

Attachment IV TMDL Requirements

Attachment IV identifies TMDLs adopted by the Regional Water Boards and approved by the State Water Board and USEPA which assign the Department a Waste Load Allocation (WLA) or which specify the Department as a responsible party. In addition, Attachment IV identifies TMDLs established by USEPA which specify the Department as a responsible party or which identify NPDES permitted storm water sources or point sources generally, or identify roads generally, as subject to the TMDL.

The Department is obligated to consult each TMDL and to comply with all applicable allocations and other provisions. Applicable Regional Water Board Basin Plan Amendments, orders and resolutions are listed in the first column in Attachment IV. Compliance with all TMDLs must be demonstrated to the satisfaction of the appropriate Regional Water Board.

Attachment IV also contains TMDL-specific permit requirements for the Lake Tahoe Sediment and Nutrients TMDL. These requirements are directly enforceable through this Order. Consistent with provision E.4.b, within one year of the ~~effective~~adoption date of this Order, the State Water Board will re-open Attachment IV for incorporation of specific permit requirements implementing the remainder of the TMDLs listed in Attachment IV. Once the TMDL-specific permit requirements are adopted, the Department shall comply with the incorporated requirements in accordance with the specified compliance due dates.

**Attachment IV
TMDL Requirements**

TMDL	Implementation Requirements
<i>R1 – North Coast Region</i>	
<p>Albion River * <i>Sediment</i></p> <p>Effective Date: December 2001</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Big River * <i>Sediment</i></p> <p>Effective Date: December 2001</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Eel River, Lower HA* <i>Temperature and Sediment</i></p> <p>Effective Date: December 18, 2007</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Eel River, Middle Fork, Eden Valley and Round Valley HSAs * <i>Temperature and Sediment</i></p> <p>Effective Date: December 2003</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Eel River, Middle Main HA * <i>Temperature and Sediment</i></p> <p>Effective Date:</p>	

TMDL	Implementation Requirements
<p>December 2005</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Eel River, North Fork HA* <i>Sediment and Temperature</i></p> <p>Effective Date: December 30, 2002</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Eel River, South Fork HA* <i>Sediment and Temperature</i></p> <p>Effective Date: December 16, 1999</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Eel River, Upper Main HA * <i>Sediment and Temperature</i></p> <p>Effective Date: December 29, 2004</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Garcia River <i>Sediment</i></p> <p>Effective Date: March 16, 1998</p> <p>BPA: Action Plan for the Garcia River Watershed</p> <p>Resolution:</p>	
<p>Gualala River * <i>Sediment</i></p> <p>Effective Date: November 29, 2004</p>	

TMDL	Implementation Requirements
BPA: Resolution:	
Klamath River in California <i>Temperature, Dissolved Oxygen, Nutrient, & Microcystin</i> Effective Date: December 28, 2010 BPA: Action Plan for Klamath River TMDLs Resolution: R1-2010-0026	
Lost River <i>Nitrogen and Biochemical oxygen Demand to address Dissolved Oxygen and pH Impairments</i> Effective Date: December 30, 2008 BPA: Action Plan for Lost River TMDL Resolution: R1-2010-0026	
Mad River * <i>Sediment and Turbidity</i> Effective Date: December 21, 2007 BPA: Resolution:	
Mattole River * <i>Sediment & Temperature</i> Effective Date: December 30, 2003 BPA: Resolution:	

TMDL	Implementation Requirements
<p>Navarro River * <i>Temperature & Sediment</i></p> <p>Effective Date: December 27, 2000</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Noyo River * <i>Sediment</i></p> <p>Effective Date: December 16, 1999</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Redwood Creek * <i>Sediment</i></p> <p>Effective Date: December 30, 1998</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Scott River <i>Sediment and Temperature</i></p> <p>Effective Date: August 11, 2006</p> <p>BPA: Action Plan for Scott River.</p> <p>Resolutions: R1-2005-0113 & R-2010-0026</p>	
<p>Shasta River <i>Dissolved Oxygen & Temperature</i></p> <p>Effective Date: January 26, 2007</p> <p>BPA: Action Plan for the Shasta River Watershed</p> <p>Resolution: R1-2006-0052</p>	

