

**Amendments**  
**to the**  
**Water Quality Control Plan – Los Angeles Region**  
**for the**  
**Machado Lake Trash TMDL**

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**Chapter 7. Total Maximum Daily Loads (TMDLs)  
Machado Lake Trash TMDL**

This TMDL was adopted by:

- The Regional Water Quality Control Board on [Insert Date].
- 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 elements of the TMDL are provided in table 7-26.1 and the implementation plan in tables 7-26.2a and 7-26.2b.

**Table 7-26.1 Machado Lake Trash TMDL: Elements**

<b>Element</b>	<b>Derivation of Numbers</b>
<b><i>Problem Statement</i></b>	Current levels of trash discharges into Machado Lake violate water quality objectives and are impairing beneficial uses. Relevant water quality objectives include Floating Material and Solid, Suspended, or Settleable Materials. The following designated beneficial uses are impacted by trash: Navigation (NAV); contact water recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); marine habitat (MAR); and rare, threatened, or endangered species (RARE).
<b><i>Numeric Target</i></b> <i>(interpretation of the narrative water quality objective, used to calculate the load allocations)</i>	Zero trash in Machado Lake and on the shoreline. Zero is defined as no trash immediately following each assessment and collection event consistent with an established Minimum Frequency. The Minimum Frequency is established at an interval that prevents trash from accumulating in concentrations that cause nuisance or adversely affect beneficial uses between collections.
<b><i>Source Analysis</i></b>	Nonpoint source discharges are the major source of trash loading to the Machado Lake. Point sources such as storm drains are minor sources of trash discharged to Machado Lake.
<b><i>Loading Capacity</i></b>	Zero, as defined in the Numeric Target.
<b><i>Waste Load Allocations (for point sources)</i></b>	Waste Load Allocations (WLAs) are assigned to the California Department of Transportation (Caltrans) and permittees under the Los Angeles County Municipal Separate Storm Sewer System (MS4) NPDES permit, including Los Angeles County Department of Public Works and the Cities of Carson, Lomita, Los Angeles, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance. WLAs may be issued to additional responsible

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	<p>jurisdictions in the future under Phase II of the US EPA Stormwater Permitting Program, or other applicable regulatory programs. WLAs are zero trash.</p>
<p><b>Load Allocations (for nonpoint sources)</b></p>	<p>A Load Allocation (LA) is assigned to Los Angeles County Department of Parks and Recreation. LAs may be issued to additional responsible jurisdictions in the future under applicable regulatory programs. LAs are zero trash.</p>
<p><b>Implementation</b></p>	<p>Implementation of the trash TMDL for Machado Lake includes structural and non-structural best management practices (BMPs) and a program for a minimum frequency of assessment and collection to address point and nonpoint trash sources.</p> <p>Baseline WLAs and LAs are based on a reference system/antidegradation approach using trash removal data from the Los Angeles Litter Monitoring Plan and the City of Calabasas. The "reference system/anti-degradation approach" means that on the basis of historical trash generation rates at existing monitoring locations most similar to Machado Lake, a baseline amount of trash discharged to Machado Lake is permitted initially under the TMDL schedule. The allowable amount of trash is set such that (1) water quality at any site is at least as good as at the designated reference site and (2) there is no degradation of existing water quality based on existing amounts of trash.</p> <p><b>Point Sources</b></p> <p>WLAs will be implemented through storm water permits and via the authority vested in the Executive Officer by section 13267 of the Porter-Cologne Water Quality Control Act (Water Code section 13000 et seq.).</p> <p>Point source dischargers may achieve compliance with the WLA using either of two approaches: 1) implementing full capture systems on storm drains through a progressive implementation schedule, or 2) implementing a program for Minimum Frequency of Assessment and Collection (MFAC) in conjunction with a progressive trash reduction schedule.</p> <p>1. Compliance with the final WLA may be achieved through an adequately sized and maintained full capture system that has been certified by the Executive Officer. A full capture system is any device or series of devices that traps all particles retained by a 5 mm mesh screen and</p>

