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CITY of GARDENA
ELECTED and ADMINISTRATIVE OFFICES – CITY MANAGER

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February 13, 2015

Sam Unger, PE – Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, CA 90013

Subject: Los Angeles County MS4 Permit – Revised City of Gardena Integrated Monitoring Program

Dear Mr. Unger:

The **City of Gardena** (City) is pleased to submit, for your review and approval, its Integrated Monitoring Program (IMP). The IMP contains the revisions specified in the Regional Board's IMP review letter to the City dated January 16, 2015. Once the revisions have been approved by Regional Board staff, the City shall incorporate them into a final IMP.

The IMP review letter specifies two substantive elements missing in the City's monitoring program submittal: (1) receiving water monitoring; and (2) non-stormwater outfall based monitoring. These and other requests for IMP changes and corrections are contained in *Enclosure 1, Summary of Comments and Required Revisions* and are highlighted in red type.

I. Receiving Water Monitoring

As our Coordinated Integrated Monitoring Program indicated, the City chose not to conduct receiving water monitoring because it is a requirement that was and still is under administrative challenge. The City challenged this requirement because it could not see any benefit in it. The City, as mentioned in its Individual Watershed Management Program, has opted for compliance at the outfall. That being the case, there should be no need to also perform receiving water monitoring. Further, because discharges during storm events are commingled with other MS4s and other sources, permitted and non-permitted, receiving water monitoring cannot serve as a compliance determinant. And as noted in the City's administrative petition and comments to the State Board, TMDLs and other water quality standards are ambient rather than wet weather standards. Indeed, State Board Water Quality Order 2001-15 makes it clear that nothing in state or federal law requires compliance with wet weather water quality standards.

Nevertheless, until this issue is resolved the City will endeavor to comply. The problem, however, is access to receiving waters, the Dominguez Channel in the City's case, to take grab samples. As you know, the Dominguez Channel is a flood control channel managed by the Los Angeles County Flood Control District. It does not allow trespassing on its channels and definitely prohibits

taking samples during storm events. The only other option is to attempt sampling from a channel overpass. As an alternative, the City requests that the Regional Board allow the use of monitoring data taken from the County's mass emission station located at Vermont Avenue and the Dominguez Channel. The data would be used as a general indicator of the health of the Dominguez Channel during storm events.

II. Non-Stormwater Outfall Monitoring

The City also opposed non-stormwater outfall monitoring which it viewed as unnecessary. The ostensible purpose of non-stormwater outfall monitoring is to determine compliance with TMDLs. However, the illicit connection and discharge detection and elimination program addresses impermissible non-stormwater discharges to the MS4. The purpose of the program is to detect illicit discharges and connections by: (1) prohibiting such discharges; and (2) if prohibition is not feasible, to require the discharger to obtain a discharge permit. By eliminating the discharge, the mechanism for transporting TMDLs and other pollutants collected in the MS4, pollutants are prevented from entering the receiving water. Further, federal regulations do not require non-stormwater outfall monitoring for TMDLs or other constituents. Federal regulations only require field screening for illicit discharges for source identification purposes. In any case, the City will conduct non-stormwater discharge outfall monitoring for TMDL constituents relative to the Dominguez Channel on a monthly basis.

III. Necessary Revisions

See Table I for revisions to the City's IMP specified in *Enclosure 1 – Summary of Necessary Revisions to Draft IMP.*

In closing, should you have any questions, please feel free call me, (310) 217-9503.

Sincerely,

Mitchell G. Lansdell

MITCHELL G. LANSDELL
City Manager

MGL:nw
Enclosures
c: Cary Reisman, Gardena City Attorney's Office

Section One Monitoring and Reporting Program (MRP)

1.0 Summary

The Los Angeles County MS4 permit (Order R4-2012-0175) includes compliance with a Monitoring and Report Program (No. CI-6948), (MRP). The MRP addresses the several types of monitoring tasks required by the permit. The City intends to meets these requirements through its **Integrated Monitoring Program** (IMP) submittal.

In addition to the above monitoring tasks, the City is also subject to monitoring tasks required by the Watershed Management Program (WMP), which is not referenced in the MRP section. Essentially, these provisions require monitoring of stormwater discharges against water quality standards that are not TMDLs either contained in the basin plan or based on federal regulations. The purpose of the monitoring is to facilitate an evaluation of the adequacy of control measures in meeting the specified limitations. The problem, however, is that the permit, under the WMP section, does not specify which pollutants and water quality standards must be monitored for or met. Discussions with Regional Board staff revealed that the water quality standards are mandated by federal regulations. They can be taken from the previous permit under the previous MS4 permit's MRP under Attachment U.

All pollutants subject to monitoring will be loaded into the RAA/Water Quality Model to evaluate to what extent the City is persistently exceeding TMDLs and other water quality standards and identify BMPs that are necessary to preventing such exceedances.

As is explained in the IMP, there are several provisions of the permit reflected in the MRP and IMP that the City cannot comply with because the City has challenged them in its administrative petition.

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These include, most notably, non-storm water action levels. The City expects these issues to be resolved though a State Board orders in response to an administrative petition it filed challenging this and other MS4 permit requirements.

1.1 Integrated Monitoring Program

The City has opted for a **Integrated Monitoring Program** to comply with monitoring and SWMP/WMP requirements under the MS4 permit. In accordance with the MRP, the IMP includes the following elements: (1) receiving water monitoring; (2) storm water outfall based monitoring; (3) non-storm water outfall based monitoring; and new development/re-development effectiveness tracking; (4) compliance with municipal action level (MAL) parameters; and (5) regional studies.

It is important to note that the City has gone on record and argued in its administrative petition about the permit's excessive monitoring requirements which it argues are arbitrary and capricious and exceed federal stormwater regulations. These include any monitoring activity that is located outside an MS4 (toxicity, wet weather TMDL WLAs, regional studies, toxic investigation evaluation (TIE), etc.); and dry weather monitoring (dry weather minimum levels, non-stormwater outfall monitoring, and non-stormwater action levels). In the alternative the City will comply with federal field screening requirements for non-stormwater discharges, the purpose of which are to detect and eliminate illicit discharges and illicit connections.

1.2 IMP Requirements

Through the **Integrated Monitoring Program** the City proposes to consolidate applicable monitoring program requirements as specified in

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attachment E of the MS4, which *provides flexibility to allow Permittees to coordinate monitoring efforts on a watershed or sub-watershed basis to leverage monitoring resources in an effort to increase cost-efficiency and effectiveness and to closely* align monitoring with TMDL monitoring requirements *and Watershed Management Programs*. To that end, the City intends to share costs with cities listed below in Table I.

Table I – Cost Sharing Participation

Watershed/Sub-watershed	Participating MS4s
• Dominguez Channel (unlined portion above Vermont)	• City of Lawndale • City of Gardena
• Dominguez Channel (unlined portion below Vermont)	• City of Compton • City of Carson

Though the SWAMP should be responsible for performing ambient monitoring, it is not known when, if ever, it intends to conduct ambient monitoring in these reaches. In the meantime, the City recognizes that the ambient monitoring approach will yield accurate data needed to evaluate the beneficial uses and facilitate compliance with ambient TMDL WLAs and other water quality standards.

The City does not plan to use a collaborative approach to pay for monitoring in the receiving water to determine compliance with wet weather TMDLs. This is because it opposes having to comply with wet weather standards in the receiving water. TMDLs are ambient, dry weather standards, not wet weather standards, the latter of which are not required to determine compliance under federal and state law.

GIS maps have been developed to depict the geographic boundaries of the monitoring plan including the receiving waters, the MS4 catchment drainages and outfalls, sub-watershed boundaries, political

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boundaries, land use, and the proposed receiving water monitoring stations for both dry weather and wet weather receiving water monitoring (see **Appendix A, Maps**).

1. 3 Receiving Water Monitoring

The MS4 permit requires receiving water monitoring to be performed at in-stream mass emissions stations; additional receiving water compliance points approved by the Regional Board's Executive Officer; and additional locations that are representative of impacts from MS4 discharges. The objectives of receiving water monitoring are: (1) determine if receiving water limitations are being achieved; (2) assess trends in pollutant concentrations over time; and (3) determine whether the designated beneficial uses are fully supported based on water chemistry, as aquatic toxicity and bio-assessment monitoring.

The City's receiving water monitoring plan shall be limited to utilizing existing ambient water quality data developed by the Regional Board's Surface Water Ambient Monitoring Program (SWAMP) and data generated by other agencies including but not limited to the Council for Watershed Health (CWH) and the Sanitation Districts of Los Angeles County (SDLAC).

The City cannot participate in any receiving water monitoring activity or action that takes place outside of its MS4. As the City's administrative petition effectively argues, the receiving water is not part of the MS4. The City's responsibility for monitoring ends at the discharge from the outfall before it reaches the receiving water.

The City has also argued in its petition that federal storm water regulations and judicial decisions affirm that MS4 permit compliance with water quality standards (WQS) is determined at the outfall – not in the

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receiving water. In other words, the regulatory "range" of an MS4 permit ends in storm water discharge from the outfall before it reaches the receiving water.

It should be noted that the 9th Circuit Court of Appeal in NRDC v. LACFCD made it very clear that the compliance determinant for MS4 discharges is at the outfall – not the receiving water. The 9th Circuit agreed with a lower federal court ruling that held violations cannot be determined in the receiving water because of evidentiary challenges -- how can one prove that a permittee caused exceedances in receiving waters that these waters also receive stormwater discharges from other sources? The 9th Circuit also said if a violation is to be determined it must be based on discharges from the outfall.

