from the monitoring location, the channel merges with Coyote Creek within the City of La Mirada. This location was chosen as it is the most representative of all landuses in the City and is also one of the only

locations with public access.

Storm water outfall location LHH-2 will serve as the storm water monitoring location for the northerly portion of the City. This portion of the City is the drainage area that flows to San Jose Creek. The approximate drainage area for LHH-2 is 156 Acres (.04% of the City). The scale of storm water flow that is transported at this location is very low, however this site is proposed because it is the only location where flow is draining from the City to the San Jose Creek watershed. The monitoring site is located along the east side of Hacienda Boulevard within the drainage. The location is at the City of Hacienda Heights city limit. The outfall is a natural creekbed.

The City proposes to monitor one outfall location for each of the sub watersheds that it is tributary to instead of the HUC-12 based requirement. The locations proposed to be monitored by the City only include LHH-1. It is anticipated that the results from LHH-1 would be similar to those found at LHH-2 however more conservative as there are more flows at the LHH-1 location. Monitoring site LHH-1 offers a better representation of land use and larger drainage area than other locations. The City may consider monitoring at both wet weather outfall monitoring locations at a later date during the permit term, however for the first year and foreseeable future of the monitoring program the City will only monitor outfall LHH-1for storm water flows as an attempt to maximize available funds for monitoring an minimize redundant data collection. If the monitoring at LHH-1 shows that there are analyte detections, sampling will also be performed at LHH-2. The sampling at LHH-2 will provide a smaller subarea for calibration.

3.5.2 Monitoring Requirements for Storm Water Outfall Monitoring

Section VIII.B of Attachment E in the MS4 Permit outlines the minimum requirements for Storm water outfall monitoring. Storm water discharges shall be monitored a minimum of three times per year for all parameters except for aquatic toxicity. Storm water monitoring shall take place during wet weather conditions as defined in Section 3.2. . Monitoring events shall target the first qualifying wet weather event of the season and at least two additional events in the same season. The first wet weather event to be targeted shall be forecasted at least 24 hours in advance with 70% probability of rainfall of at least .25 inches. The two additional events to be monitored shall be separated by a minimum of three dry condition days between events. Monitoring Parameters are identified in Table 3-7.

Table 3-7: Outfall Monitoring Parameters

Outfall Monitoring Parameters	
Parameter	**Monitoring Regulatory Basis**
Flow	Minimum Characteristic
pH	Minimum Characteristic
Total Suspended Solids	Minimum Characteristic
Hardness	Minimum Characteristic
Dissolved Oxygen	Minimum Characteristic
Temperature	Minimum Characteristic
Specific Conductivity	Minimum Characteristic
Lead	TMDL
Copper	TMDL
Zinc	TMDL
Selenium	TMDL
Coliform Bacteria	303(d)
Indicator Bacteria	303(d)
Cyanide	303(d)

3.5.3 Storm Water Outfall Monitoring Sampling Methods

Sampling of storm water at outfalls will take place during the first 24 hours of an event or before the event ends if less than 24 hours. A minimum of three grab samples separated by 15 minutes of each hour for a 24 hour event or for the duration of the storm if less than 24 hours, will be taken to create a flow weighted composite sample of the discharge from an outfall. Continuous sampler equipment may be selected for use in this monitoring plan. Grab samples may be utilized for specific pollutants at the discretion of the sampling lab/consultant.

Sampling and analysis will be conducted by a contracted water sampling consultant. Tasks conducted by the consultant will conform to the following requirements which will be verified by the City:

- Consulting Laboratory shall demonstrate that required pollution detection limits can be met with reasonable accuracy and precision.
- All equipment utilized in gathering and analyzing samples shall be cleaned and maintained in a manner that prevents sample contamination.
- Sample analysis shall be conducted in accordance with EPA established or Regional Board accepted methods and procedures applicable to pollutant(s) being analyzed.

- An adequate QA/QC program shall be in place to ensure precise and accurate results.

3.5.4 Non-Storm Water Outfall Based Monitoring

Non-storm water outfall monitoring will be utilized to determine compliance with dry weather TMDL and WQBEL requirements. Outfalls will be screened to determine the presence of dry weather flows. Dry weather monitoring will also be utilized to aid in the elimination of illicit discharges. Outfalls determined to have dry weather flows will be prioritized and investigated to determine the source of the flows and if the flows are categorized as a prohibited discharge. Starting in October 2014, daily (Monday through Friday) photos of the LHH-1 outfall (La Mirada Creek location) have been performed. Similarly scheduled photos at LHH-2 started in January 2015.

3.5.5 Outfall Screening Procedure

Upon approval of the IMP, the City will commence the screening process of outfalls for dry weather flows. Outfalls found to have consistent significant dry weather flows will be prioritized based on the receiving water, observed dry weather flow volume, observed water quality and the size of the outfall.

The initial stage of screening will be comprised of a visual assessment of all outfalls. This will take place during the first dry season that this IMP is in effect (April 16 through September 30). Each of the two primary outfalls will be visited and inspected on a daily basis for flow during dry weather conditions. If flow is present, pictures and general notes will be taken of the flow characteristics. Outfalls where dry weather flow is considered to be substantial (constant flow greater than 3 inches deep) will be documented and investigated. Documentation will include basic flow characteristics (depth and color). Where possible, the investigation will include tracing the flow to the source. Flows sourced to private property will be documented to the property line. . If no flows are found, photographs will be taken and weather characteristics documented. Follow up on non-stormwater flows is also explained in the approved WMP as part of the residential runoff program (WMP Section 5.7.3).

Each outfall found to have significant dry weather flows shall be recorded and tracked over the duration of the MS4 Permit. Field inspection reports shall be kept on file in an electronic format for future reference. Field reports shall include the following information at a minimum.

- Date and Time of Visual inspection
- Outfall ID Number (Reference Outfall inventory)
- Outfall Structure Description Receiving Water Description at Discharge Point
- Latitude/Longitude or Nearest Street Address
- Property Ownership, Access, and Safety Considerations
- Photographs of Outfall
- Photographs of Non-storm Water Discharge
- Estimated Discharge Rate
- Observed Characteristics of Discharge
    - Recent weather

Following the initial visual screening process, the field reports of outfalls with non-storm water discharges will be compiled and reviewed for the purpose of prioritizing source investigations. The MS4 Permit requires that prioritization be determined by the classification parameters below. The prioritization levels have been classified in to tiers in ascending numeric values with Tier 1 being the first outfalls to be monitored.

Tier 1 Prioritization – Outfalls discharging directly to receiving waters with WQBELS or receiving water limitations in the TMDL provisions for which final compliance has passed.

Tier 2 Prioritization – All major outfalls and other outfalls that discharge to a receiving water subject to a TMDL shall be prioritized according to TMDL compliance schedules.

Tier 3 Prioritization – Outfalls to which monitoring data exists and indicate recurring exceedances of one or more of the Action Levels identified in Attachment G of the MS4 permit.

Tier 4 Prioritization - All other major outfalls identified to have significant non-storm water discharges.

Prioritization of outfall investigations within each Tier will be based on best professional judgment with flow volume, outfall drainage area, and observed discharge water quality among other parameters taken into account.

3.5.6 Source Investigation

Non-storm water outfall source investigations will be scheduled to ensure that at least 25% of the outfalls with non-storm water discharges will undergo a source investigation within three years of the effective date of the MS4 Permit (Effective Date December 28, 2012), and 100% complete within 5 years of the effective date of the permit.

Source investigations shall include both desktop level analysis of potential sources and

field investigations to trace sources of dry weather flows. Based on the source investigation results the City will proceed with actions described in Table 3-8.

Table 3-8 Source Investigation Steps

Source Investigation Steps	
Flow Source	**Action**
Illicit Discharge	The City will enforce its ordinances accordingly to the discharge situation. Actions will be documented and reported in the next Annual Report.
NPDES Permitted Discharges	If the source is determined to be a Permitted Discharge, the City will notify the Regional Water Board and will document the actions in the Annual Report.
Unknown or Conditionally Exempt	If conditionally exempt, the discharge will be documented. If unknown, the characteristics of the discharge will be documented and continued to be investigated.
Multiple Sources	The City will attempt to quantify the proportional source and proceed as an illicit discharge.

Before a source of non-storm water discharge is classified as unknown, it shall be investigated to a reasonable extent. Investigation procedures shall include field inspections and desktop studies. Monitoring for indicator parameters shall be conducted if initial investigations yield no results. These indicator parameters, as presented in Permit Attachment E, Part IX.G include:

a. Flow;
b. Pollutants assigned a WQBEL or receiving water limitation to implement TMDL Provisions for the respective receiving water, as identified in Attachments L - R of the Order;
c. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters;
d. Pollutants identified in a TIE conducted in response to observed aquatic toxicity during dry weather at the nearest downstream receiving water station during the last sample event or, where the TIE conducted on the receiving water sample was inconclusive, aquatic discharge exhibits aquatic toxicity, then a TIE shall be conducted; and
e. Other parameters in Order Attachment E, Table E-2 identified as exceeding the

lowest applicable water quality objective in the nearest downstream receiving water monitoring station per Order Attachment E, Part VI.D.1.d.

Other means determined to be potentially effective in locating the source of unknown flows will also be evaluated. A description of all efforts to identify a source of dry weather flows will be included in the next Annual Report for sources to be classified as unknown. All MS4 outfalls requiring no further action shall be maintained in the Storm Drains, Channels and Outfalls map and associated database.

3.5.7 Monitoring Non-Storm Water Discharges Exceeding Criteria

Within 90 days after completing the source identification or after the Executive Officer of the Regional Water Board approves the IMP, whichever is later, the City will move forward with implementing monitoring activities. Dry weather monitoring activities will be limited to one outfall that has been determined to convey significant discharges comprised of either unknown or conditionally exempt non-storm water discharges, or containing discharges attributed to illicit discharges per dry season. The following parameters shall be monitored:

- Flow
- Pollutants assigned a WQBEL or RWL to implement TMDL Provisions applicable to the receiving water body
- Other Pollutants identified on the CWA 303(d) list for receiving water
- Pollutants identified in a TIE conducted in response to observed aquatic toxicity during dry weather at the nearest downstream receiving water monitoring station during the last sample event or, where the TIE conducted on the receiving water sample was inconclusive, aquatic toxicity. If the discharge exhibits aquatic toxicity, then a TIE shall be conducted.
- Other parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station per Part VI.D.1.d. of the MS4 Permit.

The frequency of monitoring during the first year shall be at least four times per outfall in the first year for outfalls that have been identified as having non-storm water discharges of unknown origin. Monitoring will then be reduced to at least twice per year for the second year. Dry weather outfall monitoring frequency will continue at a minimum of two sampling events for the remainder of the MS4 Permit cycle. Dry weather monitoring frequency may be increased from two times per year should the City deem it necessary to further trace flow source, BMP effectiveness or any other reason that would aid the City in improving water quality.

