

Attachment B to Resolution No. R19-004

Proposed Amendments

to the

Water Quality Control Plan – Los Angeles Region

for the

Machado Lake Trash TMDL

Amendments:

Chapter 7. Total Maximum Daily Loads (TMDLs)

Machado Lake Trash TMDL

This TMDL was adopted by:

The Regional Water Quality Control Board on June 7, 2007.

The TMDL was approved by:

The State Water Resources Control Board on December 4, 2007.

The Office of Administrative Law on February 8, 2008.

The U.S. Environmental Protection Agency on February 27, 2008.

This TMDL was revised by:

The Regional Water Quality Control Board on March 14, 2019.

This TMDL was approved by:

The State Water Resources Control Board on [Insert Date].

The Office of Administrative Law on [Insert Date].

The U.S. Environmental Protection Agency on [Insert Date].

The revised elements of the TMDL are presented in Table 7-26.1 and the revised Implementation Plan in Tables 7-26.2a and 7-26.2b.

Table 7-26.1 Machado Lake Trash TMDL: Elements

Element	Machado Lake Trash TMDL
Problem Statement	Current levels of trash in Machado Lake exceed water quality objectives and are impairing beneficial uses. Relevant water quality objectives include those for “Floating Material” and “Solid, Suspended, or Settleable Materials.” The following designated beneficial uses are impacted by trash: water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); and wetland habitat (WET).
Numeric Target (interpretation of the narrative water quality objective, used to calculate the load allocations)	Zero trash in Machado Lake.
Source Analysis	Litter from adjacent land areas, roadways and direct dumping and deposition are sources of trash to Machado Lake. Point sources such as storm drains are also sources of trash discharged to Machado Lake.
Loading Capacity	Zero, as defined in the Numeric Target.
Waste Load Allocations (for point sources)	Waste Load Allocations (WLAs) are assigned to the California Department of Transportation (Caltrans) and other 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 Estates, and Torrance. WLAs are zero trash discharged from MS4s into Machado Lake. WLAs may be issued to additional responsible jurisdictions in the future under Phase 2 of the US EPA Stormwater Permitting Program, or other applicable regulatory programs.
Load Allocations (for nonpoint sources)	Load Allocations (LAs) are assigned to the City of Los Angeles. LAs are zero trash, defined as no trash immediately following each assessment and collection event consistent with an established Minimum Frequency of Assessment and Collection Program (MFAC Program) where the MFAC Program is established at an interval that prevents trash from accumulating in deleterious amounts that cause nuisance or adversely affect beneficial uses between collections. Additional responsible entities may be identified in the future under applicable regulatory programs.

Element	Machado Lake Trash TMDL
Implementation	<p>Implementation of the trash TMDL for Machado Lake includes structural and non-structural best management practices (BMPs) and MFAC Programs to address point and nonpoint trash sources</p> <p>Point Sources WLA's shall be implemented through MS4 permits and via the authority vested in the Executive Officer by sections 13267 and/or 13383 of the Porter-Cologne Water Quality Control Act (Water Code section 13000 et seq.).</p> <p>MS4 Permittees MS4 Permittees may comply with WLA's by (1) installing certified full capture systems on conveyances that discharge to Machado Lake, or (2) implementing an MFAC program in conjunction with BMPs. Irrespective of these two general approaches to implementing the WLA's, MS4 Permittees may comply with the WLA's in any lawful manner, such as the compliance strategies included in the Los Angeles River and Ballona Creek Trash TMDLs as adopted by resolution R15-006, and approved by USEPA on June 30, 2016.</p> <ol style="list-style-type: none"> MS4 Permittees may comply with the final WLA by installing adequately sized and maintained full capture systems certified by the Executive Officer of the Los Angeles Water Board or the Executive Director of the State Water Board. A full capture system, at a minimum, consists of 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 sub-drainage area. The rational equation is used to compute the peak flow rate: $Q = C \times I \times A$, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour); and A = subdrainage area (acres). <p>MS4 Permittees that choose to comply via installation of full capture systems, must demonstrate a phased implementation of full capture devices over an 8-year period until the final WLA of zero is attained. Zero will be deemed to have been met if full capture systems have been installed on all conveyances that discharge to Machado Lake.</p> <ol style="list-style-type: none"> MS4 Permittees may propose an MFAC program in conjunction with BMPs to the Los Angeles Water Board

