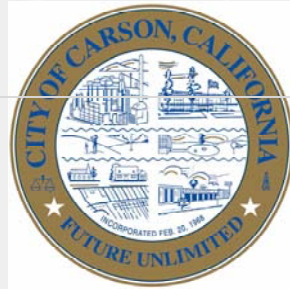


Monitoring and Reporting Program



Draft



701 East Carson Street, CA 90745



Section One: Monitoring and Reporting Program (MRP)

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MRP: 6-28-14

TC - II

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** (MRP) [No. CI948]. The MRP addresses the several types of monitoring tasks required by the Permit. The City intends to meet these requirements through its **Coordinated Integrated Monitoring Program** (CIMP) submittal.

In addition to the above monitoring tasks, the City is also subject to monitoring tasks required by the Individual Watershed Management Program (I-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 RAAWater 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 CIMP, there are several provisions of the Permit reflected in the MRP and CIMP that the City cannot comply with because the City has challenged them in its administrative petition. These include, most notably, non-storm water action levels. The City expects these issues to be resolved through a State Board Order in response to an administrative petition it filed challenging this and other MS4 Permit requirements.

1.1 **Coordinated Integrated Monitoring Program**

The City has opted for a CIMP to comply with monitoring and SWMP/WMP requirements under the MS4 Permit. In accordance with the MRP, the CIMP 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 complained 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 CIMP Requirements

Through the Comprehensive Integrated Monitoring Program (CIMP) the City proposes to consolidate applicable monitoring program requirements as specified in 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
<ul style="list-style-type: none">Los Angeles River, Reach 1	<ul style="list-style-type: none">Carson and ComptonCarson and Compton
<ul style="list-style-type: none">Dominguez Channel	<ul style="list-style-type: none">CarsonComptonGardenaLawndale
<ul style="list-style-type: none">Machado Lake	<ul style="list-style-type: none">CarsonLomita

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 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 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 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 which 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 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 can only be, by definition, ambient (dry weather) standards. Sampling a



wet weather discharge from a receiving water (not be confused with an outfall) against a wet weather 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 plants); and non-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/WMP on the beneficial uses of the receiving waters into which it discharges.

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 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**.

Outfall Discharging into Receiving Water



Six field screening points been chosen, each of which is located upstream of an outfall. The screening points are representative of stormwater discharges from the entire City. They include one for Machado Lake, one for Los Angeles River, Reach 1, and four for Dominguez Channel. The City shall collect samples for Compton Creek and Machado Lake 3 times during the wet season (October 1 through May 15). The screening points for these sub-watersheds are representative of a mix of residential and commercial areas. The City



shall also collect samples from the four field screening points for Dominguez Channel. Instead of collecting three samples for each screening point per year, the City intends to sample three times a year from one of the four field screening points on a rotating basis. Since each of these field screening locations are in residential, commercial, and industrial areas, the samples are expected to yield representative results. At the end of the 5 year term of the Permit the City will be able characterize each of the sub-watersheds for pollution issues. If persistent exceedances of TMDLs and other water quality standards are recorded, the City will propose adjustments to BMPs and other actions in its 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).

In addition to using the data to determine compliance with WQBELs, the City will also measure stormwater discharges against municipal action levels (MALs). However, as mentioned previously, the City cannot sanction the use of the data to determine compliance with TMDL WLAs or other water quality standards in the receiving water. Once again, the City is not responsible for conducting any monitoring or any activity outside the realm of its MS4. As also mentioned, the City is opposed to measuring stormwater discharges from the outfall against wet weather water quality standards because they are not legally valid.

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 persuading the discharger to prohibit a 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.

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.

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 constituents¹. 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 a means of determining compliance with the maximum extent practical (MEP) standard. There is no guidance in the Permit to explain how this 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 the development or new development site, for which post-construction BMPs have been prescribed, or down stream from it? 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

¹Total 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.



constituents are included in other stormwater monitoring requirements, the City will effectively be meeting this task. The Permit's monitoring program also 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 within 60 days of 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

The City intends to meet the foregoing tracking tasks through a revised SUSMP evaluation form (see **Section Two, SUSMP Appendix B-4**).

1.8 **Regional/Special Studies**

The City has taken the position that it is not responsible for performing any activity that lies outside of its MS4, the end of which is the outfall. The Regional Board studies referenced in the CIMP include activities in the receiving water, which lies outside of the scope of the MS4. In its administrative petition the City explained that neither federal regulations nor state law or water quality orders require performing monitoring or other activities outside of an MS4.

1.09 **Toxicity Monitoring**

The MRP of the MS4 Permit requires toxicity testing at the outfall and in the receiving water. As mentioned, the City is not required under federal or state law to perform any monitoring in the receiving water. However, the City intends to perform outfall monitoring for toxics.



Pesticide (PCBs and DDT) and metals (copper, lead, zinc, and selenium) at the outfalls. Water samples were tested with either of two different organisms: 7-day test with *Ceriodaphnia dubia* (growth, survival) and 7-day test with *Pimephales promelas* (biomass, survival).

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 tables below specifies interim and final TMDL WLAs and compliance deadline dates to which the City is subject.

Table II – Dominguez Channel Toxics TMDL (Wet Weather)

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

Table III – Dominguez Channel Toxics TMDL (Dry Weather)

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

Table IV – Machado Lake Nutrients TMDL (Wet Weather)

Nutrients TMDL	Dry Weather Interim WLA	Deadline	Dry Weather Final Interim	Deadline
• Total Phosphorous	1.25 mg/l	May, 2014	0.1 mg/l	September, 2018



• Total Nitrogen	2.45 mg/l	May, 2014	1.0 mg/l	September, 2018
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Table V – Machado Lake Nutrients TMDL (Dry Weather)

Nutrients TMDL	Wet Weather Interim WLA	Deadline	Wet Weather Final Interim	Deadline
• Total Phosphorous	1.25 mg/l	May, 2014	0.1 mg/l	September, 2018
• Total Nitrogen	2.45 mg/l	May, 2014	1.0 mg/l	September, 2018

Table VI – Machado Lake Toxics TMDL (Wet Weather)

Toxics TMDL	Wet Weather Interim WLA	Deadline	Wet Weather Final Interim	Deadline
• Total PCBs	59.9 ug/kg	September, 2019	59.9 ug/kg	September, 2019
• Total DDT	5.2 ug/kg	September, 2019	5.2 ug/kg	September, 2019
• Dieldrin	1.9 ug/kg	September, 2019	1.9 ug/kg	September, 2019
• Chlordane	3.24 µg/kg	September, 2019	3.24 ug/kg	September, 2019

Table VII – Machado Lake Toxics TMDL (Dry Weather)

Toxics TMDL	Dry Weather Interim WLA	Deadline	Dry Weather Final Interim	Deadline
• Total PCBs	59.9 ug/kg	September, 2019	59.9 ug/kg	September, 2019
• Total DDT	5.2 ug/kg	September, 2019	5.2 ug/kg	September, 2019
• Dieldrin	1.9 ug/kg	September, 2019	1.9 ug/kg	September, 2019
• Chlordane	3.24 µg/kg	September, 2019	3.24 ug/kg	September, 2019

Table VIII – Machado Lake Toxics TMDL (Wet Weather)

Toxics TMDL	Dry Weather Interim WLA	Deadline	Dry Weather Final Interim	Deadline
• Total PCBs	59.9 ug/kg	September, 2019	59.9 ug/kg	September, 2019
• Total DDT	5.2 ug/kg	September, 2019	5.2 ug/kg	September, 2019
• Dieldrin	1.9 ug/kg	September, 2019	1.9 ug/kg	September, 2019



• Chlordane	3.24 µg/kg	September, 2019	3.24 ug/kg	September, 2019
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Table IX – Machado Lake Trash TMDL

Task	Impacted Permittees	Compliance Date
Installation of Full Capture Systems to achieve 20% reduction of trash from Baseline WLA*.	California DOT (Caltrans) and Municipal Separate Storm Sewer System (MS4) Permittees including: Los Angeles County, Los Angeles Flood Control District, and the cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estate, and Torrance	March 6, 2012
Installation of Full Capture Systems to achieve 40% reduction of trash from Baseline WLA*.	Same as above.	March 6, 2013
Evaluate the effectiveness of Full Capture Systems, and reconsider the WLA.	Regional Board	March 6, 2013
Installation of Full Capture Systems to achieve 60% reduction of trash from Baseline WLA*.	California Department of Transportation (Caltrans) and Municipal Separate Storm Sewer System (MS4) Permittees including: Los Angeles County, Los Angeles Flood Control District, and the cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estate, and Torrance	March 6, 2014
Installation of Full Capture Systems to achieve 80% reduction of trash from Baseline WLA*.	Same as above.	March 6, 2015
Installation of Full Capture Systems to achieve 100% reduction of trash from Baseline WLA*.	Same as above.	March 6, 2016

*Compliance with percent reductions from the Baseline WLA will be assumed wherever full capture systems are installed in corresponding percentages of the conveyance discharging to the water body. Installation will be prioritized based on the greatest point source loadings.



Table X – Dry and Wet Weather TMDL WLAs for Los Angeles River (Reach 1)

Wet Weather WLAs				
Water Body	Copper	Lead	Zinc	Trash
Los Angeles River, Reach 1	17 ug/l	62 ug/l	159 ug/l	See Table X Below
Water Body	Bacteria	-	-	-
Los Angeles River, Reach 1	235 MPN/100 ml	-	-	-
Water Body	Nutrients²	-	-	-
Los Angeles River Reach 1	7.2 mg/l	-	-	-
Dry Weather WLAs				
Water Body	Copper	Lead	Zinc	Trash
Los Angeles River Reach 1	23 ug/l (R 1) 19 ug/l (Compton Creek)	12 ug/l (R 1) 8.9 ug/l (Compton Creek)	-	Same As Wet Weather
Water Body	Bacteria (Interim)	Bacteria (Final)	-	-
Los Angeles River Reach 1	2 MPN/day	235 MPN/100 ml	-	-

Table XI – Los Angeles River Reach 1, Bacteria TMDL Compliance Schedule

Final Waste Load Allocation(dry weather)	Deadline
235 MPN/100 ml	March 23, 2024
Final Waste Load Allocation(wet weather)	Deadline
235 MPN/100 ml	March 23, 2037

Table XII – Los Angeles River (all reaches) Trash TMDL

Year	Implementation Year	Waste Load Allocation	Compliance Point
9-08	Year 1	60% of Baseline Waste Load Allocations for the Municipal Permittees and Caltrans	60% of the baseline load

²This TMDL does not apply because it is not valid. It is a “reconsideration” of the Los Angeles River Nitrogen and Related Effects TMDL to Incorporate Site-Specific Objectives for Ammonia that was adopted by the Los Angeles Regional Board on December 6, 2012. It has not been approved by the State Water Resources Control Board. Further, this proposed TMDL appears to apply only to waste water treatment facilities, not MS4s.



9-09	Year 2	50% of Baseline Waste Load Allocations for the Municipal Permittees and Caltrans	55% of the baseline load calculated as a 2-year annual average
9-10	Year 3	40% of Baseline Waste Load Allocations for the Municipal Permittees; and Caltrans	50% of the baseline load calculated as a rolling 3-year annual average
9-11	Year 4	30% of Baseline Waste Load Allocations for the Municipal Permittees; and Caltrans	40% of the baseline load calculated as a rolling 3-year annual average
9-12	Year 5	20% of Baseline Waste Load Allocations for the Municipal Permittees; and Caltrans	30% of the baseline load calculated as a rolling 3-year annual average
9-13	Year 6	10% of Baseline Waste Load Allocations for the Municipal Permittees; and Caltrans	20% of the baseline load calculated as a rolling 3-year annual average
9-14	Year 7	0% of Baseline Waste Load Allocations for the Municipal Permittees; and Caltrans	10% of the baseline load calculated as a rolling 3-year annual average
9-15	Year 8	0% of Baseline Waste Load Allocations for the Municipal Permittees; and Caltrans	3.3% of the baseline load calculated as a rolling 3-year annual average
9-16	Year 9	0% of Baseline Waste Load Allocations for the Municipal Permittees; and Caltrans	0% of the baseline load calculated as a rolling 3-year annual average

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.



Table XIII - Municipal Action Levels

Metals	Unit	Total	Dissolved
Cadmium	Ug/l	2	0.55
Copper	Ug/l	32	12.8
Lead	Ug/l	30.6	6
Zinc	Ug/l	232	104
Nickel	Ug/l	9.6	NA
Chromium	Ug/l	10.5	1.5

Bacteria	Unit	Geometric Mean	Single Sample
E-Coli	MPN/100mL	126	235
Fecal Coliform	MPN/100mL	200	400

Nutrients	Unit	1 Hour Average	30 Day Average
Total Phosphorus	Mg/l	126	235
Total Nitrogen	Mg/l	200	400

1.12 Action Level Monitoring

The tables below lists non-stormwater action level analytes for Dominguez Channel, Los Angeles River (Reach 1) and Machado Lake. 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 XIV – Action Levels (Non-Stormwater) for Dominguez Channel

Analyte	Units	Average Monthly	Daily Maximum
Ph	Standard units	6.0-9.02 ³	
<i>E. coli</i> Bacteria	#/100 ml	126 ⁴	235 ⁵

³Within the range of 6.5 to 8.5

⁴*E.coli* density shall not exceed a geometric mean of 126/200 ml



Chloride	mg/L	0 ⁶	--
Sulfate	mg/L	0 ⁷	--
Total Dissolved Solids	mg/L	5.0 ⁸	--
Nitrate Nitrogen, Total (as N)	mg/L	1.0 ⁹	--
Turbidity	NTU	5.0 ¹⁰	
Aluminum, Total Recoverable	mg/L	1.0 ¹¹	--
Cyanide, Total Recoverable	µg/L	4.3	8.5
Copper, Total Recoverable	µg/L	0 ¹²	
Mercury, Total Recoverable	µg/L	0.051	0.10
Selenium, Total Recoverable	µg/L	4.1	8.2
<i>E. coli</i> Bacteria	#/100 ml	126	235

1.13 Additional Monitoring Required for I-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

⁵E.coli density in a single sample shall not exceed shall not exceed 235/100 ml

⁶In accordance with applicable water quality objectives contained in Chapter 3 of the Basin Plan

⁷Same as Chloride (see footnote 13)

⁸Same as Chloride (see footnote 13)

⁹Applies only to beneficial uses designated for MUN per tables 2-1 and 2-2 of the Basin Plan

¹⁰Same as N (see footnote 16)

¹¹Same as N (see footnote 16)

¹²Hardness dependent



constitute a violation. Any persistent exceedance 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 XV - WMP Monitoring for Non-TMDL Water Quality Standards

CONSTITUENTS	USEPA METHOD	Maximum Detection Limits
CONVENTIONAL POLLUTANTS		Mg/L
Oil and Grease	1664	5
Total Phenols	420.1	0.1
Cyanide		0.005
pH	150.1	0 – 14
Temperature		None
Dissolved Oxygen		Sensitivity to 5 mg/L
BACTERIA		
Total Coliform	9221B	<20mpn/100ml
Fecal Coliform	9221B	<20mpn/100ml
Enterococcus	9221B	<20mpn/100ml
GENERAL		Mg/L
Dissolved Phosphorus	300	0.05
Total Phosphorus	300	0.05
Turbidity	180.1	0.1NTU
Total Suspended Solids	160.2	2
Total Dissolved Solids	160.1	2
Volatile Suspended Solids	160.4	2
Total Organic Carbon	415.1	1
Total Petroleum Hydrocarbon	1664	5
Biochemical Oxygen Demand	405.1	2
Chemical Oxygen Demand	410.4	20-900
Total Ammonia-Nitrogen	350.2	0.1
Total Kjeldahl Nitrogen	351.2	0.1
Nitrate-Nitrite	4110	0.1
Alkalinity	310.1	2
Specific Conductance	120.1	1umho/cm
Total Hardness	130.2	2



MBAS	425.1	<0.5
Chloride	4110	2
Fluoride	4110	0.1
Sulfate	4110	2
Methyl tertiary butyl ether (MTBE)		1

1.14 **Non-stormwater Monitoring for IC/ID**

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, which 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**

The City shall comply with all reporting requirements specified in the MRP. The City cannot begin to report monitoring results until: (1) the I-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-April 2015 wet season. Results will be reported to the Regional Board 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. *Toxicity Monitoring/Testing Protocol*

Ceriodaphnia dubia are an EPA recommended freshwater invertebrate used in both acute and chronic toxicity testing. In acute toxicity testing, *Ceriodaphnia* are used at <24 hours old and survival rates are recorded. In chronic toxicity testing, *Ceriodaphnia* are used at <24 hours old and all neonates must have been released within 8 hours of each other. In chronic tests, survival and reproduction are recorded. *Ceriodaphnia dubia* are exposed in a static renewal system to different concentrations of effluent, or to receiving water, until 60% or more of surviving control females have three broods of offspring. Test results are based on survival and reproduction. EPA method 1002.0 use for toxicity testing. The *C. dubia* chronic tests consist of ten replicate 20 ml glass vials each containing one organism. Tests are initiated with less than 24-hour-old *C. dubia*, born within an 8-hour period. *C. dubia* are fed a mixture of *S. capricornutum* and YCT (a mixture of yeast, organic alfalfa and trout chow) daily. *C. dubia* are transferred into a new vial of fresh solution daily. Sierra Springs™ water amended to EPA moderately hard (SSEPAMH) water is used as the control water for the *C. dubia* test. Tests are conducted at $25 \pm 2^{\circ}$ C with a 16-hour light: 8-hour dark photoperiod. Mortality and reproduction (number of neonates) are assessed daily and at test termination (day 7).



ii. *USEPA sampling protocol*

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

- For storm water discharges, all samples shall be collected from the discharge resulting from 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.