The City will evaluate the results of the first year of dry weather monitoring and consider submitting a request to the Executive Officer of the Regional Water Quality Board to

eliminate the monitoring requirements for specific pollutants found to not be a threat to the receiving waters.

3.5.8 Sampling Methods

Non storm water discharges shall be monitored during days when precipitation is less than 0.1 –inch and those not less than three days after a rain event of greater than 0.1-inch. A minimum of three grab samples separated by 15 minutes for each hour during a 24 hour period, will be taken to create a flow weighted composite sample of the discharge from an outfall. Continuous sampler equipment may also be selected for use in this monitoring plan. Samples will then be taken from the site to a City selected lab for analysis.

Sampling and analysis will be conducted by a contracted water sampling consultant. Tasks conducted by the consultant will conform to the following requirements which will be verified by the City:

- Consultant laboratory shall demonstrate that required pollution detection limits can be met with reasonable accuracy and precision.
- All equipment utilized in gathering and analyzing samples shall be cleaned and maintained in a manner that prevents sample contamination.
- Sample analysis shall be conducted in accordance with EPA established or Regional Board accepted methods and procedures applicable to pollutant(s) being analyzed.
- An adequate QA/QC program shall be in place to ensure precise and accurate results.

3.6 Monitoring Program Summary

The following table presents a summary of the required sampling La Habra Heights will perform or participate in for 2015. This program will be reviewed and adjusted based on annual findings and analysis.

Table 3-9 Monitoring Summary Table

Basis	Parameter	Exceedance Value		Non SW Outfall	SW Outfall	Receiving Water	Regional
Baseline				Sampling Events/year	Sampling Events/year	Sampling Events/year	Sampling Events/year
	Flow			Daily photos	Daily photos		
	pH	6.0-8.5		4	3		
	TSS	-		4	3		
	TDS	750 mg/L		4	3		
	Hardness	-		4	3		
	Dissolved Oxygen	>7.0 mg/L		4	3		
	Temperature	-		4	3		
	Specific Conductivity	-		4	3		
	Coliform Bacteria	235 E. coli/100m		1	1		
	Indicator Bacteria	235 E. coli/100m		1	1		
TMDL		Dry	Wet				
North Fork and Coyote Creek	Lead	NA	96.99 µg/L x daily storm volume (L)	3	1st rain event 2 additional events same season	Dry: 2/yr 1 during August Wet: 3/year	
	Copper	0.941 kg/day	24.71 µg/L x daily storm vol (L)	3	1st rain event 2 additional events same season	Dry: 2/yr 1 during August Wet:3/yr	
	Zinc	NA	144.57 µg/L x daily storm vol (L)	3	1st rain event;2 additional events same season	Dry: 2/yr 1 during August Wet: 3/year	
San	Selenium	0.232	NA	3	1st rain event; 2	Dry: 2/yr 1 during	

Basis	Parameter	Exceedance Value		Non SW Outfall	SW Outfall	Receiving Water	Regional
Baseline				Sampling Events/year	Sampling Events/year	Sampling Events/year	Sampling Events/year
Jose Creek		kg/day; 5 µg/L[2]			additional events same season	August Wet:3/yr	
San Gabriel River	Lead	NA	81.34 µg/L x daily storm vol. (L)	3	1st rain event; 2 additional events same season	Dry: 2/yr 1 during August Wet: 3/year	
Other						Aquatic Toxcity: 2/yr	

4.0 New Development/Redevelopment Effectiveness Tracking

The objective of the new development/re-development tracking system is to track BMP effectiveness. This program will be utilized to adjust and hone BMP implementation and design with the intent to improve the effectiveness of BMPs. The City will keep a database of the information outlined below for use in evaluating the effectiveness of the new development and re-development in the City. It is noted that approximately 80% of the City is residential and BMPs will be located on private property.

4.1 New Development Re-development Tracking Parameters

The following elements will be documented and tracked as part of this program:

- Name of project developer and project
- Percent of Design Storm volume to be retained on site
- Project Location & Map
- BMP sizing criteria
- Date of Certificate of Occupancy/Project completion
- Documentation of Owner Maintenance Agreement

As the City's database of new development and re-development effectiveness builds, the City will evaluate the effectiveness of certain BMPs and re-evaluate what BMPs will be allowed for consideration in new development or re-development projects.

It is noted that there will not be off-site BMP opportunities developed within the City.

5.0 Regional Studies

Regional Studies are required to further characterize the impact on beneficial uses of receiving waters from discharges originating at the MS4 outlets. These studies will include the Southern California Storm water Monitoring Coalition (SMC) Regional Watershed Monitoring Program and special studies as specified in approved TMDLs. The City is not named as a member of the SMC, but the County of Los Angeles is. The City will meet the Permit requirement of participating in the SMC via the County of Los Angeles's participation.

The LACFCD will continue to coordinate and assist in implementing the bioassessment monitoring requirement of the MS4 permit on behalf of the permittees in Los Angeles County. Initiated in 2008, the SMC's Regional Bioassessment Program is designed to run over a five-year cycle. Monitoring under the first cycle concluded in 2013, with reporting of findings and additional special studies planned to occur in 2014. The SMC Joint Executive Workgroup is currently working on designing the bioassessment monitoring program for the next five-year cycle, which is scheduled to run from 2015 to 2019.

6.0 Special Studies

Per the MS4 Permit each permittee shall be responsible for conducting special studies required in an effective TDML or an approved TMDL Monitoring Plan. The City is subject to one TMDL which is the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL. No special studies were classified as required in the final TMDL. A number of potential special studies are identified in the TMDL, but at this time no special studies have been considered for further development by the City. In the event that monitoring data would suggest that a special study would benefit the City, further investigation of potential study(ies) will be reviewed pending available budget to do so.

7.0 Annual Reporting

On an annual basis, the City will submit an annual report to the Regional Water Quality Control Board on or before December 15th. The report will document and present key NPDES information that was gathered for previous fiscal year (June 1 to July 30). The report shall include information that will allow the Regional Board to assess the results of the pervious years NPDES program. The report topics discussed shall include:

- Implementation of the Watershed Management Plan
- The Impact of storm water and non-storm water discharges on the receiving water
- Compliance with receiving water limitations, numeric water quality based effluent limitations and non-storm water action levels
- Effectiveness of control measures in reducing discharges of pollutants from the MS4 to receiving waters
- Whether the quality of MS4 discharges and the health of receiving waters is improving, staying the same, or declining as a result of watershed management program efforts, an/or TMDL implementation measures or other minimum control measures
- Whether changes in water quality can be attributed to pollutant controls imposed on new development, re-development or retrofit projects.

Other key information will be presented will provide the Regional Board a clear and representative view of how the Watershed Management Plan and Integrated Monitoring Plan are being implemented. Section XVI through XVIII of Attachment E to the MS4 Permit discusses in detail the required annual reporting requirements.

8.0 Adaptive Management Process

The City will utilize the MS4 Permit required adaptive management process to review and potentially modify the IMP in an effort to improve the effectiveness of the plan. The adaptive management process will take place every two years from the date of approval by the Regional Water Quality Control Board. The review process of the plan will include consideration of the following items:

- Progress toward achieving interim and/or final water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachment L through R, according to established compliance schedules.
- Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
- Achievement of interim milestones.
- Re-evaluation of water quality priorities identified for the WMA based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
- Availability of new information and data from sources other than the monitoring program with in the WMA that informs the effectiveness of the actions implemented by the IMP.
- Regional Water Board recommendations.
- Recommendations for modifications to the Watershed Management Program solicited through a public participation process.

The findings of the adaptive management review process can result in modifications to the IMP including changes to compliance deadlines, interim milestones necessary to improve the effectiveness of the program. Modifications to compliance deadlines established by TMDLs will not be allowed through the adaptive management process. Proposed modifications to the IMP shall be reported by the City in the Annual Report. Proposed modifications identified through the adaptive management process shall be implemented upon approval by the Regional Board Executive Officer within 60 days of their submittal if the Regional Board Executive has not expressed any objections to the modifications.

9.0 References

Los Angeles Regional Water Quality Control Board (Regional Board), 2012. Order No. R4-2012-0175 NPDES Permit No. CAS004001 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4. November 8.
http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20%20A%20Final%20Order%20revised.pdf

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Los Angeles County Department of Public Works, 2014. "San Gabriel River Watershed." June. http://ladpw. org/wmd/watershed/sg/

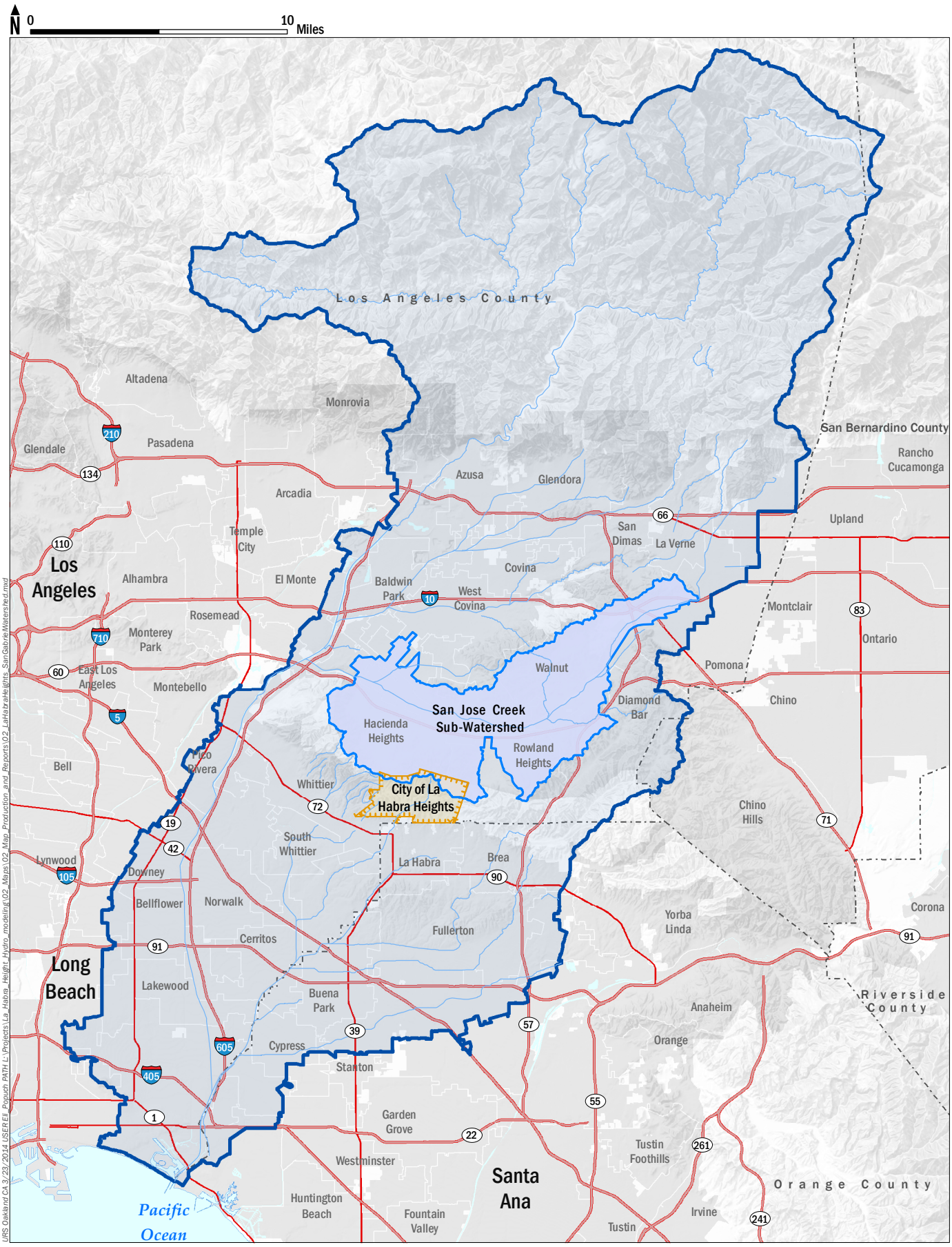
URS, 2014, City of La Habra Heights Reasonable Assurance Analysis, (draft final to RWQCB September 15, 2014; final to RWQCB December 4, 2014)

