Attachment B to Resolution No. R15-XXX

Proposed Amendment to the Water Quality Control Plan for the Los Angeles Region to revise the Ballona Creek Watershed Trash TMDL

Proposed for adoption by the California Regional Water Quality Control Board, Los Angeles Region on June 11, 2015.

Amendments:

7-3 Ballona Creek Trash TMDL

This TMDL was adopted by:
The Regional Water Quality Control Board on September 19, 2001.

This TMDL was approved by:
The State Water Resources Control Board on February 19, 2002.
The Office of Administrative Law on July 18, 2002.
The U.S. Environmental Protection Agency on August 1, 2002.

The effective date of this TMDL is: August 28, 2002.

This TMDL was revised by:
The Regional Water Quality Control Board on March 4, 2004.

This revised TMDL was approved by:
The State Water Resources Control Board on September 30, 2004.
The Office of Administrative Law on February 8, 2005.
[U.S. Environmental Protection Agency approval not required for amendment to implementation plan.]

This TMDL was again revised by:
The Regional Water Quality Control Board on June 11, 2015.

This revised TMDL was approved by:
The State Water Resources Control Board on [insert date].
The Office of Administrative Law on [insert date].
If applicable, the U.S. Environmental Protection Agency on [insert date].

The following table includes all of the elements of this TMDL.

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Table 7-3.1 Trash TMDL for Ballona Creek: Elements

Element	Key Findings and Regulatory Provisions
Problem Statement	Ballona Creek and Wetland are included on the Clean Water Act Section 303(d) list of impaired waterbodies due to trash. This impairment was identified through an assessment of the waterbody relative to the water quality objectives applicable to trash, which include "Floating Material" and "Solid, Suspended, or Settleable Materials" in Chapter 3 of this Water Quality Control Plan for the Los Angeles Region. Trash in Ballona Creek, including Ballona Creek estuary, and Ballona Wetland is causing impairment of beneficial uses. The following designated beneficial uses are impacted by trash: water contact recreation (REC1); non-contact water recreation (REC2); warm freshwater habitat (WARM); wildlife habitat (WILD), estuarine habitat (EST); marine habitat (MAR); rare and threatened or endangered species (RARE); migration of aquatic organisms (MIGR); spawning, reproduction and early development of fish (SPWN); commercial and sport fishing (COMM); shellfish harvesting (SHELL); wetland habitat (WET); and cold freshwater habitat (COLD).
Numeric Target *(interpretation of the narrative water quality objective, used to calculate the waste load and load allocations)*	Zero trash in Ballona Creek and Wetland[1].
Source Analysis	Stormwater discharges are the major source of trash in Ballona Creek Watershed.
Loading Capacity	Zero.
Waste Load Allocations	The TMDL requires phased reductions of trash over a period of 10 years, from existing baseline loads to zero. Baseline Waste Load Allocations (WLAs) for Phase I MS4 Permittees, including Caltrans, in the Ballona Creek Watershed are provided in Table 7-3.3. Current and future enrollees in Phase II MS4 permits (including educational institutions) also have a final WLA of zero.[2]
Load Allocations	The Load Allocations (LAs) for nonpoint source trash discharges to Ballona Creek and Wetlands, including the estuary, and its tributaries are zero. For nonpoint sources, zero trash is defined as no trash in the waters or parks, open space, or recreational facilities adjacent to or discharging to Ballona Creek and Wetlands, including its estuary, and its tributaries, immediately following each assessment and collection event consistent with an established Minimum Frequency of Assessment and Collection Program (MFAC Program), described

[1] The numeric target of zero was established in 2001.

[2] Phase II MS4 facilities designated in the Statewide Phase II Small MS4 General Permit within the Ballona Creek Watershed at the time of the 2015 revisions to this TMDL include: University of California, Los Angeles (main campus and various offsite facilities) and VA Greater Los Angeles Healthcare System.