1.17 **Implementation Schedule (Milestones)**

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

Table XVI – Implementation Schedule

Task	Deadline Date
• Submit WMP, MRP, and CIMP to Regional Board	No later than June 28, 2014



<ul style="list-style-type: none"> Using GIS mapping, provide land use overlay of City's storm drain system 	No later than June 28, 2014
<ul style="list-style-type: none"> Using GIS mapping, show City's storm drain system including catch basins and connections to receiving waters 	No later than June 28, 2014
<ul style="list-style-type: none"> Using GIS mapping, identify watershed and sub-watershed based on Los Angeles County's HUC 12 equivalent boundaries 	No later than June 28, 2014
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> During the dry season, conduct monthly non-stormwater visual observations and grab sampling if flow is detected. 	No later than May 1, 2015
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Submit new development/redevelopment track form. 	No later than one month following the Regional Board's approval of the CIMP

END SECTION ONE MRP-CIMP



Appendix A

Maps

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Appendix A-1

Outfall and Field Screening Location Map

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Appendix A-2

In-stream Monitoring Locations

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Appendix A-3

Watershed/Sub-watershed & City Boundary Map

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Appendix A-4

Storm Drain/Catch Basin Map

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Appendix A-5

City Land Use Map

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Appendix B

2010 303(d) List for Dominguez Channel, Machado Lake, and Los Angeles River (Reach 1)

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Appendix B

Table I – 303(d) List – Dominguez Channel

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



Table II – 303(d) List – Machado Lake

2010 303 (d) List			
Water Body	Parameter	TMDL Status Date	Source
Machado Lake	Algae	2009	Urban Runoff
	Ammonia	2019	Urban Runoff
	Chem A	2019	Non-Point Source
	Chlordane	2019	Non-Point Source
	DDT	2019	Non-Point Source
	Dieldrin	2019	Non-Point Source
	Eutrophic PCBs	2009 2019	Urban Runoff Non-Point Source
	Trash	2008	Urban Runoff

Table III – 303(d) List – Los Angeles River (Reach 1)

2010 303 (d) List			
Water Body	Parameter	TMDL Status Date	Source
Los Angeles River (Reach 1)	Coliform Bacteria	2009	Nonpoint/Point Source
	Trash	2005	Nonpoint/Surface Runoff
	Copper, Dissolved	2005	Nonpoint/Point Source
	Lead, Dissolved	2005	Nonpoint/Point Source
	Zinc, Dissolved	2005	Nonpoint/Point Source
	Nutrients (Algae)	2004	Nonpoint/Point Source



Appendix C

Total Maximum Daily Loads

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Appendix C-1

Dominguez Channel TMDLs

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Appendix C-2

Machado Lake TMDLs

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Appendix C-3

Los Angeles River (Reach 1)

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ORDINANCE NO. 14 - ____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CARSON, CALIFORNIA AMENDING SECTION 5809 OF THE CARSON MUNICIPAL CODE TO UPDATE STORMWATER REGULATIONS FOR LOW IMPACT DEVELOPMENT AND GREEN STREETS

WHEREAS, the City is authorized by Article XI, Section 5 and Section 7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity; and

WHEREAS, the federal Clean Water Act establishes Regional Water Quality Control Boards in order to prohibit the discharge of pollutants in stormwater runoff to waters of the United States; and

WHEREAS, the City is a Permittee under the California Regional Water Quality Control Board, Los Angeles Region Order No. R4-2012-0175, issued on November 8, 2012, which establishes Waste Discharge Requirements for Municipal Separate Storm Sewer Systems (“MS4”) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4; and

WHEREAS, Order No. R4-2012-0175 contains requirements for municipalities to establish a Low Impact Development (“LID”) Ordinance and a Green Streets Policy in order to participate in a Watershed Management Program; and

WHEREAS, the Regional Board has adopted Total Maximum Daily Loads (“TMDLs”) for pollutants, which are numerical limits that must be achieved effectively through LID implementation; and

WHEREAS, the City has the authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions, and limitations with respect to any activity that might degrade waters of the State; and

WHEREAS, the City is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental and economic considerations; and

WHEREAS, urbanization has led to increased impervious surface areas resulting in increased water runoff and less percolation to groundwater aquifers causing the transport of pollutants to downstream receiving waters; and

WHEREAS, the City intends to expand the applicability of the existing LID requirements by providing stormwater LID strategies for Development and Redevelopment projects, as defined herein.

NOW, THEREFORE, the City Council of the City of Carson, California, does hereby ordain as follows:

Section 1. Section 5809 of the Carson Municipal Code is hereby repealed and replaced with a new Section 5809 to read, in its entirety, as follows:

“5809 Stormwater Pollution Control Measures for New Development and Redevelopment Projects.

(a) Standard Urban Stormwater Mitigation. The Planning and Land Development Program is a compliance component under Municipal NPDES Permit. Subject new Development and Redevelopment projects are required to comply with Standard Urban Stormwater Mitigation Program (“SUSMP”) conditions assigned by the City that shall consist of: (1) low impact development (“LID”) structural and non-structural best management practices (“BMPs”); (2) source control BMPs; and (3) structural and non-structural BMPs for specific types of uses. LID controls effectively reduce the amount of impervious area of a completed project site and promote the use of infiltration and other controls that reduce runoff. Source control BMPs prevent runoff contact with pollutant materials that would otherwise be discharged to the MS4. Specific controls are also required to address pollutant discharges from certain uses including but not limited to housing developments, retail gasoline outlets, automotive-related facilities, restaurants, and industrial and commercial facilities where pollutant materials are disposed, stored, or handled.

(b) Stormwater Management/Watershed Management Program. The City’s stormwater management program (“SWMP”) or watershed management program (“WMP”), whichever is in effect at the time of review, is hereby incorporated by reference and shall contain specific conditions and procedures for meeting Planning and Land Development Program and SUSMP requirements. The program plans shall contain guidance documents to facilitate compliance, including, but not limited to, an updated SUSMP guidance manual, an LID impact design manual, and USEPA’s Green Street guidance manual.

(c) Applicability. The following Development and Redevelopment projects, termed “Planning Priority Projects,” shall comply with the requirements of this Section and the Municipal NPDES Permit:

- (1) All development projects equal to one (1) acre or greater of disturbed area and adding more than ten thousand (10,000) square feet of impervious surface area;
- (2) Industrial parks ten thousand (10,000) square feet or more of surface area;
- (3) Commercial malls ten thousand (10,000) square feet or more surface area;
- (4) Retail gasoline outlets five thousand (5,000) square feet or more of surface area;
- (5) Restaurants (Standard Industrial Classification (“SIC”) 5812) five thousand (5,000) square feet or more of surface area;
- (6) Parking lots five thousand (5,000) square feet or more of impervious surface area, or with twenty-five (25) or more parking spaces;
- (7) Street and road construction of ten thousand (10,000) square feet or more of impervious surface area;

(8) Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) five thousand (5,000) square feet or more of surface area;

(9) Redevelopment projects in subject categories that meet Redevelopment thresholds identified in sub-section (d) below;

(10) Projects located in or directly adjacent to, or discharging directly to a Significant Ecological Area (SEA), where the development will:

(i) Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

(ii) Create two thousand five hundred (2,500) square feet or more of impervious surface area;

(10) Single-family hillside homes;

(11) Redevelopment Projects;

(i) Land-disturbing activity that results in the creation or addition or replacement of five thousand (5,000) square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

(ii) Where Redevelopment results in an alteration to more than fifty (50) percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

(iii) Where Redevelopment results in an alteration of less than fifty (50) percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

(iv) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

(v) Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace ten thousand (10,000) square feet of impervious surface area.

(12) Any other project as deemed appropriate by the Director.

(d) Stormwater Pollution Control Requirements. The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

(i) Conserve natural areas;

(ii) Protect slopes and channels;

(iii) Provide storm drain system stenciling and signage;

(iv) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

(v) Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of ten thousand (10,000) square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a SUSMP plan subject to City review and approval to comply with the following:

(i) Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

(A) The eighty-fifth (85th) percentile twenty-four (24) hour runoff event as determined from the Los Angeles County eighty-fifth (85th) percentile precipitation isohyetal map; or

(B) The volume of runoff produced from a three-quarter (0.75) inch, twenty-four (24) hour rain event, whichever is greater.

(ii) Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in the SUSMP guidance manual and the LID impact design manual.

(iii) When, as determined by the City, one hundred (100) percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted SUSMP plan. The technical infeasibility may result from conditions that may include, but are not limited to:

(A) The infiltration rate of saturated in-situ soils is less than three-tenths (0.3) inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

(B) Locations where seasonal high groundwater is within five (5) to ten (10) feet of surface grade;

(C) Locations within one hundred (100) feet of a groundwater well used for drinking water;

(D) Brownfield development sites or other locations where pollutant mobilization is a documented concern;

(E) Locations with potential geotechnical hazards;

(F) Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

(iv) If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate one and one-half (1.5) times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

(A) Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City to determine eligibility. Alternative compliance options are further specified in the SUSMP guidance manual and the LID impact design manual.

(v) The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

(A) Two-tenths (0.2) inches per hour; or

(B) The one year, one hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

(vi) A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City to satisfy these standards and requirements for the entire Site during the First phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such

later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(e) Issuance of Discretionary Permits. No discretionary permit may be issued for any new Development or Redevelopment project identified in subsection (c) of this Section until the authorized enforcement officer confirms that either:

(1) The project plans comply with the applicable SUSMP requirements; or

(2) Compliance with the applicable SUSMP requirements is impractical for one (1) or more of the reasons set forth in subsection (g) of this Section regarding issuance of waivers.

(f) Issuance of Certificates of Occupancy. As a condition for issuing a Certificate of Occupancy for new Development or Redevelopment project identified in subsection (c) of this Section, the authorized enforcement officer shall require facility operators and/or owners to build all the stormwater pollution control Best Management Practices and structural or treatment control BMPs that are shown on the approved project plans and to submit a signed certification statement stating that the site and all structural or treatment control BMPs will be maintained in compliance with the SUSMP and other applicable regulatory requirements.

(g) Granting of Waiver. The authorized enforcement officer shall have the authority to grant a waiver to a development or redevelopment project from the requirements of the SUSMP, if impracticality for a specific property can be established by the project applicant. A waiver of impracticality may be granted only when all structural or treatment control BMPs have been considered and rejected as infeasible. Recognized situations of impracticality are limited to the following, unless approved by the Regional Board:

(1) Extreme limitations of space for treatment on a redevelopment project;

(2) Unfavorable or unstable soil conditions at a site to attempt infiltration; and

(3) Risk of ground water contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than ten (10) feet from the soil surface.

(h) Transfer of Properties Subject to Requirement for Maintenance of Structural and Treatment Control BMPs.

(1) The transfer or lease of a property subject to a requirement for maintenance of structural and treatment control BMPs shall include conditions requiring the transferee and its successors and assigns to either (i) assume responsibility for maintenance of any existing structural or treatment control BMP, or (ii) to replace existing structural or treatment control BMPs with

new control measures or BMPs meeting the then current standards of the City and the SUSMP. Such requirement shall be included in any sale or lease agreement or deed for such property. The condition of transfer shall include a provision that the successor property owner or lessee conduct maintenance inspections of all structural or treatment control BMPs at least once a year and retain proof of inspection.

(2) For residential properties where the structural or treatment control BMPs are located within a common area which will be maintained by a homeowner's association, language regarding the responsibility for maintenance shall be included in the project's conditions, covenants and restrictions (CC&Rs). Printed educational material will be required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what stormwater management facilities are present, signs that maintenance is needed, and how the necessary maintenance can be performed. The transfer of this information shall also be required with any subsequent sale of the property.

(3) If structural or treatment control BMPs are located within an area proposed for dedication to a public agency, they will be the responsibility of the developer until the dedication is accepted.

(i) CEQA. Provisions of this Section shall be complementary to, and shall not replace, any applicable requirements for stormwater mitigation required under the California Environmental Quality Act.”

Section 2. The City Council hereby finds that it can be seen with certainty that there is no possibility the adoption and implementation of this Ordinance may have a significant effect on the environment. The Ordinance is therefore exempt from the environmental review requirements of the California Environmental Quality Act pursuant to Section 15061(b) (3) of Title 14 of the California Code of Regulations.

Section 3. Severability. If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this section, or its application to any person or circumstance, is for any reason held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the remaining sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases of this section, or its application to any other person or circumstance. The City Council declares that it would have adopted each section, subsection, subdivision, paragraph, sentence, clause or phrase hereof, irrespective of the fact that any one or more other sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases hereof be declared invalid or unenforceable.

Section 4. The City Clerk shall cause this ordinance to be published at least once in a newspaper of general circulation published and circulated in the City within fifteen (15) days after its passage, in accordance with Section 36933 of the Government Code, and shall certify to the adoption of this ordinance.

Section 5. This Ordinance shall be in full force and effect thirty (30) days after its second reading and adoption.

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PASSED, APPROVED and ADOPTED at a regular meeting of the City Council on this ____ day of _____, 2014.

Mayor Jim Dear

ATTEST:

City Clerk

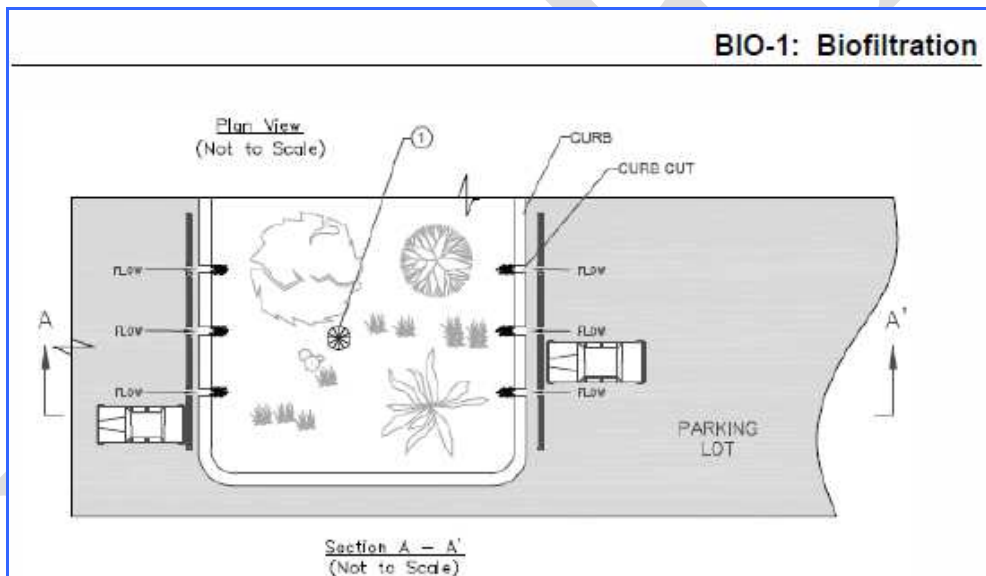
APPROVED AS TO FORM:

City Attorney

Appendix A

Standard Urban Storm Water Mitigation (SUSMP) Requirements

City of Carson



June 28, 2014



I. Standard Urban Stormwater Mitigation Program (SUSMP)

1.0 Summary

The Standard Urban Stormwater Mitigation Program (SUSMP) Plan effectively implements the Planning Land Use Development Program. In the 2001 Los Angeles MS4 permit subject SUSMP projects included certain new developments and redevelopments. These categories have changed slightly under the current MS4 permit. The SUSMP is also plan that informs the permittee how a subject development intends to comply with LID, source control, use-specific, and activity-specific controls, in-keeping with what the City prescribes based on its project evaluation.

The previous SUSMP Plan Guidance Manual, which was developed by the County of Los Angeles Watershed Management Division in 2000, has been updated to reflect PLDP requirements to the following extent:

- i. revisions to subject new development and redevelopment categories in keeping with the MS4 permit
- ii. expanded infiltration controls that must given preference over mechanical treatment controls unless infeasible
- iii. specifying infiltration sizing criteria based on the 85th percentile (95th percentile if hydromodification is an issue) design storm
- iv. a provision for treating runoff from public and private projects that are 10,000 square feet or more in area

The SUSMP Guidance Manual is heavily based on the *Low Impact Development Standards Manual* developed by the County of Los Angeles Department of Public Works (February of 2014), which is included herein as a reference document **Appendix A-1**. The manual in effect replaces the SUSMP guidance manual the County developed over a decade ago.



A SUSMP plan must be submitted as a condition of project approval to assure that the developer/applicant conforms to the City's PLDP/SUSMP requirements (see **Appendix A-2, Developer SUSMP Guidelines**). The City prescribes the type of controls required for the project, but allows the developer some discretion in determining the exact type. For example, in situations where high performance vegetative controls (bioswales and biofiltration) are not feasible, the City will allow sub-surface retention controls. The applicant is also responsible for entering into a maintenance agreement to assure the proper functioning of the controls once installed. The City will not issue a Certificate of Occupancy (C of O) until Building and Safety has verified the installation of the controls through an inspection.

2.0 **Subject New Development Projects**

New development is defined as land disturbing activities and structural development, including construction or installation of a building or structure, creation of impervious surfaces and land. It includes the following subject project categories:

- i. All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area
- ii. Industrial parks 10,000 square feet or more of surface area
- iii. Commercial malls 10,000 square feet or more surface area
- iv. Retail gasoline outlets 5,000 square feet or more of surface area
- v. Restaurants (SIC 5812) 5,000 square feet or more of surface area
- vi. Parking lots 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces



- vii. Street and road construction of 10,000 square feet or more of impervious surface area shall follow USEPA guidance
- viii. Automotive service facilities (SIC 5013, 5014, 5511, 5541, 532-7534 and 7536-7539) 5,000 square feet or more of surface area

Note that the 10 or more housing development category (single, multi-family homes, condominiums and apartments) has been eliminated. Also eliminated are one acre (soil disturbing) industrial and commercial categories. They have been replaced by industrial parks and commercial malls 10,000 square feet in area (non-soil disturbing).

3.0 **Redevelopment Projects**

Redevelopment continues to mean a land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

Redevelopment projects include:

- i. Any of the foregoing new development categories where an increase of more than 50% of impervious surface area is planned, in which case applicable SUSMP requirements shall apply to the entire project, not just to the new impervious area.
- ii. Any of the foregoing new development categories where an increase of less than 50% of impervious surface area is planned, in



which case applicable SUSMP requirements shall apply only to the newly created impervious area.

- iii. Single family hillside homes, which shall only be subject to source controls, unless the City's building official determines the need for additional measures.
- iv. Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA)¹ and is planned to create 2,500 square feet or more of impervious surface area.

4.0 **Applicability of LID, Source, Use-Specific and Activity Specific Post Construction Controls (BMPs)**

Each of the aforementioned projects may subject to multiple post-construction controls including LID, source and use-specific controls. Activity-specific controls are limited to source controls and technology controls, depending on the activity.

5.0 **Low Impact Development Controls**

The City's policy is to prescribe LID controls for any of the subject new development and redevelopment projects to the extent feasible. Typical LID controls include but are not limited:

- Bio-retention provides rainfall storage, infiltration, and evapotranspiration and operate to remove pollutants in stormwater runoff through plants and other vegetation appropriate to climate and soil conditions. Such controls are preferred stand alone controls for small developments and parking lots. In addition to being functional they are also aesthetically appealing. Bio-retention, if constructed properly can provide excellent pollutant removal for sediment, nutrients, trash (through trapping), metals, bacteria, oil and grease, and organics.

¹Note: The MS4 permit uses the term "Sensitive Ecological Area" (SEA) which is the term used by the County of Los Angeles County. The previous permit used the term Environmentally Sensitive Areas (ESAs) which the City used and will continue to use. The term is effectively the same because as SEA in that it evaluates runoff impact on sensitive biological species or habitats.



- Vegetated swales are open, shallow trenches filled with low-lying vegetation covering side slopes and bottoms that collect and slowly release runoff flow to discharge points. Because vegetated swales do not have sufficient detention times their pollutant removal capability for sediment, metals, oil/grease, and organics are rated “medium,” while for bacteria, nutrients, and trash are low. However, vegetated swales can be modified to allow for longer detention that would increase their performance in removing typical pollutants associated with new development and redevelopment projects.
- Vegetated buffers treat sheet flow stormwater from impervious areas or “intensive” landscaped surfaces such as golf courses and parks. Buffers slow runoff velocities to filter-out sediment and other pollutants while providing some infiltration to underlying soils wherein some remediation can occur. Typically buffers are used as pre-treatment controls in tandem with other controls with better performance capabilities. Because space is required for vegetated buffers and are only moderate in removing pollutants, they are not likely to be appropriate for most new development or redevelopment projects.
- Dry wells (includes french drains and shallow injection wells) use gravity to infiltrate stormwater runoff into the sub-surface. Pollutant removal performance for these controls relative to the aforementioned constituents is high. This control category is used where space does not allow for bio-retention.
- Infiltration chambers operate like dry wells but are fabricated out of plastic, concrete and other materials. This control category is used where space does not allow for bio-retention.
- Infiltration trenches are long, elongated controls that are placed in ditches over porous soils, backfilled with rocks or stones, and lined with filter fabric. Stormwater runoff enters this media where it is detained and eventually infiltrates into the soil where the pollutants are remediated. Pollutant removal performance is also excellent.
- Infiltration basins are designed to infiltrate surface water through permeable soils. Their pollutant removal capability is the same for the foregoing infiltration controls. Infiltration basins are not



likely to be prescribed by the City because of their space requirements and costs. However, they could be considered as an off-site control for infiltrating runoff from other parts City.