	<p>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:  <math>Q = C \times I \times A</math>, 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 7-26.1); 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 and accompanying Basin Plan amendment.</p> <p>Point sources that choose to comply via a full capture system, must demonstrate a phased reduction from a reference baseline 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 storm drains discharging to the lake. The default baseline WLA for the lake is equal to 5334 gallons of uncompressed trash per square mile per year removed from the lake and its shoreline. The Baseline WLAs may be revised by the Regional Board based on data collected during the Monitoring Program.</p> <p>2. Compliance through a MFAC program and a progressive trash reduction schedule may be proposed to the Regional Board for incorporation into the relevant NPDES permit. The MFAC program must include requirements analogous to described in the Nonpoint Source Conditional Waiver set forth below.</p> <p><b>Nonpoint Sources</b></p> <p>LAs are based on a phased reduction over 5-years. The default Baseline LA is equal to 640 gallons of uncompressed trash per square mile per year. The Baseline LA may be revised by the Regional Board based on data collected during the Monitoring Program</p> <p>LAs shall be implemented through either (1) A conditional waiver that implements a MFAC Program, or (2) an alternative program subject to individual waste discharge requirements.</p>
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	<p>(1) Conditional Waiver: Pursuant to Water Code section 13269, waste discharge requirements are waived for any responsible jurisdiction that submits a MFAC Program, which, to the satisfaction of the Executive Officer, meets the following criteria:</p> <ul style="list-style-type: none"> <li>a) The MFAC Program includes a minimum frequency of trash assessment and collection that includes pickup of all the visible trash in the water and on the shoreline. For the Machado Lake trash TMDL, the default minimum frequency shall initially be set at once per day.</li> <li>b) The MFAC Program requires that trash collected will not exceed baseline LAs, and ensures trash collected from the lakes and lakeshore will decline by 50% over five years, consistent with the requirements set forth in Table 26.2b, below. Furthermore, the Program must describe how the jurisdiction will respond if trash assessment and collection events indicate that trash reductions are not proceeding on schedule.</li> <li>c) The MFAC Program includes a proposed definition for major rain event as part of the monitoring plan to be approved by the Executive Officer.</li> <li>d) The MFAC Program includes reasonable assurances that it will be implemented by the responsible jurisdiction.</li> <li>e) The MFAC Program includes a monitoring and reporting plan, as described below, and a requirement that the responsible agency will self-report any non-compliance with its provisions. MFAC protocols may be based on SWAMP protocols for rapid trash assessment.</li> </ul> <p>The Executive Officer may approve or require a revised monitoring frequency under the waiver:</p> <ul style="list-style-type: none"> <li>(a) To reflect the results of trash assessment;</li> <li>(b) If the amount of trash collected is increasing such that a shorter interval between collections is warranted; or</li> <li>(c) If the amount of trash collected is decreasing such that a longer interval between collections is warranted.</li> </ul> <p>Additionally, the monitoring frequency shall be increased if the Executive Officer determines that the amount of trash accumulating between collections is causing nuisance or otherwise adversely affecting beneficial uses effects on Navigation (NAV); contact water recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); marine habitat</p>
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	<p>(MAR); and rare, threatened, or endangered species (RARE), that is specific for Machado Lake.</p> <p>With regard to (a) or (b), above, the Executive Officer is authorized to allow responsible jurisdictions to implement additional structural or non-structural BMPs in lieu of modifying the monitoring frequency if he determines doing so will abate the noncompliance with the waiver.</p> <p>This waiver shall expire pursuant to Water Code section 13269 five years after the effective date of this TMDL, unless reissued. The Regional Board may reissue this waiver through an order consistent herewith, instead of readopting these regulatory provisions.</p> <p>(2) Alternatively, responsible jurisdictions may propose, or the Regional Board may impose, an alternative program which would be implemented through waste discharge requirements or an individual waiver, provided the program is consistent with the assumptions and requirements of the reductions described in Table 7-26.2b, below.</p> <p>Within sixty days of the effective date of this TMDL, the Executive Officer shall require responsible jurisdictions to submit either a notice of intent to be regulated under the conditional waiver with their proposed MFAC Program or a report of waste discharge.</p>
<p><b><i>Monitoring and Reporting Plan</i></b></p>	<p>Responsible jurisdictions will develop a Monitoring and Reporting Plan for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in Machado Lake. A portion of the plan may include a plan to establish alternative Baseline WLAs and LAs.</p> <p>Minimum requirements for trash monitoring shall include assessment and quantification of trash collected from the surfaces and shoreline of Machado Lake. The monitoring plan shall provide details of the frequency, location, and reporting of trash monitoring for each lake. Responsible jurisdictions shall propose a metric (e.g., weight, volume, pieces of trash) to measure the amount of trash in the lake and on the land area surrounding the lake. Responsible Jurisdictions may coordinate their trash monitoring activities for Machado Lake.</p>
<p><b><i>Margin of Safety</i></b></p>	<p>“Zero discharge” is a conservative standard which contains an implicit margin of safety. A progressive schedule of trash reduction during the course of the implementation plan increases the margin of safety.</p>