TMDL	Implementation Requirements
<p>Ten Mile River * <i>Sediment</i></p> <p>Effective Date: December 2000</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Trinity River* <i>Sediment</i></p> <p>Effective Date: December 20, 2001</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Trinity River, South Fork HA* <i>Sediment</i></p> <p>Effective Date: December 1998</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Van Duzen River and Yager Creek * <i>Sediment</i></p> <p>Effective Date: December 16, 1999</p> <p>BPA:</p> <p>Resolution:</p>	
<p>R2 - San Francisco Region</p>	
<p>Napa River <i>Sediment</i></p> <p>Effective Date: January 20, 2011</p> <p>BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs</p> <p>Resolution: R2-2009-0064</p>	

TMDL	Implementation Requirements
<p>Richardson Bay <i>Pathogens</i></p> <p>Effective Date: December 18, 2009</p> <p>BPA – Pathogens in Richardson Bay</p> <p>Resolution: R2-2008-0061</p>	
<p>San Francisco Bay <i>PCBs</i></p> <p>Effective Date: March 29, 2010</p> <p>BPA: Exhibit A & TMDL & Implementation Plan for PCBs</p> <p>Resolution: R1-2008-0012</p>	
<p>San Francisco Bay <i>Mercury</i></p> <p>Effective Date: February 12, 2008</p> <p>BPA – Chapter 7, SF Bay Mercury TMDL</p> <p>Resolution: R2-2006-0052</p>	
<p>Sonoma Creek <i>Sediment</i></p> <p>Effective Date: September 8, 2010</p> <p>BPA: Exhibit A & Implementation Plan</p> <p>Resolutions: R2-2008-0103 and 2010-0016</p>	
<p>Urban Creek <i>Diazinon & Pesticide Toxicity</i></p> <p>Effective Date: May 16, 2007</p>	

TMDL	Implementation Requirements
<p>BPA: BPA – Chapter 3, Toxicity</p> <p>Resolution: R2-2005-0063</p>	
R3 - Central Coast Region	
<p>San Lorenzo River (includes Carbonera Lompico, and Shingle Mill Creeks) Sediment</p> <p>Effective Date: February 19, 2004</p> <p>BPA: Attachment to R3-2002-0063</p> <p>Resolution: R3-2002-0063</p>	
<p>Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) Sediment</p> <p>Effective Date: January 20, 2004</p> <p>BPA: Attachment A to R3-2002-0051</p> <p>Resolution: R3-2003-0051</p>	
R4 - Los Angeles Region	
<p>Ballona Creek Trash</p> <p>Effective Date: August 1, 2002 & February 8, 2005</p> <p>BPA: Attachment A, Chapter 7-3.</p> <p>Resolution: 2004-0023</p>	

TMDL	Implementation Requirements
<p>Legg Lake <i>Trash</i></p> <p>Effective Date: February 27, 2008</p> <p>BPA: Attachment A Chapter 7-27</p> <p>Resolution: R4-2007-10</p>	
<p>Los Angeles River <i>Trash</i></p> <p>Effective Date: July 24, 2008</p> <p>BPA: Attachment A, Chapter 7-2</p> <p>Resolution: R4-2007-012</p>	
<p>Machado Lake <i>Trash</i></p> <p>Effective Date: February 27, 2008 BPA: Attachment A Chapter 7-26</p> <p>Resolution: R4-2007-06</p>	
<p>Malibu Creek Watershed <i>Trash</i></p> <p>Effective Date: June 26, 2009</p> <p>BPA: Attachment A, Chapter 7-31</p> <p>Resolution: R4-2008-007</p>	
<p>Revolon Slough and Beardsley Wash <i>Trash</i></p> <p>Effective Date: August 1, 2002 &</p>	

