ATTACHMENT A

ORDER NO. R4-2014-0024-A01
AMENDING

ORDER NO. R4-2014-0024
NPDES PERMIT NO. CAS004003

WASTE DISCHARGE REQUIREMENTS FOR MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) DISCHARGES FROM THE CITY OF LONG BEACH

Revisions to Order No. R4-2014-0024 and Attachments E and F are shown in underline/~~strikeout~~ text.

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Table 4. Administrative Information

This Order was adopted by the California Regional Water Quality Control Board, Los Angeles Region on:	February 6, 2014
This Order becomes effective on:	March 28, 2014
This Order was amended by the California Regional Water Quality Control Board, Los Angeles Region on:	September 8, 2016
This Order expires on:	March 28, 2019
According to Title 23, Division 3, Chapter 9 of the California Code of Regulations and to Title 40, Part 122 of the Code of Federal Regulation, the City of Long Beach shall file a Report of Waste Discharge as application for new waste discharge requirements no later than:	180 days prior to the expiration date of this Order: September 29, 2018
According to Section 2235.4 of Title 23 of the California Code of Regulations, the terms and conditions of an expired permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on continuation of the expired permit are complied with. Accordingly, if a new Order is not adopted by the expiration date above, then the City of Long Beach shall continue to implement the requirements of this Order until a new one is adopted.	

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all its attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on February 6, 2014; and amended by the California Regional Water Quality Control Board, Los Angeles Region, on September 8, 2016.

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Samuel Unger, Executive Officer

Revisions to Part VIII.O of Order No. R4-2014-0024

O. Los Angeles River Trash TMDL

1. The City of Long Beach shall comply with the final water quality-based effluent limitation of zero trash discharged to the Los Angeles River no later than September 30, 2016 and every year thereafter.
2. The City of Long Beach shall comply with interim and final water quality-based effluent limitations for trash discharged to the Los Angeles River, per the schedule below:

Table 37. Los Angeles River Watershed Trash Effluent Limitations per Storm Year [41] (gallons of uncompressed Trash)

	Baseline	2013 (20%)	2014 (10%)	2015 (3.3%)	2016[41] (0%)
Long Beach	87135	17427	8713.5	2875.46	0

a. **Effluent Limitations**: Permittees shall comply with the interim and final WQBELs for trash as follows:

Table 1. Los Angeles River Watershed Trash Effluent Limitations per Storm Year[42] (pounds of drip-dry trash)

	Baseline	2013 (20%)	2014 (10%)	2015 (3.3%)	2016[42] (0%)
Long Beach	149759	29951.8	14975.9	4942.05	0

b. **Compliance**

i. Pursuant to California Water Code section 13360(a), the City of Long Beach may comply with the trash effluent limitations using any lawful means. Such compliance options are broadly classified as *full capture*, *partial capture, institutional controls,* or *minimum frequency of*

[41] Permittees shall achieve their final effluent limitations of zero trash discharge for the 2015-2016 storm year and every year thereafter.

[42] Permittees shall achieve their final effluent limitations of zero trash discharge for the 2015-2016 storm year and every year thereafter.

assessment and collection, as described below, and any combination of these may be employed to achieve compliance:

(1) Full Capture Systems:

(a) The Basin Plan authorizes the Regional Water Board Executive Officer to certify *full capture systems*, which are systems that meet the operating and performance requirements as described in this Order, and the procedures identified in "Procedures and Requirements for Certification of a Best Management Practice for Trash Control as a Full Capture System."[43]

(b) The City of Long Beach is authorized to comply with the effluent limitations through certified *full capture systems* provided the requirements of paragraph (c), immediately below, and any conditions in the certification, continue to be met.

(c) The City of Long Beach may comply with the effluent limitations through progressive installation of *full capture systems* throughout their jurisdictional areas until all areas draining to the Los Angeles River system are addressed. For purposes of this Order, attainment of the effluent limitations shall be conclusively presumed for any drainage area to the Los Angeles River (and its tributaries), where certified *full capture systems* treat all drainage from the area, provided that the *full capture systems* are adequately sized and maintained, and that maintenance records are up-to-date and available for inspection by the Los Angeles Regional Board.

(d) The City of Long Beach shall be deemed in compliance with its final effluent limitation if the City of Long Beach demonstrates that all drainage areas under its jurisdiction and/or authority are serviced by appropriate certified *full capture systems* as described in paragraph (1)(c).