Further, there is nothing in federal law or USEPA guidance, or state law that authorizes compliance with TMDL WLAs or other water quality standards based on wet weather monitoring of receiving waters. According to State Water Quality Order 2001-0015: *There is no provision in state or federal law that mandates the adoption of separate water quality standards for wet weather conditions.* TMDLS and water quality standards are not and cannot be wet weather standards -- they are ambient (dry weather) standards. Sampling a wet weather discharge from a receiving water (not be confused with an outfall) against an ambient standard is unrealistic and serves no purpose.

There is also no benefit to performing receiving water monitoring to determine compliance with wet weather TMDL WLAs or to assess the health of the receiving water. Pollutants during a storm event emanate from a variety sources including but not limited to: permitted facilities such as industrial and construction sites; various municipal point sources; non-municipal point sources (e.g., sewage treatment plans) and non-

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point sources including atmospheric deposition. It would be impossible to determine which of these dischargers was responsible for exceeding a wet weather WLA, which again is not legally valid in any case. It should be clear that monitoring during a significant storm event would be of no value in assessing the health of the receiving water. In fact, it is the worst time to monitor. The City will, nevertheless, rely on in-stream ambient monitoring to assess the impact of the SWMP/I-WMP on beneficial uses of the receiving waters into which it discharges.

However, the Regional Board stated in its comment letter that SWAMP data are not sufficient to fulfill the requirements of the LA County MS4 permit. Therefore, the City will conduct receiving monitoring using the Los Angeles County mass emission station located at the Dominguez Channel and Vermont Avenue in the City of Gardena. The Upstream tributary area is 14.6 square miles and is located in a concrete-lined rectangular channel. All analyses required by the NPDES permit (including relevant TMDLs) would be monitored at this site.

Table II – Summary of NPDES Receiving Water Monitoring Sites

Site ID	Site	Coordinates	Catchment Area (square miles)	City's Area (square miles)	Picture
R1	Dominguez Channel @ Vermont Ave.	33.871472, -118.290794	14.58	5.87	

1.4 Storm Water Outfall-Based Monitoring

The City is committed to stormwater monitoring at the outfall in accordance with federal stormwater regulations. Outfall monitoring will be limited to: (1) aiding in determining compliance with WQBELs (TMDL

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WLAs and other water quality standards measured against ambient standards); and (2) evaluating stormwater discharges against Municipal Action Levels (MALs). Outfall monitoring, however, will not serve to determine compliance with wet weather TMDL WLAs in the receiving water. Once again, there is no support for the legitimate existence of a wet weather TMDL or any water quality standard and the purpose of the MALs is unclear and appears to be superfluous. However, the City would be willing to comply with MAL monitoring if offered as alternative to conventional monitoring for compliance purposes.

The City has identified one outfall from which discharges are released to Dominguez Channel. However, the City cannot sample from outfalls because: (1) they are located on property owned and operated by County of Los Angeles Flood Control District (LACFCD); and (2) it would be physically impossible to draw a grab sample from them.

Federal regulations allow monitoring to be conducted at representative field screening points which, along with outfalls, are illustrated on **Appendix A-1**. Three screening points have been selected for Dominguez Channel (above Vermont Avenue). Each located upstream of five outfalls. Ordinarily, each of the outfalls would be sampled from upstream storm drain locations. However, two of the outfalls cannot be accessed to serve as field screening points. No outfall prioritization of the field screening points is necessary because of all of them are upstream of the outfalls from which the City discharges to Dominguez Channel.

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Outfall Discharging into Receiving Water

The field screening points are representative of discharges from the City which are a mix of residential and commercial land uses. Stormwater discharges from the outfall field screening points will be measured against ambient TMDL standards. The ambient standard is one that is required to assure that beneficial uses of receiving waters are protected against impairment. Sampling results will be reported to the Regional Board annually. If persistent exceedances of the ambient standards are detected, the iterative process will be triggered.

The City plans to conduct stormwater outfall monitoring three times a year, during the wet season (October 1 through May 15), with at least one month in between in accordance with 40 CFR §122.21(g)(7). Each of the three field screening points will be sampled annually on a rotating basis to provide a representative characterization of City stormwater outflows measured against ambient standards. At the end of the 5 year term of the permit the City will be able to evaluate persistent exceedances of TMDLs and other water quality standards and propose adjustments to BMPs and other actions in the Report of Waste Discharge (ROWD), the MS4 permit reapplication that is due to the Regional Board 180 days prior to the expiration of the current permit (May of 2017).

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Although the City will use the data to determine compliance with WQBELs, expressed as ambient TMDL WLAs and to measure stormwater discharges against municipal action levels (MALs), it cannot sanction the use of the data to determine compliance with TMDL WLAs in the receiving water. As mentioned, the City is not responsible for conducting any monitoring or any activity outside the realm of its MS4. Further, as also mentioned, the City cannot measure stormwater discharges from the outfall against wet weather water quality standards because they are not legally valid.

Table III – Land Use Breakdown

Land Use Category	Area (Acre)	Percentage
Agriculture	236.8	6.3 %
Commercial/Institutional	454.4	12.1 %
Industrial	556.8	14.7 %
Residential	1644.8	43.5 %
Transportation	812.8	21.6 %
Vacant	44.8	1.2 %
Water	25.6	0.6 %
Total	**3776**	**100%**

Table IV – Land Use Breakdowns for Catchment Area

Land Use Type	Drainage Area (Acres & Percentage)		
	HUC 12 Drainage area (Upper Dominguez Channel)	HUC 12 Drainage area (Lower Dominguez Channel)	
	512 Acre	3264 Acre	
	M3	M2	M1
Residential	156.8 (4.2%)	786.21 (20.8%)	701.8 (18.6%)
Agriculture	0.4 (0.01%)	87.6 (2.3%)	148.8 (3.9%)
Commercial/Institutional	8 (0.2%)	148.3 (3.9%)	298.1 (7.9%)
Industrial	176.3 (4.7%)	217.5 (5.8%)	163 (4.3%)
Transportation	178 (4.7%)	227.9 (6%)	406.9 (10.8%)
Vacant	0 (0%)	14.9 (0.39%)	29.9 (0.76%)

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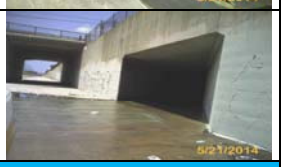
Table V - Summary of Outfall and Field Screening Points

ID No.	Outlet Coordinates	Outlet Location	Ownership	Size (in)	Outlet material	Picture
1	33.9090167, -118.32568	132nd Street	LACFCD	42	Reinforced Channel Pipe (RCP)	
2	33.909458, -118.325608	Hollypark Drain (W 135th St.)	LACFCD	168	Reinforced Cement Concrete (RCC)	
3	33.901283, -118.326691	Rosecrans Ave.	LACFCD	87	Reinforced Concrete Box (RCB)	
4	33.871158, -118.306413	Hollyhock Way (Gardena Drain)	LACFCD	48	Reinforced Channel Pipe (RCP)	
5	33.8712527, -118.882141	South of West Cassidy St.	LACFCD	117	Reinforced Concrete Box (RCB)	
ID No.	**Field Screening Coordinates**	**Field Screening Location**	**Ownership**	**Size (in)**	**Field Screening material**	**Picture**
1	33.909201, -118.32121	132nd street	LACFCD	36	Concrete Box	
2	33.901836, -118.324964	Rosecrans avenue	LACFCD	36	Concrete Box	
3	33.872029, -118.298876	Artesia Blvd.	LACFCD	36	Concrete Box	

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1.5 Non-Storm Water Outfall-Based Monitoring

The City will not perform non-stormwater outfall monitoring to determine compliance with TMDLs, other water quality standards, and action levels. Such requirements exceed federal stormwater regulations. As already explained, MS4 permittees are required to control pollutants in stormwater discharges from the outfall through BMPs and other actions. For non-stormwater discharges no such requirement is mandated. MS4 permittees are required only to prohibit impermissible (i.e., non-exempt) non-stormwater discharges into the MS4. If a permittee does not succeed in getting the discharger to prohibit the non-stormwater discharge it must require the discharger to obtain a separate discharge permit. This is an argument that was raised in the City's administrative petition and is supported by federal statute and State Board water quality orders.

However, the City will perform outfall visual and sampling monitoring in connection with illicit connection and discharge elimination requirements in keeping with federal stormwater regulations and USEPA guidance. Non-stormwater discharge monitoring will conform to 122.26(d)(1)(D) for the purpose of screening for illicit connections and dumping, which specifies visual monitoring at outfalls for dry weather (non-stormwater discharges). Visual monitoring shall be performed twice a year during dry periods. If flow is observed samples for the outfall (or field screening points):

> *...samples shall be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a narrative description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping shall be provided.*

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In addition, regulations require a narrative description of the results from sampling for fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium; pH, total chlorine, total copper, total phenol, and detergents (or surfactants) shall be provided along with a description of the flow rate. These analytes will be used as potential indicators of illicit discharges, which would trigger an up-stream investigation to identify the source of the suspected illicit discharge or connection. If the source of the illicit discharge/connection and discharger is identified the City shall notify the discharge that it will need to halt the discharge and, if not feasible, will require the discharger to obtain a discharge permit.

As per the Los Angeles County MS4 permit, non-stormwater outfall based monitoring must be included in the IMP as outlined in Part IX of Attachment E. The City's non-stormwater outfall based screening and monitoring process is outlined below:

- Field Screening: Outfalls greater than or equal to 36 inches in diameter will be located and mapped using GIS. Outfall will be monitored two additional times, after 72 hours of rain event. An observation will be conducted during working hours. During observations staff will complete an **Outfall Screening Form** containing information such as date, time, weather, flow amount, visual turbidity, and trash odor. Photographs also are taken during inspection.
- Inventory of Screening Points: An inventory will be developed of major MS4 outfall with known significant non-stormwater discharges and those requiring no further assessment.