Mapping References:

Stream Network: USGS National Hydrography Dataset, 2013

Watershed Areas: Los Angeles County Department of Public Works, 2012

Figures



URS Oakland CA 3/23/2014 USER:Eli Popuch PATH: L:\Projects\La_Habra_Height Hydro_modeling\02_Maps\02_Map_Production_and_Reports\02_LaHabraHeights_SanGabrielWatershed.mxd

URS

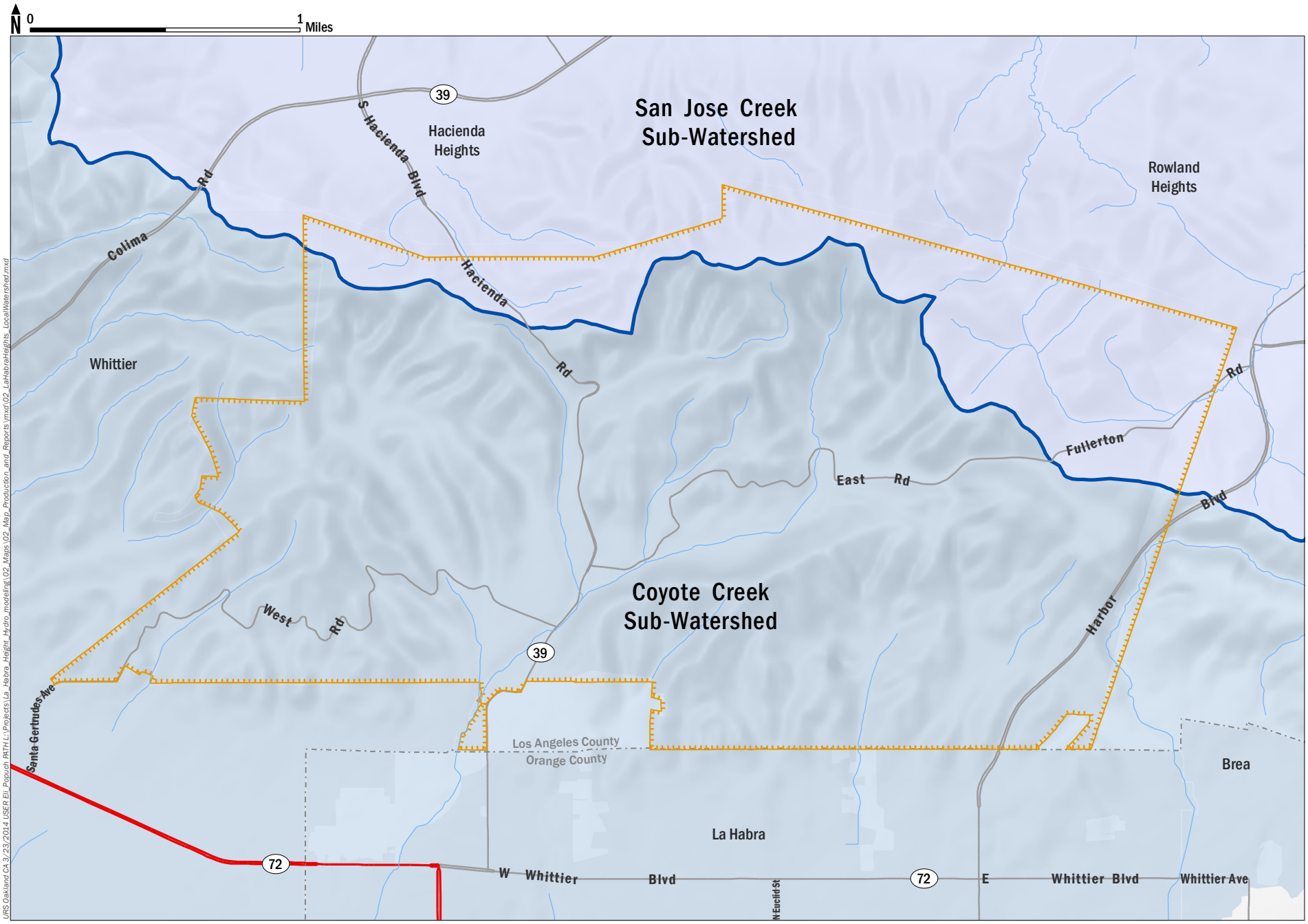
City of La Habra Heights

City of La Habra Heights Reasonable Assurance Analysis

Source: USGS National Hydrography Dataset, 2013

FIGURE 1

San Gabriel Watershed



URS

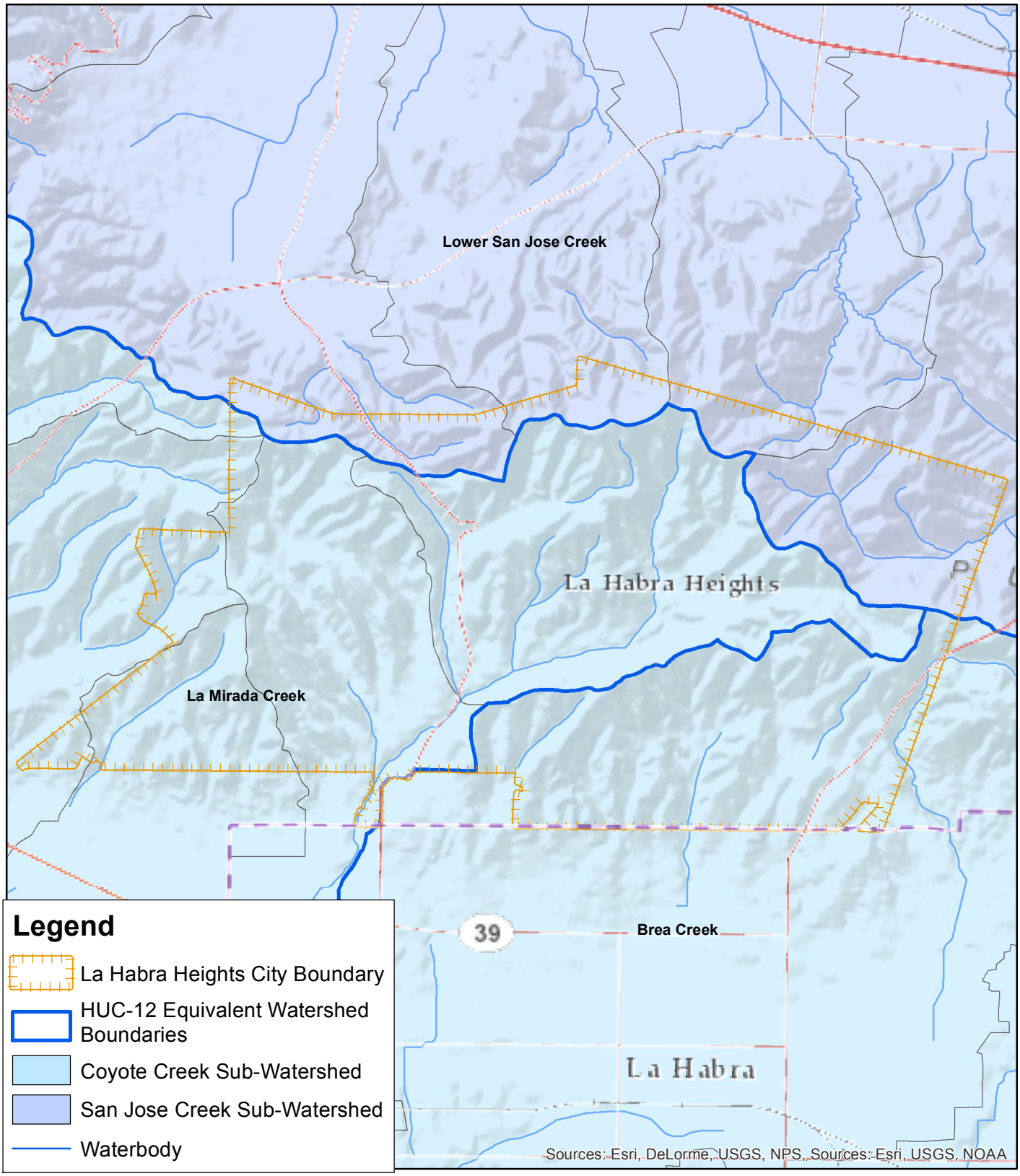
City of La Habra Heights Water Department

City of La Habra Heights Reasonable Assurance Analysis

Source: USGS National Hydrography Dataset, 2013

FIGURE 2A

La Habra Heights Local Subwatersheds



Source: USGS National Hydrography Dataset, 2013. LARWQCB GIS Files and Maps for the Watershed Management Programs, 2015.