(e) The City of Long Beach shall be deemed in compliance with its interim effluent limitations, where applicable:

(i) By demonstrating that *full capture systems* treat the percentage of drainage areas in the watershed that corresponds to the required trash abatement.

(ii) Alternatively, the City of Long Beach may propose a schedule for installation of *full capture systems* in areas under its jurisdiction and/or authority within a given

[43] The Regional Water Board currently recognizes eight *full capture systems*. These are: Vortex Separation Systems (VSS) and seven other Executive Officer certified *full capture systems*, including specific types or designs of trash nets; two gross solids removal devices (GSRDs); catch basin brush inserts and mesh screens; vertical and horizontal trash capture screen inserts; and a connector pipe screen device. See August 3, 2004 Los Angeles Regional Water Quality Control Board Memorandum titled "Procedures and Requirements for Certification of a Best Management Practice for Trash Control as a Full Capture System.

watershed, targeting first the areas of greatest trash generation, for the Los Angeles Regional Board Executive Officer's approval. The Los Angeles Regional Board Executive Officer shall not approve any such schedule that does not result in timely compliance with the final effluent limitations, consistent with the established TMDL implementation schedule and applicable State policies. The City of Long Beach shall be deemed in compliance with its interim effluent limitations provided it is fully in compliance with any such approved schedule.

(2) Partial Capture Devices and Institutional Controls: The City of Long Beach may comply with the interim and final effluent limitations through the installation of *partial capture devices* and the application of *institutional control*[44]

(a) Trash discharges from areas serviced solely by *partial capture devices* may be estimated based on demonstrated performance of the device(s) in the implementing area.[45] That is, trash reduction is equivalent to the *partial capture devices'* trash removal efficiency multiplied by the percentage of drainage area serviced by the devices.

(b) Except as provided in subdivision (c), immediately below, trash discharges from areas addressed by *institutional controls* and/or *partial capture devices* (where site-specific performance data is not available) shall be calculated using a mass balance approach, based on the daily generation rate (DGR) for a representative area.[46] The DGR shall be determined from direct measurement of trash deposited in the drainage area during any thirty-day period between June 22nd and September 22nd exclusive of rain events[47], and shall be re-calculated every year thereafter unless a less frequent period for recalculation is approved by the Regional Water Board Executive Officer. The DGR shall be calculated as the total amount of trash collected during this period divided by the length of the collection period.

DGR = (Amount of trash collected during a 30-day collection period[48] / (30 days)

[44] While interim effluent limitations may be complied with using *partial capture devices,* compliance with final effluent limitations cannot be achieved with the exclusive use of *partial capture devices*.

[45] Performance shall be demonstrated under different conditions (e.g. low to high trash loading).

[46] The area(s) should be representative of the land uses and activities within the Permittee's authority and shall be approved by the Executive Officer prior to the 30-day collection period.

[47] Provided no special events are scheduled that may affect the representative nature of that collection period.

[48] Between June 22nd and September 22nd

The DGR for the applicable area under the City of Long Beach's jurisdiction and/or authority shall be extrapolated from that of the representative drainage area(s). A mass balance equation shall be used to estimate the amount of trash discharged during a storm event.[49] The *Storm Event Trash Discharge* for a given rain event in the City of Long Beach's drainage area shall be calculated by multiplying the number of days since the last street sweeping by the DGR and subtracting the amount of any trash recovered in the catch basins.[50] For each day of a storm event that generates precipitation greater than 0.25 inch, the City of Long Beach shall calculate a *Storm Event Trash Discharge*.

Storm Event Trash Discharge = [(Days since last street sweeping*DGR)] – [Amount of trash recovered from catch basins][51]

The sum of the *Storm Event Trash Discharges* for the storm year shall be the City of Long Beach's calculated annual trash discharge.

Total Storm Year Trash Discharge = ∑Storm Event Trash Discharges from Drainage Area

(c) The Executive Officer may approve alternative compliance monitoring approaches for calculating total storm year trash discharge, upon finding that the program will provide a scientifically-based estimate of the amount of trash discharged from the City of Long Beach's MS4.