Element	Machado Lake Trash TMDL
	<p>for incorporation into the relevant NPDES permit. The MFAC/BMP program must include requirements equivalent to those set forth for Nonpoint Sources. Agencies that are responsible for both point and nonpoint sources will be deemed in compliance with both the WLAs and LAs if an MFAC/BMP program, approved by the Executive Officer, is implemented.</p> <p><i>Caltrans</i> Caltrans may comply with WLAs by installing, operating, and maintaining any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls for all storm drains that capture runoff from significant trash generating areas to achieve full capture equivalency as defined by the Trash Provisions in the Plans for Ocean Waters of California and the Inland Surface Waters, Enclosed Bays, and Estuaries of California statewide Trash Amendments.</p> <p>Nonpoint Sources</p> <p>LAs shall be implemented through a conditional waiver of waste discharge requirements, waste discharge requirements, or another appropriate order of the Los Angeles Water Board in accordance with the statewide Policy for Implementation and Enforcement of the Nonpoint Source Pollution Program.</p> <p>(1) Non-point source dischargers may achieve compliance with the LAs by implementing an MFAC/BMP program approved by the Executive Officer. Responsible jurisdictions that are responsible for both point and nonpoint sources will be deemed in compliance with both the WLAs and LAs if an MFAC/BMP program, approved by the Executive Officer, is implemented.</p> <p>The MFAC/BMP Program shall, to the satisfaction of the Executive Officer, meet the following criteria:</p> <p>a) The MFAC/BMP Program includes an adequate 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 water and on the shoreline. Responsible entities 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 Machado Lake. For Machado Lake, the initial minimum frequency shall be set as follows:</p>

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	<ol style="list-style-type: none"> 1. Five days per week on the shoreline and in the Ken Malloy Harbor Regional Park, as defined in the Executive Officer approved Trash Monitoring and Reporting Plan (TMRP). 2. Twice per week on waters of Machado Lake. <p>b) The MFAC/BMP Program includes reasonable assurances that it will be implemented by the responsible entities.</p> <p>c) The MFAC/BMP Program includes a TMRP and a requirement that the responsible entities will self-report any non-compliance with its provisions. The results and report of the TMRP must be submitted to the Los Angeles Water Board on an annual basis.</p> <p>d) MFAC protocols may be based on SWAMP protocols for rapid trash assessment, or alternative protocols proposed by dischargers and approved by the Executive Officer.</p> <p>e) Implementation of the MFAC/BMP program should include a Health and Safety Plan to protect personnel. The MFAC/BMP program shall not require responsible entities to access and collect trash from areas where personnel are prohibited.</p> <p>The Executive Officer may approve or require a revised assessment and collection frequency:</p> <ol style="list-style-type: none"> (a) To prevent trash from accumulating in deleterious amounts that cause nuisance or adversely affect beneficial uses between collections; (b) To reflect the results of trash assessment and collection; (c) If the amount of trash collected does not show a decreasing trend, where necessary, such that a shorter interval between collections is warranted; or (d) If the amount of trash collected is decreasing such that a longer interval between collections is warranted. <p>With regard to (a), (b) or (c), above, the Executive Officer is authorized to allow responsible entities to implement additional structural or non-structural BMPs in lieu of modifying the monitoring frequency.</p> <p>At the end of the implementation period, a revised MFAC/BMP program may be required if the Executive Officer determines that the amount of trash accumulating between collections is causing nuisance or otherwise adversely affecting beneficial uses.</p>