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LA HABRA HEIGHTS SUBWATERSHEDS

AECOM

OCTOBER 2015
60389492

CITY OF LA HABRA HEIGHTS
LA HABRA HEIGHTS INTEGRATED MONITORING PLAN
LA HABRA HEIGHTS, CALIFORNIA

FIGURE 2B

H:\LHH.mxd

COUNTY OF LOS ANGELES

SAN GABRIEL RIVER WATERSHED

LA County Mass Emission Station S14; Stream Gage No. F23C-R

San Gabriel River Watershed

Coyote Creek - North Fork Long Term Assessment Site

LA County Mass Emission Station S13

Figure 3 Mass Emission Monitoring Station Locations As Applicable to City of La Habra Heights

LEGEND

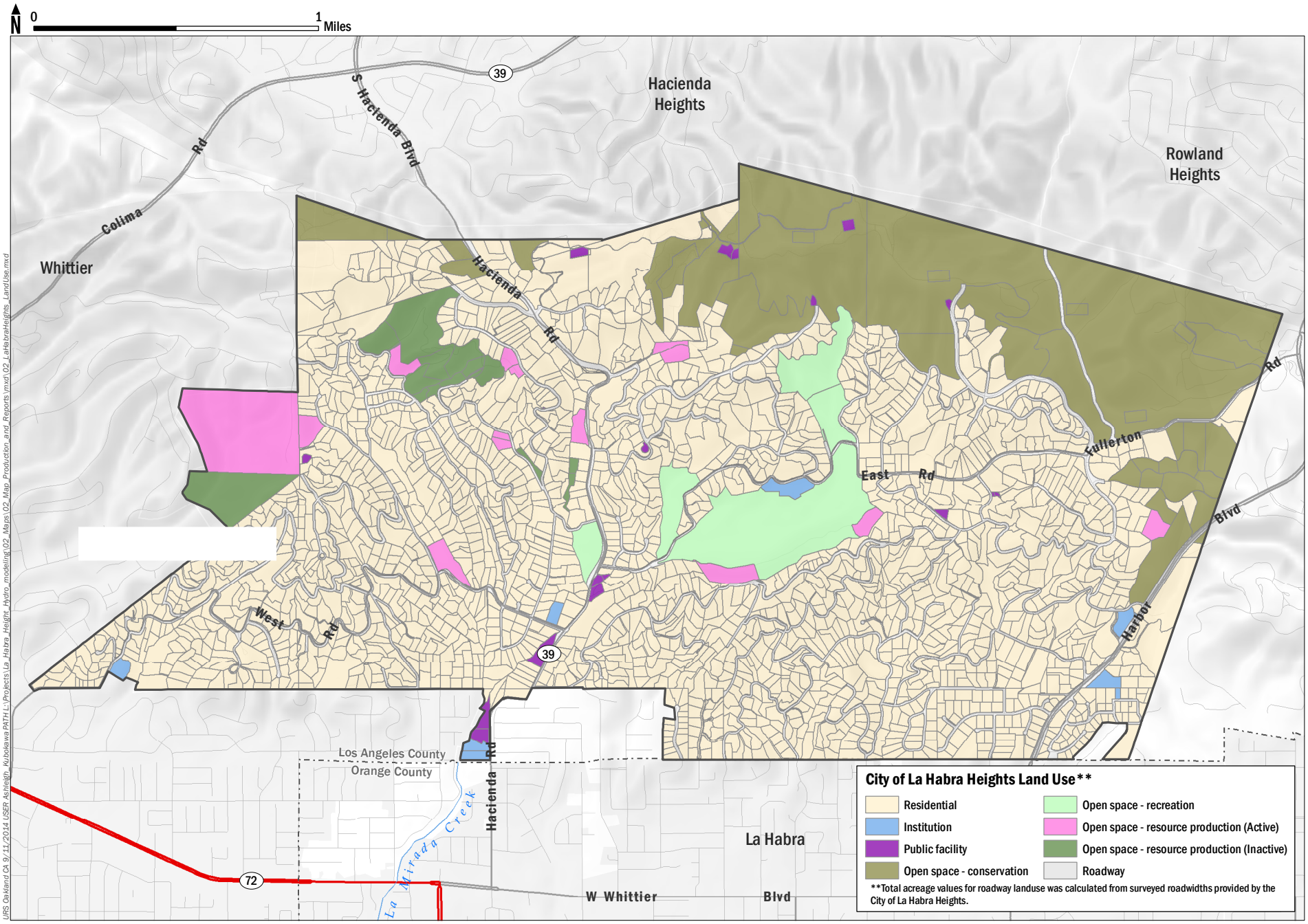
- SAN GABRIEL RIVER WATERSHED
- UNINCORPORATED AREA
- DAM / LAKE / RESERVOIR
- MAJOR RIVER
- MAJOR CHANNEL

MILES
0 0.875 1.75 3.5

Data contained in this map is produced in whole or part from the Los Angeles County Department of Public Works' digital database.

REF: \\pwgisd02\mpmgis\MPMGIS\projects\mpm\gismaps\wk_2627\SanGabrielRiver_wtrshed.mxd DATE: 08/21/07

Mapping & Property Management Division, Mapping & GIS Services Section



URS

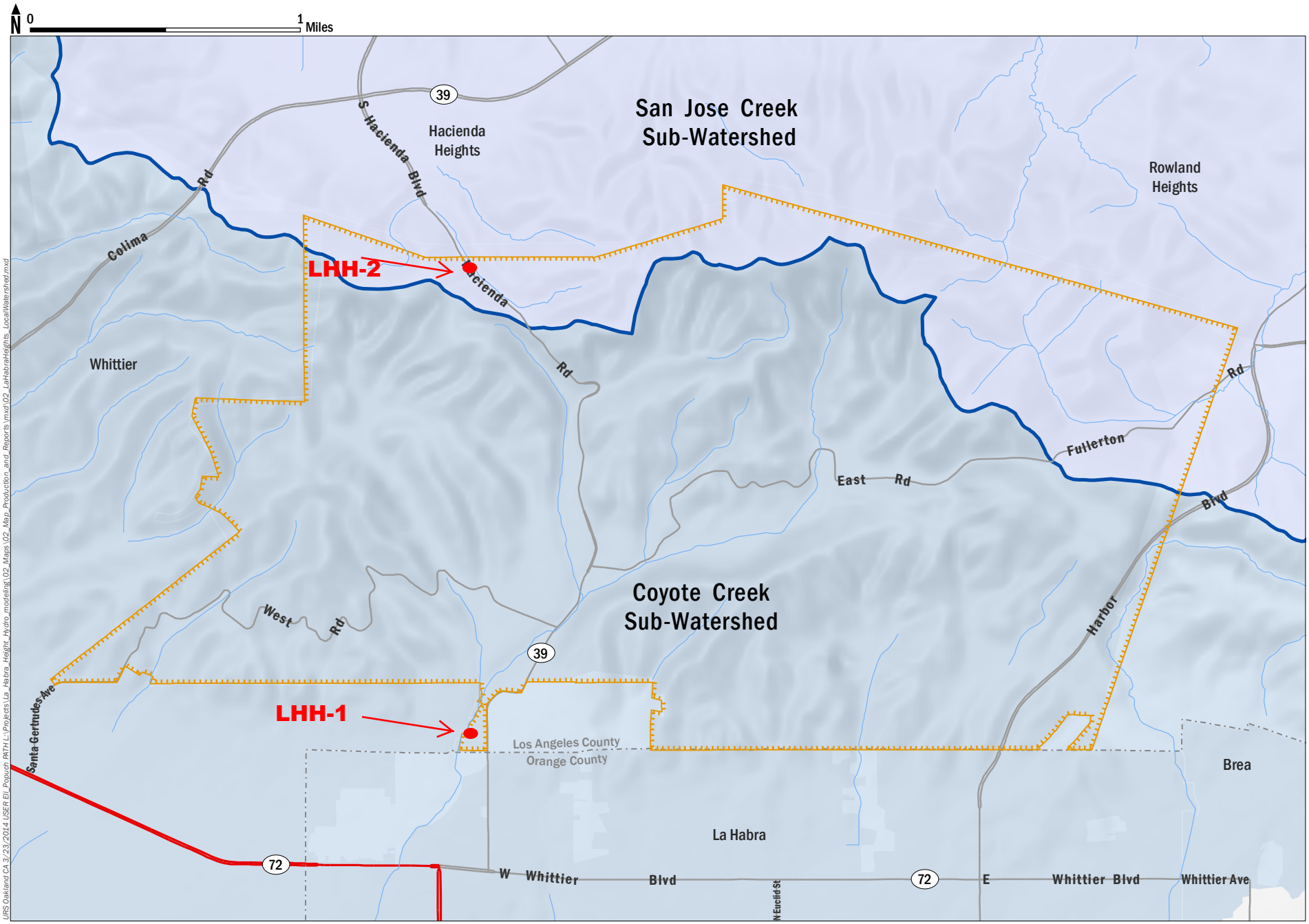
City of La Habra Heights

City of La Habra Heights Reasonable Assurance Analysis

Source: City of La Habra Heights, 2013.