(3) Combined Compliance Approaches:

The City of Long Beach may comply with their interim and final effluent limitations through a combination of *full capture systems*, *partial capture devices*, and *institutional controls*. Where the City of Long Beach relies on a combination of approaches, it shall demonstrate compliance with the interim and final effluent limitations as specified in (1)(c) in areas where *full capture systems* are installed and as specified in (2)(a) or (2)(b), as appropriate, in areas where *partial capture devices* and *institutional controls* are applied.

[49] Amount of trash shall refer to the uncompressed volume (in gallons) or drip-dry weight (in pounds) of trash collected.

[50] Any negative values shall be considered to represent a zero discharge.

[51] When more than one storm event occurs prior to the next street sweeping the discharge shall be calculated from the date of the last assessment.

(4) Additional Compliance Provisions and Alternatives for revised Los Angeles River Trash TMDL:

For the Los Angeles River Trash TMDL, the City of Long Beach may employ alternative compliance options for FCS; partial capture devices and the application of institutional controls; or scientifically based alternative compliance approaches as detailed below. If using an alternative compliance option, the City of Long Beach shall submit a revised Watershed Management Program for Executive Officer approval prior to use of the alternative compliance option.

(a) FCS Technical Infeasibility: As an alternative to subpart b.i(1)(d) above, in drainage areas where the vast majority of catch basins are retrofitted with FCS, the FCS are properly sized, operated, and maintained, and retrofit of the remaining catch basins is technically infeasible, the City of Long Beach may request that the Executive Officer make a determination that the agency is in full compliance with its final trash effluent limitation if all of the following criteria are met:

(i) 98% of all catch basins within the City's jurisdictional land area in the watershed are retrofitted with FCS (or, alternatively, 98% of the City's drainage area is addressed by FCS) and at least 97% of the catch basins (or, alternatively, drainage area) within the City's jurisdiction in the subwatershed (the smaller of the HUC-12 equivalent area or tributary subwatershed) are retrofitted with FCS.

(ii) The City of Long Beach submits to the Regional Water Board a report for Executive Officer concurrence, detailing the technical infeasibility of FCS retrofits in the remaining catch basins and evaluating the feasibility of partial capture devices, and the potential to install FCS or partial capture devices along the storm drain or at the MS4 outfall down gradient from the catch basin.

(iii) The City of Long Beach submits to the Regional Water Board a report for Executive Officer approval, detailing the partial capture devices and/or institutional controls that are currently and will continue to be implemented in the affected subwatershed(s), including an assessment of the effectiveness of the partial capture devices and/or institutional controls using existing data and studies representative of the subwatershed or jurisdictional area.

In addition, the City shall re-evaluate the effectiveness of institutional controls and partial capture devices and report the findings to the Regional Water Board for confirmation or change to the determination, if significant land use changes occur in the affected subwatershed (based on permits for new and significant re-development) or if there is a significant change in the suite of implemented partial capture devices and/or institutional controls (e.g., reduced frequency of implementation, reduced spatial coverage of implementation, change in technology employed). Such re-evaluation shall occur within one year of the identification of the significant changes.

(b) Mass Balance Equivalency: Compliance with interim and final effluent limitations through the installation of partial capture devices and the application of institutional controls. If the City of Long Beach employs partial capture devices or institutional controls, it shall use a mass balance approach based on the trash daily generation rate (DGR), to demonstrate compliance.

The DGR shall be reassessed annually. The City of Long Beach may request a less frequent assessment of its DGR for Executive Officer approval when the final effluent limitation for trash has been met (as described below) and the the City continues to implement at the same level of effort partial capture devices and institutional controls. A return to annual DGR calculation shall be required for a period of years to be determined by the Executive Officer after significant land use changes.

If the City of Long Beach employs institutional controls or a combination of full capture systems, partial capture devices, and institutional controls, it shall be deemed in compliance with its final effluent limitation for trash when the reduction of trash from the jurisdiction's baseline load, in Part VIII.O.2, is between 99% and 100% as calculated using a mass balance approach, and the FCS and partial capture devices are properly sized, operated, and maintained.

Alternatively, the City of Long Beach may request that the Executive Officer make a determination that a 97% to 98% reduction of the baseline load as calculated using a mass balance approach, constitutes full compliance with the final trash effluent limitation if all of the following criteria are met:

(i) The City of Long Beach submits to the Regional Water Board a report for Executive Officer approval, including, two or more consecutive years of data showing that the

City of Long Beach's compliance was at or above a 97% reduction in its baseline trash load; an evaluation of institutional controls in the jurisdiction demonstrating continued effectiveness and any potential enhancements; and demonstration that opportunities to implement partial capture devices have been fully exploited.