TMDL	Implementation Requirements
<p>February 8, 2005 BPA: Attachment A, Chapter 7-3.</p> <p>Resolution: 2004-0023</p>	
<p>Ventura River Estuary <i>Trash</i></p> <p>Effective Date: February 27, 2008</p> <p>BPA: Attachment A, Chapter 7-25</p> <p>Resolution: R4-2007-008</p>	
<p>Ballona Creek, Ballona Estuary, and Sepulveda Channel <i>Bacteria</i></p> <p>Effective Date: March 26, 2007</p> <p>BPA: Attachment A, Chapter 7-21</p> <p>Resolution: R4-2006-011</p>	
<p>Harbor Beaches of Ventura County (Kiddie Beach and Hobie Beach) <i>Bacteria</i></p> <p>Effective Date: December 18, 2008</p> <p>BPA: Attachment A, Chapter 7-28</p> <p>Resolution: R2007-017</p>	
<p>Malibu Creek and Lagoon <i>Bacteria</i></p> <p>Effective Date: January 10, 2006</p> <p>BPA: Attachment A,</p>	

TMDL	Implementation Requirements
<p>Chapter 7-10</p> <p>Resolution: 2004-019R</p>	
<p>Marina del Rey, Harbor Back Basins, Mother's Beach <i>Bacteria</i></p> <p>Effective Date: March 18, 2004</p> <p>BPA: Attachment A, Chapter 7-5</p> <p>Resolution: 2003-012</p>	
<p>Santa Monica Bay Beaches during Dry & Wet Weather <i>Bacteria</i></p> <p>Effective Date: June 19, 2003</p> <p>BPA: Attachment A, Chapter 7-5</p> <p>Resolution: 2003-012</p>	
<p>Ballona Creek <i>Metals</i></p> <p>Effective Date: December 22, 2005 and reaffirmed on October 29, 2008</p> <p>BPA: Attachment A, Chapter 7-12</p> <p>Resolution: R2007-015</p>	
<p>Calleguas Creek and its Tributaries and Mugu Lagoon <i>Metals and Selenium</i></p> <p>Effective Date: March 26, 2007</p> <p>BPA: Attachment A, Chapter 7-19</p>	

TMDL	Implementation Requirements
Resolution: R4-2006-012	
Los Cerritos Channel * <i>Metals</i> Effective Date: March 17, 2010 BPA: Resolution:	
Los Angeles River <i>Metals</i> Effective Date: December 22, 2005 and October 29, 2008 BPA: Attachment A, Chapter 7-13 and Attachment B. Resolution: R2007-014	
San Gabriel River * <i>Metals</i> Effective Date: March 26, 2007 BPA: Resolution:	
Machado Lake <i>Eutrophic, Algae, Ammonia, and Odors (Nutrient)</i> Effective Date: March 11, 2009 BPA: Attachment A to R08-006 Resolution: R08-006	
Santa Clara River Reach 3 * <i>Chloride</i> Effective Date:	

TMDL	Implementation Requirements
<p>June 18, 2003</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Ballona Creek Estuary <i>Toxic Pollutants</i></p> <p>Effective Date: December 22, 2005</p> <p>BPA: Attachment A, Chapter 7-14</p> <p>Resolution: R4-2005-008</p>	
<p><u>Colorado Lagoon</u> <u>Organochlorine</u> <u>Pesticides,</u> <u>Polychlorinated</u> <u>Biphenyls, Sediment</u> <u>Toxicity, Polycyclic</u> <u>Aromatic</u> <u>Hydrocarbons, and</u> <u>Metals</u></p> <p><u>Effective Date:</u> <u>June 14, 2011</u></p> <p><u>BPA: Attachment A,</u> <u>Chapter 7-30</u></p> <p><u>Resolution: No.</u> <u>R09-005</u></p>	
<p><u>Machado Lake</u> <u>Pesticides and</u> <u>Polychlorinated</u> <u>Biphenyls</u></p> <p><u>Effective Date:</u> <u>March 20, 2011</u></p> <p><u>BPA: Attachment A,</u> <u>Chapter 7-38</u></p> <p><u>Resolution:</u> <u>Resolution No. R10-</u> <u>008</u></p>	