FIGURE 4

City of La Habra Heights Land Use



URS

City of La Habra Heights Water Department

City of La Habra Heights Reasonable Assurance Analysis

Source: USGS National Hydrography Dataset, 2013

FIGURE 5

La Habra Heights Local Subwatersheds

City of La Habra Heights Sampling Locations

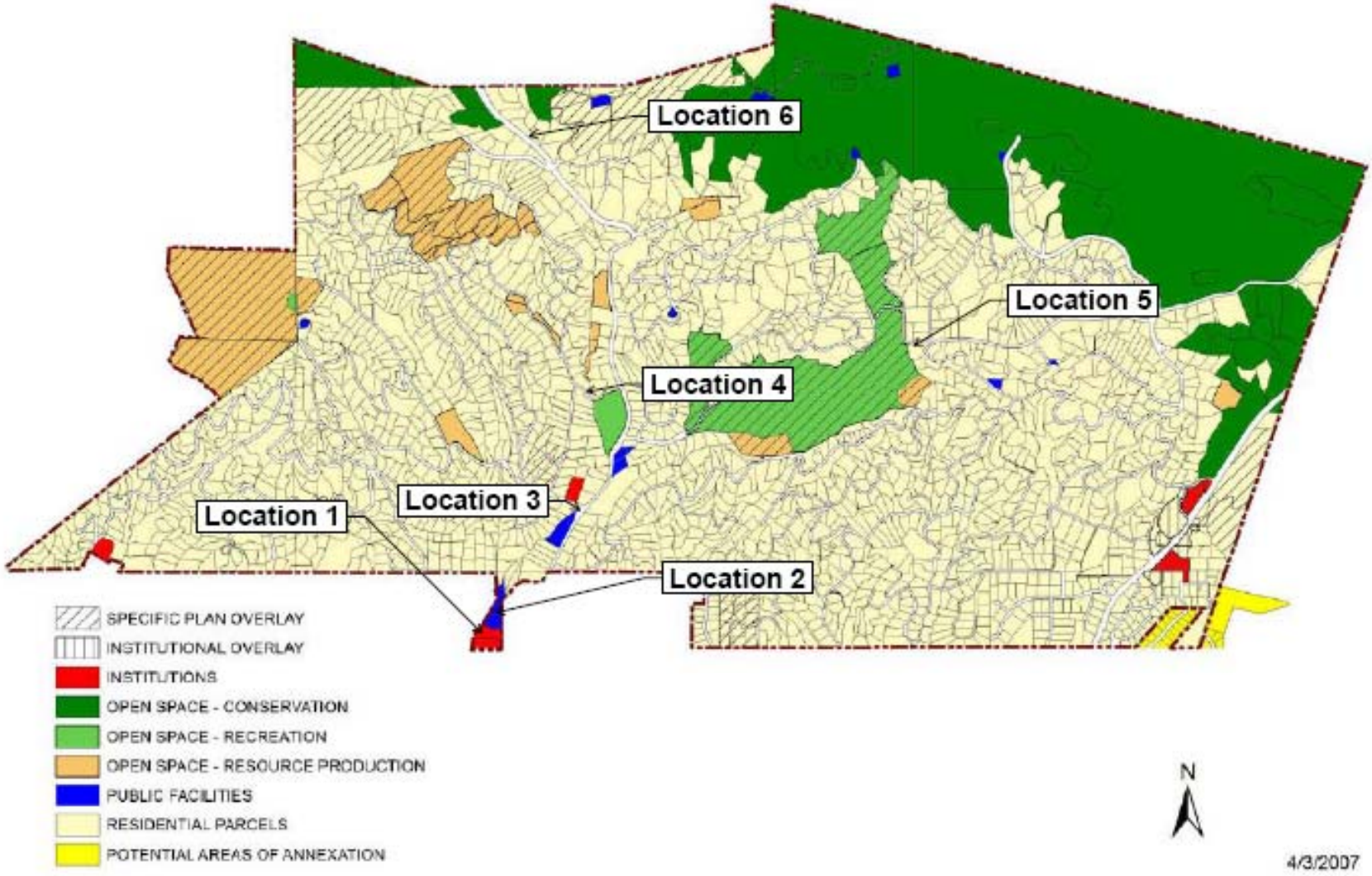


FIGURE 6 : La Habra Heights Photographic Documentation Locations

Appendix A
MS4 Permit Table E-2

CONSTITUENTS	MLs
CONVENTIONAL POLLUTANTS	**mg/L**
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 – 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
BACTERIA (single sample limits)	MPN/100ml
Total conform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
GENERAL	**mg/L**
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L
METALS (Dissolved & Total)	**µg/L**
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Chromium (Hexavalent)	5
Copper	0.5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1

SEMIVOLATILE ORGANIC COMPOUNDS	
ACIDS	**µg/L**
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
ACIDS	**µg/L**
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
BASE/NEUTRAL	**µg/L**
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzathracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10
Benzo(k)flouranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroispropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)atnthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl Phthalate	10
2,4-Dinotrotoluene	5
2,6-Dinotrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2 Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1

Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
BASE/NUETRAL	**µg/L**
Pyrene	0.05
1,2,4-Trichlorobenzene	1
CHLORINATED PESTICIDES	**µg/L**
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDA	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.05
POLYCHLORINATED BIPHENYLS	**µg/L**
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1454	0.5
Aroclor-1260	0.5
ORGANOPHOSPHATE PESTICIDES	**µg/L**
Altrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
HERBICIDES	**µg/L**
2,4-D	10
Glyphosate	5
2,4,5-TP-SILVEX	0.5

Appendix B
Regional Monitoring Agreements

MEMORANDUM OF UNDERSTANDING

BETWEEN THE COUNTY OF LOS ANGELES AND THE CITY OF LA HABRA HEIGHTS

REGARDING THE ADMINISTRATION AND COST SHARING FOR IMPLEMENTING THE COORDINATED INTEGRATED MONITORING PROGRAM FOR THE UPPER SAN GABRIEL RIVER WATERSHED

This Memorandum of Understanding (MOU), made and entered into as of the date of the last signature set forth below by and between the COUNTY OF LOS ANGELES (COUNTY), a political subdivision of the State of California and the CITY OF LA HABRA HEIGHTS (CITY), a municipal corporation. Collectively, these entities shall be known herein as PARTIES or individually as PARTY.

WITNESSETH

WHEREAS, the Regional Water Quality Control Board, Los Angeles Region (REGIONAL BOARD) adopted National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit Order No. R4-2012-0175 (MS4 Permit); and

WHEREAS, the MS4 Permit became effective on December 28, 2012, and requires that the COUNTY, the LACFCD, and 84 of the 88 cities (excluding Avalon, Long Beach, Palmdale, and Lancaster) within the Los Angeles County comply with the prescribed elements of the MS4 Permit; and

WHEREAS, the MS4 Permit identified the PARTIES as MS4 permittees that are responsible for compliance with the MS4 Permit requirements pertaining to the San Gabriel River Watershed Management Area; and

WHEREAS, the COUNTY, the Los Angeles County Flood Control District, and the Cities of Baldwin Park, Covina, Glendora, Industry, and La Puente, collectively known as the Upper San Gabriel River Enhanced Watershed Management Program (USGR EWMP GROUP), entered into a memorandum of understanding on October 24, 2013 to collaborate in the development of a Coordinated Integrated Monitoring Program (CIMP); and

WHEREAS, the CIMP was submitted to REGIONAL BOARD on June 27, 2014 and was conditionally approved on June 19, 2015; and

WHEREAS, the USGR EWMP GROUP prepared a final Scope of Work and obtained a consultant (CONSULTANT) to assist with implementing the CIMP and is entering into a memorandum of understanding to collaborate in the implementation of the CIMP; and

WHEREAS, the PARTIES have agreed that the annual cost for CITY to participate in USGR EWMP GROUP's receiving water monitoring as part of the CIMP implementation shall not exceed $8,400.00, which includes a 5 percent contract administration cost; and

WHEREAS, the PARTIES agree that each shall assume full and independent responsibility for ensuring its own compliance with the MS4 Permit despite the collaborative approach of the MOU.

NOW, THEREFORE, in consideration of the mutual benefits to be derived by the PARTIES, and of the promises contained in this MOU, the PARTIES agree as follows:

Section 1. Recitals. The recitals set forth above are incorporated into this MOU.

Section 2. Purpose. The purpose of this MOU is for CITY to participate in and collaboratively fund the implementation of the CIMP and to coordinate the payment and share results of the monitoring services.

Section 3. Cooperation. The PARTIES shall fully cooperate with one another to attain the purposes of this MOU.

Section 4. Voluntary. This MOU is voluntarily entered into for the implementation of the CIMP.

Section 5. Term. This MOU shall become effective on the last date of execution by a PARTY (EFFECTIVE DATE), and shall remain in effect until (1) CITY has paid all outstanding invoices, or (2) December 31, 2019, whichever comes first.

Section 6. COUNTY AGREES:

a. Consultant Services. To select a CONSULTANT from COUNTY's as-needed watershed engineering and water quality support consultant services contractors for implementation of the CIMP in accordance with the Scope of Work. COUNTY will be compensated for the administration of the consultant contract at a rate of 5 percent of CITY's annual cost of $8,000.00. COUNTY will comply with all procurement requirements applicable to said selection.

b. Invoice. To invoice CITY annually at an amount of $8,400.00 for a total 5-year not-to-exceed amount of $42,000. The annual payments for the period of July 1 through June 30 will be invoiced in July of that fiscal year, except for the first invoice, which will be issued upon the execution of this MOU by both PARTIES or in August 2015, whichever comes first. The last payment will be invoiced in July 2019.

c. Expenditure. To utilize the funds deposited by the PARTIES only for the administration of the consultant contract and the implementation of the CIMP.

d. Report. To provide CITY with an electronic copy of receiving water monitoring results in a format approved by REGIONAL BOARD within 7 business days after the CONSULTANT's deliverable is accepted by COUNTY.

Section 7. CITY AGREES:

a. Payment. To pay COUNTY for CITY's share of the cost for the implementation of the CIMP and contract administration annually at an amount of $8,400.00, within 60 days of receipt of the invoice from COUNTY.

Section 8. Indemnification

a. Each PARTY shall indemnify, defend, and hold harmless each other PARTY, including its special districts, elected and appointed officers, employees, agents, attorneys, and designated volunteers from and against any and all liability, including, but not limited to demands, claims, actions, fees, costs, and expenses (including reasonable attorney's and expert witness fees), arising from or connected with the respective acts of each PARTY arising from or related to this MOU; provided, however, that no PARTY shall indemnify another PARTY for that PARTY'S own negligence or willful misconduct.

b. In light of the provisions of Section 895.2 of the Government Code of the State of California imposing certain tort liability jointly upon public entities solely by reason of such entities being parties to an agreement (as defined in Section 895 of said Code), each of the PARTIES hereto, pursuant to the authorization contained in Section 895.4 and 895.6 of said Code, shall assume the full liability imposed upon it or any of its officers, agents, or employees, by law for injury caused by any act or omission occurring in the performance of this MOU to the same extent such liability would be imposed in the absence of Section 895.2 of said Code. To achieve the above stated purpose, each PARTY indemnifies, defends, and holds harmless each other PARTY for any liability, cost, or expense that may be imposed upon such other PARTY solely by virtue of said Section 895.2. The provisions of Section 2778 of the California Civil Code are made a part hereof as if incorporated herein.

Section 9. Termination and Withdrawal

a. This MOU may be terminated upon the express written agreement of both PARTIES. If this MOU is terminated, then both PARTIES must agree on the payment of invoices due at the time of termination. Completed work shall be owned by the PARTY or PARTIES who fund the completion of such work. Rights

to uncompleted work by the CONSULTANT still under contract will be held by the PARTY or PARTIES who fund the completion of such work.

b. If a PARTY fails to substantially comply with any of the terms or conditions of this MOU, then that PARTY shall forfeit its rights to work completed through this MOU, but no such forfeiture shall occur unless and until the defaulting PARTY has first been given notice of its default and a reasonable opportunity to cure the alleged default.

c. COUNTY will notify CITY in writing of CITY failing to cure an alleged default in compliance with the terms or conditions of this MOU. COUNTY will determine the next course of action.

d. If CITY wishes to withdraw from this MOU for any reason, CITY must give COUNTY and the REGIONAL BOARD prior written notice thereof. CITY shall be responsible for its share of the CIMP implementation cost through the end of the current monitoring year (July 1 through June 30). The effective date of withdrawal shall be the 6th day after COUNTY receives written notice of CITY's intent to withdraw.