(c) Scientifically Based Alternative: If the City of Long Beach employs an alternative compliance approach, it shall conduct studies of institutional controls and partial capture devices for its particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area for Executive Officer approval. The City of Long Beach shall also provide a schedule for periodic compliance effectiveness demonstration and evaluation. FCS and partial capture devices shall be properly sized, operated, and maintained consistent with sizing, operation, and maintenance schedules used to determine their effectiveness.

~~**(4) Minimum Frequency of Assessment and Collection Approach:**~~

~~If allowed in a trash TMDL and approved by the Executive Officer, the City of Long Beach may alternatively comply with its final effluent limitations by implementing a program for *minimum frequency of assessment and collection* (MFAC) in conjunction with BMPs. To the satisfaction of the Executive Officer, the MFAC/BMP program must meet the following criteria:~~

~~**(a)** The MFAC/BMP Program includes an initial minimum frequency of trash assessment and collection and suite of structural and/or nonstructural BMPs. The MFAC/BMP program shall include collection and disposal of all trash found in the receiving water and shoreline. Permittees shall implement an initial suite of BMPs based on current trash management practices in land areas that are found to be sources of trash to the water body. The initial minimum frequency of trash assessment and collection shall be set as specified in the Machado Lake Trash TMDL.~~

~~**(b)** The MFAC/BMP Program includes reasonable assurances that it will be implemented by the responsible Discharger.~~

~~**(c)** MFAC protocols may be based on SWAMP protocols for rapid trash assessment, or alternative protocols proposed by Discharger and approved by the Regional Water Board Executive Officer.~~

~~**(d)** Implementation of the MFAC/BMP program should include a Health and Safety Program to protect personnel. The~~

~~MFAC/BMP program shall not require Discharger to access and collect trash from areas where personnel are prohibited.~~

~~**(e)** The Los Angeles Regional Water Board Executive Officer may approve or require a revised assessment and collection frequency and definition of the critical conditions under the MFAC:~~

~~**(i)** To prevent trash from accumulating in deleterious amounts that cause nuisance or adversely affect beneficial uses between collections;~~

~~**(ii)** To reflect the results of trash assessment and collection;~~

~~**(iii)** If the amount of trash collected does not show a decreasing trend, where necessary, such that a shorter interval between collections is warranted; or~~

~~**(iv)** If the amount of trash collected is decreasing such that a longer interval between collections is warranted.~~

~~**(f)** At the end of the implementation period, a revised MFAC/BMP program may be required if the Los Angeles Regional Water Board Executive Officer determines that the amount of trash accumulating between collections is causing nuisance or otherwise adversely affecting beneficial uses.~~

~~**(g)** With regard to (4)(e)(i), (4)(e)(ii), or (4)(e)(iii), above, the Los Angeles Regional Water Board Executive Officer is authorized to allow the City of Long Beach to implement additional structural or non-structural BMPs in lieu of modifying the monitoring frequency.~~

(5) If the City of Long Beach is not in compliance with its applicable interim and/or final trash effluent limitation then it shall be in violation of this Order.

(a) If the City of Long Beach, relying on partial capture devices and/or institutional controls has violated its interim and/or final effluent limitation(s), the City of Long Beach shall be presumed to have violated the applicable limitation for each day of each storm event that generated precipitation greater than 0.25 inch during the applicable storm year, except those storm days on which it establishes that its cumulative Storm Event Trash Discharges has not exceeded the applicable effluent limitation.

(b) If the City of Long Beach, relying on full capture systems has failed to demonstrate that the full capture systems for any drainage area are adequately sized and maintained, and that maintenance records are up-to-date and available for inspection by the Regional Water Board, and that it is in compliance with any conditions of its certification, shall be presumed to have

discharged trash in an amount that corresponds to the percentage of the baseline waste load allocation represented by the drainage area in question.

i. The City of Long Beach may overcome this presumption by demonstrating (using any of the methods authorized in Part VIII.O.2.b(2) that the actual or calculated discharge for that drainage area is in compliance with the applicable interim or final effluent limitation.