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- No further Assessment: No further Assessment will be reported in the inventory database if no flow is observed during at least 4 out of 5 visits.
- Prioritization Criteria & Source Investigation: Based on data collected during the screening process, the City will identify screening points with significant non-stormwater discharges and those requiring no further action. The data collected as part of the outfall screening process will be used to prioritize outfalls for source investigation. The City will complete 25% of source identification inventory by December 28th, 2015 and 100% by December 28, 2017.
- Implement Source Identification: If necessary, the City will implement source identification in prioritized order, consistent with the City's IC/ID Program. The City's contribution will be quantified if the discharge is comprised of multiple sources. Upstream jurisdictions and the Regional Board will be notified if the source originates outside The City's jurisdiction.
- Monitor Non-storm Water Discharge Exceedance Criteria: The City will monitor outfall screening points conveying significant discharges comprised of unknown or conditionally exempt non-stormwater discharges, or continuing illicit discharges. In addition, an outfall subject to an approved dry weather TMDL will be monitored per the TMDL Monitoring Plan. Monitoring frequency will be reduced to twice per year beginning the second year of monitoring if pollutant concentration during the first year do not exceed WQBELs or water quality standards on the 303(d) list for the receiving water. Outfall(s) will be monitored for the flow, constituents identified in Attachment N of MS4 permit, and other pollutants identified in 303(d) list. Pollutants identified in a TIE conducted in response to observed acute toxicity

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during dry weather at the nearest downstream receiving water monitoring station. If the discharge exhibits acute toxicity, then a TIE shall be conducted.

1.6 Municipal Action Levels

The purpose of municipal action levels (MALs) is not clear and appears to be superfluous given the permit's other monitoring requirements. All of the MAL constituents are already addressed by TMDLs and federally mandated monitoring for certain constituents[1]. The MS4 permit's fact sheet mentions that the purpose of MAL monitoring is to evaluate the effectiveness of a Permittee's stormwater management program in reducing pollutant loads from drainage areas as means of determining compliance with the maximum extent practical (MEP) standard. There is no guidance in the permit to explain how this is task is to be accomplished. MAL monitoring is also intended to evaluate the effectiveness of post-construction BMPs. It is not clear, however, how MALs can evaluate post-construction BMPs. One basic question is where would MAL monitoring be performed at development or new development site or down stream from it, for which post-construction BMPs have been prescribed?

The City has challenged the MAL monitoring requirement in its administrative petition, based on these and other concerns. MAL monitoring represents an unnecessary cost that accomplishes nothing beneficial. Nevertheless, because MAL constituents are included in other stormwater monitoring requirements, the City will effectively be meeting this monitoring requirement. The permit's monitoring program also

[1]Total nitrogen, total phosphorous, Ammonia N, TKN, Total PCBs, Chlordane, Dieldrin, 4,4 – DDD, 4,4 – DDE, 4,4 –DDT, Cadmium, Chromium, copper, lead, zinc, E-Coli, fecal coliform.

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requires non-stormwater MAL compliance. As mentioned, the City has challenged all non-stormwater monitoring tasks that are intended to determine compliance with TMDLs and other water quality standards.

1.7 New Development/Redevelopment Tracking

The PLDP requires tracking new development and redevelopment projects with 60 days after the permit's adoption (unless a permittee chooses to participate in watershed management program). Although not a monitoring requirement per se, permittees are nevertheless required to maintain a database containing the following information:

- name of the project and developer,
- project location and map (preferably linked to the GIS storm drain map),
- date of Certificate of Occupancy,
- 85th percentile storm event for the project design (inches per 24 hours),
- 95th percentile storm event for projects draining to natural water bodies
- (inches per 24 hours), related to hydromodification
- other design criteria required to meet hydromodification requirements for drainages to natural water bodies,
- project design storm (inches per 24-hours),
- project design storm volume (gallons or MGD),
- percent of design storm volume to be retained on site
- design volume for water quality mitigation treatment BMPs, if any.
- If flow through, water quality treatment BMPs are approved, provide the one year, one-hour storm intensity as depicted on the most recently issued isohyetal map published by the Los Angeles County Hydrologist,
- percent of design storm volume to be infiltrated at an off-site mitigation or groundwater replenishment project site
- percent of design storm volume to be retained or treated with bio-filtration at an off-site retrofit project,
- location and maps (preferably linked to the GIS storm drain map required in Part VII.A of this MRP) of off-site mitigation, groundwater replenishment, or retrofit sites documentation of issuance of requirements to the developer.

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The City intends to meet this requirement through a revised SUSMP evaluation form (see **Section Two, SUSMP Appendix B-4**).

1.8 Regional/Special Studies

The Southern California Stormwater Monitoring Coalition (SMC) Regional Watershed Monitoring Program was initiated in 2008. This program is conducted in collaboration with the Southern California Coastal Water Research Project (SCCWRP), State Water Board's Surface Water Ambient Monitoring Program, three Southern California Regional Water Quality Control Boards (Los Angeles, Santa Ana, and San Diego) and several county storm water agencies (Los Angeles, Ventura, Orange, Riverside, San Bernardino and San Diego). SCCWRP acts as the facilitator to organize the program and completes data analysis and report preparation. The SMC monitoring program seeks to coordinate and leverage existing monitoring efforts to produce regional estimates of condition, improve data comparability and quality assurance, and maximize data availability, while conserving monitoring expenditures. The primary goal of this program is to implement an ongoing, large - scale regional monitoring program for southern California's coastal streams and rivers. The monitoring program addresses three main questions:

- What is the condition of streams in southern California?
- What are the stressors that affect stream condition?; and
- Are conditions getting better or worse?

In order to continue the implementation efforts of the SMC monitoring program, the City will support or provide monitoring data as described at the SMC sites within the watershed management area(s) that overlap with the City's jurisdictional area.

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1.9 Toxicity Monitoring

The MRP of the MS4 permit requires toxicity testing at the outfall and in the receiving water. The City will collect and analyze grab samples taken from receiving water monitoring locations to evaluate the extent and cause of toxicity in the receiving water. If toxicity is present in the receiving water the City will perform toxicity testing on water samples taken from field screening points to make sure that the toxicity is coming from City's jurisdictional area. A sufficient number of samples specified in the MRP shall be collected to perform both the required toxicity test and TIE studies.

1.9.1 Sensitive Spices Selection

The MRP states that a sensitivity screening is required to select the most sensitive test species unless "a sensitive test species has already been determined, or if there is prior knowledge of potential toxicant(s) and if a test species is sensitive to such toxicant(s), monitoring shall be conducted using only that test species." Previous relevant studies conducted in the watershed should be considered. Such studies may have been completed via previous MS4 sampling, wastewater NPDES sampling, or special studies conducted within the watershed. The following sub-sections discuss the species section process for assessing aquatic toxicity in receiving waters.

1.9.2 Freshwater Sensitive Spices Selection

As described in the MRP, if samples are collected in receiving waters with salinity less than 1 part per thousand (ppt), or from outfalls discharging to receiving waters with salinity less than 1 ppt, toxicity tests

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should be conducted on the most sensitive test species in accordance with species and short-term test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* The freshwater test species identified in the MRP are:

- A static renewal toxicity test with the fathead minnow, Pimephales promelas (Larval Survival and Growth Test Method 1000.04).
- A static renewal toxicity test with the daphnid, Ceriodaphnia dubia (Survival and Reproduction Test Method 1002.05).
- A static non-renewal toxicity test with the green alga, Selenastrum capricornutum (also named Raphidocelis subcapitata) (Growth Test Method 1003.0).

The three test species were evaluated to determine if either a sensitive test species had already been determined, or if there is prior knowledge of potential toxicant(s) and a test species is sensitive to such toxicant(s). In reviewing the available data in the Dominguez Channel watershed, metals, historical organics, and pyrethroids have been identified as problematic and are generally considered the primary aquatic life toxicants of concern found in urban runoff. Given the knowledge of the presence of these potential toxicants in the watershed, the sensitivities of each of the three species were considered to evaluate which is the most sensitive to the potential toxicants in the watersheds.

As C. dubia is identified as the most sensitive to known potential toxicant(s) typically found in receiving waters and urban runoff in the freshwater potions of the watershed, C. dubia is selected as the most sensitive species. The species also has the advantage of being easily maintained by means of in-house mass cultures. The simplicity of the test, the ease of interpreting results, and the smaller volume necessary to

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run the test, make the test a valuable screening tool. The ease of sample collection and higher sensitivity will support assessing the presence of ambient receiving water toxicity or long term effects of toxic storm water over time.

As such, toxicity testing in the freshwater portions of the watershed will be conducted using C. dubia. However, C. dubia test organisms are typically cultured in moderately hard waters and can have increased sensitivity to elevated water hardness greater than 400 mg/L $CaCO_3$, which is beyond their typical habitat range. Because of this, in instances where hardness in site waters exceeds 400 mg/L ($CaCO_3$), an alternative test species may be used. Daphnia magna is more tolerant to high hardness levels and is a suitable substitution for C. dubia in these instances.

1.9.3 **Toxicity Identification Evaluation (TIE)**

A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if either the survival or sub-lethal endpoint demonstrates a Percent Effect value equal to or greater than 50% at the IWC. Percent Effect is defined as the effect value denoted as the difference between the mean control response and the mean IWC response, divided by the mean control response - multiplied by 100. A TIE shall be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA manuals: Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I (EPA/600/6 - 91/005F, 1992); Methods for Aquatic Toxicity Identification *Evaluations, Phase II* Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R - 92/081, 1993); and Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document (EPA/600/R - 96 - 054, 1996).