Section 10. General Provisions

a. Notices. Any notices, bills, invoices, or reports relating to this MOU, and any request, demand, statement, or other communication required or permitted hereunder shall be in writing and shall be delivered to the representatives of the PARTIES at the following addresses. The PARTIES shall promptly notify each other of any change of the following contact information, including personnel changes. Written notice shall include notice delivered via e-mail or fax. A notice shall be deemed to have been received on (a) the date of delivery, if delivered by hand during regular business hours, or by confirmed facsimile or by e-mail; or (b) on the third (3rd) business day following mailing by registered or certified mail (return receipt requested) to the following addresses:

County of Los Angeles
Department of Public Works
Watershed Management Division, 11th Floor
900 South Fremont Avenue
Alhambra, CA 91803-1331
Paul Alva, Assistant Division Head
E-mail: palva@dpw.lacounty.gov
Phone: (626) 458-4325

City of La Habra Heights
1245 Hacienda Road
La Habra Heights, CA 90631

Shauna Clark, City Manager
E-mail: shaunac@lhhcity.org
Phone: (562) 694-6302 x221

b. Administration. For the purposes of this MOU, the PARTIES hereby designate as their respective PARTY representatives the persons named in Section 10(a). The designated PARTY representatives, or their respective designees, shall administer the terms and conditions of this MOU on behalf of their respective PARTY. Each of the persons signing below on behalf of a PARTY represents and warrants that he or she is authorized to sign this MOU on behalf of such PARTY.

c. Relationship of the PARTIES. The PARTIES are, and shall at all times remain as to each other, wholly independent entities. No PARTY to this MOU shall have power to incur any debt, obligation, or liability on behalf of any other PARTY unless expressly provided to the contrary by this MOU. No employee, agent, or officer of a PARTY shall be deemed for any purpose whatsoever to be an agent, employee, or officer of another PARTY.

d. Binding Effect. This MOU shall be binding upon, and shall be to the benefit of the respective successors, heirs, and assigns of each PARTY; provided, however, no PARTY may assign its respective rights or obligations under this MOU without prior written consent of the other PARTIES.

e. Amendment. The terms and provisions of this MOU may not be amended, modified, or waived, except by an instrument in writing signed by all non-delinquent PARTIES. For purposes of this MOU, a PARTY shall be considered delinquent if that PARTY fails to timely pay an invoice as required by Section 7(a) or withdraws pursuant to Section 9(d).

f. Law to Govern. This MOU is governed by, interpreted under, and construed and enforced in accordance with the laws of the State of California.

g. Severability. If any provision of this MOU shall be determined by any court to be invalid, illegal, or unenforceable to any extent, then the remainder of this MOU shall not be affected, and this MOU shall be construed as if the invalid, illegal, or unenforceable provision had never been contained in this MOU.

h. Entire Agreement. This MOU constitutes the entire agreement of the PARTIES with respect to the subject matter hereof.

i. Waiver. Waiver by any PARTY to this MOU of any term, condition, or covenant of this MOU shall not constitute a waiver of any other term, condition, or covenant. Waiver by any PARTY to any breach of the provisions of this MOU shall not constitute a waiver of any other provision, nor a waiver of any subsequent breach or violation of any provision of this MOU.

j. Counterparts. This MOU may be executed in any number of counterparts, each of which shall be an original, but all of which taken together shall constitute one and the same instrument, provided, however, that such counterparts shall have been delivered to all PARTIES to this MOU.

k. All PARTIES have been represented by counsel in the preparation and negotiation of this MOU. Accordingly, this MOU shall be construed according to its fair language. Any ambiguities shall be resolved in a collaborative manner by the PARTIES and shall be rectified by amending this MOU as described in Section 10(e).

IN WITNESS WHEREOF, the PARTIES hereto have caused this MOU to be executed by their duly authorized representatives and affixed as of the date of signature of the PARTIES:

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COUNTY OF LOS ANGELES

By _____ 9-24-15
GAIL FARBER, Director of Public Works Date

APPROVED AS TO FORM:

MARY C. WICKHAM
Interim County Counsel

By _____ 8/27/15
Deputy Date

CITY OF LA HABRA HEIGHTS

By _____ August 13, 2015
Mayor Date

APPROVED AS TO CONTENT:

By _____
City Manager

APPROVED AS TO FORM:

By _____
City Attorney

AGREEMENT
BETWEEN THE LOS ANGELES GATEWAY REGION INTEGRATED REGIONAL WATER MANAGEMENT JOINT POWERS AUTHORITY AND THE CITY OF LA HABRA HEIGHTS

FOR COST SHARING FOR THE INSTALLATION OF MONITORING EQUIPMENT AND MONITORING PURSUANT TO THE HARBOR TOXIC POLLUTANTS TMDL

This Agreement is made and entered into as of May 21, 2015, by and between the Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority ("GWMA"), a California Joint Powers Authority, and the City of La Habra Heights, (the "Permittee").

RECITALS

WHEREAS, the mission of the GWMA includes the equitable protection and management of water resources within its area;

WHEREAS, for the purposes of this Agreement, the term "MS4 Permittees" shall mean those public agencies that are co-permittees to a National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit Order ("MS4 Permit") issued by the Los Angeles Regional Water Quality Control Board;

WHEREAS, the United States Environmental Protection Agency established the Total Maximum Daily Loads ("TMDL") for Toxic Pollutants on March 23, 2012, with the intent of protecting and improving water quality in the Dominguez Channel and the Greater Los Angeles and Long Beach Harbor Waters ("Harbor Toxic Pollutants TMDL");

WHEREAS, the Harbor Toxic Pollutants TMDL regulates certain discharges from National Pollutant Discharge Elimination System ("NPDES") permit holders, requiring organization and cooperation among the Permittees;

WHEREAS, the Permittee manages, drains or conveys storm water into at least a portion of the Los Angeles River including the estuary or Coyote Creek or the San Gabriel River including the estuary;

WHEREAS, various MS4 Permittees desire to facilitate the achievement of the objectives of the Harbor Toxic Pollutants TMDL by installing one monitoring station in the Los Angeles River at Wardlow Road, one monitoring station in the San Gabriel River near Spring Street, and one monitoring station in the Coyote Creek, also near Spring Street and conducting monitoring at said monitoring stations (collectively "Monitoring Stations") to ensure consistency with other regional monitoring programs and usability with other TMDL related studies;

WHEREAS, installation of the Monitoring Stations and future monitoring requires administrative coordination for the various MS4 Permittees that the GWMA can provide;

WHEREAS, individual MS4 permittees that are not GWMA members have indicated a desire to participate in the cost sharing for the installation of the Monitoring Stations and the costs of monitoring conducted at the Monitoring Stations (collectively "Monitoring Costs");

WHEREAS, the GWMA Board of Directors authorized the GWMA to enter into individual separate agreements with such individual MS4 Permittees (which shall not have voting rights in any group relating to the GWMA Members) for purposes of only cost sharing in the Monitoring Costs;

WHEREAS, the members of the GWMA are the Cities of Artesia, Bell, Bell Gardens, Bellflower, Cerritos, Commerce, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Mirada, Lakewood, Long Beach, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Whittier, Central Basin Municipal Water District and the Long Beach Water Department ("GWMA Members");

WHEREAS, because GWMA Members already currently pay annual membership fees that pay for GWMA administrative costs, GWMA Members that participate in the cost share for the Monitoring Costs shall pay a three percent (3%) administrative fee on each payment to cover various administrative costs;

WHEREAS, MS4 Permittees that are not GWMA Members that participate in the cost share for the Monitoring Costs shall pay a five percent (5%) administrative fee on each payment to cover various administrative costs;

WHEREAS, currently a majority of MS4 Permittees tributary to the Los Angeles and San Gabriel River systems have committed to cost share for the Monitoring Costs;

WHEREAS, because of the financial savings and benefits resulting from this cost-sharing arrangement, other MS4 Permittees may request to participate in the cost sharing of the Monitoring Costs;

WHEREAS, the cost-share formula, set forth in Exhibit "A" of this Agreement, currently assumes the participation of the maximum number of MS4 Permittees required to comply with the monitoring requirements of the Harbor Toxic Pollutants TMDL;

WHEREAS, it is currently unknown how many MS4 Permittees will ultimately participate in the cost sharing of the Monitoring Costs;

WHEREAS, because some definite maximum cost share amount per participating Permittee is required for planning purposes, this Agreement requires each participating Permittee to submit an initial payment that includes the first year payment plus a deposit that is 25% of the first year payment cost identified in Exhibit "A" of this Agreement, to account for possible non-participation of some MS4 Permittees in the cost share for the Monitoring Costs;

WHEREAS, depending on how many MS4 Permittees ultimately participate in the cost sharing for the Monitoring Costs, each participating Permittee's annual cost share amount will be adjusted and the GWMA will notify each participating Permittee of its adjusted annual cost share amount in writing;

WHEREAS, the "Initial Payment Amount" and the "Annual Payment Amount" identified in Section 8 ("Financial Terms") of this Agreement represent the maximum dollar amounts that the Permittee is required to submit to the GWMA, but may be reduced based on the final number of MS4 Permittees that participate in the cost sharing for the Monitoring Costs;

WHEREAS, if the actual cost share amount is less than the Initial Payment Amount paid by the Permittee, the GWMA will notify the Permittee and shall credit any balance in excess of the actual cost share amount towards the Permittee's "Annual Payment Amount" in subsequent years;

WHEREAS, the Permittee desires to share in the Monitoring Costs;

WHEREAS, the Permittee and the GWMA are collectively referred to as the "Parties";

WHEREAS, the Parties have determined that authorizing GWMA to hire additional consultant as necessary to install the Monitoring Stations and conduct the monitoring required by the Harbor Toxic Pollutants TMDL will be beneficial to the Parties;

WHEREAS, the Permittee agrees to pay: (a) its proportional share of the Monitoring Costs to be incurred by the GWMA in accordance with the Cost Sharing Formula reflected in **Exhibit "A",** (b) a deposit of 25% of the "Initial Payment Amount" and a deposit of 25% of the "Annual Payment Amount"; and (c) applicable administrative fees to cover administrative costs; and

WHEREAS, the role of the GWMA is to: (1) invoice and collect funds from the Permittee to cover its portion of the Monitoring Costs; and (2) hire and retain consultants to install Monitoring Stations and conduct monitoring at the Monitoring Stations.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, the Parties do hereby agree as follows:

Section 1. Recitals. The recitals set forth above are fully incorporated as part of this Agreement.

Section 2. Purpose. The purpose of this Agreement is for the Permittee to cost share in the Monitoring Costs.

Section 3. Cooperation. The Parties shall fully cooperate with one another to achieve the purposes of this Agreement.

Section 4. Voluntary Nature. The Parties voluntarily enter into this Agreement.

Section 5. Binding Effect. This Agreement shall become binding on GWMA and the Permittee.

Section 6. Term. This Agreement shall commence on July 1, 2015 and shall expire on June 30, 2018, unless terminated earlier pursuant to this Agreement.

Section 7. Role of the GWMA.

(a) The GWMA shall invoice and collect funds from the Permittee to cover the Monitoring Costs; and

(b) The GWMA shall administer the consultants' contracts for the Monitoring Costs.

Section 8. Financial Terms.