<b><i>Seasonal Variations and Critical Conditions</i></b>	Discharge of trash from the storm drain occurs primarily during or shortly after a major rain event. Discharge of trash from nonpoint sources occurs primarily during or shortly after high wind events, which are defined as periods of wind advisories issued by the National Weather Service, and periods of high visitation during and after weekends and holidays from May 15 to October 15.
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**Table 7-26.2a Machado Lake Trash TMDL:  
Full Capture Implementation Schedule\*.**

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
1	Baseline Waste Load Allocations Effect	Stormwater Permittees	Effective Date of the TMDL
2	Submit Monitoring and Reporting Plan	Stormwater Permittees	Sixty days from receipt of Order from Regional Board Executive Officer
3	Implement Monitoring and Reporting Program	Stormwater Permittees	Sixty days from receipt of letter of approval from Regional Board Executive Officer
4	Regional Board Reconsideration of Baseline Waste Load Allocations.	Regional Board	Two years from effective date of TMDL.
5	Installation of BMPs to achieve 20% reduction of trash,from Baseline WLA**	Stormwater Permittees	Four years from effective date of TMDL.
6	Installation of BMPs to achieve 40% reduction of trash from Baseline WLA**	Stormwater Permittees	Five years from effective date of TMDL.
7	Installation of BMPs to achieve 60% reduction of trash from Baseline WLA**	Stormwater Permittees	Six years from effective date of TMDL.
8	Installation of BMPs to achieve 80% reduction of trash,from Baseline WLA**	Stormwater Permittees	Seven years from effective date of TMDL.
9	Installation of BMPs to achieve 100% reduction of trash,from Baseline WLA**	Stormwater Permittees	Eight years from effective date of TMDL.

\* The isohyethal map may be updated by the Los Angeles County hydrologist to reflect additional rain data. Data published by the Los Angeles County Department of Public Works are prospectively incorporated by reference into this TMDL and accompanying Basin Plan amendment.

\*\* Compliance with percent reductions from the Baseline WLA will be assumed wherever full capture systems are installed in corresponding percentages of the storm drain system discharging to the lake.