(6) The City of Long Beach shall be held liable for violations of the effluent limitations assigned to their area. If the City of Long Beach's compliance strategy includes full or partial capture devices and it chooses to install a full or partial capture device in the MS4 physical infrastructure of another public entity, it is responsible for obtaining all necessary permits to do so. If the City of Long Beach believes it is unable to obtain the permits needed to install a full capture or partial capture device within another Discharger's MS4 physical infrastructure, either Discharger may request the Executive Officer to hold a conference between the City and the other discharger. Nothing in this Order shall affect the right of that public entity or a Discharger to seek indemnity or other recourse from the other as they deem appropriate. Nothing in this subsection shall be construed as relieving a Discharger of any liability that the City of Long Beach would otherwise have under this Order.

Revisions to Attachment E, Part XIX.B

B. Reporting Requirements for the Los Angeles River WMA TMDLs

Deliverable	Description	Due Date(s)
Los Angeles River Watershed Trash TMDL		
Reporting	Report compliance with the installation of full capture systems and/or installation/implementation of partial capture devices and institutional controls.	December 15, 2013, and annually thereafter.
Trash Monitoring and Reporting Plan / Update CIMP or IMP	The City of Long Beach shall propose and implement a Trash Monitoring and Reporting Plan (TMRP) for Executive Officer approval. The Regional Water Board's Executive Officer will have full authority to review, to modify, to select alternate monitoring sites, and to approve or disapprove the monitoring plans. The City of Long Beach may report receiving water monitoring through a separate TMRP annual report, if approved by the Executive Officer, or in conjunction with annual reporting under MS4 permits. Receiving water monitoring shall be consistent with prescribed elements listed in the Surface Water Ambient Monitoring Program's Rapid Trash Assessment or shall be an alternative protocol proposed by the City of Long Beach and approved by the Executive Officer. Monitoring Plan: The City of Long Beach will submit a TMRP with the proposed receiving monitoring sites and at least two additional alternate monitoring locations. The TMRP must include maps of the proposed monitoring locations and rationale for their selection. Trash monitoring shall focus on visible trash at representative and critical locations.	December 30, 2016

	Sampling Site and Frequency: The TMRP shall detail the monitoring frequency and number and location of sites, including at least one monitoring station per reach and tributary. Each sampling evaluation should consider trash levels over time and under different seasonal conditions. Sampling assessment shall be repeated at the same site where trash was collected during the previous assessment(s) unless an alternate location has been approved. The City of Long Beach shall submit either a revised Integrated Monitoring Program or Coordinated Integrated Monitoring Program incorporating the TMRP requirements by December 30, 2016.	
Plastic Pellet Monitoring and Reporting Plan	The City of Long Beach shall prepare a Plastic Pellet Monitoring and Reporting Plan (PMRP) to (i) monitor the amount of plastic pellets being discharged from the MS4; (ii) establish triggers for increased industrial facility inspections and enforcement of SWPPP requirements for industrial facilities identified as responsible for the plastic pellet WLA herein; and (iii) address possible plastic pellet spills. The PMRP shall include protocols for a timely and appropriate response to possible plastic pellets spills within their jurisdictional area, including notification to the Regional Water Board, and a comprehensive plan to ensure that plastic pellets are contained. The City of Long Beach will fall into one of the following three categories for requirements of a PMRP: 1. Permittees that have industrial facilities or activities related to the manufacturing, handling, or transportation of plastic pellets within their jurisdiction must prepare a PMRP.	By March 8, 2018, or as part of the first adaptive management process for the approved Lower Los Angeles River WMP.

	2. Permittees that have no industrial facilities or activities related to the manufacturing, handling, or transportation of plastic pellets may not be required to conduct monitoring at MS4 outfalls, but must have a response plan in place to address plastic pellet spills. If satisfactory documentation is provided that shows there are no industrial facilities or activities related to plastic pellets within the jurisdiction, the Permittee may be excused of the requirement to monitor MS4 outfalls. 3. Permittees that only have residential areas within their respective jurisdictions, and have limited commercial or industrial transportation corridors (including railways and roadways), may be exempted from the requirements of preparing a PMRP. In order for a responsible jurisdiction to be exempted from this requirement, sufficient documentation including municipal zoning plans must be submitted to the Regional Water Board and approved by the Executive Officer.	
Los Angeles River Nitrogen Compounds and Related Effects TMDL		
Reporting	Annual reporting of monitoring results to the Los Angeles Regional Water Board.	December 15, 2013, and annually thereafter.
Los Angeles River and Tributaries Metals TMDL		
Annual Monitoring Report	The Discharger shall submit annual monitoring reports as detailed in the approved coordinated monitoring plan to the Los Angeles Regional Water Board.	December 15, 2013, and annually thereafter.
Los Angeles River Watershed Bacteria TMDL		