Element	Key Findings and Regulatory Provisions
	below in "Implementation". MFAC Programs shall be established at intervals that prevent trash from accumulating in deleterious amounts that cause nuisance or adversely affect beneficial uses between collections. LAs are assigned to the California Department of Fish and Wildlife for the Ballona Creek Wetlands. LAs may be assigned to additional entities that own and/or operate parks, open space, or recreational facilities adjacent to or discharging trash to Ballona Creek, its estuary, or a tributary to the creek in the future under appropriate regulatory programs.
Implementation	**Point Sources** TMDL Waste Load Allocations (WLAs) assigned to responsible agencies listed in Table 7-3.3 shall be implemented through the Los Angeles County Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit and the State of California Department of Transportation (Caltrans) MS4 Permit. WLAs assigned to Phase II MS4 permittees shall be implemented through the Statewide Phase II Small MS4s General Permit or other regional MS4 permit issued to the Phase II MS4 dischargers. WLAs shall also be implemented via the authority vested in the Los Angeles Regional Water Board by sections 13267 and 13383 of the Porter-Cologne Water Quality Control Act (Water Code section 13000 et seq.). (1) Compliance with the interim and final WLAs may be achieved through a full capture system. A full capture system (FCS) is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one-hour, storm in the subdrainage area. The Rational Equation is used to compute the peak flow rate: Q = C × I × A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map in Figure 7-3.A), and A= subdrainage area (acres). The isohyetal map may be updated annually by the Los Angeles County hydrologist to reflect additional rain data gathered during the previous year. Annual updates published by the Los Angeles County Department of Public Works are prospectively incorporated by reference into this TMDL

Element	Key Findings and Regulatory Provisions
	The Executive Officer has authority to certify, as full-capture, any trash reduction system that meets the operating and performance requirements as described above.[3] Permittees that choose to comply using full capture systems must demonstrate a phased implementation of full capture systems over a 10-year period until the final WLA of zero is attained. The WLA of zero trash discharged shall be deemed achieved if FCS have been installed on all conveyances discharging to the waterbodies or installed to address all the drainage within the Permittee's drainage area to the Ballona Creek Watershed and the FCS are properly sized, operated, and maintained. Alternatively, 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, responsible agencies may request that the Executive Officer make a determination that the agency is in full compliance with its final WLA if all of the following criteria are met: 1) 98% of all catch basins within the agency's jurisdictional land area in the watershed are retrofitted with FCS (or, alternatively, 98% of the jurisdiction's drainage area is addressed by FCS) and at least 97% of the catch basins (or, alternatively, drainage area) within the agency's jurisdiction in the subwatershed (the smaller of the HUC-12 equivalent area or tributary subwatershed) are retrofitted with FCS. 2) The agency submits to the Regional 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. 3) The agency submits to the Regional 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

[3] The Regional Water Board currently recognizes nine *full capture systems*. These are: Vortex Separation Systems (VSS) and eight 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; a connector pipe screen device; and the nutrient separating baffle box. 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.

Element	Key Findings and Regulatory Provisions
	of the subwatershed or jurisdictional area. If, based on Regional Board evaluation, existing data and studies are determined non-representative, responsible jurisdictions may also be required to conduct a special study of institutional controls and partial capture devices in the particular subwatershed(s) where the non-retrofitted catch basins are located. In addition, responsible jurisdictions shall re-evaluate the effectiveness of institutional controls and partial capture devices and report the findings to the Regional 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. (2) Compliance with interim and final effluent limitations through the installation of partial capture devices and the application of institutional controls. Responsible jurisdictions employing partial capture devices or institutional controls shall use a mass balance approach based on the trash daily generation rate (DGR)[4], to demonstrate compliance. The DGR shall be reassessed annually. Responsible jurisdictions may request a less frequent assessment of its DGR when the final WLA has been met (as described below) and the responsible jurisdiction continues to implement at the same level of effort partial capture devices and institutional controls for Executive Officer approval. 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. Responsible jurisdictions employing institutional controls or a combination of full capture systems, partial capture devices, and institutional controls shall be deemed in compliance with the final WLAs when the reduction of trash from the jurisdiction's baseline load, in Table 7-3.3, 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, responsible jurisdictions 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 all of the following criteria are met:

[4] The DGR is the average amount of trash deposited during a 24-hour period, as measured in a specified drainage area.