- Planter boxes are an infiltration control variant consisting of two types: (1) contained planters for planting trees, shrubs, and ground cover to be place over imperious surfaces (but are deep enough to remediate all pollutants); and (2) infiltration planters are structural landscaped reservoirs to collect, filter, and infiltration stormwater runoff to allow pollutants to settle and filter-out as water percolates through the planter control and enters the sub-surface for remediation. Planter boxes are effective for infiltrating roof-top runoff from a new or replaced building where no other runoff from impervious surfaces exist.
- Porous pavement consists of a variety of materials including special asphalt, concrete (highly pervious), and a mix of various materials such as gravel, paving stones, and brick. Porous pavement/surfaces are effective for patios, driveways, parking lots, and some portions of streets. Prescription of this type of control should limited to patios and sidewalks and under limited certain circumstances to other applications. Because porous materials are not durable as conventional materials they tend to unravel under traffic and should not, be placed in traffic lanes. Further, porous materials require a high level of maintenance because the pores tend to clog easily with road dust, oil and grease, and particulate emissions from vehicles. Nevertheless, pollutant removal performance of the LID control is effective against all of the standard pollutants except sediment, bacterial, and organics.
- Unit pavers fall under the same category as above.
- Cisterns and rain barrels are appropriate for rooftops. They capture rainwater from the rain gutter which is then routed to a barrel or above/below cistern. The collected runoff can be reused for irrigation purposes and reduces the amount of flow to the MS4. Pollutant removal capability for roof-top sourced pollutants is rated high for these types of controls. However, in order for them to perform properly the rainwater contained in them must be released.



A more comprehensive listing of LID controls is contained in the County's *Low Impact Development Standards Manual*.

6.0 **LID and Street Runoff**

The MS4 permit requires any new street 10,000 square feet or more in area to infiltrate runoff. This requirement applies to private streets as part of new development or redevelopment projects and public streets. The City expects this requirement to more often affect subject private developments rather than City projects. The City, which is built-out, is not expected to construct new public streets. Maintenance projects that do not result in a disturbance of original line and grade (e.g., repaving, slurry seal, etc.) are not subject.

USEPA's Municipal Handbook for Green Streets (see **Appendix A-3**) is the basic reference source for the selection and design of controls to infiltrate street runoff. The controls focus on street-related pollutants including: sediment and other particulates; metals (copper, zinc, lead, and arsenic); and organics associated with petroleum products (oil, grease, vehicle fluids, and polyaromatic hydrocarbons). The Green Street Handbook discusses a variety of street controls including: bioretention areas; street-side swales that run parallel to streets; pervious pavers; sidewalk trees and tree boxes; vegetated curb extensions. Other controls are now being developed by the County of Los Angeles Department of Public Works that will be incorporated in the SUSMP once they become available.

7.0 **Numeric Design Standards for Sizing Controls**

The MS4 permit changes the basic sizing metric for infiltration and other structural controls has changed from being volumetric and flow-



based to being volumetric based only. Under the previous permit the following volumetric design options were available for sizing treatment controls:

- i. The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998); or
- ii. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/ Commercial, (1993); or
- iii. The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system; or
- iv. The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for “treatment” (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

Developers preferred design option “iii” which was the basic standard for over a decade. Under the current MS4 permit, the preference has shifted from $\frac{3}{4}$ ” storm event to 85th percentile design storm. The 85th percentile design storm requires infiltration from a storm event that produces 1” to 1 $\frac{1}{2}$ ” of runoff. Determining whether the 1” or 1 $\frac{1}{2}$ ” volume is to be infiltrated (or treated if infiltration is not feasible) will be what isohyetal zone the project lies within (see below section 8.0).

8.0 **Calculating the Stormwater Quality Design Volume**

The current permit simplifies calculating the design storm by using the formula SWQDv. By complying with the SWQDv it is expected that



pollutant loads, which are typically higher during the beginning of storm events, will be reduced in the discharge to or prevented from reaching the receiving waters. The County's recent LID manual provides a detailed method for calculating the design storm, from which the SWQDv is calculated, which is defined as the greater of the ¾", 24-hour storm event or the 85th percentile, 24-hour rain event as determined from the Los Angeles County 85th percentile precipitation isoheytal map (see 6-1 to 6-4 of the LID Standards Manual).

9.0 Source Controls

Source controls operate to prevent stormwater contact with pollutant materials and avoid illicit discharges by prohibiting them and their connections to the MS4. The table below summarizes post-construction source BMPs for project categories.

Table I – Source Controls for New Development and Redevelopment Projects

Project Category	Post-Construction BMP
<ul style="list-style-type: none"> • Conserve Natural Areas (to the extent applicable) 	<ul style="list-style-type: none"> • Concentrate or cluster Development on portions of a site while leaving the remaining land in a natural undisturbed condition. • Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection. • Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants. • Promote natural vegetation by using parking lot islands and other landscaped areas.



	<ul style="list-style-type: none"> • Preserve riparian areas and wetlands.
<ul style="list-style-type: none"> • All project categories 	<ul style="list-style-type: none"> • Deployment of trash receptacles at high generation trash locations
<ul style="list-style-type: none"> • All projects that include on-site curb outlet or drop inlet catch basins 	<ul style="list-style-type: none"> • No dumping messaging on on-site curb-outlet and drop-inlet catch basins
<ul style="list-style-type: none"> • Storage of hazardous and other pollutant materials 	<ul style="list-style-type: none"> • Store indoors or outdoors raised off the ground and covered to prevent stormwater contact
<ul style="list-style-type: none"> • Load docks or areas associated with industrial or commercial developments 	<ul style="list-style-type: none"> • Cover loading areas to prevent stormwater contact with pollutant materials transferred from vehicles or other sources to a warehouse or other enclosed structure; or design warehouse or storage building to allow direct transfer of materials from vehicles without exposure to stormwater contact
<ul style="list-style-type: none"> • Storage of hazardous and other pollutant materials 	<ul style="list-style-type: none"> • Store indoors or outdoors raised off the ground and covered to prevent stormwater contact
<ul style="list-style-type: none"> • All industrial and commercial facilities 	<ul style="list-style-type: none"> • Prohibit installation or catch basins or other on-site conveyances to the MS4 (e.g., trench drains) in areas where pollutant materials handled, stored, disposed of or transferred from a vehicle to warehouse or other building where such materials are stored
<ul style="list-style-type: none"> • All industrial and commercial facilities 	<ul style="list-style-type: none"> • Prohibit the installation of illicit connections (connections between an actual or potential source of contaminated discharges and the MS4)



<ul style="list-style-type: none"> All industrial and commercial facilities (equipped with repair and/or maintenance bays) 	<ul style="list-style-type: none"> Repair/maintenance bays must be indoors or designed in such a way that do not allow storm water run-on or contact with storm water runoff. Design a repair/maintenance bay drainage system to capture all wash-water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit. Install clarifier connected to the sewer system and permitted by appropriate local agency
<ul style="list-style-type: none"> All industrial and commercial facilities (equipped with vehicle equipment wash facilities) 	<ul style="list-style-type: none"> Prohibit outdoor washing of equipment or impervious surfaces that have the potential of being conveyed to the MS4 Install clarifier connected to the sewer system and permitted by appropriate local agency

10.0 Use-Specific Controls

This category of controls is carried over from the previous permit to reduce pollutant discharges from specific projects and activities. Projects requiring use-specific BMP controls are shown in the table below and are more particularly described in the County's LID manual.

Table II – Use-Specific BMP Controls for New and Redevelopment Projects

Project/Activity	Post-Construction BMP
<ul style="list-style-type: none"> Retail Gasoline Stations (RGOs) and industrial/commercial facilities equipped with fueling facilities 	<ul style="list-style-type: none"> Canopy over fueling island/pad Trench drain (connected to MS4) to intercept runoff before reaching the fueling pad, or Grade around fueling area to prevent runoff contact Indoor storage of pollutant materials or if not feasible, outdoor storage under cover and off the ground Installation of properly sized clarifier (oil



	<ul style="list-style-type: none"> and water separator) connected to the municipal sewerage system and permitted by appropriate regulating agency (e.g., Sanitation District of Los Angeles County) No washing of indoor or outdoor area unless runoff is directed to a clarifier drain (cleaning of surfaces must employ damp or dry cleaning techniques) Outdoor surfaces must be free of staining, visible oil or other fluids associated with vehicle maintenance
<ul style="list-style-type: none"> Automotive Service Facilities (referenced above by SIC code) 	<ul style="list-style-type: none"> Indoor storage of pollutant materials or if not feasible, outdoor storage under cover and off the ground Installation of properly sized clarifier (oil and water separator) connected to the municipal sewerage system and permitted by appropriate regulating agency (e.g., Sanitation District of Los Angeles County) No washing of indoor or outdoor area unless runoff is directed to a clarifier drain (cleaning of surfaces must employ damp or dry cleaning techniques) Outdoor surfaces must be free of staining, visible oil or other fluids associated with vehicle maintenance
<ul style="list-style-type: none"> Restaurants (stand alone) 	<ul style="list-style-type: none"> Grease trap or interceptor designed in accordance with the City's Sewer System Management Program)
<ul style="list-style-type: none"> Nurseries or Garden Centers 	<ul style="list-style-type: none"> Proper² indoor and outdoor storage of fertilizers, nutrients, herbicides, insecticides, etc.

11.0 Activity-Specific Post-Construction BMPs

Activity-specific projects are projects that require the implementation of a site-specific plan to mitigate post-development storm water for new development not requiring a Standard Urban Stormwater Mitigation Plan (SUSMP) but which may potentially have adverse impacts on post-development storm water quality, where the following project characteristic exist:

²Note: Proper here means storage in a manner that prevents storm water and non-storm water contact with these and pollutants that can enter the MS4 through sheet flow or through on-site catch basin.



- a. Vehicle or equipment fueling areas
- b. vehicle or equipment maintenance areas, including washing and repair
- c. commercial or industrial waste handling or storage
- d. outdoor handling or storage of hazardous materials
- e. outdoor manufacturing
- f. outdoor food handling or processing
- g. outdoor animal case, confinement, or slaughter, or
- h. outdoor horticulture activities

12.0 **Project Review and Condition Assignment**

The City's Community Development Department is primarily responsible for reviewing development projects for SUSMP applicability, review, condition assignment, and compliance. Development projects are introduced to the Planning Division and then forwarded the Building and Safety Division for further review and verification for SUSMP applicability. If subject, the project is forwarded to the City's environmental consultant for condition assignment using a SUSMP evaluation form (see **Appendix A-4**). The consultant then contacts the applicant and specifies in writing the conditions, which are based on project type and location that must be met. No grading permit will be issued until the applicant has fully complied with the assigned conditions. Further, the City's Engineer shall be responsible for verifying proper compliance with sizing calculations to meet design stormwater requirements and once approved, the Engineer shall notify the environmental consultant that the controls have been properly designed. Once the SUSMP plan submittal is approved the applicant may begin construction. Prior to completion, the Building and Safety Division shall inspect the project to assure that requisite post-construction controls have been properly installed. Once the inspection is completed to the satisfaction of the Building inspector the City's environmental consultant shall be notified at which time the applicant will be required to enter into a



maintenance agreement with the City (see **Appendix A-5**). At this point, the consultant shall inform the Building and Safety Division that the project is in conformance, which will then issue the certification of occupancy – provided that all other City conditions are met.

13.0 **SUSMP Plan**

The SUSMP plan is required for all subject new development and redevelopment projects and must include the following:

- i. A site plan with standardized information requested by the city including: (1) a colorized layout of the project area showing the location of all controls (LID, source, and use specific); (3) location of any catch basins with no dumping messaging; (4) direction flow from all impervious and pervious surfaces to the MS4; (5) landscape; (6) north arrow.
- ii. A narrative section providing a project description of relevant information, including: project location (address, tract, and/or GPS coordinates); name, address, telephone number, and email address of application and project engineering; identification of whether the project is a new development or redevelopment project; project footprint, total pre-construction existing pervious and impervious area; previous land use; total post-construction impervious and pervious area; sub-watershed location; narrative explanation of the fate of runoff from the time it makes contact with surface areas (pervious and impervious); description of the LID control(s) and why it was selected; how it was sized (based on the 85th percentile design storm and rainfall data from ISO map (supported by calculation formulas); and SUSMP plan's



preparer and civil engineering certification with the requisite language:

“As the architect/engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project’s construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity.”

- iii. A grading plan to be submitted after the LID controls have been proposed and approved.
- iv. A description of any source controls and the rationale for their selection
- v. A description of use-specific controls and specification sheets (e.g., canopies for fueling facilities, trench drains to intercept runoff before reaching the fueling pad or grading around the fueling area to demonstrate runoff contact avoidance)
- vi. A maintenance agreement issued by the City specifying appropriate maintenance requirements for the types of controls prescribed

END APPENDIX A - SUSMP



Appendix A-1

Los Angeles County Low Impact Development

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Appendix A-2

Developer SUSMP Guidelines

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Appendix A-3

USEPA's Municipal Handbook for Green Streets

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Appendix A-4

SUSMP Evaluation and Tracking Form

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Appendix A-5

Maintenance Agreement

DRAFT



Planning and Land Development Program



Draft



701 East Carson Street, CA 90745



Section Two: Planning and Land Development Program

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PLDP 06-28-14

TC - II

Section Two Planning and Land Development

2.0 Summary

Planning and Land Development Program (PLDP) is intended to replace the Development Planning Program carried over from the previous Los Angeles County MS4 permit. According to the current MS4 permit permittees are required to implement a PLDP pursuant to Part VI.D.7.b for all new development and redevelopment projects. The purpose of the PLDP is similar to the DPP which it is intended to replace, is as follows:

- *Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, and safeguarding of environmentally sensitive areas*
- *Minimize the adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of water bodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21000 et seq.).*
- *Minimize the percentage of impervious surfaces on land developments by minimizing soil compaction during construction, designing projects to minimize the impervious area footprint, and employing Low Impact Development (LID) design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use.*
- *Maintain existing riparian buffers and enhance riparian buffers when possible.*
- *Minimize pollutant loadings from impervious surfaces such as roof tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), LID Strategies, and Treatment Control BMPs.*
- *Properly select, design and maintain LID and Hydromodification Control BMPs to address pollutants that are likely to be generated, reduce changes to pre-development hydrology, assure long-term function, and avoid the breeding of vectors.*



- *Prioritize the selection of BMPs to remove storm water pollutants, reduce storm water runoff volume, and beneficially use storm water to support an integrated approach to protecting water quality and managing water resources in the following order of preference:*
 - *On-site infiltration, bioretention and/or rainfall harvest and use.*
 - *On-site biofiltration, off-site ground water replenishment, and/or off-site retrofit.*

2.1 **New Development Redevelopment Projects Subject to PLDP**

The PLDP revises project categories subject to LID, source controls, and other requirements carried over from Development Planning Program (DPP) requirements associated with the previous MS4 permit. It also includes LID controls for new public and private streets 10,000 or more square feet in area.

The current MS4 permit defines new development as land disturbing activities and structural development, including construction or installation of a building or structure, creation of impervious surfaces and land. It includes the following project categories:

- i. All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area
- ii. Industrial parks 10,000 square feet or more of surface area
- iii. Commercial malls 10,000 square feet or more surface area
- iv. Retail gasoline outlets 5,000 square feet or more of surface area
- v. Restaurants (SIC 5812) 5,000 square feet or more of surface area
- vi. Parking lots 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces



- vii. Street and road construction of 10,000 square feet or more of impervious surface area shall follow USEPA guidance
- viii. Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area
- ix. Projects located in or directly adjacent to, or discharging directly to a Significant Ecological Area (SEA), where the development will:
 - a. discharge storm water runoff that is likely to impact a sensitive
 - b. biological species or habitat; and create 2,500 square feet or more of impervious surface area
- x. Redevelopment projects in subject categories that meet redevelopment thresholds identified in Part VI.D.6.b.ii (Redevelopment Projects) 2.2 below.
- xi. Single-family hillside homes requiring only¹:
 - a. Conservation of natural areas
 - b. Protection of slopes and channels
 - c. Application of storm drain system stenciling and signage
 - d. Diversion of roof runoff to vegetated areas before discharge unless the diversion would result in slope instability
 - e. Direction surface flow to vegetated areas before discharge unless the diversion would result in slope instability

Note that the 10 or more housing development category (single, multi-family homes, condominiums and apartments) has been eliminated. Also eliminated are one acre (soil disturbing) industrial and commercial categories. They have been replaced by industrial parks and commercial malls 10,000 square feet in area (non-soil disturbing). However, if a development project that is expected to disturb one acre of soil and add 10,000 square feet of impervious surface happens to be a housing development it would be a subject project.

¹No LID controls may be required because of the potential of slope failure.



2.2 Redevelopment Projects

Redevelopment continues to mean a land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

Redevelopment projects include:

- i. Any of the foregoing new development categories where an increase of more than 50% of impervious surface area is planned, in which case applicable SUSMP requirements shall apply to the entire project, not just to the new impervious area.
- ii. Any of the foregoing new development categories where an increase of less than 50% of impervious surface area is planned, in which case applicable SUSMP requirements shall apply only to the newly created impervious area.
- iii. Single family hillside homes, which shall only be subject to source controls, unless the City's building official determines the need for additional measures.
- iv. Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA)² and is planned to create 2,500 square feet or more of impervious surface area.

²Note: The MS4 permit uses the term "Sensitive Ecological Area" (SEA) which is the term used by the County of Los Angeles County. The previous permit used the term Environmentally Sensitive Areas



2.3 Activity-Specific Post-Construction BMPs

Activity-specific projects are projects that require the implementation of a site-specific plan to mitigate post-development storm water from a new development or redevelopment associated with a specific characteristic that has the potential to pollute stormwater or non-stormwater runoff. Single or multiple activities are not covered under a Standard Urban Stormwater Mitigation Plan (SUSMP) because it is only applicable to certain project categories. For example, a municipal corporate yard adding a fueling station ordinarily would not trigger a SUSMP because such facilities are not SUSMP subject unless one acre of soil is disturbed and adds 10,000 square feet of surface area. Thus, it is important to identify the pollution generating activity and prescribe appropriate post-construction controls. Site-specific activities that trigger post-construction BMPs include the following:

- a. Vehicle or equipment fueling areas
- b. vehicle or equipment maintenance areas, including washing and repair
- c. commercial or industrial waste handling or storage
- d. outdoor handling or storage of hazardous materials
- e. outdoor manufacturing
- f. outdoor food handling or processing
- g. outdoor animal case, confinement, or slaughter, or
- h. outdoor horticulture activities

Site characteristic “a” will require fueling-related BMPs while “b” will require covered and enclosed equipment maintenances from which runoff cannot be discharged to the MS4 (which may require a sewer-connected

(ESAs) which the City used and will continue to use. The term is effectively the same because as SEA in that it evaluates runoff impact on sensitive biological species or habitats.