Bacteria Coordinated Monitoring Plan	The Discharger shall submit a Bacteria Coordinated Monitoring Plan (CMP), which shall be submitted for Los Angeles Regional Water Board Executive Officer approval. The CMP shall detail: the number and location of sites, including at least one monitoring station per each river segment, reach and tributary addressed under this TMDL; measurements and sample collection methods; and monitoring frequencies. The Discharger may also include in the CMP, for Executive Officer consideration, other meteorological stations which may be more representative of the existing hydrology and climate. Each segment, reach, and tributary addressed under this TMDL shall be monitored at least monthly until the subject segment, reach or tributary is at the end of the execution part of its first implementation phase (i.e. 7 years after beginning the segment or tributary-specific phase), to determine compliance with the interim water quality based effluent limitations. Each segment, reach and tributary addressed under this TMDL shall be monitored at least weekly to determine compliance with the instream targets after the first implementation phase. For parties pursuing a Load Reduction Strategy (LRS), intensive outfall monitoring will be conducted before and after implementation of the LRS. Pre-LRS monitoring will be used to estimate the *E. coli* loading from MS4 outfalls to the segment or tributary, and identify the outfalls and types of implementation actions that are expected to be necessary to attain the water quality based limits. Post-LRS monitoring will be used to evaluate compliance with the interim water quality based limits and to plan for additional implementation actions to meet the final water quality based limits, in a second implementation phase, if necessary. When applicable, outfall monitoring shall including *E. coli* by USEPA- approved methods and flow rate at *all* MS4 outfalls	March 23, 2013, or Submit an IMP or CIMP plan concurrently with the Discharger's draft WMP.

	("snapshots") that are discharging to a segment or tributary or across jurisdictional boundaries during a given monitoring event. For each LRS, at least six (6) snapshots shall be conducted for pre-LRS monitoring, and at least three (3) snapshots shall be conducted for post- LRS monitoring. For MS4s that choose to follow a non-LRS implementation approach, but choose to demonstrate compliance with Equivalent Conditions, at least six (6) snapshots shall be conducted.	
Implement CMP	The Discharger shall begin implementation actions to attain water quality-based effluent limitation, as necessary.	30 days after approval of the CMP
Annual Monitoring Report	Annual reporting of monitoring results to the Los Angeles Regional Water Board.	December 15, 2013, and annually thereafter.
Implementation Plan	The Discharger shall submit an Implementation Plan for wet weather with interim milestones for approval of the Los Angeles Regional Water Board Executive Officer.	March 23, 2022
Long Beach City Beaches and Los Angeles River Estuary Bacteria TMDL		
Compliance Monitoring	To evaluate compliance with numeric targets, monitoring shall take place at existing monitoring sites as well as any new monitoring locations in the ambient water. For beach monitoring locations, daily or systematic weekly sampling in the wave wash at all major drains and creeks, existing monitoring stations at beaches without storm drains, and freshwater outlets is recommended to evaluate compliance. At all beach locations, samples should be taken at ankle depth and on an incoming wave, consistent with section 7961(b) of title 17 of the California Code of Regulations. At locations where there is a freshwater outlet, during wet weather, samples should be taken as close as possible to the wave wash, and no further away than 10 meters down current of the storm drain or outlet. A robust monitoring program shall be developed for the LAR Estuary. Available data includes bi-weekly monitoring from May through September of 2009, and 2010. Monitoring shall be expanded to include year round monitoring requirements, and at least three monitoring locations within the Estuary. We understand that adequate data to establish a reference estuary approach is currently not available. If in the future, adequate data	Submit an IMP or CIMP plan concurrently with the Discharger's draft WMP, or If a WMP or IMP or CIMP will not be developed then submitted the Monitoring Plan 12 months after the effective date of this Order.

	from reference estuary studies become available, it may be appropriate to consider a reference estuary approach to evaluate compliance with these TMDLs.	
Annual Monitoring Report	Annual reporting of monitoring results to the Los Angeles Regional Board.	December 15, 2013, and annually thereafter.