TMDL	Implementation Requirements
<p>Marina del Rey Harbor <i>Toxic Pollutants</i></p> <p>Effective Date: March 16, 2006</p> <p>BPA: Attachment A, Chapter 7-18</p> <p>Resolution: R4-2005-012</p>	
<p>Calleguas Creek its Tributaries and Mugu Lagoon <i>Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation</i></p> <p>Effective Date: March 14, 2006</p> <p>BPA: Attachment A, Chapter 7-17</p> <p>Resolution: R4-2005-010</p>	
<p>R5 – Central Valley Region</p>	
<p>Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch <i>Mercury</i></p> <p>Effective Date: February 7, 2007</p> <p>BPA: Attachment 1 to R5-2005-0146</p> <p>Resolution: R5-2005-0146</p>	
<p>Clear Lake <i>Nutrients</i></p> <p>Effective Date: September 21, 2007</p> <p>BPA: Attachment 1 to R5-2006-0060</p>	

TMDL	Implementation Requirements
Resolution: R5-2006-0060	
<p>Sacramento-San Joaquín River Delta Estuary <i>Methyl mercury</i></p> <p>Effective Date: October 20, 2011</p> <p>BPA: Sacramento River and San Joaquin River Basins for the Control of Methylmercury and Total Mercury in the Sacramento –San Joaquin River Delta Estuary</p> <p>Resolution: R5-2010-0043</p>	

R6 – Lahontan Region

<p>Lake Tahoe <i>Sediment and Nutrients</i></p> <p>Effective Date: August 16, 2011</p> <p>BPA: WQ Amendment May 2008</p> <p>Resolution: 2009-0028</p>	<p><u>IMPLEMENTATION REQUIREMENTS</u></p> <p>A. Pollutant Load Reduction Requirements</p> <p>The Department must reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by 10%, 7%, and 8%, respectively, by September 30, 2016.</p> <p>Pollutant load reductions shall be measured in accordance with the processes outlined in the most recent version of Lake Clarity Crediting Program Handbook. To demonstrate compliance with the average annual fine sediment particle pollutant load reduction requirements, the Department must earn and maintain 361 Lake Clarity Credits for the water year October 1, 2015 to September 30, 2016, and for subsequent water years.</p> <p>B. Pollutant Load Reduction Plans</p> <p>The Department shall prepare a Pollutant Load Reduction Plan (PLRP) describing how it expects to meet the pollutant load reduction requirements described in Section A above. The Department shall submit a plan no later than September 15, 2013 that shall include, at a minimum, the following elements:</p> <ol style="list-style-type: none"> <i>Catchment registration schedule</i> <p>The PLRP shall include a list of catchments that the Department plans to register pursuant to the approved Lake Clarity Crediting Program to meet load reduction requirements. The list shall include catchments where capital improvement projects have been constructed since May 1, 2004 that the Department expects to claim credit for, and catchments where projects will be constructed and other load reduction activities (capital improvements, institutional controls, and other measures/practices implement) taken during the term of this Order.</p>
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TMDL	Implementation Requirements
	<p>2. <i>Proposed pollutant control measures</i></p> <p>The PLRP shall generally describe storm water program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading that the Department will implement in identified catchments.</p> <p>3. <i>Pollutant load reduction estimates</i></p> <p>The Department shall conduct pollutant load reduction analyses on a representative catchment subset to demonstrate that proposed implementation actions are expected to achieve the pollutant load reduction requirements specified in Section A above. For representative catchments, the analysis shall include detailed estimates of both baseline pollutant loading and expected pollutant loading resulting from implementation actions and provide justification why the conducted load reduction analysis is adequate for extrapolation to other catchments.</p> <p>The pollutant loading estimates shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004 and pollutant load reductions from actions not yet taken.</p> <p>4. <i>Load reduction schedule</i></p> <p>The PLRP shall describe a schedule for achieving the pollutant load reduction requirements described in Section A above. The schedule shall include an estimate of expected pollutant load reductions for each year of this Permit term based on preliminary numeric modeling results. The schedule shall also describe which catchments the Department anticipates it will register for each year of this Permit term.</p> <p>5. <i>Annual adaptive management</i></p> <p>The PLRP shall include a description of the processes and procedures to annually assess storm water management activities and associated load reduction progress. The plan shall describe how the Department will use information from the monitoring and implementation or other efforts to improve operational effectiveness and for achieving the pollutant load reduction requirements specified in Section A.</p> <p>6. <i>Pollutant Load Reduction Plan Update</i></p> <p>By March 15, 2017, the Department shall update its Pollutant Load Reduction Plan to describe how it will achieve the pollutant load reduction requirements for the second five-year TMDL implementation period, defined as the ten-year load reduction milestone in the Lake Tahoe TMDL.</p> <p>Specifically, the update Pollutant Load Reduction Plan shall demonstrate how the Department will reduce baseline fine sediment particle, total nitrogen, and total phosphorus loads by 21 percent, 14 percent, and 14 percent, respectively, by water year 2021.</p> <p>C. Pollutant Load Reduction Progress</p> <p>To demonstrate pollutant load reduction progress, the Department shall submit a Progress Report by March 15, 2014 documenting pollutant load reductions accomplished between May 1, 2004 (baseline year) and October 15, 2011.</p> <p>D. Pollutant Load Reduction Monitoring and Water Quality Monitoring Requirements</p>