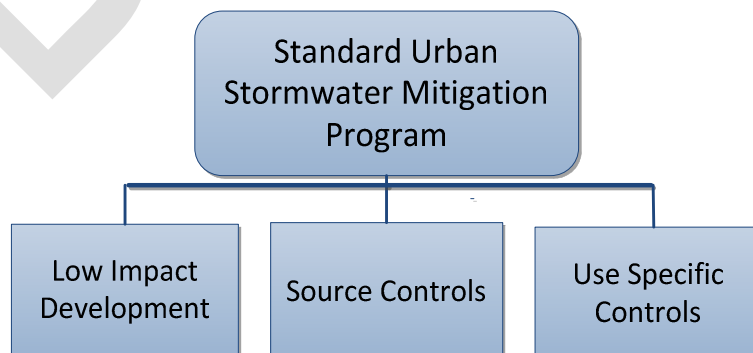


clarifier if infeasible). Activities c through h require structures to prevent stormwater contact pollutants used in connection with these activities and treatment controls, if necessary, such as clarifiers connected to the sewer system and grease traps and interceptors.

2.4 Implementation of PLDP through SUSMP

The City will implement the PLDP to achieve its foregoing purposes through the SUSMP. Although the current permit does not specifically state that the PLDP is to be implemented through the SUSMP (see **Appendix A**). Regional Board staff has interpreted the permit to mean that SUSMP provisions are in effect. The SUSMP offers several advantages. To begin with, many developers in Los Angeles County are accustomed to the SUSMP. The SUSMP has been the instrument for implementing Development Planning Program requirements required under the previous permit (from 2002 to present). The SUSMP not only implements post-construction runoff mitigation control requirements, source controls, and use-specific structural and non-structural BMPs, but also provides a predictable and standardized plan developers can use to report compliance to permittees. Further, it can easily be revised to implement PLDP requirements under the current MS4 permit.

Table I



2.5 Low Impact Development (LID)

LID is the center piece for the PLDP. As mentioned, LID is not new to the City. Starting in 2006, and at the behest of the Regional Board, the City began “preferring” infiltration controls over mechanical treatment controls to meet post-construction runoff pollution mitigation controls for subject new development and redevelopment projects through the Development Planning/SUSMP program.

Prior to Regional Board’s policy shift to infiltration controls, the City allowed developers to select from a menu of mechanical treatment and infiltration BMPs. Because treatment controls -- particularly the relatively inexpensive catch basin inserts -- were an option, developers routinely chose them over infiltration controls. However, as it was discovered, catch basin inserts proved to be poor performers in removing certain pollutants. Because inserts require a high level of maintenance (viz., changing filters sometimes as often as after one storm event), they often became sources of pollution rather than effective pollution mitigation measures.

Typically, the City has accepted a variety of infiltration controls specific to project types. Some included vegetation, which is the preferred to type, coupled with pre and post-treatment controls (typically catch basin inserts). The inserts that were used for pre-treatment were placed in vegetated areas that were prone to generating sediment that could compromise the performance of the vegetation. On occasion, the City allowed the use of inserts for post-treatment of runoff from vegetated areas which allowed for the release of overflow and operated to trap sediment. Also accepted were various french drain variants and sub-surface retention systems that are used when vegetative controls are impractical because of space limitations.



Since 2006, the use of LID controls has increased. Many of them are described in the Low Impact Development (LID) manual developed by Los Angeles County (See **SUSMP Appendix A-1**). The City intends to use this LID manual as one of several resources to facilitate developer compliance with LID controls prescribed by the City. The City also reserves the right under its land use discretion to prescribe LID controls that it feels are necessary and appropriate to new and redevelopment projects as opposed to allowing developers to select their own. The City is also committed to use USEPA's Green Street Guidance: *Managing Wet Weather with Green Infrastructure Municipal Handbook, Green Streets, (EPA-833-F-08-009)* (see **SUSMP Appendix A-2**).

The PLDP appears to prefer bio-retention and bio-swales infiltration controls. The City, as matter of practice, has preferred vegetative controls over other types of infiltration controls (e.g., sub-surface infiltration chambers). Vegetative controls addressing a variety of pollutants (oil, grease, nutrients, and metals) and are very effective in their pollutant removal capabilities. Beyond this, vegetative controls enhance the appearance of projects and contribute to meeting landscaping requirements. The **SUSMP Appendix** provides more detail on vegetative and non-vegetative infiltration controls and mechanical treatment controls.

2.6 **Source Controls**

Source controls are pollution prevention measures that prevent stormwater and non-storm water contact with pollutant materials which would otherwise be transported to the MS4. Source controls fall under two categories: (1) mandatory minimum controls (catch basin stenciling with no dumping message and properly designed trash enclosures; (2) activity



specific controls (preventing ground-traveling runoff and rainfall contact with pollutant materials stored outdoors, covering or enclosing warehouses or other structures where pollutant materials are transferred from vehicles to loading areas; and (3) illicit discharge/connection prohibition. The **SUSMP Appendix** provides detailed information on source controls and their applicability to certain projects. The table below summarizes post-construction source control requirements for each specific project category.

**Table II – Source Controls for
New Development and Redevelopment Projects**

Project Category	Post-Construction BMP
<ul style="list-style-type: none"> All project categories 	<ul style="list-style-type: none"> Deployment of trash receptacles at high generation trash locations
<ul style="list-style-type: none"> All project categories (to the extent applicable) 	<ul style="list-style-type: none"> Concentrate or cluster Development on portions of a site while leaving the remaining land in a natural undisturbed condition. Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection. Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants. Promote natural vegetation by using parking lot islands and other landscaped areas. Preserve riparian areas and wetlands.



<ul style="list-style-type: none"> • All projects that include on-site curb outlet or drop inlet catch basins 	<ul style="list-style-type: none"> • No dumping messaging on on-site curb-outlet and drop-inlet catch basins
<ul style="list-style-type: none"> • Storage of hazardous and other pollutant materials 	<ul style="list-style-type: none"> • Store indoors or outdoors raised off the ground and covered to prevent stormwater contact
<ul style="list-style-type: none"> • Load docks or areas associated with industrial or commercial developments 	<ul style="list-style-type: none"> • Cover loading areas to prevent stormwater contact with pollutant materials transferred from vehicles or other sources to a warehouse or other enclosed structure; or design warehouse or storage building to allow direct transfer of materials from vehicles without exposure to stormwater contact
<ul style="list-style-type: none"> • Storage of hazardous and other pollutant materials 	<ul style="list-style-type: none"> • Store indoors or outdoors raised off the ground and covered to prevent stormwater contact
<ul style="list-style-type: none"> • All industrial and commercial facilities 	<ul style="list-style-type: none"> • Prohibit installation or catch basins or other on-site conveyances to the MS4 (e.g., trench drains) in areas where pollutant materials handled, stored, disposed of or transferred from a vehicle to warehouse or other building where such materials are stored
<ul style="list-style-type: none"> • All industrial and commercial facilities 	<ul style="list-style-type: none"> • Prohibit installation or catch basins or other on-site conveyances to the MS4 (e.g., trench drains) in areas where pollutant materials are handled, stored, disposed of or transferred from a vehicle to a warehouse or other building where such materials are stored to provide accidental discharges to the MS4
<ul style="list-style-type: none"> • All industrial and commercial facilities 	<ul style="list-style-type: none"> • Prohibit the installation of illicit connections (connections between an actual or potential source of contaminated discharges and the MS4)



2.7 Use-Specific Controls

This category of controls is carried over from the previous permit to reduce pollutant discharges from specific projects and activities. Projects requiring use-specific BMP controls are shown in the table below and are more particularly described in the **SUSMP Appendix**.

Table III – Use-Specific BMP Controls for New and Redevelopment Projects

Project/Activity	Post-Construction BMP
<ul style="list-style-type: none"> • Retail Gasoline Stations (RGOs) and industrial/commercial facilities equipped with fueling facilities 	<ul style="list-style-type: none"> • Canopy over fueling island/pad • Trench drain (connected to MS4) to intercept runoff before reaching the fueling pad, or • Grade around fueling area to prevent runoff contact • Indoor storage of pollutant materials or if not feasible, outdoor storage under cover and off the ground • Installation of properly sized clarifier (oil and water separator) connected to the municipal sewerage system and permitted by appropriate regulating agency (e.g., Sanitation District of Los Angeles County) • No washing of indoor or outdoor area unless runoff is directed to a clarifier drain (cleaning of surfaces must employ damp or dry cleaning techniques) • Outdoor surfaces must be free of staining, visible oil or other fluids associated with vehicle maintenance
<ul style="list-style-type: none"> • Automotive Service Facilities (referenced above by SIC code) 	<ul style="list-style-type: none"> • Indoor storage of pollutant materials or if not feasible, outdoor storage under cover and off the ground • Installation of properly sized



	<p>clarifier (oil and water separator) connected to the municipal sewerage system and permitted by appropriate regulating agency (e.g., Sanitation District of Los Angeles County)</p> <ul style="list-style-type: none"> No washing of indoor or outdoor area unless runoff is directed to a clarifier drain (cleaning of surfaces must employ damp or dry cleaning techniques) Outdoor surfaces must be free of staining, visible oil or other fluids associated with vehicle maintenance
<ul style="list-style-type: none"> Restaurants (stand alone) 	<ul style="list-style-type: none"> Grease trap or interceptor designed in accordance with the City's Sewer System Management Program)
<ul style="list-style-type: none"> Nurseries or Garden Centers 	<ul style="list-style-type: none"> Proper³ indoor and outdoor storage of fertilizers, nutrients, herbicides, insecticides, etc.

2.8 Hydromodification

Hydromodification evolved from the peak flow requirements under the previous MS4 permit that were intended to prevent stream-bank erosion. The requirement was to prevent pre-construction peak-flow from exceeding post-construction peak flow. However, neither peak flow nor hydromodification (which is met by requiring post-construction controls designed to meet a 95th percentile design standard) is an issue for the City because both of its sub-watersheds drain into concretized flood control channels and subsequently flow into spreading grounds. Nevertheless,

³Note: Proper here means storage in a manner that prevents storm water and non-storm water contact with these and pollutants that can enter the MS4 through sheet flow or through on-site catch basin.



the City intends to require peak flow be maintained at pre-construction levels as a means of maximizing impervious areas.

2.9 Off-site Mitigation

The City does not plan to opt for off-site mitigation for purposes of off or on-site ground infiltration at this time. Computer modeling, however, may demonstrate the need for off-site mitigation in the future if the implementation of the City's SWMP/I-WMP is not sufficient to meet TMDL waste load allocations.

2.10 Control Design Requirements

Typically, LID controls shall be designed to meet the 85th percentile infiltration requirement (see **SUSMP Appendix**). However, in the event infiltration at any rate is feasible, the City will prescribe mechanical treatment controls that meet the benchmarks for new and redevelopment projects indicated in the table below.

Table IV – Benchmarks for New and Redevelopment Treatment Controls

Conventional Pollutants

Pollutant	Suspended Solids-mg/l	Total P mg/l	Total N mg/l		TKN mg/l	
Effluent Concentration	14	0.13	1.28		1.09	

Metals

Pollutant	Total Cd ug/l	Total Cu ug/l	Total Cr ug/l	Total Pb ug/l	Total Zn u/l	
Effluent Concentration	0.3	6	2.8	2.5	23	



2.11 Condition Assignment and Compliance Process

SUSMP requirements are determined shortly after a subject project is introduced to the City through the Planning Department or Building and Safety. The first step is to determine if the project is subject. This is done by using a check list for new development and redevelopment projects. If the project is “tagged” as subject, the City notifies the applicant he or she must comply with SUSMP requirements, the extent to which will depend on the type of new development or redevelopment and the specific type of project being proposed.

Subject SUSMP Project Categories – New Development

- All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area (includes housing developments as well)
- Industrial parks 10,000 square feet or more of surface area
- Commercial malls 10,000 square feet or more surface area
- Retail gasoline outlets 5,000 square feet or more of surface area
- Restaurants (SIC 5812) 5,000 square feet or more of surface area
- Parking lots 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
- Street and road construction of 10,000 square feet or more of impervious surface area shall follow USEPA guidance
- Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area
- Single-family hillside homes



Subject SUSMP Project Categories – Redevelopment⁴

- Existing 1 acre development projects with an expected soil disturbance of 5,000 square feet
- Existing industrial parks 10,000 square feet or more of surface area with an expected soil disturbance of 5,000 square feet
- Existing commercial malls 10,000 square feet or more surface area with an expected soil disturbance of 5,000 square feet
- Retail gasoline outlets 5,000 square feet or more of surface area
- Restaurants (SIC 5812) 5,000 square feet or more of surface area
- Parking lots 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
- Street and road construction of 10,000 square feet or more of impervious surface area shall follow USEPA guidance (does not apply to maintenance projects that do not disturb original line and grade)
- Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area
- Single-family (non-hillside) homes that add 10,000 square feet of new impervious surface

If the project is a new development or redevelopment project, the next step is to inform the developer applicant of SUSMP requirements and require additional project-related information including but not limited to:

- project name, location, and tract (if applicable)

⁴Any addition, creation, or replacement of 50% or more of an impervious area, based on total project area requires a SUSMP to be applied to the entire site, while less than 50% only applies to new addition, creation, or replacement of the impervious area.



- intended use (which is SUSMP-subject)
- project area
- amount of new impervious area/new surface area
- applicant and project engineer's, address, phone number, and email
- project type
- location coordinates
- previous land use
- amount of original land and line to be disturbed
- sub-watershed location
- project location with isohyetal (rainfall) zone
- original purpose of property
- estimation of site soil conditions
- project location in ESA or SEA
- subject to General Construction Activity Stormwater Permit
- expected time to begin grading

Based on the foregoing information, the City will conduct a further evaluation to determine what site specific activities will be conducted at the site that would require source controls and use-specific BMPs. Once completed, the conditions would be sent to the applicant and engineer. Conditions include:

- a menu of LID controls that will prefer "green" or vegetative infiltration devices (bioretention and biofiltration)
- design criteria for the controls (viz., 85th percentile based on project location within isohyetal zone)
- source controls (standard and site specific)



- use-specific controls (if applicable) and design specifications (e.g., dimensions for canopies and sizing for sewer-connected clarifiers)
- maintenance agreement for LID and other controls (in accordance with MS4 permit requirements)
- if the project is subject to GCASP applicant must demonstrate compliance by showing waste discharge identification number (WDID) issued by the State Water Resources Control Board

Completion of the evaluation will be formally transmitted to the applicant and engineer for compliance. An inspection of the project site will be conducted by the City to verify the proper installation of LID and inclusion of other controls. No certificate of occupancy will be issued until all control conditions are met and a maintenance agreement has been finalized.

Once completed all of the required recorded information (see below) will be completed for annual reporting and archival purposes.

2.12 **New Development/Redevelopment Effectiveness Tracking**

The PLDP also requires each new development and redevelopment for which LID and other controls are required to be tracked, ostensibly for reporting purposes to the Regional Board and for various municipal internal uses. Tracking should include the following:

- Project identification number assigned by the City
- State Board waste discharge identification (WDID) number
- Project area
- BMP Type and Description
- BMP Location (coordinates)



- Date of Acceptance
- Date of Maintenance Agreement
- Maintenance Records
- Inspection Date and Summary
- Corrective Action
- Date Certificate of Occupancy Issued
- Replacement or Repair Date

Much of the information required by the tracking form can be taken from the project evaluation form discussed above. The tracking form will be finalized one month following approval of the watershed management program plan. All projects will be tracked using GIS coordinates.

2.13 **Low Impact Development Ordinance**

The City has adopted a LID ordinance that will include infiltration controls for street projects that meet the 10,000 square foot threshold prior to the June 28, 2014 submittal deadline date for the I-WMP. The LID ordinance is attached as **Appendix B**.

2.14 **Training**

All impacted City personnel shall be provided “classroom” training using Power Point and counter training on PLDP requirements annually, prior to the end of the fiscal year. Training will be verified using a “sign in sheet.” Impacted personnel will include employees (non-contract and contract), from planning, building and safety, and engineering divisions.



2.15 Developer Information Materials

PLDP changes from Development Planning Program necessitate revisions to developer hand-outs and other informational materials required to facilitate a clear understanding of the new requirements as they relate to: (1) the emphasis on LID; (2) green streets; (3) revised sizing requirements for infiltration controls; (4) source controls; (5) use specific controls; and (6) activity-specific controls. This will require a revision to the existing SUSMP and general guidelines for completing SUSMP requirements. These materials will be made available as hard copies at the counter. Also in the works is uploading these and other materials (including the Los Angeles County's LID Standards Manual and USEPA's Municipal Handbook for Green Streets and the *Best Management Practice Handbook for New Development and Redevelopment prepared by the California Stormwater Quality Association*).

2.16 Implementation Schedule (Milestones)

The table below provides a schedule for implementing the PLDP/SUSMP.

Table V – Implementation Schedule

Task	Due Date
• PLDP/SUSMP Submittal	June 28, 2014
• PLDP/SUSMP Implementation	One month after Regional Board's approval of SWMP or I-WMP
• Low Impact Development Ordinance	June 28, 2014
• Green Street Policy	June 28, 2014
• Training	Prior to June 20, 2015 ⁵

⁵Previews of new PLDP requirements will be provided when the City conducts on-going training for Development Planning requirements which is typically presented in May or June of each year.



<ul style="list-style-type: none">• New Development/Development Tracking	One month after the Regional Board's approval of the SWMP or I-WMP
<ul style="list-style-type: none">• Developer Information Materials	One month after the Regional Board's approval of the SWMP or WMP

END SECTION



Appendices

Planning and Land Development Program

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Appendix A

Standard Urban Stormwater Management Program Plan

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Appendix B

Low Impact Ordinance

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Stormwater and Watershed Management Program

Section Three Development Construction



Section Four Illicit Connection and Discharge



701 East Carson Street, CA 90745



Section Three: **Development Construction Program**

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Section Three Development Construction Program

3.0 Summary

The Development Construction Program (DCP) under the current MS4 permit has changed from the previous permit to the following extent:

- i. The Local Stormwater Pollution Prevention Plan (Local-SWPPP) has been eliminated.
- ii. The DCP reflects revisions made to the General Construction Activity Stormwater Permit (GCASWP) which includes multiple compliance tiers for soil-disturbing projects over 1 acre.
- iii. Minimum best management practices (BMPs) for construction projects less than one acre are more defined.

The purpose of the Development Construction Program (DCP) continues to assure that subject private and municipal construction projects are managed in a manner that: (1) does not expose construction-related pollutants to stormwater or non-stormwater that would result in their transport into the municipal separate storm sewer system (MS4) and the receiving water; and (2) eliminates illicit discharges and connections to the MS4. DCP more specifically requires appropriate BMPs to:

- i. Prevent illicit discharges and illicit connections through which illicit discharges pass to the MS4 from the construction site.
- ii. Reduce pollutants from the construction site to the MS4 to aid in preventing water quality standard exceedances to the maximum extent practicable (MEP).



- iii. Prevent construction site discharges to the MS4 from causing or contributing to a violation of water quality standards.

As was the case under the previous MS4 permit, the City is obligated to control pollutants from two construction activity categories:

- i. Projects expected to disturb one acre or more of soil by grading, clearing, and excavating, which must obtain a General Construction Activity Stormwater Permit (GCASP) from the State Water Resources Control Board (SWRCB).
- ii. Projects that disturb less than one acre of soil by grading, clearing, and excavating, which require “minimum BMPs.”

A Development Construction Project is one that involves soil disturbing activities including, but not limited to, clearing, grading, excavation, and road construction. It does not include maintaining original line and grade, hydraulic capacity, or original purpose of facility; emergency construction activities required to immediately protect public health and safety; interior remodeling with no outside exposure of construction material or construction waste to storm water; mechanical permit work; or sign permit work.