Revisions to Attachment E, Table E-1

Table E-1. Approved TMDL Monitoring Plans by Watershed Management Area

TMDL	Comment	Date of Final Plan	Los Angeles Regional Water Board Approval Date
Dominguez Channel and Greater Harbors Waters Watershed Management Area			
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	Monitoring Plan is due on November 23, 2013.	---	---
Los Angeles River Watershed Management Area			
Los Angeles River Watershed Trash TMDL	~~Monitoring Plan was not required.~~ TMRP is due by December 30, 2016. PMRP is due by March 8, 2018 or as part of the first adaptive management process for the approved Lower Los Angeles River WMP and CIMP.	~~N/A~~ ---	~~N/A~~ ---
Los Angeles River Nitrogen Compounds and Related Effects TMDL	Monitoring Plan was due on March 23, 2005.	March 23, 2005	Has not been approved.
Los Angeles River and Tributaries Metals TMDL	Los Angeles River Metals TMDL Coordinated Monitoring Plan	March 25, 2008	April 11, 2008
Los Angeles River Watershed Bacteria TMDL	Monitoring Plan is due on March 23, 2013.	---	---
Long Beach City Beaches and Los Angeles River Estuary Bacteria TMDL	USEPA Established TMDL	N/A	N/A
San Gabriel River Watershed Management Area			
San Gabriel River and Impaired Tributaries Metals and Selenium TMDL	USEPA Established TMDL	N/A	N/A
Los Cerritos Channel and Alamitos Bay Watershed Management Area			

TMDL	Comment	Date of Final Plan	Los Angeles Regional Water Board Approval Date
Los Cerritos Channel Metals TMDL	USEPA Established TMDL	N/A	N/A
Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDL	Colorado Lagoon TMDL Monitoring Plan (CLTMP)	June 15, 2012	August 23, 2012

Addition of Part V.D.5 to Attachment F

5. TMDL Revisions Incorporated after February 6, 2014

Part VII.A.6 of this Order contains reopener and modification provisions that allow for the permit to be modified, revoked, reissued, or terminated under certain circumstances. Subpart a.iv. provides that a cause for taking such actions includes incorporating provisions as a result of TMDL reconsiderations.

a. Permit Modification Related to Revised Los Angeles River Watershed Trash TMDLs

On June 11, 2015, the Regional Water Board adopted Resolution No. R15-006, an amendment to the Water Quality Control Plan for the Los Angeles Region to revise the Los Angeles River Watershed Trash TMDL and the Ballona Creek Watershed Trash TMDL. The revised TMDLs were subsequently approved by the State Water Resources Control Board (State Water Board) by Resolution No. 2015-0068 on November 17, 2015; the Office of Administrative Law on May 4, 2016; and the U.S. Environmental Protection Agency (U.S. EPA) on June 30, 2016. The revised TMDLs became effective upon approval by U.S. EPA.

This Order has been modified consistent with the revisions to the Los Angeles River Watershed Trash TMDL, as described below.

Alternative Methods for Demonstrating Compliance with Final Effluent Limitations

Provisions are included in Part VIII.O.2.b to provide the City of Long Beach alternatives for demonstrating compliance with the final effluent limitations prescribed to achieve the Los Angeles River Watershed Trash TMDL. The Staff Report for Resolution No. R15-006 describes the practical considerations that these alternatives address. For example, regarding permittees that have chosen to use full capture systems (FCS) to achieve compliance, the Staff Report notes that:

> Exclusive use of full capture systems provides advantages and many responsible agencies have chosen to use full capture systems exclusively to achieve their WLAs. However, some of these responsible agencies have found that there are some catch basins for which retrofitting with a full capture system, or even a

partial capture device, is technically infeasible due to the configuration of the catch basin (i.e., usually too shallow to accommodate a full capture system). In these cases, installation of a full capture system would create a flood risk or would require significant expense to redesign the catch basin and the connected storm drain system that may be out of proportion with the reduction in trash that would be achieved.

To address these practical considerations, in drainage areas where the vast majority of catch basins are retrofitted with Full Capture Systems (FCS); the FCS are properly sized, operated, and maintained; and retrofit of the remaining catch basins is technically infeasible, the City of Long Beach may request that the Executive Officer make a determination that the agency is in full compliance with its final WLA if three criteria are met as specified in Part VIII.O.2.b.i.(4)(a).