(a) Initial Payment Amount. The Permittee shall pay no more than Twenty-One Thousand Thirty-Nine Dollars and Twenty Cents ($21,039.20) for the initial payment ("Initial Payment Amount") , for the 2015-2016 fiscal year to the GWMA for managing the installation of the Monitoring Stations and the monitoring data collected at the Monitoring Stations for the 2015-2016 fiscal year. This Initial Payment Amount includes: (1) the Permittee's cost share amount ("Cost Share Amount") identified in **Exhibit "A"**, attached hereto and incorporated herein; (2) the administrative fee identified in subsection (c) of this Section 8; and (3) a deposit in the amount of 25% of the Permittee's Cost Share Amount identified in **Exhibit "A"**.

(b) Annual Payment Amount. For each subsequent fiscal year, commencing with the 2016-2017 fiscal year, the Permittee shall pay no more than Eleven Thousand Four Hundred Seventy-Six Dollars and Forty Cents ($11,476.40) ("Annual Payment Amount") annually on a fiscal year (July 1st to June 30th) basis to the GWMA in exchange for the monitoring data collected from the Monitoring Stations. This price assumes the participation of the maximum number of MS4 Permittees subject to the Harbor Toxic Pollutants TMDL. This Annual Payment Amount includes: (1) the Permittee's Cost Share Amount identified in **Exhibit "A"**, attached hereto and incorporated herein; (2) the administrative fee identified in subsection (c) of this Section 8; and (3) a deposit in the amount of 25% of the Permittee's Cost Share Amount identified in **Exhibit "A"**.

(c) Adjustment of Cost Share Based on Number of Participants. The "Initial Payment Amount" and the "Annual Payment Amount" identified in Section 8 ("Financial Terms") of this Agreement represent the maximum dollar amounts that the Permittee is required to submit to the GWMA, but may be reduced based on the final number of MS4 Permittees that participate in the cost sharing for the Monitoring Costs. In the event that fewer than the maximum number of MS4 Permittees participate, the GWMA will notify the Permittee in writing that the Permittee's cost share amount will be adjusted accordingly. If the Permittee's actual cost share amount plus administrative

costs are less than the Initial Payment Amount paid by the Permittee, the GWMA will notify the Permittee in writing and shall credit any balance in excess of the actual cost share amount towards the Permittee's "Annual Payment Amount" in subsequent years;

(d) Administrative Costs. As part of the Initial Payment Amount and the Annual Payment Amount, the Permittee shall also pay its proportional share of the GWMA's staff time for hiring the consultants and invoicing the Permittee, audit expenses and other overhead costs, including reasonable legal fees incurred by the GWMA in the performance of its duties under this Agreement ("Administrative Costs"). The GWMA shall charge five percent (5%) of each Permittee's Cost Share Amount identified in **Exhibit "A"** to the Permittee's annual invoice to cover the Permittee's share of the Administrative Costs.

(e) The Permittee's Initial Payment Amount shall cover the 2015-2016 fiscal year and is due upon execution of this Agreement, but in no event later than June 30, 2015. For each subsequent fiscal year, commencing with the 2016-2017 fiscal year, the GWMA shall submit annual invoices to the Permittee for the Annual Payment Amount no later than the April 1st prior to the new fiscal year.

(f) Upon receiving an invoice from the GWMA, the Permittee shall pay the invoiced amount to the GWMA within thirty (30) days of the invoice's date.

(g) The Permittee shall be delinquent if its invoiced payment is not received by the GWMA within forty-five (45) days after the invoice's date. If the Permittee is delinquent, the GWMA will: 1) verbally contact the representative of the Permittee; and 2) submit a formal letter from the GWMA Executive Officer to the Permittee at the address listed in Section 12 of this Agreement. If payment is not received within sixty (60) days of the original invoice date, the GWMA may terminate this Agreement. However, no such termination may be ordered unless the GWMA first provides the Permittee with thirty (30) days written notice of its intent to terminate the Agreement. The terminated Permittee shall remain obligated to GWMA for its delinquent payments and any other obligations incurred prior to the date of termination. If the GWMA terminates this Agreement because the Permittee is delinquent in its payment, the Permittee shall no longer be entitled to the monitoring data collected from the Monitoring Stations.

(h) Any delinquent payments by the Permittee shall accrue compound interest at the average rate of interest paid by the Local Agency Investment Fund during the time that the payment is delinquent.

Section 9. Independent Contractor.

(a) The GWMA is, and shall at all times remain, a wholly independent contractor for performance of the obligations described in this Agreement. The GWMA's officers, officials, employees and agents shall at all times during the term of this Agreement be under the exclusive control of the GWMA. The Permittee cannot control the conduct of the GWMA or any of its officers, officials, employees or agents. The

GWMA and its officers, officials, employees, and agents shall not be deemed to be employees of the Permittee.

(b) The GWMA is solely responsible for the payment of salaries, wages, other compensation, employment taxes, workers' compensation, or similar taxes for its employees and consultants performing services hereunder.

Section 10. Indemnification and Insurance.

(a) The Permittee shall defend, indemnify and hold harmless the GWMA and its officers, employees, and other representatives and agents from and against any and all liabilities, actions, suits proceedings, claims, demands, losses, costs, and expenses, including legal costs and attorney's fees, for injury to or death of person(s), for damage to property (including property owned by the GWMA) for negligent or intentional acts, errors and omissions committed by the Permittee or its officers, employees, and agents, arising out of or related to that Permittee's performance under this Agreement, except for such loss as may be caused by GWMA's negligence or that of its officers, employees, or other representatives and agents, excluding the consultant.

(b) GWMA makes no guarantee or warranty that any monitoring data prepared by the consultants shall be approved by the relevant governmental authorities. GWMA shall have no liability to the Permittee for the negligent or intentional acts or omissions of GWMA's consultants. The Permittee's sole recourse for any negligent or intentional act or omission of GWMA's consultants shall be against consultants and their insurance.

Section 11. Termination.

(a) The Permittee may terminate this Agreement for any reason, or no reason, by giving the GWMA prior written notice thereof, but the Permittee shall remain responsible for its entire Annual Payment Amount through the end of the current fiscal year during which Permittee terminates the Agreement and shall not be entitled any refund of any portion of said Annual Payment Amount. Moreover, unless the Permittee provides written notice of termination to the GWMA by February 15th immediately prior to the new fiscal year, the Permittee shall also be responsible for its Annual Payment Amount through the end of the new fiscal year (*e.g.*, If the Permittee terminates on March 1st, 2016, the Permittee is responsible for the Annual Payment Amounts for both FY 2015-2016 and FY 2016-2017. If the Permittee terminates on February 10, 2016, the Permittee is responsible for its Annual Payment Amount only for FY 2015-2016, not for FY 2016-2017). If the Permittee terminates the Agreement, the Permittee shall remain liable for any loss, debt, or liability otherwise incurred through the end of the new fiscal year.

(b) The GWMA may, with a vote of the GWMA Board, terminate this Agreement upon not less than thirty (30) days written notice to the Permittee. Any remaining funds not due and payable or otherwise legally committed to Consultant shall

be returned to the Permittee.

Section 12. Miscellaneous.

(a) The Permittee has been accepted as a participant in the cost sharing for the Monitoring Costs and shall not be entitled to appoint a representative or to vote or participate in any way in decisions assigned to GWMA Members. Participant status entitles the Permittee only to the monitoring data collected from the Monitoring Stations for any fiscal year in which the participant has paid its Annual Payment Amount.

(b) Notices. All Notices which the Parties require or desire to give hereunder shall be in writing and shall be deemed given when delivered personally or three (3) days after mailing by registered or certified mail (return receipt requested) to the following address or as such other addresses as the Parties may from time to time designate by written notice in the aforesaid manner:

To GWMA:

Ms. Toni Penn
GWMA Administrative/Accounting Assistant
GWMA
16401 Paramount Boulevard
Paramount, CA 90723

To the Permittee:

Ms. Shawna Clark
City Manager
City of La Habra Heights
1245 Hacienda Rd
La Habra Heights, CA 90631
shawnac@lhhcity.org

(c) Amendment. The terms and provisions of this Agreement may not be amended, modified or waived, except by a written instrument signed by all Parties.

(d) Waiver. Waiver by either the GWMA or the Permittee of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver, by the GWMA or the Permittee, to any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach of any provision of this Agreement.

(e) Law to Govern: Venue. This Agreement shall be interpreted, construed, and governed according to the laws of the State of California. In the event of litigation between the Parties, venue shall lie exclusively in the County of Los Angeles.

(f) No Presumption in Drafting. The Parties to this Agreement agree that the general rule than an agreement is to be interpreted against the Party drafting it, or causing it to be prepared, shall not apply.

(g) Severability. If any term, provision, condition or covenant of this Agreement is declared or determined by any court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions of this Agreement shall not be affected thereby and this Agreement shall be read and construed without the invalid, void, or unenforceable provisions(s).

(h) Entire Agreement. This Agreement constitutes the entire agreement of the Parties with respect to the subject matter hereof and supersedes all prior or contemporaneous agreements, whether written or oral, with respect thereto.

(i) Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which taken together shall constitute but one and the same instrument, provided, however, that such counterparts shall have been delivered to all Parties to this Agreement.

(j) Legal Representation. All Parties have been represented by counsel in the preparation and negotiation of this Agreement. Accordingly, this Agreement shall be construed according to its fair language.

(k) Authority to Execute this Agreement. The person or persons executing this Agreement on behalf of Permittee warrants and represents that he or she has the authority to execute this Agreement on behalf of the Permittee and has the authority to bind Permittee.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed on their behalf, respectively, as follows:

DATE: 6/29/15

LOS ANGELES GATEWAY REGION INTEGRATED REGIONAL WATER MANAGEMENT JOINT POWERS AUTHORITY

Christopher S. Cash
GWMA Chair

DATE: June 11 2015

PERMITTEE
City of La Habra Heights

Signature

Shauna Clark
Print Name

City Manager
Print Title

EXHIBIT "A"