TMDL	Implementation Requirements
	<p>Caltrans shall prepare and submit a Stormwater Monitoring Plan for review and approval by the Regional Board by July 15, 2013 and implement the approved plan.</p>
<p>Truckee River Sediment</p> <p>Effective Date: September 16, 2009</p> <p>BPA: WQ Amendment May 2008</p> <p>Resolution: 2009-0028</p>	
<p>R7 - Colorado River Region</p>	
<p>Coachella Valley Storm Water Channel <i>Bacterial Indicators</i></p> <p>Effective Date: <u>April 27, 2012</u></p> <p>BPA: Attachment 1: Final CVSC Bacteria TMDL</p> <p>Resolution: R7-2010-0028</p>	
<p>R8 - Colorado River Region</p>	
<p>Big Bear Lake <i>Nutrients for Dry Hydrological Conditions</i></p> <p>Effective Date: September 25, 2007</p> <p>BPA: Attachment to. R8-2006-0023</p> <p>Resolutions: R8-2006-0023, and R8-2008-0070</p>	

TMDL	Implementation Requirements
<p>Lake Elsinore and Canyon Lake <i>Nutrients</i></p> <p>Effective Date: September 30, 2005</p> <p>BPA: Attachment to. R8-2004-0037 & R8-2006- 0031</p> <p>Resolution: R8-2007-0083</p>	
<p>Rhine Channel Area of the Lower New Port Bay* <i>Chromium and Mercury</i></p> <p>Effective Date: June 14, 2002</p> <p>BPA:</p> <p>Resolution:</p>	
<p>San Diego Creek and Newport Bay* <i>Metals (Cadmium, Copper, Lead, & Zinc)</i></p> <p>Effective Date: June 14, 2002</p> <p>BPA:</p> <p>Resolution:</p>	
<p>San Diego Creek Watershed and the Upper & Lower Newport Bay* <i>Organochlorine Compounds (DDT, Chlordane, Dieldrin, PCBs, & Toxaphene)</i></p> <p>Effective Date: June 14, 2002</p> <p>BPA:</p> <p>Resolution:</p>	

TMDL	Implementation Requirements
R9 – San Diego Region	
<p>Chollas Creek <i>Diazinon</i></p> <p>Effective Date: November 3, 2003</p> <p>BPA: Attachment A to R9-2002-0123</p> <p>Resolution: Investigation Order R9-2004-0277</p>	
<p>Chollas Creek <i>Dissolved Copper, Lead and Zinc</i></p> <p>Effective Date: December 18, 2008</p> <p>BPA: Attachment A to Resolution No. R9-2007-0043</p> <p>Resolution: R9-2007-0036</p>	
<p>Rainbow Creek <i>Total Nitrogen and Total Phosphorus</i></p> <p>Effective Date: March 22, 2006</p> <p>BPA: Attachment A to R9-2005-0036</p> <p>Resolution: R9-2007-0036</p>	
<p>Project 1- Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) <i>Indicator Bacteria</i></p> <p>Effective Date: June 22, 2011</p>	

TMDL	Implementation Requirements
BPA: Attachment A to Resolution R9- 2010-001 Resolution: R9-2010-0001	

* USEPA Established TMDLs