3.1 Reviewing Construction Projects for Conditions Assignment

Construction projects are reviewed for development construction conditions at the same time they are reviewed for Planning and Land Development/SUSMP conformance. Projects are introduced to the Planning Department and then are referred to Building and Safety for further evaluation. If the project is expected to cause a soil disturbance of one acre or more, the applicant must be notified that it is subject to General Construction Activity Stormwater Permit (GCASWP)



requirements mandated by the State Water Resources Control Board (“State Board”). Grading permit issuance is dependent on obtaining GCASWP coverage. If the project is expected to disturb less than 1 acre of soil, Building and Safety is responsible for assigning minimum BMPs based on site characteristics and location.

3.2 **Projects Subject to the General Storm Water Construction Permit and Requirements**

A project is subject to the GCASWP if it disturbs more than one acre or more of soil by grading, clearing, excavating, and/or other activities. The MS4 permit prohibits municipal permittees from issuing a grading permit to a project applicant who has not applied for a GCASWP (see **Appendix A, Fact Sheet**). The applicant, at a minimum, must show a copy of a Waste Discharge Identification (WDID) number to the permittee issued by the State Water Resources Control Board (State Board). A WDID number is issued when the applicant has submitted a Notice of Intent (NOI) to apply for a GCASWP (see **Appendix B, NOI Checklist**).

Although the City may issue a grading permit to an applicant based on a proof of having a WDID, no grading may be begin until a SWPPP has been prepared and uploaded to the State Board’s *Storm Water Multiple Application and Report Tracking System* (SMART system). Requirements for SWPPP preparation are provided in the GCASWP application and on the State Board’s website.¹ The Storm Water Pollution Prevention Plan (SWPPP) and a Monitoring Program Plan (MRP) must

¹http://www.waterboards.ca.gov/water_issues/programs/stormwater/industrial.shtml.



be prepared by a qualified SWPPP developer (QSD) or a qualified SWPPP preparer (QSP).

The City is not required to review either of the documents for approval. The State Board, in effect, has ultimate regulatory control over GCASWP requirements. Nevertheless, a valid SWPPP should include, at a minimum, the following BMPs: (1) properly anchored silt fencing or rows of sand bags placed perpendicular to flow to minimize the discharge of sediment to the MS4; (2) trash receptacles in areas where debris is expected to be generated; (3) portable toilets; (4) concrete wash-out areas or potable wash-out controls; (5) stabilized construction area to prevent vehicle tracking of dirt to the street (a component of the MS4²); (6) covering stockpiled material (dirt, concrete, gravel, etc.); and storage of pollutant materials under cover and raised off the ground away from drainage pathways, if possible.

It should be noted that current GCASWP requirements that were in effect during the previous MS4 permit have changed substantially and are more complicated to the extent that it requires:

- **Risk-Based Permitting Approach:** Establishes three levels of risk possible for a construction site. Risk is calculated in two parts: (1) Project Sediment Risk, and (2) Receiving Water Risk.
- **Minimum Requirements Specified:** Imposes more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.
- **Project Site Soil Characteristics Monitoring and Reporting:** Provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.

²MS4 typically includes streets, catch basins, storm drains, and other conveyances natural or man-made that operate to convey runoff to receiving waters.



- **Effluent Monitoring and Reporting:** Requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to determine compliance with the NELs and evaluate whether NALs included in this General Permit are exceeded.
- **Receiving Water Monitoring and Reporting:** Some Risk Level 3 dischargers to monitor receiving waters and conduct bio-assessments.
- **Post-Construction Storm Water Performance Standards:** Specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit, to avoid, minimize and/or mitigate post-construction storm water runoff impacts.
- **Rain Event Action Plan:** Requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.
- **Annual Reporting:** Requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.

3.3 Inspection requirements for GCASWP Sites

The MS4 permit specifies inspections for one acre construction projects subject to GCASWP in accordance with requirements contained in the table below.

Table I - Inspection Frequencies for Sites One Acre or Greater

Site	Inspection Frequency
<ul style="list-style-type: none"> • All sites 1 acre or larger that discharge to a tributary listed by the state as an impaired water for sediment or turbidity under the CWA § 303(d) 	<ul style="list-style-type: none"> • when two or more consecutive days with greater than 50% chance of rainfall are predicted by NOAA • within 48 hours of a 1/2-inch rain event and at (3) least once every



<ul style="list-style-type: none"> • Other sites 1 acre or more determined to be a significant threat to water quality 	
<ul style="list-style-type: none"> • All other construction sites with 1 acre or more of soil disturbance not meeting the criteria above 	<ul style="list-style-type: none"> • At least monthly

Inspections require a site evaluation using the *Construction Site Inspection Checklist* (see **Appendix C**). If the inspection results in the detection of a compliance issue such as improper or no BMPs at the site, the City's inspector has the authority to compel the construction manager to correct the deficiency(ies). The inspector can also require the manager to provide a copy of the SWPPP (which includes erosion control provisions) for review to determine if the SWPPP is deficient. The inspector will note the deficiency, and depending on the severity of the problem, will require correction within a reasonable period of time with the threat of issuing a stop work order if compliance is not achieved. If the issue is an illicit discharge, the inspector shall demand immediate correction. If not corrected, the inspector can issue a stop work order and instruct the City's code enforcement officer to issue a citation as a misdemeanor violation. If the problem is egregious and/or reoccurring, the City will notify the Regional Board of the problem and ask for its intervention. All inspection visits are logged and tracked using the site inspection checklist

3.4 Requirements for Construction Projects Less than One Acre

Under the previous MS4 permit, construction projects that disturb less than one acre of soil by grading, clearing, excavating, and other



activities required “minimum BMPs.” Determining which minimum BMPs to prescribe was left up to the discretion of permittees. The current MS4 permit provides more prescriptive guidance. It requires the following:

1. *Through the use of the Permittee’s erosion and sediment control ordinance, or and/or building permit, require the implementation of an effective combination of erosion and sediment control BMPs chosen from Table I to prevent erosion and sediment loss, and the discharge of construction wastes.*

Table II - Applicable Set of BMPs for All Construction Sites

Erosion Controls	Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
	Stabilized Construction Site Entrance/Exit
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

The assignment of the BMPs contained in the above table will be based on site-specific considerations using the *Mandatory and Discretionary Minimum Best Management Practices Checklist (Appendix D)*. If an activity requires a BMP contained in the table, it is cross-referenced to the CASQA Construction BMP Handbook. **Appendix E** contains applicable BMPs that are alpha-numerically coded – for example, EC for Erosion Control, SE for Sediment Control, NS for Non-



Stormwater Management Control; and WM for Waste Management and Materials Pollution Control.

Each subject developer/contractor applicant shall submit an Erosion Control and Sediment Plan (ECSP) based on BMPs prescribed by the City. The ECSP shall be submitted and approved by the City as a condition for grading permit issuance.

2. Possess the ability to identify all construction sites with soil disturbing activities that require a permit

This City has in place a system for recording and tracking all construction projects using a computerized data base. Projects are inputted into an Excel spreadsheet that provides the following information: (1) name of the project applicant (contractor/developer); (2) applicant contact information (address, geo-coordinates, telephone number, fax, email address); (2) project start and completion date; (3) project size; (4) project use; (5) inspection dates; (6) location within watershed/sub-watershed; (7) grading permit number and date of issuance; and (8) watershed/sub-watershed location.

3. Inspect construction sites as needed based on the evaluation of the factors that are a threat to water quality.

The City exceeds the inspection requirement for projects less than one acre. It inspects all projects that require grading permits. Inspectors are trained to look for sediment charges to the MS4 from the right of way, which is the most common construction site issue. Sediment in the street indicates a failure of sediment controls, typically improper installation or maintenance of silt fences, sand bags, or catch basin inlet protection (mandatory BMPs for all construction projects). Other issues may be



detected such as illicit discharges (e.g., from concrete wash-out). Once on site, the inspector will use the construction site checklist to conduct a comprehensive evaluation. If deficiencies are recorded, the inspector will inform the site manager to correct the problem within a period of time that depends on the severity of the deficiency. If an illicit discharge (e.g., from concrete wash out) is an issue, the discharge must be halted immediately and any downstream catch basin inlet must be protected to prevent the release from entering the storm drain. Sediment in the street during a storm event would also call for immediate corrective action. The failed BMP that gave rise to the problem should be repaired immediately and any sediment discharges to the street should be removed immediately as well. If applicable, downstream catch basin inlet protection should be in place and, if not, the construction site operator must install one immediately. If the sediment discharge is detected during dry days, the inspector may allow the construction operator to correct the problem (fixing the BMP and removing the sediment) by the end of the work day.

4. *Enforcement of BMP Conditions and Other Requirements*

The City's enforcement policy relative to stormwater compliance and other requirements for construction sites, as mentioned, is to issue a stop work order in the event corrective action is ignored. Citation action may also be invoked, but usually the stop work order threat is sufficient to compel compliance because of the financial impact on the contractor or owner.

3.5 **Legal Authority for Development Construction Requirements**



The City's current runoff control ordinance empowers the City to require compliance development construction requirements and has had such authority since 1998.

3.6 Training

Training for conformance with development construction requirements has been on-going since the 2001 Los Angeles County MS4 permit. Classroom and at-the-counter training has been provided annually to impacted personnel. Planning, public works, building and safety, and code enforcement personnel are required to attend annual development construction training.

3.7 Implementation Schedule (Milestones)

The table below provides a schedule for implementing the Development Construction Program.

Table V – Implementation Schedule

Task	Due Date
<ul style="list-style-type: none"> Development Construction Submittal 	June 28, 2014
<ul style="list-style-type: none"> Development Construction Implementation 	One month after Regional Board's approval of SWMP or WMP
<ul style="list-style-type: none"> Training 	Prior to June 20, 2015
<ul style="list-style-type: none"> Legal Authority Update³ 	Three months after the Regional Board's approval of the SWMP or WMP

³The City already has legal authority to require compliance with development construction requirements.



Appendix A

General Construction Activity Stormwater Permit Fact Sheet



Appendix B

Notice of Intent (NOI) Fact Sheet

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Appendix C

Construction Site Inspection Checklist



Appendix D

Mandatory and Discretionary Minimum BMP Checklist

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Appendix E

Excerpts from CASQA Construction BMP Handbook

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Section Four: IC/ID

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Section Four

Illicit Connection and Discharge Detection and Elimination Program

4.0 Summary

The Los Angeles County MS4 Permit Permittees to implement an Illicit Connection and Illicit Discharge Elimination (IC/ID) program. The IC/ID program under the current permit is essentially the same as the previous permit. The purpose of the IC/ID program is to detect and eliminate illicit discharges and connections to the MS4 which are deemed to be harmful to receiving water quality. An illicit discharge is any discharge that is not entirely composed of storm water and is not exempted as a permissible discharge to the MS4. An illicit connection is any connection that operates to convey an illicit discharge to the MS4. This section provides guidance on what specific tasks the City is required to perform to comply with IC/ID program requirements.

The Permit contains requirements specifically for the identification and elimination of illicit connections and illicit discharges to the municipal separate storm sewer system (MS4). They include: (1) written procedures conducting source investigations for IC/IDs; (2) written procedures for eliminating the source of IC/IDs; (3) written procedures for public reporting of illicit discharges; (4) preparation of a spill response plan; and (5) IC/ID education and training for impacted Permittee staff.

IC/ID requirements are grounded in federal Clean Water Act section 402(p)(3)(B)(ii), which effectively prohibits non-stormwater discharges into the storm sewers. The term non-stormwater discharge, however, has been qualified by USEPA to include exempted discharges and non-exempted -- impermissible non-stormwater discharges referred to as illicit discharges. The current MS4 Permit imposes more stringent



conditions on non-stormwater discharges than the previous Permit. It conditions them on meeting water quality standards, including TMDLs. This requirement, however, exceeds federal stormwater regulations. When Congress amended the Clean Water Act in 1987 to add stormwater regulations, it deliberately made a distinction between non-stormwater discharges and stormwater discharges. Congress required stormwater discharges to be controlled at the outfall through BMPs. For non-stormwater discharges, Congress required MS4 Permittees only to prohibit illicit discharges. If a Permittee cannot persuade a discharger to prohibit its impermissible discharges to the MS4, because of lack of will or technical infeasibility, the discharger must obtain a separate discharge Permit.

Further, requiring municipal Permittees to comply with water quality standards for non-stormwater discharges poses a serious problem to compliance. Unlike stormwater discharges, which are subject to the iterative process, which preempts violations if properly followed, non-stormwater discharges are not entitled to the iterative process. This of course is attributed to the fact that impermissible non-stormwater discharges only require prohibition or coverage under a separate Permit. It should be noted that the County of Los Angeles attempted to argue in an administrative petition challenging a revision to the 2001 MS4 Permit that if non-stormwater discharges are to be subject to water quality standards they too should be entitled the iterative process. The State Board, which ruled on this matter, said that the iterative process does not apply to non-stormwater discharges. Thus, in the event of an exceedance of a non-stormwater discharge detected at the outfall, a Permittee will automatically be in violation – even if the discharge was managed with



the proper BMPs. The City has challenged this requirement in an administrative petition to the State Board on this basis.

4.1 Exempted Non-stormwater Discharges

Eliminating illicit discharges and connections requires City personnel to distinguish exempted non-stormwater discharges from impermissible non-stormwater discharges (viz. illicit discharges). The MS4 Permit specifies categories of exempted non-stormwater discharges, including:

- Natural springs and rising ground water
- Flows from riparian habitats or wetlands
- Stream diversions, Permitted by the State Board
- Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)]
- Flows from emergency fire fighting activity (conditioned on BMPs specified in Table I below)
- Reclaimed and potable landscape irrigation runoff
- Potable drinking water supply and distribution system releases (conditioned on BMPs specified in Table I below)
- Drains for foundations, footings, and crawl spaces
- Air conditioning condensate
- Dechlorinated/debrominated swimming pool discharges
- Dewatering of lakes and decorative fountains
- Non-commercial car washing by residents or by non-profit organizations and
- Sidewalk rinsing.



Table I – Conditionally Exempt Non-Stormwater Discharges

Conditional Non-Stormwater Discharge Type	Best Management Practices(s)
<ul style="list-style-type: none"> Discharges from essential non-emergency fire-fighting activities 	<p>Appropriate BMPs are implemented based on the CAL FIRE, Office of the State Fire Marshal's <i>Water-Based Fire Protection Systems Discharge Best Management Practices Manual</i> (September 2011) for water-based fire protection system discharges, and based on Riverside County's <i>Best Management Practices Plan for Urban Runoff Management</i> (May 1, 2004) or equivalent BMP manual for fire training activities and post-emergency fire fighting activities.</p>
<ul style="list-style-type: none"> Discharges from drinking water supplier distribution systems, where not regulated by an individual or general NPDES Permit¹ 	<p>Appropriate BMPs are implemented based on the American Water Works Association (California-Nevada Section) Guidelines for the Development of Your Best Management Practices (BMP) Manual for Drinking Water System Releases (2005) or equivalent industry standard BMP manual. Additionally, each Permittee shall work with drinking water suppliers that may discharge to the Permittee's MS4 to ensure for all discharges greater than 100,000 gallons: (1) notification at least 72 hours prior to a planned discharge and as soon as possible after an unplanned discharge; (2) monitoring of any pollutants of concern in the drinking water supplier distribution system release; and (3) record keeping by the drinking water supplier. Permittees shall require that the following information is maintained by the drinking water supplier(s) for all discharges to the MS4 (planned and unplanned) greater than 100,000 gallons: name of discharger, date and time of notification (for planned discharges), method of notification, location of discharge, discharge pathway, receiving water, date of discharge, time of the beginning and end of the discharge, duration of the discharge, flow rate or velocity, total number of gallons discharged, type of dechlorination equipment used, type of dechlorination chemicals</p>

¹The City shall require all water producers to obtain a separate NPDES Permit if their non-stormwater discharges are not in fact potable, which shall be determined based on water quality sampling and analysis performed by the producers. If the discharge is potable, the water producer shall only be required to notify the City and LACFCD of any planned or unplanned release to the City's MS4 of 100,000 gallons or more.



	used, concentration of residual chlorine, type(s) of sediment controls used, pH of discharge, type(s) of volumetric and velocity controls used, and field and laboratory monitoring data. Records shall be retained for five years and made available upon request by the Permittee or Regional Water Board.
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4.2 Non-stormwater Discharges from Community Water Systems

The City is served by a multiple “community water systems” (CWSs): Southern California Water Company; California Service Water Company; and Golden State Water Company. The MS4 Permit calls for municipal Permittees to enter into memos of understanding (MOUs) with each CWS. The MOU, in effect, allows discharges from CWSs to enter a Permittee’s MS4 without the need for a separate discharge Permit. The City, however, shall not enter into an MOU with any of the CWSs for two reasons.

First, under federal regulations at §40 CFR 122.26, which addresses illicit discharges, MS4 Permittees and not the Permitting agency (the Regional Board in this case), are only authorized to determine whether potable water discharges and other non-stormwater discharges are illicit or permissible discharges. Neither the City, nor any other municipal Permittee that it is aware of, has conducted non-stormwater monitoring to determine if potable water discharges contain pollutants in concentrations that need to be prohibited or Permitted. The City, however, intends to require CWSs to provide non-stormwater quality data on an annual basis to demonstrate that its discharges are in fact potable. Until this time, the City will assume that discharges from CWSs are potable and, therefore, allowable to its MS4.



Second, non-stormwater discharges from a CWS have the potential to exceed TMDLs or other water quality standards. The MS4 Permit impermissibly imposes discharge limitations on non-stormwater and as well as stormwater discharges. If the discharge is not potable, or if the discharge makes contact with a pollutant that results in an exceedance detected by outfall monitoring, Permittees would be in violation of receiving water limitations. But as the City has argued in its administrative petition, federal regulations and State Board orders do not require MS4 Permittees to meet water quality standards at the outfall. Again, Permittees are only responsible for meeting water quality standards for stormwater discharges monitored at the outfall.

If a CWS is unable to demonstrate that its discharges are not potable on a consistent basis, the City will require it to obtain a separate discharge Permit as is required by federal regulations (MS4 (Fed. Reg. Vol. 55, No. 222 [November 16, 1990] page 47995) which state:

... operators of non-stormwater discharges need to obtain NPDES Permits under the present framework (rather than the municipal operator (Permittee) of the MS4.)

4.3 **Procedures for Conducting Source Investigations for IC/IDs Based on Reports from the Public or City Personnel**

The City's IC/ID source investigation program has, since the adoption of the 2001 MS4 Permit, consisted of the following:

1. Conducting outfall and field screening visual monitoring for non-storm water discharges and conduct water quality sampling and analysis (**see MRP**).
2. Encouraging the public to report illicit discharges to the City's reporting hotline or directly to the City's Environmental Services Program Unit under the Community Development Department.



Public reporting is encouraged through public education outreach materials. Reports are recorded using the IC/ID reporting form (see **Appendix A**). The City plans to encourage reporting through its web site with an on-line reporting form (in English and Spanish).