In these instances, Part VIII.O.2.b.i.(4) of the Order also requires the City of Long Beach to re-evaluate the effectiveness of institutional controls and partial capture devices and report the findings to the Regional Water Board for confirmation or change to the determination, if significant land use changes occur in the affected subwatershed (based on permits for new and significant re-development) or if there is a significant change in the suite of implemented partial capture devices and/or institutional controls (e.g., reduced frequency of implementation, reduced spatial coverage of implementation, change in technology employed). The Order requires such re-evaluation to occur within one year of the identification of the significant changes.

The TMDL revisions addressed similar practical considerations for Permittees employing institutional controls or a combination of full capture systems, partial capture devices, and institutional controls. According to the TMDL revisions, Permittees employing these strategies shall be deemed in compliance with the final WLAs when the reduction of trash from the jurisdiction's baseline load is between 99% and 100% as calculated using a mass balance approach, and the FCS and partial capture devices are properly sized, operated, and maintained.

Alternatively, the City of Long Beach may request that the Executive Officer make a determination that a 97% to 98% reduction of the baseline load as calculated using a mass balance approach, constitutes full compliance with the final WLA if the criteria set forth in Part VIII.O.2.b.i.(4) are met.

Finally, the City of Long Beach may demonstrate compliance with interim and final WLAs through a scientifically based alternative compliance approach as described in Part VIII.O.2.b.i.(4).

If the City of Long Beach employs alternative compliance options for FCS, partial capture devices, and the application of institutional controls, or employs a scientifically based alternative compliance approach, the city shall submit a revised Watershed Management Program (WMP) for Executive Officer approval prior to use of these alternative compliance options.

Provisions for Plastic Pellet Monitoring for MS4 Permittees Subject to the Los Angeles River Watershed Trash TMDL

MS4 Permittees subject to the Ballona Creek Watershed Trash TMDL are already addressing plastic pellets as part of the requirements related to the Santa Monica Bay Debris TMDL to which they are also subject. The addition of similar provisions for MS4 Permittees subject to the

Los Angeles River Watershed Trash TMDL, including the City of Long Beach, ensures consistency among trash TMDLs.

Specifically, Attachment E, Part XIX.B requires that the City of Long Beach prepare a Plastic Pellet Monitoring and Reporting Plan (PMRP) to (i) monitor the amount of plastic pellets being discharged from the MS4; (ii) establish triggers for increased industrial facility inspections and enforcement of Storm Water Pollution Prevention Plan (SWPPP) requirements for industrial facilities identified as responsible for the plastic pellet WLA herein; and/or (iii) address possible plastic pellet spills if it does not meet the exemption criteria (as set forth in Attachment E, Part XIX.B). The City of Long Beach must submit a PMRP to the Regional Water Board either (i) by March 8, 2018 or (ii) as part of its adaptive management process for its approved Lower Los Angeles River WMP and corresponding CIMP.

Provisions for Receiving Water Monitoring for Trash

Incorporation of receiving water monitoring requirements allows for an objective evaluation of the effectiveness, and continued effectiveness, of the implementation actions to control trash discharges from the MS4 in the Los Angeles River watershed.

Attachment E, Part XIX.B requires that the City of Long Beach propose for Executive Officer approval, and implement, a Trash Monitoring and Reporting Plan (TMRP). To meet this requirement, the City of Long Beach must submit a revised Integrated Monitoring Program (IMP) or Coordinated Integrated Monitoring Program (CIMP) incorporating the TMRP requirements for Executive Officer approval six months after the effective date of the TMDL (i.e., December 30, 2016).

Provisions for Minimum Frequency of Assessment and Collection Approach

Part VIII.O.2.b.1(4), “Minimum Frequency of Assessment and Collection Approach,” was initially included in the Long Beach MS4 Permit, allowing the City of Long Beach to alternatively comply with its final effluent limitations for trash by implementing a program for minimum frequency of assessment and collection (MFAC) in conjunction with BMPs if allowed in the TMDL; however, since this section is not applicable to the LA River Trash TMDL provisions (i.e., such an approach is not allowed for the WLAs in the TMDL), it has been removed from this Order.