COST SHARE MATRIX
ATTACHED

Harbor Toxics TMDL Monitoring

Los Angeles River Watersheds

				(50% equal share, 50% by area) Installation and 1st Year's operations $110,000			(50% equal share, 50% by area) 2nd Year and subsequent years $60,000		
Group Name	**Cities/ Permittees Involved**	**Area (acres)**	**Area**	**Base Cost**	**Area Cost**	**Total Cost**	**Base Cost**	**Area Cost**	**Total Cost**
Upper Los Angeles River Watershed Group	Alhambra	4,884	1.3%	$581	$683	$1,263	$317	$372	$689
	Burbank	11,095	3.0%	$581	$1,551	$2,131	$317	$846	$1,163
	Calabasas	4,006	1.1%	$581	$560	$1,140	$317	$305	$622
	Glendale	19,588	5.2%	$581	$2,738	$3,318	$317	$1,493	$1,810
	Hidden Hills	961	0.3%	$581	$134	$715	$317	$73	$390
	La Canada Flintridge	5,534	1.5%	$581	$774	$1,354	$317	$422	$739
	Los Angeles	181,288	48.5%	$581	$25,338	$25,918	$317	$13,820	$14,137
	Montebello	5,356	1.4%	$581	$749	$1,329	$317	$408	$725
	Monterey Park	4,952	1.3%	$581	$692	$1,273	$317	$377	$694
	Pasadena	14,805	4.0%	$581	$2,069	$2,650	$317	$1,129	$1,445
	Rosemead	3,311	0.9%	$581	$463	$1,043	$317	$252	$569
	San Fernando	1,518	0.4%	$581	$212	$793	$317	$116	$432
	San Gabriel	2,645	0.7%	$581	$370	$950	$317	$202	$518
	San Marino	2,410	0.6%	$581	$337	$917	$317	$184	$500
	South El Monte	1,577	0.4%	$581	$220	$801	$317	$120	$437
	South Pasadena	2,186	0.6%	$581	$306	$886	$317	$167	$483
	Temple City	2,577	0.7%	$581	$360	$941	$317	$196	$513
	Unincorporated	40,553	10.8%	$581	$5,668	$6,248	$317	$3,092	$3,408
Lower Los Angeles River Watershed	Downey	3,546	0.9%	$1,306	$496	$1,802	$713	$270	$983
	Lakewood	51	0.0%	$1,306	$7	$1,313	$713	$4	$716
	Long Beach	12,301	3.3%	$1,306	$1,719	$3,025	$713	$938	$1,650
	Lynwood	3,098	0.8%	$1,306	$433	$1,739	$713	$236	$949
	Paramount	1,997	0.5%	$1,306	$279	$1,585	$713	$152	$865
	Pico Rivera	1,510	0.4%	$1,306	$211	$1,517	$713	$115	$828
	Signal Hill	774	0.2%	$1,306	$108	$1,414	$713	$59	$772
	South Gate	4,704	1.3%	$1,306	$657	$1,964	$713	$359	$1,071
Rio Hondo/San Gabriel River Water Quality Group	Arcadia	6,912	1.8%	$1,493	$966	$2,459	$814	$527	$1,341
	Azusa	0	0.0%	$1,493	$0	$1,493	$814	$0	$814
	Bradbury	512	0.1%	$1,493	$72	$1,564	$814	$39	$853
	Duarte	832	0.2%	$1,493	$116	$1,609	$814	$63	$878
	Monrovia	5,056	1.4%	$1,493	$707	$2,200	$814	$385	$1,200
	Sierra Madre	1,792	0.5%	$1,493	$250	$1,743	$814	$137	$951
	Unincorporated	1,792	0.5%	$1,493	$250	$1,743	$814	$137	$951
Upper Reach 2 Group	Bell	1,676	0.4%	$1,493	$234	$1,727	$814	$128	$942
	Bell Gardens	1,577	0.4%	$1,493	$220	$1,713	$814	$120	$935
	Commerce	4,195	1.1%	$1,493	$586	$2,079	$814	$320	$1,134
	Cudahy	786	0.2%	$1,493	$110	$1,603	$814	$60	$874
	Huntington Park	1,930	0.5%	$1,493	$270	$1,763	$814	$147	$961
	Maywood	754	0.2%	$1,493	$105	$1,598	$814	$57	$872
	Vernon	3,298	0.9%	$1,493	$461	$1,954	$814	$251	$1,066
Other	Carson*	--	--	--	--	--	--	--	--
	Compton*	--	--	--	--	--	--	--	--
	El Monte	4,482	1.2%	$5,225	$626	$5,851	$2,850	$342	$3,192
	Irwindale	1,024	0.3%	$5,225	$143	$5,368	$2,850	$78	$2,928
LACFCD (5%)	--	--	--	--	--	**$5,500**	--	--	**$3,000**
	Totals	**373,845**	**100.0%**	**$52,250**	**$52,250**	**$104,500**	**$28,500**	**$28,500**	**$57,000**

GWMA members will pay an additional 3% in administrative costs
Non-GWMA members will an additional 5% in administrative costs

GWMA will collect a 25% deposit on each cost share amount listed in case a city decides to drop out
**did not indicate intent to participate*

Last update 5/14/2015

Area is preliminary and subject to revisions.

Harbor Toxics TMDL Monitoring

San Gabriel River Watersheds

				(50% equal share, 50% by area) Installation and 1st Year's operations $110,000			(50% equal share, 50% by area) 2nd Year and subsequent years $60,000		
Group Name	**Cities/ Permittees Involved**	**Area (acres)**	**Area**	**Base Cost**	**Area Cost**	**Total Cost**	**Base Cost**	**Area Cost**	**Total Cost**
Rio Hondo/San Gabriel River Water Quality Group	Arcadia	128	0.1%	$1,493	$41	$1,534	$814	$22	$837
	Azusa	5,952	3.6%	$1,493	$1,900	$3,393	$814	$1,037	$1,851
	Bradbury	704	0.4%	$1,493	$225	$1,718	$814	$123	$937
	Duarte	64	0.0%	$1,493	$20	$1,513	$814	$11	$825
	Monrovia	64	0.0%	$1,493	$20	$1,513	$814	$11	$825
	Sierra Madre	0	0.0%	$1,493	$0	$1,493	$814	$0	$814
	Unincorporated	1,344	0.8%	$1,493	$429	$1,922	$814	$234	$1,048
Upper San Gabriel River	Baldwin Park	4,335	2.6%	$1,742	$1,384	$3,126	$950	$755	$1,705
	Covina	4,481	2.7%	$1,742	$1,431	$3,172	$950	$780	$1,730
	Glendora	9,307	5.7%	$1,742	$2,972	$4,713	$950	$1,621	$2,571
	Industry	7,647	4.7%	$1,742	$2,442	$4,183	$950	$1,332	$2,282
	La Puente	2,207	1.3%	$1,742	$705	$2,446	$950	$384	$1,334
	Unincorporated	40,812	24.9%	$1,742	$13,030	$14,772	$950	$7,107	$8,057
East San Gabriel Valley Watershed Management Area	Claremont	5,790	3.5%	$2,613	$1,849	$4,461	$1,425	$1,008	$2,433
	La Verne	5,030	3.1%	$2,613	$1,606	$4,218	$1,425	$876	$2,301
	Pomona	7,929	4.8%	$2,613	$2,532	$5,144	$1,425	$1,381	$2,806
	San Dimas	8,539	5.2%	$2,613	$2,726	$5,339	$1,425	$1,487	$2,912
Lower San Gabriel River	Bellflower	1,216	0.7%	$1,045	$388	$1,433	$570	$212	$782
	Cerritos	5,645	3.4%	$1,045	$1,802	$2,847	$570	$983	$1,553
	Diamond Bar	4,563	2.8%	$1,045	$1,457	$2,502	$570	$795	$1,365
	Downey	4,237	2.6%	$1,045	$1,353	$2,398	$570	$738	$1,308
	Lakewood	1,293	0.8%	$1,045	$413	$1,458	$570	$225	$795
	Long Beach	2,138	1.3%	$1,045	$683	$1,728	$570	$372	$942
	Norwalk	6,246	3.8%	$1,045	$1,994	$3,039	$570	$1,088	$1,658
	Pico Rivera	3,929	2.4%	$1,045	$1,254	$2,299	$570	$684	$1,254
	Santa Fe Springs	5,683	3.5%	$1,045	$1,814	$2,859	$570	$990	$1,560
	Whittier	9,382	5.7%	$1,045	$2,995	$4,040	$570	$1,634	$2,204
Other	El Monte	1,577	1.0%	$2,090	$504	$2,594	$1,140	$275	$1,415
	Irwindale	5,128	3.1%	$2,090	$1,637	$3,727	$1,140	$893	$2,033
	La Habra Heights	700	0.4%	$2,090	$223	$2,313	$1,140	$122	$1,262
	South El Monte	1,823	1.1%	$2,090	$582	$2,672	$1,140	$317	$1,457
	Walnut	5,757	3.5%	$2,090	$1,838	$3,928	$1,140	$1,003	$2,143
	West Covina*	--	--	--	--	--	--	--	--
LACFCD (5%)	--	--	--	--	--	$5,500	--	--	$3,000
	Totals	**163,650**	**100.0%**	**$52,250**	**$52,250**	**$104,500**	**$28,500**	**$28,500**	**$57,000**

GWMA members will pay an additional 3% in administrative costs
Non-GWMA members will an additional 5% in administrative costs

GWMA will collect a 25% deposit on each cost share amount listed in case a city decides to drop out

**did not indicate intent to participate*

Last update 5/14/2015

Area is preliminary and subject to revisions.

Harbor Toxics TMDL Monitoring

Coyote Creek Watersheds

				(50% equal share, 50% by area) Installation and 1st Year's operations $110,000			(50% equal share, 50% by area) 2nd Year and subsequent years $60,000		
Group Name	**Cities/ Permittees Involved**	**Area (acres)**	**Area**	**Base Cost**	**Area Cost**	**Total Cost**	**Base Cost**	**Area Cost**	**Total Cost**
Lower San Gabriel River	Artesia	1,037	1.9%	$2,613	$999	$3,611	$1,425	$545	$1,970
	Cerritos	5,645	10.4%	$2,613	$5,436	$8,048	$1,425	$2,965	$4,390
	Diamond Bar	4,563	8.4%	$2,613	$4,394	$7,006	$1,425	$2,397	$3,822
	Hawaiian Gardens	614	1.1%	$2,613	$591	$3,204	$1,425	$322	$1,747
	La Mirada	5,018	9.2%	$2,613	$4,832	$7,445	$1,425	$2,636	$4,061
	Lakewood	1,293	2.4%	$2,613	$1,245	$3,858	$1,425	$679	$2,104
	Long Beach	2,138	3.9%	$2,613	$2,059	$4,671	$1,425	$1,123	$2,548
	Norwalk	6,246	11.5%	$2,613	$6,015	$8,627	$1,425	$3,281	$4,706
	Santa Fe Springs	5,683	10.5%	$2,613	$5,472	$8,085	$1,425	$2,985	$4,410
	Whittier	9,382	17.3%	$2,613	$9,034	$11,647	$1,425	$4,928	$6,353
Other	La Habra Heights	3,242	6.0%	$13,063	$3,122	$16,184	$7,125	$1,703	$8,828
	Unincorporated	9,400	17.3%	$13,063	$9,052	$22,114	$7,125	$4,937	$12,062
LACFCD (5%)	--	--	--	--	--	$5,500	--	--	$3,000
	Totals	**54,261**	**100.0%**	**$52,250**	**$52,250**	**$104,500**	**$28,500**	**$28,500**	**$57,000**

GWMA members will pay an additional 3% in administrative costs
Non-GWMA members will an additional 5% in administrative costs

GWMA will collect a 25% deposit on each cost share amount listed in case a city decides to drop out

**did not indicate intent to participate*

Last update 5/14/2015