3. Training City personnel to identify potential illicit discharges and report them to the City for investigation.
4. Training field personnel to respond to reports of illicit discharges, including identifying the source of the discharge if possible, halting the discharge if still in progress, recording the location of the discharge (to be used later to plot discharges on GIS using geo-coordinates). If the discharge is innocuous (e.g., wash water), and the source is from an individual, City personnel shall inform him/her that the discharge is in violation of the City's stormwater ordinance and is a misdemeanor violation. Serious discharges such as dumping hazardous materials should result in code enforcement. The County's flood control district must also be notified because of the potential for the hazardous material discharge to enter the flood control channel or other receiving water. If the discharge is sewage, the City is required *under State Board Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*.
5. Training will include discussion of a Standard Operating Procedure (SOP) for responding to illicit discharges and detecting illicit connections. The SOP will be based on MS4 Permit IC/ID requirements and *USEPA's Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assistance* (see **Appendix B**).
6. Training shall provide guidance on how to identify exempted discharges and illicit discharges.
7. Training City personnel responsible for conducting industrial and commercial inspections to identify illicit discharges and connections including the use of fluorometric dye tests.



8. Training plan check personnel to condition building Permits on prohibitions on illicit connections² (e.g., floor drains to the MS4).
9. Training construction inspection personnel to identify illicit discharges and connections during construction activities.

4.4 Procedures for Eliminating the Source of IC/IDs

Once the illicit discharge has been verified and the illicit connection has been identified, the next step is to eliminate the discharge and, if applicable, the connection. Not all illicit discharges are conveyed through illicit connections. For example, an auto repair shop employee hosing down an outdoor area to flush away oil and grease directly to the street (a component of the MS4) creates an illicit discharge, but there is no illicit connection. However, if the discharge enters an indoor drain that is connected to a street curb outlet, then an illicit connection issue arises.

Eliminating the illicit discharge can be as simple as the City notifying the discharger that the practice of flushing pollutants directly to the MS4 or through an on-site drain is in violation of the City's stormwater ordinance subject to misdemeanor violations and other sanctions such as denying reissuance of the operator's business license. But to assure that the operator does not engage in the same illicit discharge activity again the City will:

1. Provide BMPs specific to automotive-related businesses resulting from commercial inspections, a complaint from the public called into the City directly to the 1-800-CleanLA reporting hotline. The BMPs will include "dry cleaning" techniques for removing pollutants and source controls to prevent pollutant discharges to outdoor surfaces.
2. If the discharge does not include the disposal of pollutant materials such as motor oil or paint directly or directly to the MS4, the City

²The Uniform Plumbing Code, which the City has adopted, prohibits the illicit connections to the MS4.



shall provide a warning to the operator. If a second instance occurs the facility will be cited. If the issue is an illicit connection, the operator may be required to physically remove the connection or cap the drain. If hosing down an outdoor or indoor surface is necessary to the business, the City will require the installation of an oil/water separator (also referred to as a clarifier) connected to the municipal sewer system or to a sub-surface sump. However, no use of water for cleaning purposes will be allowed until the clarifier is installed. Failure to comply with this requirement will result in enforcement action.

3. If the discharge involves a pollutant material such as gasoline, oil, paint, or other chemicals, the City will immediately issue a citation and notify LACFCD for further enforcement action.
4. The incident will be recorded using the IC/ID reporting form, information from which will be inputted into a data base. If the discharge is more serious, the operator will be cited immediately. The County of Los Angeles Flood Control District shall also be notified for further enforcement action.
5. A follow-up inspection visit should be scheduled to verify that the facility operator is not engaging in the same activity. If it is, the City shall take enforcement action by issuing a misdemeanor citation and, if the issue is repeated, the City shall meet with the operator and use the threat of license revocation to compel compliance.

4.5 **Time Lines for Compliance for Investigating and Resolving IC/ID Issues**

The MS4 Permit specifies time lines for completing IC/ID related tasks. They include:

1. At a minimum, each Permittee shall initiate an investigation(s) to identify and locate the source within 72 hours of becoming aware of an **illicit discharge**. In real world terms, this is not always possible because in many instances the illicit discharge may be temporary or a single event such as an accident for example. If the discharge is in progress and is of a serious nature, the City shall to the extent feasible, dispatch City personnel to investigate. However any report of a sewage release is responded to immediately during working hours and



as soon as possible during after-hours or over the weekends and holidays. The City has personnel on “stand-by” to respond to sewage releases and water main breaks.

2. A report of a suspected illicit connection, the Permittee is required to initiate an investigation within 21 days to determine the: (1) source of the connection, (2) nature and volume of discharge through the connection, and (3) responsible party for the connection. It should be noted that reports of illicit connections are rarely reported and in any case, if an illicit discharge is conveyed through the connection the discharge shall be terminated at the source of the connection and/or removed or capped.

4.6 **Public Reporting of Releases to the MS4**

The City has effectively operated a reporting hotline since the 1996 MS4 Permit was issued for Los Angeles County. The City encourages the public to use the 1-888-CLEANLA hotline on its public information materials such as BMP pamphlets for residents in English and Spanish. It also has its own reporting number directly to the City. The hotline is also referenced in BMP materials that are handed out to subject industrial and commercial facilities during inspection visits. The City plans to place these materials on its web site, along with instructions for reporting various types of releases to the MS4: oil, batteries, paint, paint wash, and other hazardous waste; trash; and sewage releases. As mentioned, reports to the hotline and City are recorded using the aforementioned IC/ID reporting form.

4.7 **Spill Control Plan**

The City relies on two types of spill control plans. First, a Hazardous Waste and Materials Response Plan that is implemented by the Los Angeles County Fire Department in the event of deliberate dumping or



accidental spills. Second the City is also required to address sewage releases to the MS4 through its Overflow Emergency Response Plan – a requirement of the *Sewer System Management Plan* mandated by Waste Discharge Order 2006-0003. The Spill Control Plan is based on SSMP requirements (see **Appendix C**). Additional spill control measures are discussed in Section 5, **Public Agency Program** (see **Appendix A-1**).

4.8 **Training**

The City continues to provide annual training to impacted City personnel – a requirement of the previous MS4 – which includes IC/ID. As mentioned in Section 4.3, new IC/ID requirements will be addressed during training sessions. This includes procedures for identifying and detecting illicit discharges and connections and eliminating them. IC/ID training will also include how to differentiate between permissible non-stormwater discharges and illicit discharges.

4.9 **Legal Authority**

The City has ample legal authority under its current municipal code to require compliance with IC/ID requirements.

4.10 **Issues with IC/ID Requirements**

The IC/ID section of the MS4 contains two requirements that are inappropriate. First, under ii.1:

Each Permittee, upon confirmation of an illicit MS4 connection, shall insure that the connection is: (1) Permitted or documented, provided that storm water and non-water is allowed under the Permit or other individual or general NPDES Permit or Waste Discharge Order.



Here the Permit is in error because an illicit connection cannot be Permitted or documented to make it an allowable discharge. Once again, an illicit connection is a connection that conveys an illicit discharge. An illicit discharge is an impermissible non-stormwater discharge specified in the Permit. It is also one determined by Permittees. Further, not all illicit discharges can be made a permissible by covering it under a separate Permit. For example, non-stormwater mixed with a pollutant such as paint, fuel, motor oil, etc., cannot be allowed under a separate discharge Permit. The discharge must be routed to the sanitary sewer and covered under an industrial waste discharge Permit.

Second, the Permit requires Permittees to comply with the following:

In the event the Permittee is unable to eliminate an ongoing illicit discharge following full execution of its legal authority and in accordance with its Progressive Enforcement Policy, or other circumstances prevent the full elimination of an ongoing illicit discharge, including the inability to find the responsible party/parties, the Permittee shall provide for diversion of the entire flow to the sanitary sewer or provide treatment.

This requirement has no legal authority under federal stormwater regulations or state law. Further, if the City cannot terminate the discharge using its existing legal authority such as prohibiting the discharge or requiring it to be covered under a separate discharge Permit, it would be the Regional Board's responsibility to use its authority under the Clean Water Act to compel compliance.

4.11 **Implementation Schedule (Milestones)**

The table below provides a schedule for implementing the Illicit Connection and Discharge and Detection and Elimination Program.



Table II – Implementation Schedule (Milestones)

Task	Due Date
<ul style="list-style-type: none">• IC/ID Submittal	June 28, 2014
<ul style="list-style-type: none">• IC/ID Implementation	One month after Regional Board's approval of SWMP or WMP
<ul style="list-style-type: none">• Training	Prior to June 20, 2015
<ul style="list-style-type: none">• Preparation of an IC/ID Standard Operating Procedures	Prior to June 20, 2015
<ul style="list-style-type: none">• Legal Authority Update³	Three months after the Regional Board's approval of the SWMP or WMP

End Section

Appendix A

³The City already has legal authority to require compliance with development construction requirements.



IC/ID Reporting Form

DRAFT

Appendix B



USEPA Guidance Manual on Illicit Connections and Discharges

DRAFT

Appendix C



Spill Control Plan (Spill System Overflow Prevention Plan)

DRAFT



Stormwater and
Watershed Management Program

Section Five

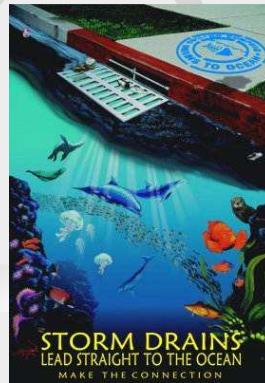
Public Agency Activity

Section Six

Industrial and Commercial Facility

Section Seven

Public Information and
Participation



701 East Carson Street, CA 90745



Section Five: Public Agency Program

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Section Five Public Agency Activity Program

5.0 Summary

Municipal construction and maintenance operations are governed by the MS4 Permit through the Public Agency Activities Program (PAAP) and its BMP requirements, the purpose of which is to eliminate or reduce pollutant discharges to the MS4 to the maximum extent practicable, and to detect and eliminate illicit connections and discharges. More specifically PAAP requirements include:

- i. Public Construction Activities Management
- ii. Public Facility Inventory
- iii. Inventory of Existing Development for Retrofitting Opportunities
- iv. Public Facility and Activity Management
- v. Vehicle and Equipment Wash Areas
- vi. Landscape, Park, and Recreational Facilities Management
- vii. Storm Drain Operation and Maintenance
- viii. Streets, Roads, and Parking Facilities Maintenance
- ix. Emergency Procedures
- x. Municipal Employee and Contractor Training

With the exception of the *Public Facility Inventory and Inventory of Existing Development for Retrofitting Opportunities*, all of the above PAAP tasks are carry-overs from the previous MS4 permit that have been implemented by the City.

5.1 Public Construction Activities Management

The PAAP requires the following:

- i. Each Permittee shall implement and comply with the Planning and Land Development Program requirements in Part VI.D.7 of the Permit at Permittee-owned or operated (i.e., public or



Permittee sponsored) construction projects that are categorized under the project types identified in Part VI.D.7.b of this Permit.

- ii. Each Permittee shall implement and comply with the appropriate Development Construction Program requirements in Part VI.D.8 of this Order at Permittee-owned or operated construction projects as applicable.
- iii. For Permittee-owned or operated projects (including those under a capital improvement project plan) that disturb less than one acre of soil, each Permittee shall require an effective combination of erosion and sediment control BMPs from Table 13 (see Construction Development Program, minimum BMPs).
- iv. Each Permittee shall obtain separate coverage under the Construction General Permit for all Permittee-owned or operated construction sites that require coverage.

The City intends to comply with **Planning and Land Development** program requirements contained in **Section Two** of this submittal, which addresses LID and other requirements applicable to municipal projects.

The City also intends to comply with **Development Construction Program** requirements contained in **Section Three** of this submittal. This includes compliance with *General Construction Activity Stormwater Permit* (GCASWP) requirements and minimum BMPs for municipal projects that are the less than one acre (by grading, clearing, excavating, and other soil disturbance activities).

5.2 **Public Facility Inventory**

This PAAP requirement calls for the City to develop an inventory of all of its facilities. This includes, but is not limited to, the following, if applicable:



- Animal control facilities
- Chemical storage facilities
- Composting facilities
- Equipment storage and maintenance facilities (including landscape maintenance-related operations)
- Fueling or fuel storage facilities (including municipal airports)
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Materials storage yards
- Pesticide storage facilities
- Fire stations
- Public restrooms
- Public parking lots
- Public golf courses
- Public swimming pools
- Public parks
- Public works yards
- Public marinas
- Recycling facilities
- Solid waste handling and transfer facilities
- Vehicle storage and maintenance yards
- Storm water management facilities (e.g., detention basins)
- All other Permittee-owned or operated facilities or activities that each Permittee determines may contribute a substantial pollutant load to the MS4.

The purpose of this requirement is to: (1) identify potential sources of pollution; (2) ensure that each facility is implementing BMPs to reduce or eliminate pollutants in stormwater discharges; and (3) to detect and eliminate illicit connections and discharges. The City intends to begin



implementing this task no later than one two months following the Regional Board's approval of the City's SWMP/I-WMP and shall be completed no later than September 28, 2015. Subject City facilities shall be plotted on GIS.

Each subject facility shall be tracked using an Excel data base that will capture the following information:

- Name of facility
- Name of facility manager and contact information
- Address of facility (physical and mailing)
- A narrative description of activities performed and potential pollution sources.
- Coverage under the Industrial General Permit – if applicable -- or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Water Board pertaining to storm water discharges.

The data base shall be updated once every five years or as often as new information becomes available.

5.3 **Inventory of Existing Development for Retrofitting Opportunities**

The Permit imposes a PAAP requirement that was not contained in the previous MS4 Permit that poses a serious challenge to compliance. The PAAP provision of the permit requires:

- i. Each Permittee shall develop an inventory of retrofitting opportunities that meet the requirements of this Part VI.9.d. Retrofit opportunities shall be identified within the public right-of-way or in coordination with a TMDL implementation plan(s). The goals of the existing development retrofitting inventory are to address the impacts of existing development through regional or sub-regional retrofit projects that reduce the discharges of storm water pollutants into the MS4 and prevent discharges from the MS4 from causing or contributing to a violation of water quality standards as defined in Part V.A, Receiving Water Limitations.



- ii. Each Permittee shall screen existing areas of development to identify candidate areas for retrofitting using watershed models or other screening level tools.

- iii. Each Permittee shall evaluate and rank the areas of existing development identified in the screening to prioritize retrofitting candidates. Criteria for evaluation may include, but are not limited to:
 - 1. Feasibility, including general private and public land availability;
 - 2. Cost effectiveness;
 - 3. Pollutant removal effectiveness;
 - 4. Tributary area potentially treated;
 - 5. Maintenance requirements;
 - 6. Landowner cooperation;
 - 7. Neighborhood acceptance;
 - 8. Aesthetic qualities;
 - 9. Efficacy at addressing concern; and
 - 10. Potential improvements to public health and safety.

- iv. Each Permittee shall consider the results of the evaluation in the following programs:
 - 1. The Permittee's storm water management program: Highly feasible projects expected to benefit water quality should be given a high priority to implement source control and treatment control BMPs in a Permittee's SWMP.
 - 2. Off-site mitigation for New Development and Redevelopment: Each Permittee shall consider high priority retrofit projects as candidates for off-site mitigation projects per Part VI.D.7.c.iii.(4).(d).
 - 3. Where feasible, and at the discretion of the Permittee, the existing development retrofitting program may be coordinated with flood control projects and other infrastructure improvement programs per Part VI.D.9.e.ii.(2) below.



- v. Each Permittee shall cooperate with private landowners to encourage site specific retrofitting projects. Each Permittee shall consider the following practices in cooperating with private landowners to retrofit existing development:
1. Demonstration retrofit projects;
 2. Retrofits on public land and easements that treat runoff from private developments;
 3. Education and outreach;
 4. Subsidies for retrofit projects;
 5. Requiring retrofit projects as enforcement, mitigation or ordinance compliance;
 6. Public and private partnerships;
 7. Fees for existing discharges to the MS4 and reduction of fees for retrofit implementation.

5.4. **Challenges to Compliance with Retrofitting Opportunities**

Complying with retrofitting opportunities poses serious compliance challenges that include, but are not limited to: (1) how to develop an inventory of candidates for retrofitting that are to be identified within the right-of-way or in coordination with TMDL plans; (2) understanding what a “highly feasible retrofit new development and redevelop project” is; (3) understanding the definition of “retrofit;” (4) what criteria is supposed to be used to determine candidates for retrofit projects; and (5) what if the City cannot afford to participate in regional multi-benefit projects? Further, language contained in this provision suggests that participation is discretionary. For example, Permittees are only required to cooperate with landowners to encourage them to retrofit projects. Another challenge is legal authority. Do permittees have the legal authority to compel an existing development to do stormwater control retrofit?



Nevertheless, the City shall explore the possibility of retrofitting new and redevelopment projects based on: (1) whether the property is located in a drainage area subject to a TMDL (other than trash) that is not being met; (2) whether these properties already have infiltration controls prescribed through the SUSMP program; (3) whether the properties are located upstream of spreading grounds or other off-site infiltration controls (e.g., debris basins, infiltration/detention basins) which operate as existing sub-regional structural treatment controls; (4) if computer modeling can accurately predict that retrofitting is capable of meeting TMDL waste load allocations, (5) how many properties, based area considerations, require inclusion and over what period of time; (6) whether the City can legally require retrofitting outside of the LID/SUSMP program; and (7) whether the retrofit can be economically acceptable to the property owner (e.g., installing bio-swales).

The City will begin evaluating candidate retrofit developments once computer modeling has been completed and outfall monitoring for TMDLs and other water quality standards have been performed over the term of the permit. If outfall monitoring results in persistent exceedances for a TMDL, the City shall propose an amendment to its SWMP/WMP through the Report of Waste Discharge (ROWD).

5.5. General Industrial Activity Stormwater Permit Applicability

The PAAP calls for Permittees to obtain General Industrial Activity Stormwater Permit (GIASWP) for subject facilities. Typically, municipal Permittees are subject to GIASWP requirements if they, for example, operate a transit facility, transfer station, or landfill. The City, however, does not operate any of these or other subject industrial facilities.



5.6. Flood Control Management Projects

The PAAP requires each Permittee to assess impacts of flood management projects on receiving water quality and evaluate existing structural flood control facilities to determine if retrofitting is feasible. The City does not operate flood control management projects. This requirement appears to apply only to the Los Angeles County Flood Control District (LACFCD).

5.7. Implementation and Maintenance of BMPs

The PAAP requires a continuation of BMPs affecting various municipal maintenance operations including: vehicle and equipment washing; landscape, park, and recreational facilities maintenance; streets, roads, and parking facilities maintenance; emergency procedures; municipal employee and contractor training; and ICID (already covered under the ICID program submittal).

- *Vehicle and Equipment Washing*

The City has been implementing vehicle and equipment washing BMPs since the adoption of the 2001 MS4 Permit through the Stormwater Management Pollution Prevention Program (SWPPP) plan. The BMPs contained in the SWPPP are in keeping with the BMPs contained in Table 18 referenced in the PAAP section of the Permit and are more extensively described in the Los Angeles County Model Program for Public Agency Program (see **Appendix A-2**).

The BMPs were more specifically developed based on the model program developed by the County of Los Angeles pursuant to the 2001 MS4 permit.



The current Permit, however, does not require a SWPPP for municipal operations. Nevertheless, the City intends to update the SWPPP to reflect applicable BMPs.

With regard to vehicle and equipment washing, the City will continue to comply with the general requirements specified in the previous MS4 permit, which calls for equipping that area where vehicle washing and maintenance is performed with either a clarifier (also known as an oil/water separator) connected to the sanitary sewer. Any City facility improvement that is subject to the development planning program where vehicle or equipment washing is performed shall be required to install a clarifier. The clarifier shall also comply with an Industrial Waste Permit. The SWPPP also prohibits the use of water for any purpose that results in the discharge of pollutants to the MS4. Leaks and spills are to be cleaned using damp or dry cleaning techniques. The SWPPP shall be updated no later than June 28, 2015. Training impacted City personnel will be based on the SWPPP.