Element	Key Findings and Regulatory Provisions
	1) The agency submits to the Regional Board a report for Executive Officer approval, including, two or more consecutive years of data showing that the Permittee'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. (3) Compliance with the interim and final WLAs through a scientifically based alternative compliance approach approved by the Regional Board. Responsible jurisdictions employing an alternative compliance approach shall conduct studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area for Executive Officer approval. Responsible jurisdictions 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. The Los Angeles County MS4 and Caltrans MS4 Permittees employing alternative compliance options for FCS, partial capture devices, and the application of institutional controls, or employing a scientifically based alternative compliance approach shall submit a revised Watershed Management Program or Enhanced Watershed Management Program, or separate TMDL implementation plan, for Executive Officer approval prior to use of these alternative compliance options. An implementation schedule for Phase II MS4 permittees will be established during the issuance, reissuance, or reopening of their respective permit(s) to incorporate provisions consistent with the assumptions and requirements of these WLAs or upon designation by the State or Regional Water Board as a Phase II MS4 permittee and enrollment in the Statewide Phase II Small MS4s General NPDES Permit. The Los Angeles County Flood Control District (LACFCD) is not assigned a Waste Load Allocation, since Waste Load Allocations are based on jurisdictional area. However, the LACFCD is responsible for performing storm drain operation and maintenance, including but not limited to: ~~catch basin inspection and cleaning~~ catch basin labeling, catch basin label inspections, and open channel signage; open channel maintenance that includes removal of trash and debris; and implementation of activity specific BMPs, including those related to litter/debris/graffiti in compliance with its MS4 permit. The LACFCD may be held responsible with a jurisdiction and/or agency for non-

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Element	Key Findings and Regulatory Provisions
	compliance with Waste Load Allocations where it has either: (i) without good cause denied entitlements or other necessary authority to a responsible jurisdiction or agency for the timely installation and/or maintenance of full and/or partial capture trash control devices for purposes of TMDL compliance in parts of the MS4 physical infrastructure that are under its authority, or (ii) not fulfilled its obligations regarding proper BMP installation, operation, and maintenance for purposes of TMDL compliance within the MS4 physical infrastructure under its authority, thereby causing or contributing to a responsible jurisdiction and/or agency to be out of compliance with its interim or final Waste Load Allocations. Under these circumstances, the LACFCD's responsibility shall be limited to non-compliance related to the drainage area(s) within the jurisdiction where the LACFCD has authority over the relevant portions of the MS4 physical infrastructure. **Nonpoint Sources** Load Allocations (LAs) shall be implemented consistent with the Statewide Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program through a general waiver of waste discharge requirements (WDRs), individual waivers of WDRs, general WDRs, individual WDRs, a memorandum of understanding (MOU), a cleanup and abatement order, or any other appropriate regulatory order(s). LAs may be achieved through a program of minimum frequency of assessment and collection (MFAC). Responsible ~~jurisdictions~~ agencies assigned LAs shall be deemed in compliance with the LAs if an MFAC/BMP program, approved by the Executive Officer, demonstrates that there is no accumulation of trash, as defined in "Load Allocations" above. Responsible entities assigned LAs shall also comply with the implementation schedule listed in Table 7-3.4. An MFAC/BMP Program shall include the following criteria: 1) The MFAC/BMP Program shall include an initial minimum frequency of trash assessment and collection and a suite of structural and/or nonstructural BMPs. The MFAC/BMP program shall include collection and disposal of all trash found in the source areas and along ~~the Los Angeles River~~Ballona Creek and its tributaries. Responsible entities shall implement an initial suite of BMPs based on current trash management practices in land areas that are found to be nonpoint sources of trash to the ~~Los Angeles River~~ Ballona Creek and its tributaries. The initial minimum frequency shall be as follows:

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Element	Key Findings and Regulatory Provisions
	a) Trash in open space and parks managed by responsible jurisdictions and agencies identified in the LA section of this table shall be 100% removed at each assessment and collection event as specified in the Trash Monitoring and Reporting Plan (TMRP[5]), within 72 hours after critical conditions, and immediately after special events when no safety hazards exist. b) The TMRP shall include protocols for trash assessment immediately after each collection event, assessment locations, and frequencies. c) Compliance for entities responsible for open space and parks is determined by the following criteria: i) The assessment performed immediately after each collection event shall demonstrate that no trash remains. ii) The trash amount accumulated between collection events in open space and parks shall not exceed the LAs of 640 gallons per square mile per year (gal/mi^2/yr) and shall ~~show a decreasing trend~~not show an increasing trend. iii) Responsible entities shall increase the frequency of collection and/or implement additional BMPs, should trash amounts collected at collection events ~~not~~ indicate ~~a decreasing trend~~an increasing trend. 2) The MFAC/BMP Program shall include assurances that it will be implemented by the responsible entities. 3) MFAC protocols may be based on SWAMP protocols for rapid trash assessment, or alternative protocols proposed by dischargers and approved by the Executive Officer. 4) Implementation of the MFAC/BMP program shall include a Health and Safety Plan to protect personnel. The MFAC/BMP shall not require responsible jurisdictions to access and collect trash from areas where access by personnel is prohibited.
Margin of Safety	"Zero discharge" is a conservative standard that contains an implicit margin of safety.
Seasonal Variations and Critical Conditions	Discharge of trash from the MS4 occurs primarily during or shortly after a rain event of greater than 0.25 inches.

[5] The TMRP is described in the monitoring element. An MFAC program is an implementation program that also provides monitoring so monitoring requirements of a MFAC will be detailed in the TMRP.

Element	Key Findings and Regulatory Provisions
Monitoring	**Receiving Water Monitoring** Permittees under the Los Angeles County MS4 Permittees and the Caltrans Storm Water Permit shall propose and implement a Trash Monitoring and Reporting Plan (TMRP) for Executive Officer approval. The Regional Board's Executive Officer will have full authority to review, to modify, to select alternate monitoring sites, and to approve or disapprove of the monitoring plans. Responsible entities can report receiving water monitoring through a separate TMRP annual report 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 responsible jurisdictions and approved by the Executive Officer. Monitoring Plan: Responsible entities 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 ~~MS4 infrastructure, including catch basins, storm drains and outfalls relative to receiving waters, and locations where trash accumulates in the waterbody~~ proposed monitoring locations and rationale for their selection. Trash monitoring shall focus on visible trash at representative and critical locations. ~~Locations for trash assessment shall include, but not be limited to, locations where trash enters and exits each reach/segment and their tributaries.~~ 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 every year shall be repeated at the same site where trash was collected during previous assessment ~~to determine trash accumulation rates~~. Responsible entities should consider trash assessment before and after community clean up events. Los Angeles County MS4 Permittees and Caltrans shall submit a revised Integrated Monitoring Program or Coordinated Integrated Monitoring Program incorporating the TMRP requirements or a stand-alone TMRP for Executive Officer approval six months after the effective date of the TMDL. **MFAC Monitoring** Responsible entities assigned LAs, shall prepare a TMRP for the MFAC/BMP Program, and responsible entities shall self-report any non-compliance with its provisions. The results of the MFAC/BMP Program including, but not limited to, frequency of trash collections, amount of trash collected, trash assessments, and calculation of reduction from baseline load allocations shall be submitted to the

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Element	Key Findings and Regulatory Provisions
	Regional Board on an annual basis.

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Figure 7-3.A
Isohyethal Map of Rainfall Intensities in Portions of Los Angeles County