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	Alternatively, responsible entities may propose, or the Los Angeles Water Board may impose, an alternative program, provided the program is consistent with the assumptions and requirements of the reductions described in Table 7-26.2b.
Monitoring and Reporting Plan	<p>Responsible jurisdictions and entities will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in Machado Lake and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs for non-Caltrans entities, or an alternative to the default trash baseline for Caltrans to prioritize installation of full capture devices. The default trash baseline WLA for Caltrans is 6677.4 gallons per square mile per year.</p> <p>Requirements for the TMRP shall include, but are not limited to, assessment and quantification of trash collected from the surfaces and shoreline of Machado Lake or from responsible jurisdiction land areas. The monitoring plan shall provide details of the frequency, location, and reporting of trash monitoring. Responsible jurisdictions and entities shall propose a metric (e.g., weight, volume, pieces of trash) to measure the amount of trash in Machado Lake and on the land area surrounding Machado Lake, as defined in the TMRP.</p> <p>The TMRP shall also include a process for evaluation of effectiveness of the MFAC/BMP program to prevent trash from accumulating in deleterious amounts that cause nuisance or adversely affect beneficial uses between collections, proposals to enhance BMPs, and a revised MFAC for Executive Officer review.</p> <p>Responsible jurisdictions and entities may coordinate their TMRP activities for Machado Lake.</p>
Margin of Safety	Zero is a conservative numeric target which contains an implicit margin of safety.
Seasonal Variations and Critical Conditions	Discharge of trash from point sources occurs primarily during or shortly after a major rain event. Discharge of trash from nonpoint sources occurs during all seasons, but can be increased during or shortly after high wind events, which are defined as periods of wind advisories issued by the National Weather Service, and the period from May 15 to October 15.

**Table 7-26.2a Machado Lake Trash TMDL: Implementation Schedule
Point Sources**

Task No.	Task	Responsible Jurisdiction	Date
1	Submit Trash Monitoring and Reporting Plan, including a plan for defining the trash baseline WLA and a proposed definition of "major rain event".	California Department of Transportation (Caltrans) and Municipal Separate Storm Sewer System (MS4) Permittees including: Los Angeles County, Los Angeles County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	September 6, 2008
2	Implement Trash Monitoring and Reporting Plan.	California Department of Transportation (Caltrans) and Municipal Separate Storm Sewer System (MS4) Permittees including: Los Angeles County, Los Angeles County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	6 months from receipt of letter of approval from Los Angeles Board Executive Officer
3	Submit results of Trash Monitoring and Reporting Plan, recommend trash baseline WLA, and propose prioritization of Full Capture System installation or implementation of other measures to attain the required trash reduction.	California Department of Transportation (Caltrans) and Municipal Separate Storm Sewer System (MS4) Permittees including: Los Angeles County, Los Angeles County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	2 years from receipt of letter of approval for the Trash Monitoring and Reporting Plan from Los Angeles Board Executive Officer.
4	Installation of Full Capture Systems or other measures to achieve 20% 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 County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	March 6, 2012

Task No.	Task	Responsible Jurisdiction	Date
5	Installation of Full Capture Systems or other measures to achieve 40% 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 County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	March 6, 2013
6	Evaluate the effectiveness of Full Capture Systems or other measures and reconsider the WLA.	Regional Board.	March 6, 2013
7	Installation of Full Capture Systems or other measures 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 County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	March 6, 2014
8	Installation of Full Capture Systems or other measures to achieve 80% 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 County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	March 6, 2015
9	Installation of Full Capture Systems or other measures to achieve 100% 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 County Flood Control District, and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance	March 6, 2016

Task No. 4 through 9: 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 Machado Lake.

**Table 7-26.2b Machado Lake Trash TMDL:
Implementation Schedule
Minimum Frequency of Assessment and Collection Program**

Task No.	Task	Responsible Entities	Date
1	Submit MFAC/BMP Program and Trash Monitoring and Reporting Plan.		September 6, 2008
2	Implement MFAC/BMP Program.	City of Los Angeles	Six months from approval of TMRP from Los Angeles Board Executive Officer.
3	Submit annual TMRP reports including proposal for revising MFAC/BMP for Executive Officer approval.	City of Los Angeles	March 6, 2010, and annually thereafter.
4	Reconsideration of Trash TMDL based on evaluation of effectiveness of MFAC/BMP program.	Los Angeles Board.	March 6, 2013.
5	Submit revised MFAC/BMP Program and Trash Monitoring and Reporting Plan	City of Los Angeles	Six months from the effective date of the revisions to the TMDL

Task No. 2: All responsible entities must be attaining the zero trash target after each required trash assessment and collection event. Task No. 3: All responsible entities must demonstrate full compliance and attainment of the zero trash target's requirement that trash is not accumulating in deleterious amounts between the required trash assessment and collection events. Task No. 1 through 5: Based on responsible entities' monitoring reports, the Executive Officer may adjust the minimum frequency of assessment and collection as necessary to ensure compliance between the required trash assessment and collection events.