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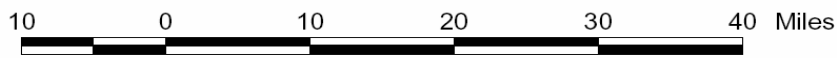
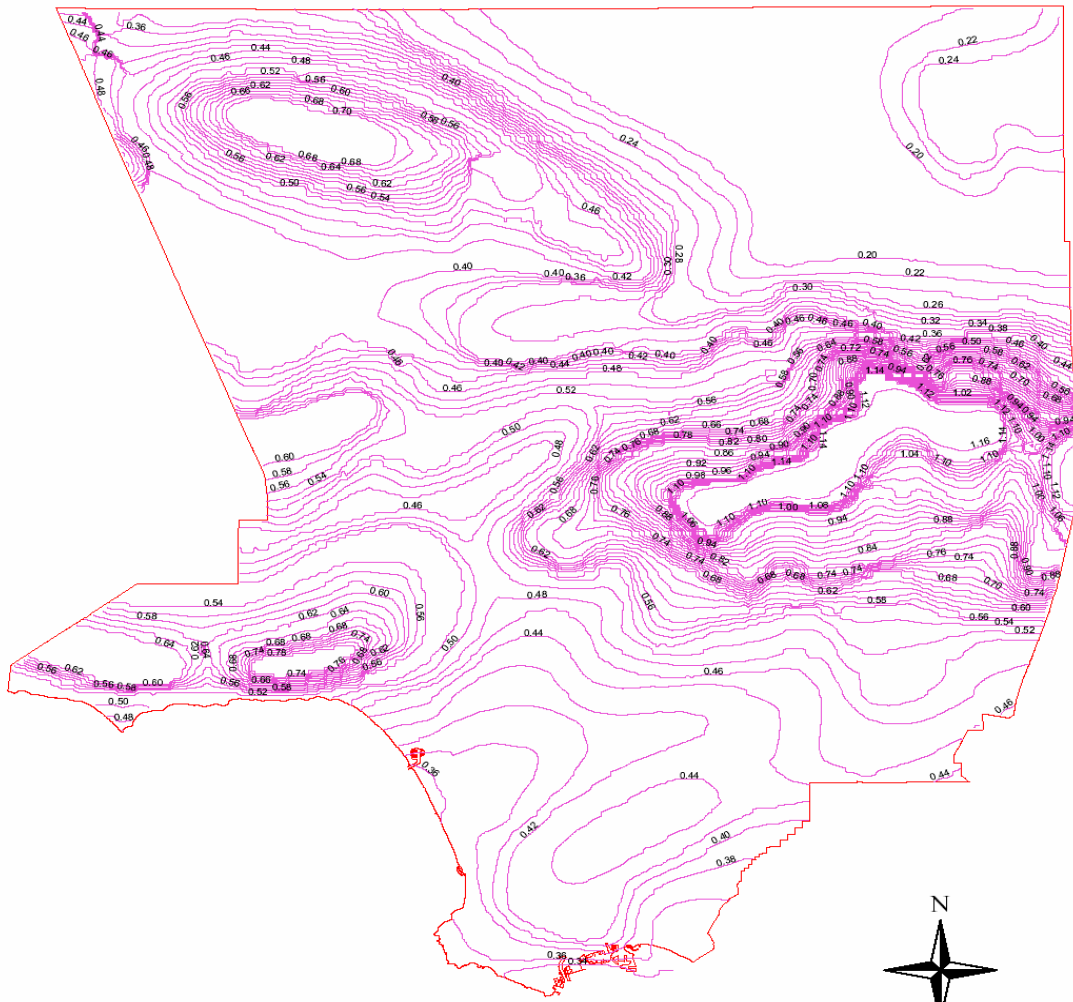
**Table 7-26.2b Machado Lake Trash TMDL:  
Minimum Frequency Assessment and Collection Schedule.**

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
1	Conditional Waiver in Effect	Los Angeles City and Stormwater Permittees	Regional Board adoption of TMDL
2	Baseline Waste Load and Load Allocations in Effect	Los Angeles City and Stormwater Permittees	Effective Date of the TMDL
3	Submit Notice of Intent to Comply with Conditional Waiver of Discharge Requirements, including minimum Frequency Assessment and Collection (MFAC) Program Plan	Los Angeles City and Stormwater Permittees	Sixty days from TMDL effective date
4	Implement MFAC Program	Los Angeles City and Stormwater Permittees	Sixty days from receipt of Notice of Acceptance from Regional Board Executive Officer
5	Regional Board Reconsideration of Baseline Waste Load Allocations and Load Allocations	Regional Board	Two years from effective date of TMDL.
6	Installation of BMPs to achieve 10% reduction of trash from Baseline WLA and LA	Los Angeles City and Stormwater Permittees	Three years from effective date of TMDL.
7	Installation of BMPs to achieve 30% reduction of trash from Baseline WLA and LA	Los Angeles City and Stormwater Permittees	Four years from effective date of TMDL.
8	Installation of BMPs to achieve 50% reduction of trash from Baseline WLA and LA	Los Angeles City and Stormwater Permittees	Five years from effective date of TMDL.

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**7-26.1. Machado Lake Trash TMDL, Isohyetal Map of Rainfall Intensities  
in Portions of Los Angeles County**

**1-Year 30-Min Rainfall Intensity (Inches/Hour)**



- 1yr 30min intensity.shp
- La county boundary.shp

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