- *Landscape, Park, and Recreational Facilities Management*

This program component is applicable to all Permittees that own and operate recreational facilities. Maintenance practices at parks and recreation facilities generally include fertilizer and pesticide applications, vegetation maintenance and disposal, swimming pool chemical maintenance and draining, and trash and debris management. All of these maintenance practices have the potential to contribute pollutants to the storm drain system. If improperly managed, potential pollutants can be transported in runoff to the storm drain system and subsequently discharged to receiving waters. The purpose of the program for landscape and recreational facilities management is to make storm water quality a concern when conducting operation and maintenance activities. These potential pollutant generating



activities have been governed by BMPs specified in the City's municipal operations SWPPP, which shall be updated no later than June 28, 2015. The BMPs are based on the Los Angeles County's Model Program for *Landscape and Recreational Facilities Management* (see **Appendix A-3**).

- *Catch Basin Cleaning*

The current Permit carries over catch basin cleaning requirements contained in the 2001 MS4 Permit. All City and County catch basins are GIS mapped (see **Appendix B-1**). All City and County catch basins have been designated as Priority B catch basins, which consistently generate moderate volumes of trash and/or debris. The Permit requires such catch basins to be cleaned-out once prior to the onset of the wet season (commencing October 1) and once again during the wet season. The City contracts with the County of Los Angeles Department of Public Works to provide this service. The need to clean-out catch basins more frequently is diminished by the catch basin debris screens that have been installed in many of the City's catch basins (see **Appendix B-2**).

- *Catch Basin Stenciling*

City and County owned catch basins are stenciled with "no dumping" messaging. Before the end of the dry season (September 30), the County of Los Angeles Department of Public Works is responsible for evaluating the legibility of existing stenciling. Faded stenciling is scheduled for re-stenciling, but only during the dry season.

The City has no open channels, creeks, or urban lakes that would require no dumping signage. However, Machado Lake, which is operated by the County of Los Angeles, has such signage posted in areas of public access.



- *Trash Management*

The City occasionally puts on public events, none of which takes place in areas where trash can be disposed into the MS4. Further, many of the City's catch basins are with equipped with debris exclusion screens. Typically, community events are held the City's parks, where there are a sufficient number of trash receptacles deployed. After an event, City's recreational staff routinely picks-up any debris lying on the surface.

- *Retrofitting Catch Basins with Debris Excluders*

The Permit requires the installation of debris controls in areas that are not subject to a trash TMDL no later than four years after the effective date of the Permit (December 28, 2017). The City is not subject to this requirement because it is subject to a trash TMDL and is required to install screens in all of its catch basins by 2016.

- *Storm Drain Maintenance*

The scope of the storm drain maintenance program includes the following tasks: (1) annual visual monitoring of Permittee-owned open channels and other drainage facilities for trash and debris; (2) removal of trash and debris from open channels at a minimum of once a year prior to the wet season; (3) elimination of the discharge of contaminants during MS4 maintenance and clean-outs; and (4) proper disposal of debris and trash removal during catch basin and storm drain clean-outs. Tasks 1 and 2 are not applicable to the City. The City has no open channels, and as a mentioned, catch basins are routinely cleaned-out twice a year -- once prior to the on-set of the wet season and once during the wet season. Task 3 is unclear but appears to be related to task 4. The County is responsible for the proper



removal of trash, which means in a manner that does not cause trash to re-enter the MS4. Storm drain maintenance BMPs are referenced in **Appendix A-4**).

- *Sewer System Management*

The Permit requires the implementation of a program to control and prevent sewer releases to the MS4 to the following extent:

1. Each Permittee shall implement controls and measures to prevent and eliminate infiltration of seepage from sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4.
2. Each Permittee that operates both a municipal sanitary sewer system and a MS4 must implement controls and measures to prevent and eliminate infiltration of seepage from the sanitary sewers to the MS4s that must include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both. Implementation of a Sewer System Management Plan in accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems may be used to fulfill this requirement.
3. Each Permittee shall implement controls to limit infiltration of seepage from sanitary sewers to the MS4 where necessary. Such controls must include:
 - Adequate plan checking for construction and new development;
 - Incident response training for its municipal employees that identify sanitary sewer spills;
 - Code enforcement inspections;
 - MS4 maintenance and inspections;
 - Interagency coordination with sewer agencies; and
 - Proper education of its municipal staff and contractors conducting field operations on the MS4 or its municipal sanitary sewer (if applicable).



Tasks 1 and 2 are complied with through the City's Sewer System Management Program, pursuant to State Water Resources Control Board Order 2006-0003, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*. Task 3 is fairly easy to comply with. New developments and redevelopment projects are plan checked for conformance with **Uniform Plumbing Code** requirements pertaining to the sewer. As mentioned in the ICID program section, a **Spill Control Plan** for sewage releases has been developed, based on the **Sewer Systems Operation** component of the Los Angeles County Model Program developed in 2002 (see **Appendix A-1**). Illicit connections such as cross-connections from the sewer system to the storm drain are performed when there is reason to believe that sewage is being discharged to the MS4. The City also notifies the County of Los Angeles Flood Control District in the event of sewage releases to the MS4 that can enter a flood control channel or other receiving water.

- *Permittee Owned Treatment Control BMPs*

The Permit requires the City to implement an inspection and maintenance program for its treatment control BMPs. The only treatment controls the City is responsible for at this time are catch basin debris excluders. The City inspects the excluders once a year prior to the onset of the wet season and once during the wet season. The inspection routine consists of looking for debris trapped on screens and checking the retracting mechanisms for obstructions that could prevent them from opening and closing. The debris is removed and properly disposed of in the same manner as debris removed from catch basins during clean-outs.

5.8. **Streets, Roads, and Parking Facilities Maintenance**

- *Street Sweeping Frequency*



As was the case with the previous MS4 Permit, the current Permit requires street sweeping frequency based on a priority scheme ranging from A through C according to the table below.

Table I – Prioritized Street Sweeping

Priority	Trash Generation	Required Street Sweeping Frequency
A	High Volume	Twice a month
B	Moderate	Once a month
C	Low	Once a year

The City exceeds the requirement for Priority A street segments because it sweeps all of its streets at least once a week.

- *Road Work*

Street and road construction work are pollutant generating activities that have the potential to be flushed by runoff or deposited into the MS4. This includes such projects as roadbed, street paving, repaving, patching, dig-outs, or resurfacing roadbed surfaces. These activities generate pollutants that have the potential to enter the MS4 -- activities such as grinding, which generates asphaltic particulates; paving, which involves the use of asphaltic or concrete material; and stripping, which involves the use of paint and other chemicals – all of which can enter the MS4 during a storm event or can be discharged to it by wind or vehicular activity. The primary BMP is catch basin inlet protection (see development construction BMPs).

To control pollutants associated with these activities, the MS4 Permit requires each Permittee to implement the following BMPs to the extent applicable:



- Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions.
- Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat;
- Prevent the discharge of release agents including soybean oil, other oils, or diesel into the MS4 or receiving waters.
- Prevent non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Cover the “cold-mix” asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray during grinding.
- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near MS4 or receiving waters.
- Protect stockpiles with a cover or sediment barriers during a rain.

Appendix A-5, *Streets and Road Maintenance* provides additional BMP-related information. **Section Three, Development Construction Program**



also contains similar BMPs for roadway work applicable to private and public construction projects.

- *Parking Facilities Maintenance*

The MS4 Permit carries-over from the previous Permit the requirement for municipally owned and operated parking facilities, which has remained the same:

Permittee-owned parking lots exposed to storm water shall be kept clear of debris and excessive oil buildup and cleaned no less than 2 times per month and/or inspected no less than 2 times per month to determine if cleaning is necessary. In no case shall a Permittee-owned parking lot be cleaned less than once a month.

Typically, this requirement has been met by deploying street sweepers to subject parking lots and structures at least once a month (see **Appendix A-6, Parking Facilities Management**).

- *Emergency Procedures*

The MS4 Permit provides for a waiver in the event of an emergency. The Permit does not, however, explain what constitutes an emergency, nor does it explain what the waiver exactly does – specifically what MS4 Permit requirement is waived during the undefined emergency? More information is needed in order to understand how and why the City needs to comply with this provision. **Appendix A-7** contains Emergency Procedures related compliance information.

- *Municipal Employee and Contractor Training, Pesticide Management*

The MS4 permit calls for Permittees, no later than 1 year after the Permit's adoption and annually thereafter before June 30th, to train all



employees and contractors who use or have the potential to use pesticides or fertilizers (whether or not they normally apply these as part of their work). Training is to include: (1) potential for pesticide-related surface water toxicity; (2) proper use, handling, and disposal of pesticides; (3) least toxic methods of pest prevention and control, including integrated pest management; and (4) reduction of pesticide use.

The City has been complying with this training requirement for impacted employees since 2002. Annual Public Agency training is provided to City parks and recreation personnel, as well as to personnel engaged in storm drain, sewer, and vehicle/equipment operations and maintenance. Individuals responsible for applying pesticides, herbicides, fungicides, and other products necessary to landscape maintenance are required to receive training in their proper use and disposal. They are also prohibited from using such products before impending storm events. Beyond this, impacted personnel are made aware that certain chemical products (e.g., DDT and Diazinon) are federally banned and any remaining inventory must be disposed of immediately.

Most important, impacted personnel are informed that although chemical products are necessary to landscape maintenance, they are toxic pollutants that are harmful to receiving water quality. Even fertilizer poses a threat to water quality. Nutrients contained in chemical and organic fertilizer can have an adverse impact on aquatic life by promoting eutrophication -- a process that causes the growth of vegetative blooms in an aquatic system such as lake, river, or ocean. The result is hypoxia, which depletes oxygen in water and, as a consequence can kill fish and other aquatic life by oxygen starvation.

The Permit also requires individuals who are contracted to apply chemical products to abide by use, storage, storage cautions that are



specified on the product and Material Safety Data Sheets (MSDS). Some products, such as Roundup™, require certification for municipal and contractor applicators. The City does not employ outside contractors for landscape services.

5.9 Illicit Discharge Source Investigation and Elimination

The ICID is already addressed and in **ICID Program Section IV** and in **Development Construction Program Section III**, which addresses roadway construction and other activities that have the potential to cause illicit discharges or create illicit connections.

5.10 Implementation Schedule (Milestones)

Table V below provides compliance milestones for tasks associated with the PAAP.

Table V – Implementation Schedule (Milestones)

Task	Due Date
<ul style="list-style-type: none"> PAAP Submittal 	June 28, 2014
<ul style="list-style-type: none"> PAPP Implementation 	Currently being implemented as a carry-over requirement from the previous MS4 Permit
<ul style="list-style-type: none"> Training 	Prior to June 20, 2015
<ul style="list-style-type: none"> Public Agency Inventory 	September 28, 2015
<ul style="list-style-type: none"> Preparation of an ICID Standard Operating Procedures 	Prior to June 20, 2015
<ul style="list-style-type: none"> Municipal Stormwater Pollution Prevention Plan (SWPPP) Update 	Prior to June 20, 2015



Appendix A

Public Agency BMPs from 2002 Los Angeles County Public Agency Program



Appendix A-1

Section One: Sewer System Operations



Appendix A-2

Section Three: Vehicle Maintenance, Material Storage, and Facilities Management



Appendix A-3

Section Four: Landscape and Recreational Facilities Management



Appendix A-4

Section Five: Storm Drain Operation & Management



Appendix A-5

Section Six: Streets and Roads Maintenance



Appendix A-6

Section Seven: Parking Facilities Management



Appendix A-7

Section Nine: Emergency Procedures



Appendix B

Catch Basin Maps



Appendix B-1

Catch Basin Location Map



Appendix B-2

Catch Basin Debris Screens Location Map

(to be added later)



Section Six: Industrial and Commercial Facilities Program

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Section Six Industrial and Commercial Facilities Program

6.0 Summary

The MS4 Permit continues the Industrial and Commercial Facilities Program (ICFP) that was initiated under the 2001 MS4 Permit. Essentially, the ICFP requires inspections for certain categories of industrial and commercial facilities. The industrial facilities have been identified by stormwater regulations and are referred to as Phase I facilities. These facilities require coverage under a *General Industrial Activity Stormwater Permit* (GIASWP) issued by the State Water Resources Control Board. The purpose of this type of inspection visits for these facilities is twofold: (1) to determine if they are implementing appropriate BMPs in accordance with the City's stormwater ordinance and; (2) to inform industrial facility operators that are not covered under a GIASWP that they are required by the Clean Water Act and by the City's stormwater ordinance to obtain one. The commercial facilities that require inspections twice during the 5-year term of the Permit include: retail gasoline outlets (RGOs); automotive repair shops; restaurants (stand alone); and nurseries. The purpose of the commercial inspection visits is also twofold: (1) to evaluate compliance with BMPs specified in the City's stormwater ordinance; and (2) to verify compliance with SUSMP post-construction runoff control requirements.

The objective of the ICFP is to require subject facilities to comply with tasks that are expected to result in: (1) the detection and elimination of illicit discharges and connections to the MS4; (2) the reduction of pollutants in stormwater discharges from the subject facilities to the MS4 to the maximum extent practicable (MEP); and (3) the prevention of



discharges from the facilities that cause or contribute to a violation of receiving water limitations.¹ The requisite tasks include: (1) identifying and tracking subject facilities using GIS and a data base; (2) inspecting them periodically (twice during the term of the Permit); and (3) educating facility personnel to be aware that pollutants generated from their businesses can degrade water quality, and how they can be managed to protect receiving water quality through the implementation of BMPs.

6.1 Identifying and Tracking Facilities

The City will use the same methods for identifying and tracking subject commercial and industrial facilities as it had under the previous permit. Identifying subject facilities was accomplished by extracting them from the City's business license data base using standard industrial classification (SIC) codes or the North American Industrial Classification System (NAICS) that type each subject facility. Tables I and II below identify these facilities by SIC.

Table I – Subject Industrial Facilities

Facility Categories	Standard Industrial Classification Code
Sub-chapter "N" Facilities	0211 (feedlots); 4911 (steam electric generation); 2873, 2874, and 2875 (fertilizer manufacturing); 3241 (cement manufacturing); 2911 (petroleum refineries); 2810-2819 (phosphate manufacturing); 1220-1221 (coal mining); 1474, 1479, and 4181 (mineral mining and processing); 1011, 1031, 1044, 1061, 1094, 1099, 1459, and 1479 (ore mining and dressing)

¹The City cannot meet this requirement because it has no ability to control discharges from either industrial or commercial facilities to prevent receiving water limitation violations. To do so would require monitoring of each and every subject commercial and industrial facility at the point of discharge to the MS4. The MS4 permit does not confer such authority on Permittees for this purpose. In the case of industrial facilities, the GIASWP controls and allows such facilities to exceed receiving water limitations, provided that they comply by GIASWP requirements, which includes the implementation of a Stormwater Pollution Prevention Plan (SWPPP) and a Monitoring Program Plan (MRP). The City is preempted from requiring GIASWP covered facilities to comply with TMDLs or other water quality standards.



Manufacturing Facilities	2400 - 2499 (except 2434); 2600 (except 2650-2699 and 2670-2679); 2800 (except 2830-2839 and 2850-2859); 2900-2999; 3110 - 3119; 3200-3299 (except 3230-3239; 3300-3399; 3441; and 3730-3739
Oil and Gas/Mining Facilities	1000-1400
Landfills	4953
Hazardous Waste Treatment, Storage or Disposal Facilities	4953
Recycling Facilities	5015 and 5093
Transportation Facilities	4000 - 4099; 4100 - 4199; 4200 - 4299; 4300 - 4399, 4400 - 4499; 4500 - 4599; and 5171
Sewage or Wastewater Treatment Works	4952
Other Manufacturing Facilities (where industrial materials, equipment or activities are exposed to storm water)	2000 - 2099; 2100 - 2199, 2200 - 2299; 2300 - 2399; 2434; 2500-2599; 2650- 2659; 2670-2679; 2700-2799; 2830- 2839; 2850-2859; 3000-3099; 3100-3199 (except 3110 - 3119); 3230-3239; 3400-3499 (except 3441); 3500-3599; 3600 - 3699; 3700 - 3799 (except 3730 - 3739); 3800-3899; 3900 - 3999; and 4221-4225

Table II – Commercial Facilities

Commercial Categories	Standard Industrial Classification Code
1. Automotive Service Facilities	5013, 5014, 5541, 5511, 7532-7534, or 7536-7539 and, conditionally, 5013, 5014, 5541, 5511 if there are outdoor activities materials that may be exposed to storm water (this requires an initial visit to make such a determination) 7542 (carwashes)
2. Restaurants	5812
3. Retail Gas Stations	5541 (included above, under automotive facilities as well)
4. Nurseries	519306



The data base from business licensing is “loaded” into an Excel spreadsheet that was developed by the State Water Resources Control Board several years ago. It contains data fields that can accommodate the following information that the MS4 permit requires:

1. Name of facility
2. Name of owner/ operator and contact information
3. Address of facility (physical and mailing)
4. North American Industry Classification System (NAICS) code
5. Standard Industrial Classification (SIC) code
6. A narrative description of the activities performed and/or principal products produced
7. Status of exposure of materials to storm water
8. Name of receiving water
9. Identification of whether the facility is tributary to a CWA § 303(d) listed water body segment or water body segment subject to a TMDL, where the facility generates pollutants for which the water body segment is impaired.
10. Ability to denote if the facility is known to maintain coverage under the State Water Board’s General NPDES Permit for the Discharge of Stormwater Associated with Industrial Activities or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Water Board pertaining to storm water discharges.
11. Ability to denote if the facility has filed a No Exposure Certification with the State Water Board.

The spreadsheet is located in **Appendix A**.

Once the ICFP data base of the inventoried facilities has been completed, the City will update it annually using business licensing data base. New facilities subject to the ICFP will be identified during the PLDP/SUSMP review and added to the ICFP data base.



6.2 Identifying Phase I Industrial Facilities Requiring GIASWP Coverage

Identifying Phase I industrial facilities in the City requires comparing the business license data that contains subject facilities by SIC/NAICS codes against the State Board's GIASWP data base. An industrial facility that is not listed in the State Board's data base will be flagged on the ICFP data base to be used by inspection personnel. The owner/operator will be informed by City inspection personnel that the facility must be covered under a GIASWP. The owner/operator will be given 6 months to obtain coverage. The City shall also notify the Regional Board that the facility lacks coverage and has provided it with this time frame to come into compliance.

Facilities that are subject to the GIASWP, but do not have outdoor exposure to stormwater, will be informed of the No Exposure Certification (NOC) option (see **Appendix B**). A facility qualifies for the NOC if: (1) it can demonstrate that it does not use, store, or handle pollutant materials outdoors; and (2) it has obtained coverage under the GIASWP. The benefit of the NOC to an industrial facility is that it waves the sampling and analysis requirement, which is a Monitoring and Reporting Program (MRP) requirement of the GIASWP.

The GIASWP facilities are also subject to Regional Board inspections. To avoid duplicative efforts, the MS4 Permit allows Permittees to exclude facilities from inspections if they already have been or will be inspected by the Regional Board. This will be determined by examining the State Board's GIASWP data base. The City's ICFP data base will reflect this information.



6.3 Identifying Commercial Facilities

The City's business license data base will also be used to cull-out subject commercial facilities to create the inspection data base.