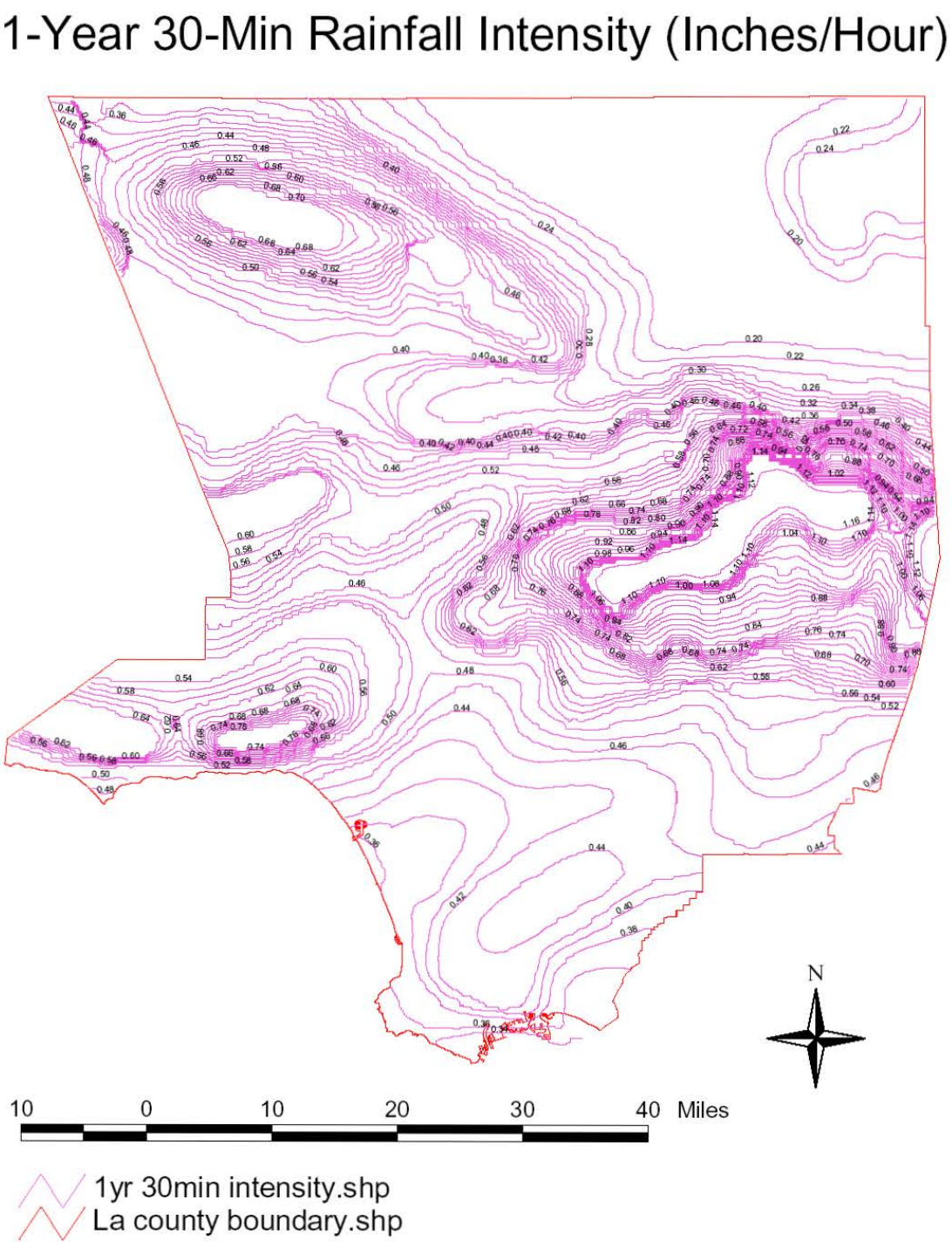

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Table 7-3.2 Ballona Creek Watershed Trash TMDL: Implementation Schedule.[6]
(Baseline Waste Load Allocations expressed as cubic feet of uncompressed trash and % reduction.)