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The TIE should be conducted on the test species demonstrating the most sensitive toxicity response at a sampling station. A TIE may be conducted on a different test species demonstrating a toxicity response with the caveat that once the toxicant(s) are identified, the most sensitive test species triggering the TIE shall be further tested to verify that the toxicant has been identified and addressed. A TIE Prioritization Metric (see Appendix 5 in SMC Model Monitoring Program) may be utilized to rank sites for TIEs.

1.9.3 **Toxicity Identification Evaluation (TIE)**

When a toxicant or class of toxicants is identified through a TIE conducted at a receiving water monitoring station, Permittees shall analyze for the toxicant(s)during the next scheduled sampling event in the discharge from the outfall(s) upstream of the receiving water location. If the toxicant is present in the discharge from the outfall at levels above the applicable receiving water limitation, a TRE shall be performed for that toxicant. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs. The City shall submit a TRE Corrective Action Plan to the Regional Water Board Executive Officer for approval. At minimum, the plan shall include a discussion of the following:

- The potential sources of pollutant(s) causing toxicity.
- A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.
- Recommended BMPs to reduce the pollutants(s) causing toxicity.
- Proposed post-construction control measures to reduce the pollutant(s) causing toxicity.
- Follow-up monitoring to demonstrate that the toxicants have been reduced or eliminated.

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1.10 Chemical TMDL Monitoring and Compliance Schedule

Chemical TMDL sampling will be performed at field screening points from stormwater discharges at least three times a year. Sampling and analysis will be in keeping with USEPA guidance. The table below specifies interim and final TMDL WLAs and compliance deadline dates to which the City is subject. Table VI below summarize list of constituents for NPDES and TMDL storm water outfall based monitoring and receiving water monitoring as well.

Table VI – List of Constituents

Upper Dominguez Channel (Upper HUC 12)	Lower Dominguez Channel (Lower HUC 12)
Flow, hardness, pH, dissolved oxygen, temperature, specific conductivity, TSS & SSC	Flow, hardness, pH, dissolved oxygen, temperature, specific conductivity, TSS & SSC
Table E-2 Pollutants	Table E-2 Pollutants
Cooper, Lead, Zinc	Cooper, Lead, Zinc
Chlordane, DDT, PCBs, & PAHs	Chlordane, DDT, PCBs, & PAHs
Suspended Sediment: Copper, Lead, Silver, Zinc, Chlordane, DDT, PCBs & PAHs	Suspended Sediment: Copper, Lead, Silver, Zinc, Chlordane, DDT, PCBs & PAHs

Table VII – Dominguez Channel Toxics TMDL

Toxics TMDL	Wet Weather Interim WLA	Deadline	Wet Weather Final WLA	Deadline
• Total Copper	207.51 µg/L	December 28, 2012	1300.3 g/day	March 23, 2032
• Total Lead	122.88 µg/L	December 28, 2012	5733.7 g/day	March 23, 2032
• Total Zinc	898.87 µg/L	December 28, 2012	9355.5 g/day	March 23, 2032
• Toxicity	2 TUc	December 28, 2012	1 TUc	March 23, 2032

1.11 MAL Monitoring

Stormwater sampling against MAL analytes shall be performed at the same time stormwater monitoring is performed for other purposes and with the same frequency – three times during the wet season. The table below identifies the MAL analytes and their numeric limitations.

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Table VII - Municipal Action Levels

Metals	Unit	Total
Cadmium	ug/l	2.52
Chromium	ug/l	20.2
Copper	ug/l	71.12
Lead	ug/l	102
Zinc	ug/l	641.3
Nickel	ug/l	27.43
Conventional Pollutants	**Unit**	**MAL**
Total Phosphorus	mg/l	0.80
Nitrate & Nitrite	mg/l	1.85
Kjedahl Nitrogen (TKN)	mg/l	4.59
COD	mg/l	247.5
TSS	mg/l	264.1
pH	-	6 -9

1.12 Action Level Monitoring

The tables below lists non-stormwater action level analytes for the Los Angeles River and San Gabriel River. As mentioned, the City does not intend to conduct action level or any other non-stormwater monitoring at the outfall. Such monitoring is not authorized under the Clean Water Act and is contrary to State Board water quality orders. Because non-stormwater discharges are not subject to an iterative process an exceedance would place a permittee in violation. Nevertheless, the City shall conduct non-stormwater monitoring to detect and eliminated illicit discharges and connections (see below Section 1.14).

Table VIII – Action Levels (Non-Stormwater) for Dominguez Channel

Analyte	Units	Average Monthly	Daily Maximum
pH	Standard units	6.5-8.5[2]	
E. coli Bacteria	#/100 ml	126[3]	235[4]
Cyanide, Total Recoverable	µg/l	4.3	8.5
Copper, Total Recoverable	µg/l	7	14
Lead, Total Recoverable	µg/l	2.6	5.2
Mercury, Total Recoverable	µg/l	0.051	0.10
Selenium, Total Recoverable	µg/l	4.1	8.2

[2]Within the range of 6.5 to 8.5 at all times
[3]E.coli density shall not exceed a geometric mean of 126/200 ml

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[4]E.coli density in a single sample shall not exceed shall not exceed 235/100 ml
[5]In accordance with applicable water quality objectives contained in Chapter 3 of the Basin Plan
[6]Same as Chloride (see footnote 13)

Table IX – Action Levels (Non-Stormwater) for Dominguez Channel Estuary

Analyte	Units	Average Monthly	Daily Maximum
pH	Standard units	6.5-8.5[1]	
Total Coliform bacteria	#/100 ml	1000[2,3]	10,000[3,4]
Fecal Coliform Bacteria	#/100 ml	200[2]	400[4]
Enterococcus Bacteria	#/100 ml	35[2]	104[4]
Cyanide, Total Recoverable	ug/L	0.5	1
Copper, Total Recoverable	ug/L	2.9	5.8
Lead, Total Recoverable	ug/L	7	14
Mercury, Total Recoverable	ug/L	0.051	0.1
Selenium, Total Recoverable	ug/L	58	117

[1]Within the range of 6.5 to 8.5 at all times.
[2] Total coliform density shall not exceed a geometric mean of 1,000/100 ml. Fecal coliform density shall not exceed a geometric mean of 200/100 ml. Enterococcus density shall not exceed a geometric mean of 35/100 ml.
[3] In areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the median total coliform density shall not exceed 70/100 ml and not more than 10 percent of the samples shall exceed 230/100 ml.
[4] Total coliform density in a single sample shall not exceed 10,000/100 ml. Fecal coliform density in a single sample shall not exceed 400/100 ml. Enterococcus density shall not exceed a geometric mean of 104/100 ml.

1.13 Additional Monitoring Required for WMP Compliance

MRP section VI.C.2.a.i and ii requires additional outfall monitoring tasks for permittees that opt for the WMP. They include pollutants that are currently not TMDLs but are nevertheless 303(d) listed (e.g., cyanide). Regional Board staff has suggested that other water quality standards be included that can found in the previous MS4 in attachment U of the Monitoring Program.

The purpose of this monitoring task is to identify non-TMDL pollutants are causing impairments to beneficial uses of receiving waters and to evaluate the effectiveness of BMPs implemented through the SWMP/WMP. They are also included to determine if non-TMDL pollutants are causing or contributing to exceedances of receiving water limitations. The City takes the position that the detection of an exceedance does not constitute a violation. Any persistent exceedance

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of a TMDL or water quality standard monitored over the term of the permit would not constitute a violation provided that (1) the SWMP/WMP is being implemented in a timely and complete manner; and (2) complies with the iterative process described in MS4 permit section V.A.1-4.

Resulting data generated from WMP-related monitoring will be, along with TMDL monitoring, loaded into the water quality model. These pollutants will be added to the stormwater outfall sampling list.

Table X - WMP Monitoring for Non-TMDL Water Quality Standards

CONSTITUENTS	USEPA METHOD	MLs
CONVENTIONAL POLLUTANTS		**mg/L**
Oil and Grease	EPA 1664	5
Total Phenols	EPA 420.1	0.1
Cyanide	EPA 4500-CNC	0.005
pH	EPA 150.1	0 – 14
Temperature	NA	None
Dissolved Oxygen	NA	Sensitivity to 5 mg/L
BACTERIA		MPN/100ml
Total Coliform	SM 9221B	<20mpn/100ml
Fecal Coliform	SM 9222 B	<20mpn/100ml
Enterococcus	SM 9230 B	<20mpn/100ml
GENERAL		**mg/L**
Dissolved Phosphorus	SM 4500-PC	0.05
Total Phosphorus	SM 4500-PC	0.05
Turbidity	EPA 180.1	0.1NTU
Total Suspended Solids	EPA 160.2	2
Total Dissolved Solids	EPA 160.1	2
Volatile Suspended Solids	EPA 160.4	2
Total Organic Carbon	SM 5310 B	1
Total Petroleum Hydrocarbon	EPA 1664	5
Biochemical Oxygen Demand	SMOL-5210	2
Chemical Oxygen Demand	SM 5220D	20-900
Total Ammonia-Nitrogen	EPA 350.2	0.1
Total Kjeldahl Nitrogen	EPA 351.2	0.1
Nitrate-Nitrite	EPA 4110	0.1
Alkalinity	EPA 310.1	2
Specific Conductance	EPA 120.1	1umho/cm
Total Hardness	EPA 130.2	2
MBAS	SM 5540 C	<0.5
Chloride	EPA 300	2
Fluoride	EPA 300	0.1