6.4 Educating, Inspecting, and Ensuring Compliance

City or contract personnel will perform the following tasks as part of their inspection routine to comply with ICFP requirements:

- *Educate the owner/operator of the purpose of the site inspection visits.*

The owner/operator will be informed that the visits are necessary to determine if the business is complying with the City's stormwater ordinance and, if applicable, the State Board's GIASWP. Inspection personnel shall also explain that the ordinance and GIASWP are intended to require businesses to reduce pollutant discharges in stormwater from their facilities, which are potentially harmful to water quality. Written public education materials specific to industrial and commercial facilities shall also be distributed. The materials contain information about BMPs specific to their type of facility, along with an explanation of how the BMPs protect water quality (see **Appendix C-1**).

Table III - Check List for Phase I Industrial Facilities

1. All prohibited non-storm water discharges have been eliminated or otherwise permitted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are materials or equipment cleaned outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are wash or rinse waters generated on-site?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are there any discharges (other than storm water) entering the storm drain system?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Do any drains under roofed areas discharge to the storm drain system?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Have there been any accidental spills into the storm drain system in the last year?	Yes <input type="checkbox"/>	No <input type="checkbox"/>



<ul style="list-style-type: none"> • Are any process waste-waters disposed of outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2. All significant materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any materials stored outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any materials handled outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any outdoor loading docks? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any above ground liquid or non-liquid storage tanks outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any outdoor loading/unloading operations? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any products or by-products manufactured or used outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any waste products manufactured or used outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any outdoor waste disposal areas? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Is any process wastewater disposed of outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there any drums, pallets, or containers outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are materials handled or stored on immediate access roads or railways? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are vehicles maintained or fueled outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are any materials stored or disposed of in outdoor ponds or impoundments? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are materials stored outdoors temporarily? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Have there been any spills or leaks outdoors in the last year? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Are there areas where materials remain exposed to storm water from past industrial activity? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • Does any manufacturing take place outdoors? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>



3. All industrial activities and industrial equipment are not exposed to stormwater or unauthorized non-stormwater discharges	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are any material handling vehicles (such as forklifts) parked outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is permanent industrial equipment located outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is portable industrial equipment used outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Do any material handling vehicles (such as forklifts and trucks) or outdoor industrial equipment come into contact with materials?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there any un-housed rooftop equipment (such as air conditioners, scrubbers, etc.)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4. There is no exposure of storm water to significant materials associated with industrial activities through direct or indirect pathways such as from industrial activities that generate dust and particulates.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are there any emissions of dust or particles from stacks or air exhaust systems?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are there any emissions of dust or particles from other outlets such as windows, loading docks, etc.?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Have there been any spills or leaks associated with maintenance of stacks or air exhaust systems?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**Table IV - Check List for
Retail Gasoline Outlets and Automotive Repair Facilities**

1. All prohibited non-storm water discharges have been eliminated or otherwise permitted (addresses illicit discharges/connections)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are materials or equipment cleaned outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are any materials stored outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>



• Are wash or rinse waters generated on-site?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are there any discharges (other than storm water) entering the storm drain system?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Do any drains under roofed areas discharge to the storm drain system?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Have there been any accidental spills into the storm drain system in the last year?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are any process waste waters disposed of outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2. Stormwater Pollution Prevention		
• Does facility dispense fuel?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• If fueling is provided, is the fueling area covered with a canopy		
• Is there evidence of staining on fuel pumps and/or fueling pad?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are vehicle maintenance/repair activities conducted exclusively indoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there a potential for stormwater contact with pollutant materials stored outdoors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there a clarifier connected to the sewer system?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there a need for a clarifier (based on observations of oil, grease, and other pollutant materials lying on outdoor surfaces that can be exposed to stormwater and conveyed to the MS4)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are trash bins stationed within an enclosed area and equipped with lids; and are trash receptacles covered with lids?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there trash lying on the facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>



Table V - Check List for Restaurants

• Is cooking grease stored outdoors, and if so, is it properly stored?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are trash receptacles located on the property?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there evidence of floor mats, utensils, etc., washed outdoors that have the potential to enter the MS4 through an on-site catch basin or sheet flow?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is trash lying on outdoor surface areas?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are trash bins located in an enclosed area and equipped with lids?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are the lids on the trash bins closed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are trash receptacles equipped with lids and are they in closed positions.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is the restaurant equipped with a grease trap or interceptor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is the parking area free of trash, oil, grease, and other leakage?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there evidence of an illicit connection or discharge?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Table VI - Nurseries

• Is the nursery located adjacent to a flood control channel or a water body (receiving water)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Are materials containing pollutants (fertilizers, herbicides, pesticides, etc.) stored outdoors and exposure to stormwater contact (aerial and ground-traveling)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there any trash or debris lying on nursery grounds that can be transported to the MS4 and/or receiving water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
• Is there the potential for irrigation water to be discharged to the MS4 and/or receiving water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>



<ul style="list-style-type: none"> Is the receiving water 303(d) listed for impairments due to toxicity or nutrients? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> Are trash receptacles or bins located on site? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> Are trash receptacles or bins equipped with lids that are in a closed position? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> Is the parking area free of trash, oil, grease, and other leakage? 	Yes <input type="checkbox"/>	No <input type="checkbox"/>

- Inspections*

The City's inspection routine will be the same as it was under the previous MS4 Permit – twice for subject industrial and commercial facilities during the 5 year term of the Permit. The first round shall be initiated no later than December 28, 2015, two years after the effective date of the MS4 permit. Inspection personnel will use the checklists in the tables below to evaluate each categorical facility. A minimum period of six months is required before the second round of inspections may begin. The results of the inspections will be provided to the owner/operator once the inspection is completed. Issues found at the industrial facility will be communicated verbally and in writing through a copy of the inspection form. The inspector will also provide an information hand-out explaining the GIASWP program and its requirements. The hand-out also contains BMPs that are required of all businesses in the City that are mandated under the City's municipal code (see **Appendix C-1**). Owners and operators of RGOs and automotive-related repair facilities will also be informed of the results of the inspection. If deficiencies are noted, a copy of the inspection will be provided along with appropriate BMP hand-outs (see **Appendix C-2** for RGOs and auto-related businesses and **C-3** for Restaurants). A hand-out has not been developed for nurseries, but one will be



prepared for them prior to December 28, 2015. The inspector shall also notify the owner/operator if the facility drains to an Environmentally Sensitive Area (ESA) or to an area that is subject to valid TMDL. The purpose of this information is to further sensitize the owner/operator of the importance of stormwater management.

It should be noted that the BMPs contained in the hand-outs are in keeping with the source control BMPs contained in the MS4 Permit listed below in the table.

Table VII - Source Control BMPs at Commercial and Industrial Facilities

Pollutant-Generating Activity	BMP Narrative Description
<ul style="list-style-type: none"> • Unauthorized Non-Storm-water Discharges 	Effective elimination of non-storm water discharges
<ul style="list-style-type: none"> • Accidental Spills/ Leaks 	Implementation of effective spills and leaks prevention and response procedures
<ul style="list-style-type: none"> • Vehicle/ Equipment Fueling 	Implementation of effective fueling source control devices and practices
<ul style="list-style-type: none"> • Vehicle/ Equipment Cleaning 	Implementation of effective equipment/ vehicle cleaning practices and appropriate wash water management practices
<ul style="list-style-type: none"> • Vehicle/ Equipment Repair 	Implementation of effective vehicle/ equipment repair practices and source
<ul style="list-style-type: none"> • Outdoor Liquid Storage 	Implementation of effective outdoor liquid storage source controls and practices
<ul style="list-style-type: none"> • Outdoor Equipment Operations 	Implementation of effective outdoor equipment source control devices and other practices
<ul style="list-style-type: none"> • Outdoor Storage of Raw Materials 	Implementation of effective source control practices and structural devices
<ul style="list-style-type: none"> • Storage and Handling of Solid Waste 	Implementation of effective solid waste storage/ handling practices and appropriate control measures
<ul style="list-style-type: none"> • Building and Grounds Maintenance 	Implementation of effective facility maintenance practices



Pollutant-Generating	BMP Narrative Description
<ul style="list-style-type: none"> Parking/ Storage Area Maintenance 	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices
<ul style="list-style-type: none"> Storm water Conveyance System Maintenance Practices 	Implementation of proper conveyance system operation and maintenance protocols
<ul style="list-style-type: none"> Pollutant-Generating Activity 	BMP Narrative Description from Regional Water Board Resolution No. 98-08
<ul style="list-style-type: none"> Sidewalk Washing 	Remove trash, debris, and free standing oil/grease spills/leaks (use absorbent material, if necessary) from the area before washing; and use high pressure, low volume spray washing using only potable water with no cleaning agents at an average usage of 0.006 gallons per square feet of sidewalk area
<ul style="list-style-type: none"> Street Washing 	Collect and divert wash water to the sanitary sewer – publically owned treatment works (POTW)

At the conclusion of the first round of inspections, the City will decide whether it will be necessary to conduct a business outreach program to industrial and/or commercial facilities that would benefit from class-room style training on MS4 Permit requirements and BMPs. If necessary, the City could require mandatory training for those businesses that have been cited for non-compliance with the City’s stormwater ordinance for failing to comply with BMP requirements.

- Enforcement*

The City shall implement a progressive enforcement program vis-à-vis non-compliant facilities as it had under the previous MS4 Permit. Enforcement shall begin with a written notice of the deficiency – unless it is a serious issue such as an illicit discharge of hazardous or toxic pollutants to



the MS4, in which case the discharge must be halted immediately. And, depending on the severity of the discharge, the City could opt for citation issuance without progressive enforcement. Generally, the City will provide the non-compliant facility time to comply if, for example, the issue is improper outdoor storage of materials. If the facility fails to comply after being given reasonable notice, the City shall issue a misdemeanor citation through its code enforcement unit or Sheriff's Department. The City could also threatened revocation of the facility's business license. If illegal dumping is the issue which would necessitate cost-recovery to the City for clean-up costs, the City may need to resort to judicial action if a citation action fails. The City established legal authority for requiring compliance ICFP requirements in 2002.

6.5 Implementation Schedule (Milestones)

The table below provides a schedule for implementing the Illicit Connection and Discharge and Detection and Elimination Program.

Table VIII – Implementation Schedule (Milestones)

Task	Due Date
<ul style="list-style-type: none"> ICFP Submittal 	June 28, 2014
<ul style="list-style-type: none"> ICFP Implementation 	Data base to be developed by November of 2015 Inspections to begin by December of 2015



Appendix A

ICFP Data Base

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Appendix B

No Exposure Certification

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Appendix C-1

BMP Hand-out to GIASWP Facilities

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Appendix C-2

BMP Hand-out to Restaurants

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Appendix C-3

BMP Hand-out to RGOs and Auto- Repair Shops

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City of Carson Industrial and Commercial Inspection Data Base

A	B	C	D	E	F	G	G	G
Facility Name	Owner or Operator	Contact Info	Facility Type	Street Number	Street Direction	Street Name	City	Street Name
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								



City of Carson Industrial and Commercial Inspection Data Base

A		B		C	D	E	F	G	
SIC/NAICS Classification		Facility Description	GIASWP	No Exposure Cert	Materials Exposure	Water Body Segment	303(d) TMDLS	Blank	Blank
1									
2									
3									
4									
5									
6									
7									
8									
9									
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Section Seven: **Public Information and Participation Program**

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Section Seven Public Information and Participation Program

7.0 Summary

The Public Information and Participation Program (PIPP) is a carry over from the previous MS4 Permit. The requirements under the current MS4 Permit have changed only slightly. As was essentially the case under the previous MS4 Permit, the purpose of the PIPP is to:

- 1. To measurably increase the knowledge of target audiences about the MS4 permit, the adverse impacts of stormwater pollution on receiving waters, and potential solutions to mitigate impacts.*
- 2. To measurably change the waste disposal and stormwater pollution generation behavior of target audiences by developing and encouraging the implementation of appropriate alternatives.*
- 3. To invoice and engage a diversity of socio-economic groups and ethnic communities in Los Angeles County to participate in mitigating the impacts of storm water pollution.*

These objectives are to be accomplished through the implementation of one or more of the following approaches: (1) participating in a County-wide PIPP; (2) participating in one or more Watershed Group sponsored PIPPs; and/or (3) individual participation within its jurisdiction. The Permit requires Permittees to designate a PIPP coordinator, along with contact information. In the event that the City staff person or consultant assigned to this role changes, the Permit requires contact information for the new PIPP coordinator to be made available 30 days after the change occurs.

The City intends to participate in a County-wide PIPP and implement its own PIPP. The County's PIPP is under development and is likely to produce new outreach materials including pamphlets, brochures, and media releases that will address watershed/sub-



watershed TMDLs. While the County is developing its revised PIPP, the City will continue to implement its program which is based on the County's model PIPP that was developed in 2002 (see **Appendix A**).

7.1 **Public Participation**

This program task must be implemented regardless of which of the aforementioned approaches a Permittee chooses. It is also a task specified in the previous MS4 permit and PIPP program. Public Participation focuses on public reporting of the following: (1) clogged catch basins or catch basins that are overflowing with trash; (2) faded or missing *no dumping messaging* on catch basins; (3) illicit discharges and illicit connections; and (4) general stormwater and non-stormwater pollution prevention information. To this end, the Permit allows individual Permittees to use the **1-888-CLEANLA** hotline as a general public reporting contact number.

The City has and will continue to use both the **1-888-CLEANLA** number and its own reporting number (**310) 847-3520**). These numbers are listed on all outreach materials and will be on the City's web site. The Permit also requires this information to be included under the government section of the telephone directory. This requirement has been in effect since the previous MS4 Permit was adopted in 2002. Since then, information technology has expanded making telephone directories obsolete. The City would prefer to rely on reporting information contained on its public education materials.

The City's **Stormwater Water Program Manager**, who operates under the City's Public Works Department, is responsible for handling and responding illicit discharge/connection concerns and responding to questions regarding runoff pollution prevention from the public. The



names of staff that will be responsible for responding to public reports will be posted on the City's website (<http://ci.carson.ca.us>). The City Code Enforcement is also charged with the responsibility of responding to illicit discharges and connections reported by the public or detected during its routine code enforcement duties.

The current MS4 Permit also requires Permittees to participate in community events to promote pollution prevention awareness. Such events include but are not limited to educating residents and residential sub-groups (viz., culturally diverse communities) on stormwater pollution prevention. The City has been sponsoring various community events since the adoption of the 2001 MS4 Permit. Recently, the City sponsored a *Dominguez Channel Clean-up Day* in partnership with the Adopt-A-Stormdrain Foundation and the Goodyear Corporation (see **Appendix B**). The City also hosts periodic oil recycling programs funded by a State oil grant that inform citizens of the need to dispose of oil through a recycling program and not to a component of the MS4.

7.2 Residential Outreach Program

The MS4 Permit requires the following to be incorporated into its residential outreach program:

1. Stormwater pollution prevention public service announcements and advertising campaigns.
2. Public education materials in English and Spanish that include information on the proper handling (i.e., disposal, storage and/or use) of:
 - i. Vehicle waste fluids



- ii. Household waste materials (i.e., trash and household hazardous waste, including personal care products and pharmaceuticals)
- iii. Construction waste materials
- iv. Pesticides and fertilizers (including integrated pest management practices [IPM] to promote reduced use of pesticides)
- v. Green waste (including lawn clippings and leaves)
- vi. Animal wastes

The City has already developed outreach materials that address the foregoing pollution issues. The MS4 permit also calls for distributing information materials to commercial businesses below:

- i. Automotive parts stores
- ii. Home improvement centers, lumber yards, hardware stores/paint stores
- iii. Landscaping and gardening centers
- iv. Pet shops and feed stores

The City has already developed runoff pollution prevention information and BMPs for automotive parts stores as part of its Industrial and Commercial Facilities Program (ICFP). It has not yet developed similar outreach materials for home improvement centers; lumber yards; hardware stores; paint stores; landscaping and gardening centers; pet shops; and feed stores. It should be noted that with the exception of auto parts stores, none of these businesses is subject ICFP inspections. Nevertheless, the City anticipates working cooperatively with the County Watershed Management Division to develop these materials in the future.



7.3 Runoff Pollution Prevention Web-site

The City's web-site is already used to promote runoff pollution prevention awareness. The City intends to augment its use for this purpose by making the following enhancements to it:

- Provide a listing of all public education outreach materials that are currently in hard-copy form. This includes BMP pamphlets for residents that are contained in **Appendix C** herein and hand-outs for industrial and commercial facilities contained in the **ICFP** and (see **Appendices C1, C-2, and C-3**). New materials developed in conjunction with other Permittees and the County of Los Angeles Watershed Management Division will also be posted as they become available.
- Provide a specific section devoted to the ICID Program and the need for the Carson public to report dumping and illicit discharges to the MS4. An ICID reporting form will also be uploaded onto the ICID Program section to enable on-line reporting.
- Provide TMDL information to promote public awareness of pollution issues for Dominguez Channel, Machado Lake, and the Los Angeles River.
- Provide Planning and Land Development (PLDP) and SUSMP related information for developers and contractors. This includes guidelines, evaluation forms, LID references (including *the County's LID Standards Manual and USEPA's Green Street Handbook*).
- Provide outreach materials for public and private schools in the City.
- Announce clean-up days for the Dominguez Channel and other events that promote runoff pollution prevention awareness.
- List the County-wide reporting hotline number **(1-888-CLEANLA)** and the City's reporting number.
- Enhance the City's GIS program to enable access to maps of its storm drain system, catch basins, catch basins equipped with debris screens, outfall and in-stream monitoring locations, illicit discharges



and connections locations, new development and redevelopments where LID and other controls have been and will be required.

7.4 Outreach to Educational Facilities

The MS4 Permit continues to require outreach to public and private schools. Under the previous MS4 Permit, Permittees met this requirement by joining with the County, which had developed the *Environmental Defenders Program* for schools. The City plans to joint venture with the County and other cities to develop a similar program for schools within its jurisdiction. It is expected that the County will have a plan to implement this program some time before June of 2015. The City expects that the County’s program will include “Erase the Waste” educational program and the California Environmental Education Interagency Network (CEEIN) to implement this requirement.

7.5 Outreach to the City’s Culturally Diverse Community

The MS4 Permit require the use of “effective strategies to and involve ethnic communities in storm water pollution prevention through culturally effective methods.” It should be noted that the Carson Community is very culturally diverse as illustrated below.

Table I – Ethnic Breakdown

Ethnic Group	Percentage of Population
• African American	23.3%
• Asian	25.2%
• Hispanic	38.6%
• Native Hawaiian & Other Pacific Islander	2.5%



• White	7.7%
• Other	.07%

The City sees no need to resort to cultural effective methods to these groups, which are English-speaking and are either American or are legal immigrants. However, some residents who are Hispanic have limited English speaking skills and, therefore, require outreach materials to be in Spanish. The City has addressed the needs of the Hispanic Community by providing outreach materials in Spanish and will continue to do so as more outreach materials are developed.

7.6 Implementation Schedule (Milestones)

The table below provides a schedule for implementing the PIPP.

Table V – Implementation Schedule (Milestones)

Task	Due Date
• PIPP Submittal	June 28, 2014
• PIPP Implementation	June 28, 2014
• Participation in Revised County-wide PIPP Program	Prior to June 28, 2015



Appendix A

County of Los Angeles
Department of Public Works
Storm Water/Urban Runoff
Public Education Model Program



Appendix B

Dominguez Channel Clean-up Day Press Release

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Appendix C

Residential Outreach Materials

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