Year	Baseline Monitoring/ Implementation	Waste Load Allocation	Compliance Point
1 10/1/01--9/30/02	Baseline Monitoring	No allocation specified. Trash will be reduced by levels collected during the baseline monitoring program.	Achieved through timely compliance with baseline monitoring program.
2 10/1/02--9/30/03	Baseline Monitoring	No allocation specified. Trash will be reduced by levels collected during the baseline monitoring program.	Achieved through timely compliance with baseline monitoring program.
3 10/1/03--9/30/04	Baseline Monitoring (optional)/ Implementation: Year 1	90% (9,985 for the Municipal permittees;1,472 for Caltrans)	No compliance point (target of 90%)
4 10/1/04--9/30/05	Baseline Monitoring (optional)/ Implementation: Year 2	80% (8,875 for the Municipal permittees; 1,308 for Caltrans)	No compliance point (target of 80%)
5 10/1/05--9/30/06	Implementation: Year 3	70% (7,776 for the Municipal permittees; 1,146 for Caltrans)	80% of the baseline load, calculated as a rolling 3-year annual average (8,875 for the Municipal permittees; 1,308 for Caltrans).
6 10/1/06--9/30/07	Implementation: Year 4	60% (6,656 for the Municipal permittees; 981 for Caltrans)	70% of the baseline load, calculated as a rolling 3-year annual average (7,776 for the Municipal permittees; 1,146 for Caltrans).
7 10/1/07--9/30/08	Implementation: Year 57	50% (5,547 for the Municipal permittees; 818 for Caltrans)	60% of the baseline load, calculated as a rolling 3-year annual average (6,656 for the Municipal permittees; 981 for Caltrans)
8 10/1/08--9/30/09	Implementation: Year 6	40% (4,438 for the Municipal permittees; 654 for Caltrans)	50% of the baseline load, calculated as a rolling 3-year annual average (5,547 for the Municipal permittees; 818 for Caltrans).
9 10/1/09--9/30/10	Implementation: Year 7	30% (3,328 for the Municipal permittees; 491 for Caltrans)	40% of the baseline load, calculated as a rolling 3-year annual average (4,438 for the Municipal permittees; 654 for Caltrans).
10 10/1/10--9/30/11	Implementation: Year 8	20% (2,218 for the Municipal permittees; 327 for Caltrans).	30% of the baseline load, calculated as a rolling 3-year annual average (3,328 for the Municipal permittees; 491 for Caltrans).
11	Implementation:	10% (1,110 for the Municipal	20% of the baseline load, calculated as

[6] Notwithstanding the zero trash target and the baseline Waste Load Allocations shown in Table 7-3.2, a Permittee will be deemed in compliance with the Trash TMDL in areas served by a Full Capture System within the Ballona Creek Watershed.
[7] The Regional Board will review and reconsider the final Waste Load Allocations once a reduction of 50% has been achieved and sustained.

10/1/11--9/30/12	Year 9	permittees; 164 for Caltrans).	a rolling 3-year annual average (2,220 for the Municipal permittees; 327 for Caltrans).
12 10/1/12--9/30/13	Implementation: Year 10	0 or 0 % of the baseline load.	10% of the baseline load, calculated as a rolling 3-year annual average (1,110 for the Municipal permittees; 164 for Caltrans.
13 10/1/13--9/30/14	Implementation: Year 11	0 or 0 % of the baseline load.	3.3% of the baseline load, calculated as a rolling 3-year annual average (366 for the Municipal permittees, 54 for Caltrans).
14 10/1/14--9/30/15	Implementation: Year 12	0 or 0 % of the baseline.	0 or 0 % of the baseline load.

Table 7-3.3. Ballona Creek Watershed Trash TMDL Baseline Waste Load Allocations (gallons and lbs of trash).

Responsible Entity	WLA (gals)	WLA (lbs)
City of Beverly Hills	45,336	70,712
City of Culver City	25,081	37,271
City of Inglewood	14,717	22,324
City of Los Angeles	602,068	942,720
County of Los Angeles	32,679	52,693
City of Santa Monica	1,749	2,579
City of West Hollywood	9,360	13,411
Caltrans	12,222	13,688

Table 7-3.4 Ballona Creek Trash TMDL: Nonpoint Source Implementation Schedule

Task No.	Task	Date
1	Baseline Load Allocations in Effect	Effective date of the reconsideration of the Ballona Creek Trash TMDL
2	Submit Minimum Frequency Assessment and Collection (MFAC) Program Plan	Upon enrollment in Conditional Waiver of WDR for trash, or no later than two years from the effective date of the TMDL
3	Achieve final load allocations by fully implementing an Executive Officer approved MFAC program or 100% reduction of trash from baseline load allocations	Three years from effective date of the reconsideration of the Ballona Creek Trash TMDL

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