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Methyl tertiary butyl ether (MTBE)	EPA 4110	1
Perchlorate	EPA 314.0	4 ug/l
METALS(Dissolved & Total)		**µg/L**
Aluminum	EPA 200.8	100
Antimony	EPA 200.8	0.5
Arsenic	EPA 200.8	1
Beryllium	EPA 200.8	0.5
Cadmium	EPA 200.8	0.25
Chromium (total)	EPA 200.8	0.5
Chromium (Hexavalent)	EPA 200.8	5
Copper	EPA 200.8	0.5
Iron	EPA 200.8	100
Lead	EPA 200.8	0.5
Mercury	EPA 200.8	0.5
Nickel	EPA 200.8	1
Selenium	EPA 200.8	1
Silver	EPA 200.8	0.25
Thallium	EPA 200.8	1
zinc	EPA 200.8	1
SEMIVOLATILE ORGANIC COMPOUNDS		
ACIDS		**µg/L**
2-Chlorophenol	EPA 625	2
4-Chloro-3-methylphenol	EPA 625	1
2,4-Dichlorophenol	EPA 625	1
2,4-Dimethylphenol	EPA 625	2
2,4-Dinitrophenol	EPA 625	5
2-Nitrophenol	EPA 625	10
4-Nitrophenol	EPA 625	5
Pentachlorophenol	EPA 625	2
Phenol	EPA 625	1
2,4,6-Trichlorophenol	EPA 625	10
BASE/NEUTRAL		**µg/L**
Acenaphthene	EPA 625	1
Acenaphthylene	EPA 625	2
Anthracene	EPA 625	2
Benzedine	EPA 625	5
1,2 Benzanthracene	EPA 625	5
Benzo(a)pyrene	EPA 625	2
Benzo(g,h,i)perylene	EPA 625	5
3,4 Benzoflouranthene	EPA 625	10
Bis(2-Chloroethoxy) methane	EPA 625	2
Bis(2-Chloroisoproply) ether	EPA 625	5
Bis(2-Chloroethyl) ether	EPA 625	2
Bis(2-Ethylhexl) phthalate	EPA 625	1
4-Bromophenyl Phenyl ether	EPA 625	5
Butyl benzyl phthalate	EPA 625	5
2-Chloroethyl vinyl ether	EPA 625	10
2-Chloronaphthalene	EPA 625	1

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4-Chlorophenyl phenyl ether	EPA 625	10
Chrysene	EPA 625	5
Dibenzo(a,h)anthracene	EPA 625	5
1,3-Dichlorobenzene	EPA 625	0.1
1,4-Dichlorobenzene	EPA 625	1
1,2-Dichlorobenzene	EPA 625	1
3,3-Dichlorobenzidine	EPA 625	1
Diethyl phthalate	EPA 625	5
Dimethyl phthalate	EPA 625	2
di-n-Butyl phthalate	EPA 625	2
2,4-Dinitrotoluene	EPA 625	10
2,6-Dinitrotoluene	EPA 625	5
4,6 Dinitro-2-methylphenol	EPA 625	5
1,2-Diphenylhydrazine	EPA 625	5
di-n-Octyl phthalate	EPA 625	1
Fluoranthene	EPA 625	10
Fluorene	EPA 625	0.05
Hexachlorobenzene	EPA 625	0.1
Hexachlorobutadiene	EPA 625	1
Hexachloro-cyclopentadiene	EPA 625	5
Hexachloroethane	EPA 625	1
Indeno(1,2,3-cd)pyrene	EPA 625	0.05
Isophorone	EPA 625	1
Naphthalene	EPA 625	1
Nitrobenzene	EPA 625	0.2
N-Nitroso-dimethyl amine	EPA 625	5
N-Nitroso-diphenyl amine	EPA 625	1
N-Nitroso-di-n-propyl amine	EPA 625	5
Phenanthrene	EPA 625	0.05
Pyrene	EPA 625	0.05
1,2,4-Trichlorobenzene	EPA 625	1
CHLORINATED PESTICIDES		**µg/L**
Aldrin	EPA 608	0.005
alpha-BHC	EPA 608	0.01
beta-BHC	EPA 608	0.005
delta-BHC	EPA 608	0.005
gamma-BHC (lindane)	EPA 608	0.02
alpha-chlordane	EPA 8270	0.1
gamma-chlordane	EPA 8270	0.1
4,4'-DDD	EPA 8270	0.05
4,4'-DDE	EPA 8270	0.05
4,4'-DDT	EPA 8270	0.01
Dieldrin	EPA 608	0.01
alpha-Endosulfan	EPA 608	0.02
beta-Endosulfan	EPA 608	0.01
Endosulfan sulfate	EPA 608	0.05
Endrin	EPA 608	0.01
Endrin aldehyde	EPA 608	0.01

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Heptachlor	EPA 608	0.01
Heptachlor epoxide	EPA 608	0.01
Toxaphene	EPA 608	0.5
POLYCHLORINATED BIPHENYLS		**µg/L**
Aroclor-1016	EPA 608	0.5
Aroclor-1221	EPA 608	0.5
Aroclor-1232	EPA 608	0.5
Aroclor-1242	EPA 608	0.5
Aroclor-1248	EPA 608	0.5
Aroclor-1254	EPA 608	0.5
Aroclor-1260	EPA 608	0.5
ORGANOPHOSPHATE PESTICIDES		**µg/L**
Atrazine	EPA 8141A/B	2
Chlorpyrifos	EPA 8141A/B	0.05
Cyanazine	EPA 8141A/B	2
Diazinon	EPA 8141A/B	0.01
Malathion	EPA 8141A/B	1
Prometryn	EPA 8141A/B	2
Simazine	EPA 8141A/B	2
HERBICIDES		**µg/L**
2,4-D	EPA 8151A	10
Glyphosate	EPA 8151A	5
2,4,5-TP-SILVEX	EPA 8151A	0.5

1.14 Non-stormwater Monitoring for ICID

As mentioned above, the City proposes to perform non-stormwater monitoring to detect and eliminate illicit connections and discharges in accordance with 40 CFR 122.26(d)(1)(D). Monitoring will consist of dry weather visual observations at outfalls or field screening points that shall be conducted monthly during the dry season (May 1 to September 30) -- see **Appendix A-1** for field screening locations. If flow is detected, grab samples are to be taken within a 24 hour period and measured against fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides, and potassium. Other constituents may be added later based on USEPA's ICID-DE guidance manual.

1.15 Reporting Requirements

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The City shall comply with all reporting requirements specified in the MRP. The City cannot begin to report monitoring results until: (1) the WMP and MRP have been approved by the Regional Board, (expected to happen 4 months after the June 28th WMP submittal date); and (2) one round of monitoring has been conducted during October 2014 to April 2015 wet season. Reporting results to the Regional Board will occur on or before December of 2015. By this time, it is expected that the County of Los Angeles will have developed a standardized annual report form that will include reporting criteria for the MS4 permit, TMDLs, MALs and certain water quality standards.

1.16 Monitoring Protocols

The MRP requires a variety of monitoring requirements that are governed by monitoring protocols established by USEPA, which are summarized below.

I. *Receiving Monitoring Protocol*

Minimum required receiving water monitoring frequencies are defined in section VI.C of Attachment E in the MS4 Permit. Wet weather is defined as when the flow in the receiving water is at least 20% greater that the base flow. In an effort to simplify the wet weather definition the City will utilize the definition in Attachment A of the MS4 Permit, 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. Wet weather monitoring will occur at least three times per year for all applicable parameters with the exception for aquatic toxicity. Aquatic toxicity monitoring will be conducted at a minimum of twice per year. The first wet weather event with a predicted rainfall of .25 inches with a 70% probability 24 hours prior to rain fall will be targeted for monitoring. At a minimum two additional

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rainfall events with a minimum separation of three dry days (less than .1 inch of rain per day) between monitoring will be monitored to meet the minimum requirement of three storm events per year. 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.

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 during which at least one of the monitoring events occurs.

II. *Non-storm water outfall based sampling Protocol*

Dry weather samples will be collected on days there has be no measurable precipitation within the last three days. Grab samples will be taken for those constituents that are require grab sampling. If the City cannot install an automated sampler, grab samples will be collected. Flow will be estimated for storm water outfall monitoring sites based on drainage area, impervious cover, and precipitation data.

III. *Outfall Based sampling protocol*

For each field screening point, a storm water discharge sample shall be collected from three storm events occurring at least one month apart in accordance with the requirements indicated below:

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- For storm water discharges, all samples shall be collected from the discharge resulting flow within the receiving water when it is at least 20% greater that the base flow. For Dominguez channel wet weather define as any day when the maximum daily flow measured at a location within the Dominguez Channel is equal to or greater than 62.7 cfs, a flow-weighted composite shall be taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours. The flow-weighted composite sample for a storm water discharge may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours., with each aliquot being separated by a minimum period of twenty minutes. In addition the City will target the first storm event of the storm year with a predicted rainfall of at least 0.25 inch at a 70% probability of rainfall at least 24 hours prior to the event start time. Two more wet weather monitoring events will be performed when a predicted rain event is equal or more than 0.1 inches and minimum 3 consecutive days of dry weather.

- Sampling of storm water from field screening points will take place during 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. Grab samples may be utilize for specific pollutants such as bacteria, oil & grease, volatile organics and cyanides. For all storm water permit applicants taking flow-weighted composites, quantitative data must be reported for all pollutants specified in §122.26 except pH,

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temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus.

