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

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

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

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

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

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

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

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

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

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

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

TMDL	Implementation Requirements
June 18, 2003 BPA: Resolution:	
Ballona Creek Estuary *Toxic Pollutants* Effective Date: December 22, 2005 BPA: Attachment A, Chapter 7-14 Resolution: R4-2005-008	
Marina del Rey Harbor *Toxic Pollutants* Effective Date: March 16, 2006 BPA: Attachment A, Chapter 7-18 Resolution: R4-2005-012	
Calleguas Creek its Tributaries and Mugu Lagoon *Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation* Effective Date: March 14, 2006 BPA: Attachment A, Chapter 7-17 Resolution: R4-2005-010	
R5 – Central Valley Region	
Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch *Mercury*	

TMDL	Implementation Requirements
Effective Date: February 7, 2007 BPA: Attachment 1 to R5-2005-0146 Resolution: R5-2005-0146	
Clear Lake *Nutrients* Effective Date: September 21, 2007 BPA: Attachment 1 to R5-2006-0060 Resolution: R5-2006-0060	
Sacramento-San Joaquín River Delta Estuary *Methyl mercury* Effective Date: October 20, 2011 BPA: Sacramento River and San Joaquin River Basins for the Control of Methylmercury and Total Mercury in the Sacramento –San Joaquin River Delta Estuary Resolution: R5-2010-0043	
R6 – Lahontan Region	
Lake Tahoe *Sediment and Nutrients* Effective Date: August 16, 2011 BPA: WQ Amendment May 2008 Resolution:	**IMPLEMENTATION REQUIREMENTS** **A. Pollutant Load Reduction Requirements** 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. 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.

TMDL	Implementation Requirements
2009-0028	**B. Pollutant Load Reduction Plans** 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: *1. Catchment registration schedule* 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. *2. Proposed pollutant control measures* 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. *3. Pollutant load reduction estimates* 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. 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. *4. Load reduction schedule* 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. *5. Annual adaptive management* 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. 6. *Pollutant Load Reduction Plan Update*

TMDL	Implementation Requirements
	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. 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. **C. Pollutant Load Reduction Progress** 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. **D. Pollutant Load Reduction Monitoring and Water Quality Monitoring Requirements** 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.
Truckee River *Sediment* Effective Date: September 16, 2009 BPA: WQ Amendment May 2008 Resolution: 2009-0028	
R7 - Colorado River Region	
Coachella Valley Storm Water Channel *Bacterial Indicators* Effective Date*:* *Pending* BPA: Attachment 1: Final CVSC Bacteria TMDL Resolution: R7-2010-0028	

TMDL	Implementation Requirements
R8 - Colorado River Region	
Big Bear Lake *Nutrients for Dry Hydrological Conditions* Effective Date: September 25, 2007 BPA: Attachment to. R8-2006-0023 Resolutions: R8-2006-0023, and R8-2008-0070	
Lake Elsinore and Canyon Lake *Nutrients* Effective Date: September 30, 2005 BPA: Attachment to. R8-2004-0037 & R8-2006- 0031 Resolution: R8-2007-0083	
Rhine Channel Area of the Lower New Port Bay* *Chromium and Mercury* Effective Date: June 14, 2002 BPA: Resolution:	
San Diego Creek and Newport Bay* *Metals (Cadmium, Copper, Lead, & Zinc)* Effective Date: June 14, 2002 BPA: Resolution:	

TMDL	Implementation Requirements
San Diego Creek Watershed and the Upper & Lower Newport Bay* *Organochlorine Compounds (DDT, Chlordane, Dieldrin, PCBs, & Toxaphene* Effective Date: June 14, 2002 BPA: Resolution:	
R9 – San Diego Region	
Chollas Creek *Diazinon* Effective Date: November 3, 2003 BPA: Attachment A to R9-2002-0123 Resolution: Investigation Order R9-2004-0277	
Chollas Creek *Dissolved Copper, Lead and Zinc* Effective Date: December 18, 2008 BPA: Attachment A to Resolution No. R9-2007-0043 Resolution: R9-2007-0036	

TMDL	Implementation Requirements
Rainbow Creek *Total Nitrogen and Total Phosphorus* Effective Date: March 22, 2006 BPA: Attachment A to R9-2005-0036 Resolution: R9-2007-0036	
Project 1- Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) *Indicator Bacteria* Effective Date: June 22, 2011 BPA: Attachment A to Resolution R9-2010-001 Resolution: R9-2010-0001	

* USEPA Established TMDLs