- A storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. For all applicants, a flow-weighted composite shall be taken for either the entire discharge or for the first three hours of the discharge. The flow-weighted composite sample for a storm water discharge may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes. For a flow-weighted composite sample, only one analysis of the composite of aliquots is required. For all storm water permit applicants taking flow-weighted composites, quantitative data must be reported for all pollutants specified in §122.26 except pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus.

IV. *Toxicity Monitoring/Testing Protocol*

The approach to conducting aquatic toxicity monitoring is presented in Figure C-1, which describes a general evaluation process for each sample collected as part of routine sampling conducted twice per year in wet weather and once per year in dry weather. Monitoring begins in the receiving water and the information gained is used to identify constituents for monitoring at outfalls to support the identification of pollutants.

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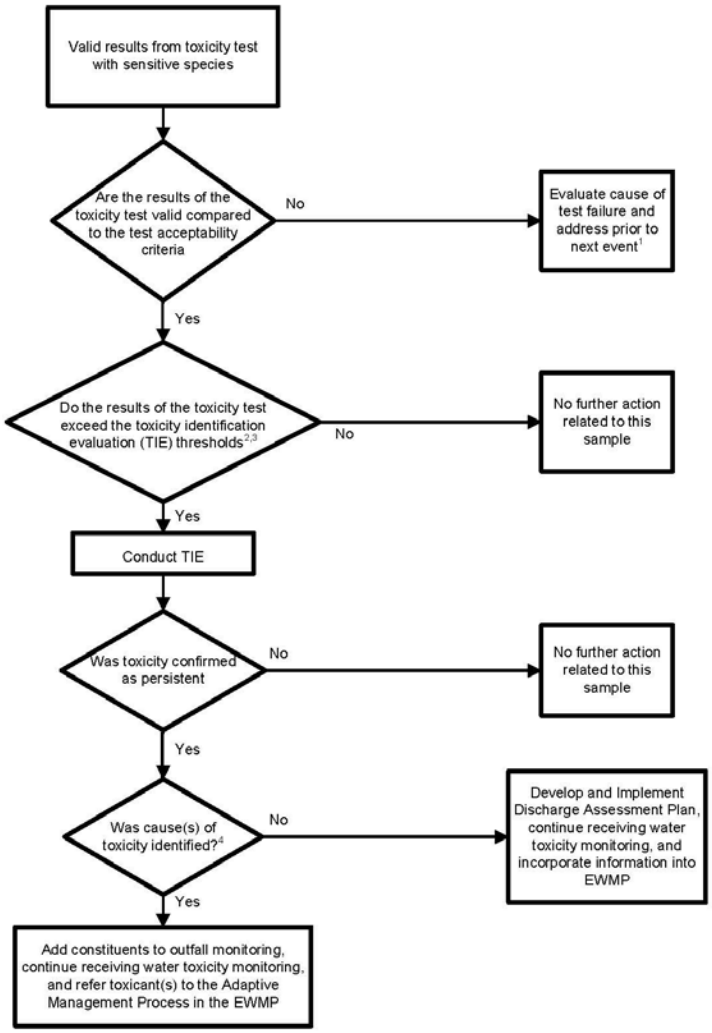

Footnotes

1. Test failure includes pathogen or epibont interference, which should be addressed prior to the next toxicity sampling event. Additionally, lab control organisms may fail to meet test standards. As a result of test failure, toxicity samples will be collected during the next wet weather event, or as soon as possible following notification of test failure for dry event samples.
2. For freshwater, the TIE threshold is equal to or greater than 50% (≥50%) mortality in an acute (wet weather) or chronic (dry weather) test. If a ≥50% effect in a sub-lethal endpoint for chronic test is observed during dry weather, a follow up sample will be collected within two weeks of the completion of the initial sample collection. If the follow up sample exhibits a ≥50% effect, a TIE will be initiated.
3. For marine waters and estuarine waters, the TIE threshold is the percent effect value ≥50%. If a ≥50% or greater effect is observed during dry weather a follow up sample will be collected within two weeks of the initial sample collection and if the follow up sample exhibits a ≥50% effect, a TIE will be initiated.
4. The goal of conducting Phase I TIEs is to identify the cause of toxicity so that outfall monitoring can incorporate the toxicant(s) into the list of constituents monitored during outfall monitoring. Thus, if specific toxicant(s) or the analytical class of toxicants (i.e., metals that are analyzed via EPA Method 200.8) are identified, sufficient information is available to inform the addition of pollutants to the list of pollutants monitored during outfall monitoring.

1.17 Implementation Schedule (Milestones)

The table below provides a schedule for implementing MRP/CIMP tasks.

Table XI – Implementation Schedule

Task	Deadline Date
• Submit WMP, MRP, and CIMP to Regional Board	No later than June 28, 2014
• Using GIS mapping, provide land use overlay of City's storm drain system	No later than June 28, 2014
• Using GIS mapping, show City's storm drain system including catch basins and connections to receiving waters	No later than June 28, 2014
• Using GIS mapping, identify watershed and sub-watershed based on Los Angeles County's HUC 12 equivalent boundaries	No later than June 28, 2014
• Using GIS mapping, identify: stormwater outfalls and field screening points; mass emission and other in-stream monitoring points/stations; and ambient monitoring locations established by the Regional Board's Surface Water Ambient Monitoring Program (SWAMP); and locations established by the Council for Watershed Health.	No later than June 28, 2014
• Conduct outfall monitoring for stormwater discharges for TMDLs, other water quality standards, MALs, and toxicity three times beginning during 2015-2016 wet season and annually thereafter.	Beginning no later than October of 2015
• During the dry season, conduct monthly non-stormwater visual observations and grab sampling if flow is detected.	No later than May 1, 2015
• If no data exists the City shall contract for the CWH to conduct ambient monitoring once during the term of the permit for Dominguez Channel (costs to be shared with the cities of Carson and Gardena)	No later than June 28, 2015
• Review available ambient monitoring data and studies to assess the health of the Dominguez at both reaches (above and below Vermont Avenue)	No later than June 28, 2014
• Submit annual monitoring reports to the Regional Board of any available TMDL or other water quality standards data generated through outfall monitoring.	Beginning no later than December of 2014
• Submit new development/redevelopment track form.	No later than one month following the Regional Board's approval of the CIMP

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End Section One

Appendix A

Maps

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Appendix A-1

Field Screening – HUC 12 Location Map

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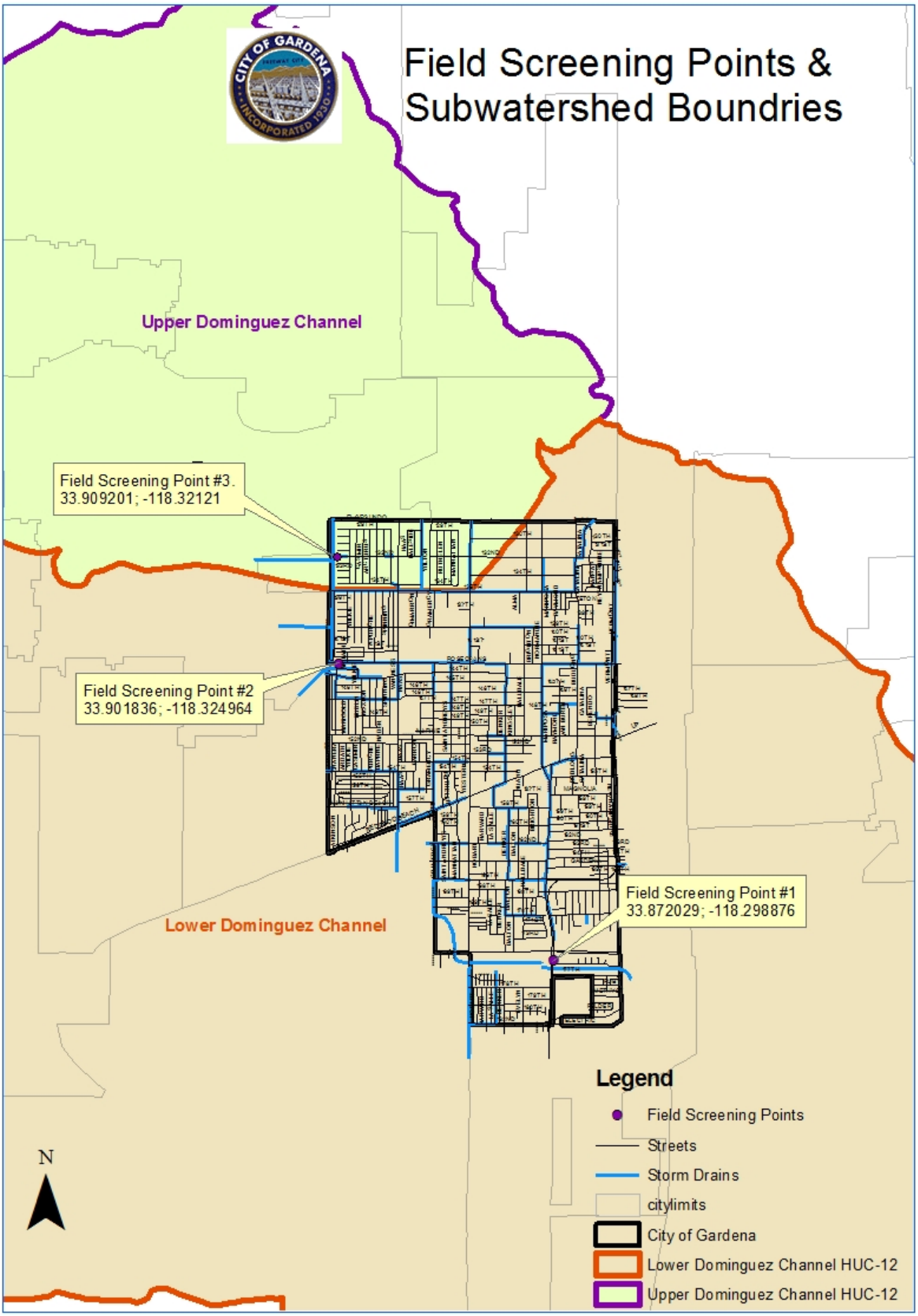
Field Screening Points &
Subwatershed Boundries
Upper Dominguez Channel
Field Screening Point #3.
33.909201; -118.32121
Field Screening Point #2
33.901836; -118.324964
Field Screening Point #1
33.872029; -118.298876
Lower Dominguez Channel
N
Legend
Field Screening Points
Streets
Storm Drains
citylimits
City of Gardena
Lower Dominguez Channel HUC-12
Upper Dominguez Channel HUC-12

Appendix A-2

Outfall & Receiving Water Monitoring Location

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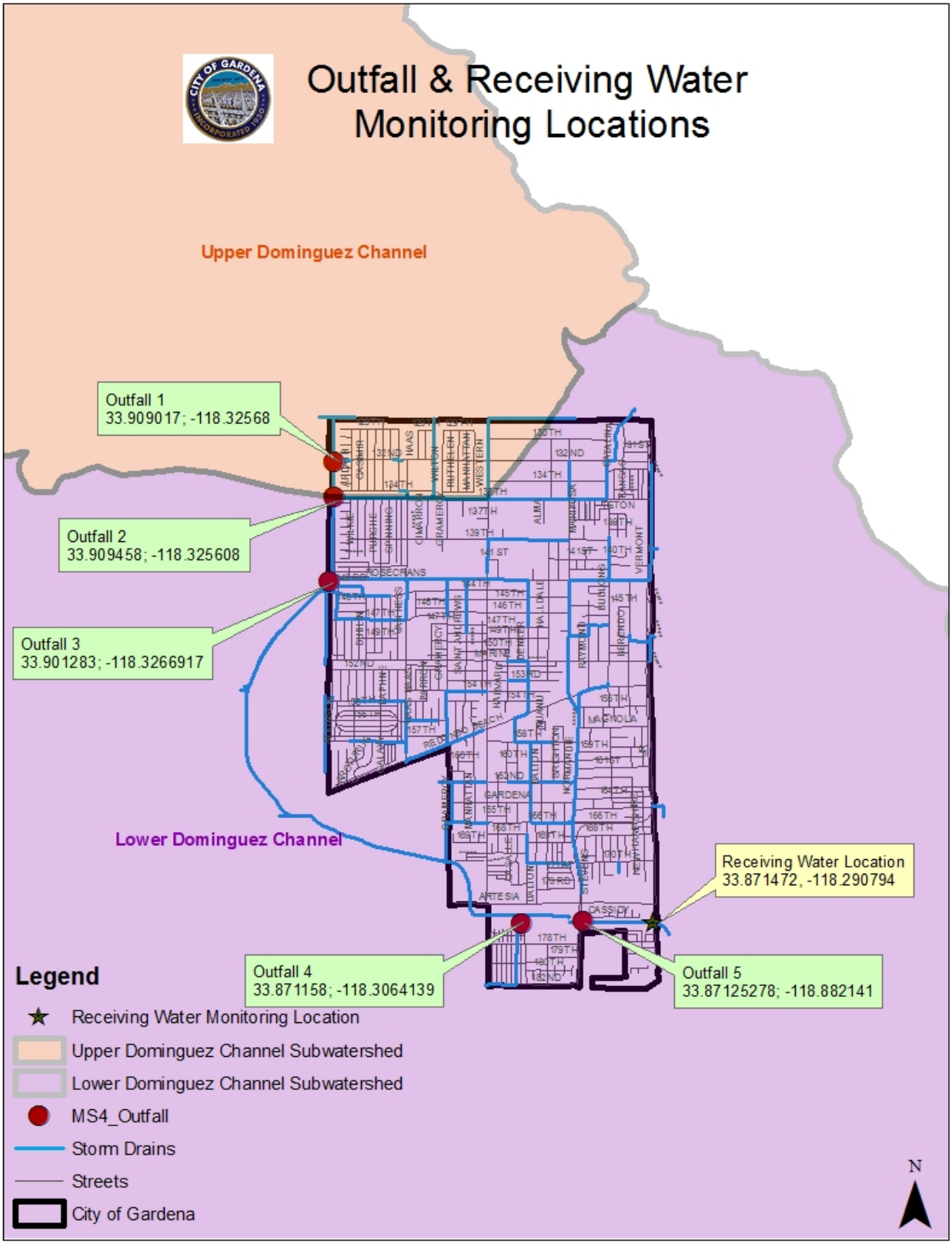
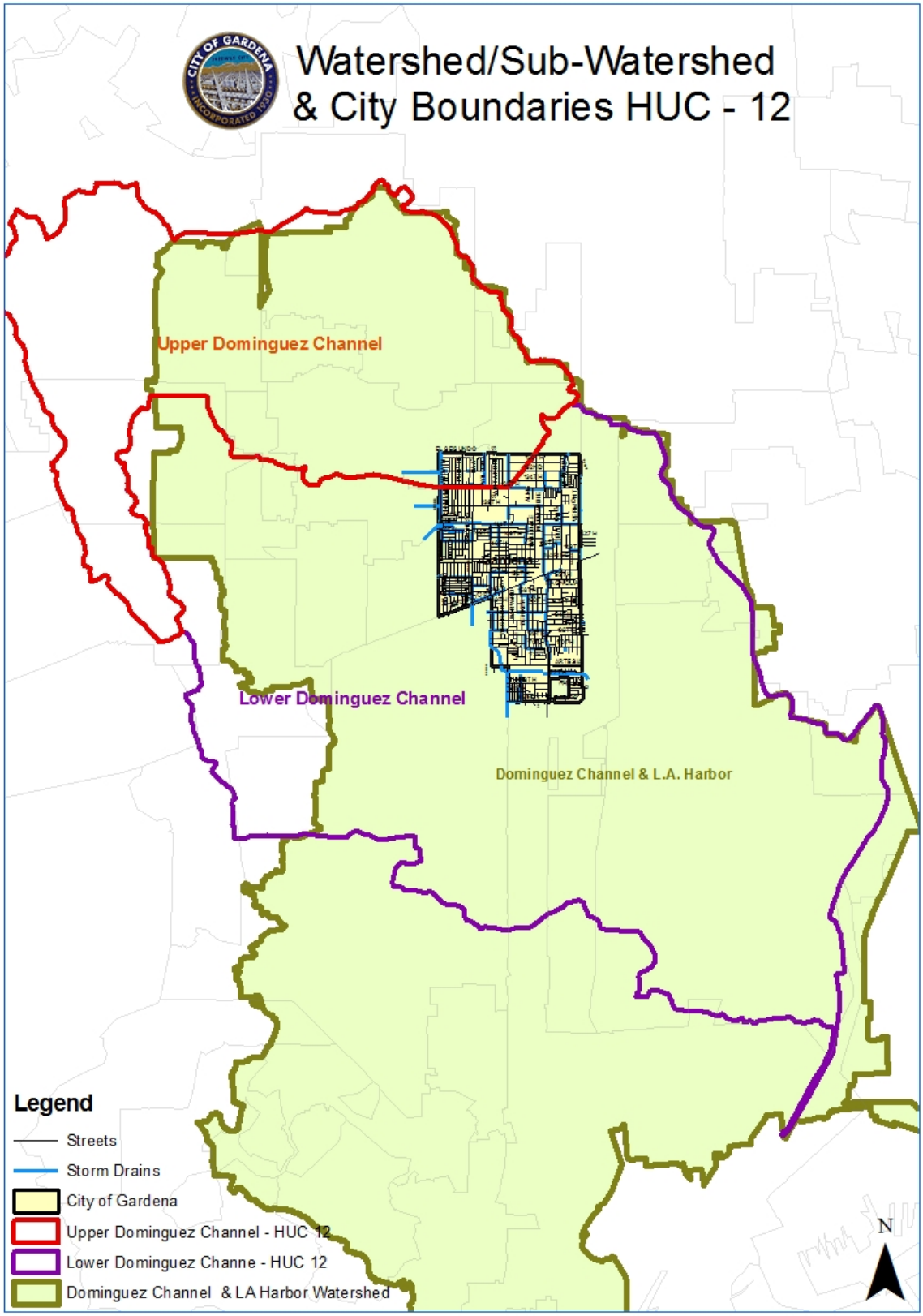

Outfall & Receiving Water Monitoring Locations
Upper Dominguez Channel
Lower Dominguez Channel
Outfall 1
33.909017; -118.32568
Outfall 2
33.909458; -118.325608
Outfall 3
33.901283; -118.3266917
Outfall 4
33.871158; -118.3064139
Outfall 5
33.87125278; -118.882141
Receiving Water Location
33.871472, -118.290794
Legend
Receiving Water Monitoring Location
Upper Dominguez Channel Subwatershed
Lower Dominguez Channel Subwatershed
MS4_Outfall
Storm Drains
Streets
City of Gardena
N

Appendix A-3

Watershed/Sub-watershed & City Boundary Map

Revised Draft

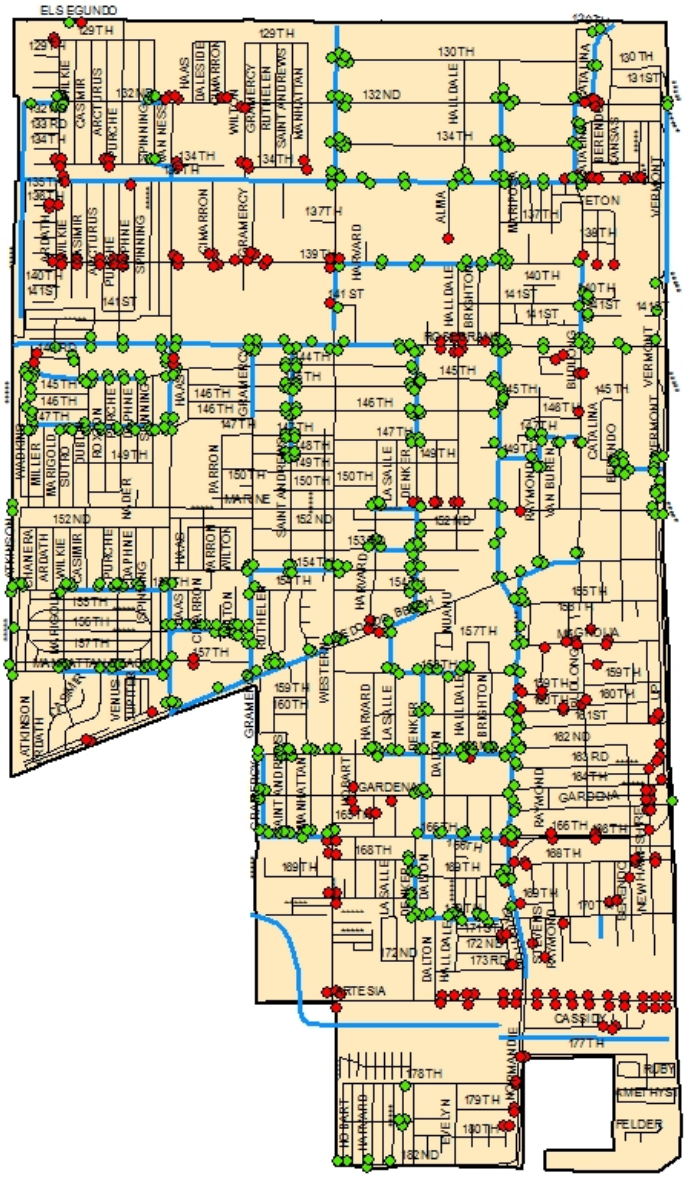

Watershed/Sub-Watershed
& City Boundaries HUC - 12
Upper Dominguez Channel
Lower Dominguez Channel
Dominguez Channel & L.A. Harbor
Legend
Streets
Storm Drains
City of Gardena
Upper Dominguez Channel - HUC 12
Lower Dominguez Channe - HUC 12
Dominguez Channel & LA Harbor Watershed
N

Appendix A- 4

Storm Drain/Catch Basin Map

Revised Draft

City of Gardena Catch Basins



Legend

Catch Basin

OWNERSHIP

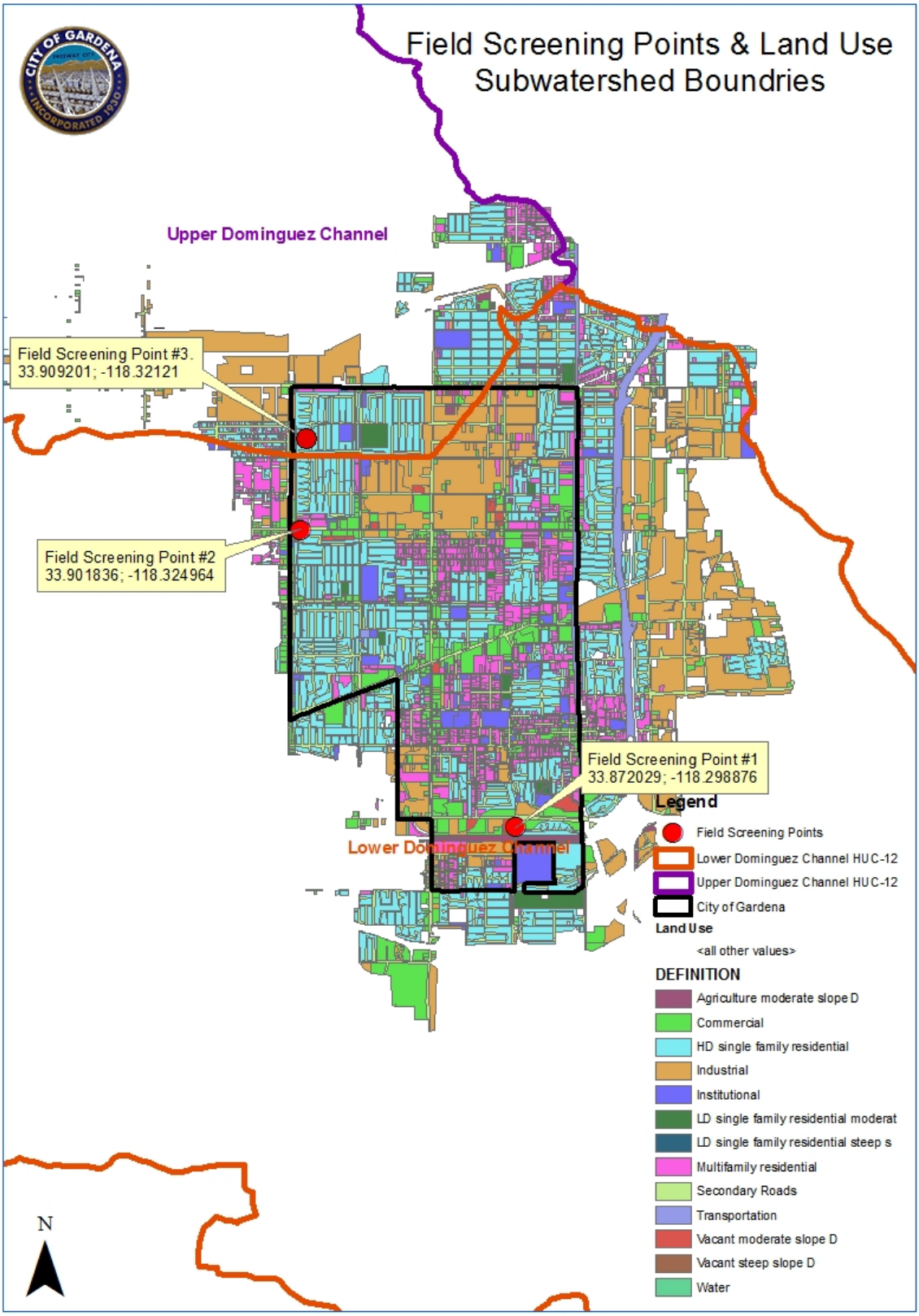
- CITY
- LACFCD
- Storm Drains
- Streets
- Gardena

N

Appendix A-5

City Land Use Map

Revised Draft


Field Screening Points & Land Use
Subwatershed Boundries
Upper Dominguez Channel
Field Screening Point #3.
33.909201; -118.32121
Field Screening Point #2
33.901836; -118.324964
Field Screening Point #1
33.872029; -118.298876
Lower Dominguez Channel
Legend
Field Screening Points
Lower Dominguez Channel HUC-12
Upper Dominguez Channel HUC-12
City of Gardena
Land Use
<all other values>
DEFINITION
Agriculture moderate slope D
Commercial
HD single family residential
Industrial
Institutional
LD single family residential moderat
LD single family residential steep s
Multifamily residential
Secondary Roads
Transportation
Vacant moderate slope D
Vacant steep slope D
Water
N

Appendix B

2010 303(d) List for Dominguez Channel

Revised Draft

Appendix B
Table XII – 303(d) List – Dominguez Channel

2010 303 (d) List				
Water Body	**Parameter**	**TMDL Status Date**	**Source**	**Pollutant Category**
Dominguez Channel (below Vermont Avenue)	Ammonia	2019	Nonpoint/Point Source	TMDL Require List
	BMB	2019	Nonpoint/Point Source	TMDL Require List
	Benzo Pyrene (PAHs)	2019	Source Unknown	TMDL Require List
	Benzo Anthracene (PAHs)	2019	Source Unknown	TMDL Require List
	Chlordane (tissue)	2019	Source Unknown	TMDL Require List
	Chrysene (C1-C4)	2019	Source Unknown	TMDL Require List
	Coliform Bacteria	2007	Nonpoint/Point Source	TMDL Require List
	DDT (tissue & Sediment)	2019	Nonpoint/Point Source	TMDL Require List
	Dieldrin (tissue)	2019	Nonpoint/Point Source	TMDL Require List
	Lead (tissue)	2019	Nonpoint/Point Source	TMDL Require List
	PCBs	2019	Source Unknown	TMDL Require List
	Phenanthrene	2019	Source Unknown	TMDL Require List
	Pyrene	2019	Source Unknown	TMDL Require List
	Zinc (sediment)	2019	Nonpoint/Point Source	TMDL Require List
	Sediment Toxicity	2021	Nonpoint Source	TMDL Require List
Dominguez Channel (Above Vermont Avenue)	Ammonia	2019	Point Source	TMDL Require List
	Copper	2019	Nonpoint/Point Source	TMDL Require List
	Indicator Bacteria	2007	Nonpoint/Point Source	TMDL Require List
	Lead	2019	Nonpoint/Point Source	TMDL Require List

Revised Draft

	Toxicity	2021	Nonpoint/Point Source	TMDL Require List
	Zinc	2019	Nonpoint/Point Source	TMDL Require List
	Diazinon	2019	Source Unknown	TMDL Require List

Revised Draft