

# Chollas Creek Dissolved Metals Total Maximum Daily Load (TMDL) Implementation Plan

Final Draft

July 2009



San Diego Unified  
Port District



County of  
San Diego



CalTrans



City of  
Lemon Grove



City of  
San Diego



City of  
La Mesa



U.S. Navy

**CHOLLAS CREEK  
DISSOLVED METALS TOTAL MAXIMUM  
DAILY LOAD (TMDL)  
IMPLEMENTATION PLAN**

**Final Draft Report**

Prepared for:

Caltrans  
City of San Diego  
City of La Mesa  
City of Lemon Grove  
County of San Diego  
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LIST OF ACRONYMS

Basin Plan	<i>Water Quality Control Plan for the San Diego Region</i>
Indicator Bacteria TMDL	<i>Project I - Beaches and Creeks in the San Diego Region TMDL for Indicator Bacteria</i>
BLTEA	Baseline Long Term Effectiveness Assessment
BMP	Best Management Practice
Caltrans	California Department of Transportation
CBSM	Community Based Social Marketing
CCC	Criteria Continuous Concentration
CMC	Criteria Maximum Concentration
Copermittees	The five San Diego Region Municipal Stormwater Copermittees who are also Dischargers, including the City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, and San Diego Unified Port District
Cost-Share Agreement	Cost-Share Agreement for Chollas Creek Hydrologic Unit No. 8.22, Chollas Creek Dissolved Metals Total Maximum Daily Load, Investigation Order No. R9-2004-0277 and Addendum No. 1, Implementation Monitoring
(Chollas Creek) Dissolved Metals TMDL	Total Maximum Daily Loads for Dissolved Copper, Lead and Zinc in Chollas Creek, Tributary to San Diego Bay
Implementation Plan	Chollas Creek Dissolved Metals TMDL Implementation Plan
LID	Low Impact Development
MS4	Municipal Separate Storm Sewer System
Navy	United States Navy
NPDES	National Pollutant Discharge Elimination System
OAL	Office of Administrative Law
Port	San Diego Unified Port District
REC-1	Contact Water Recreation
REC-2	Non-Contact Water Recreation
Regional Board	San Diego Regional Water Quality Control Board
San Diego Copermittee Monitoring Program	Annual wet and dry weather monitoring related to the San Diego County Municipal Copermittees Urban Runoff Monitoring Program
San Diego Copermittee Monitoring Report	Annual wet and dry weather reporting related to the San Diego County Municipal Copermittees Urban Runoff Monitoring Program
SCCWRP	Southern California Coastal Waters Research Project
SUSMP	Standard Urban Stormwater Mitigation Plan
TMDLs	Total Maximum Daily Loads
(TMDL Compliance) Monitoring Plan	<i>Chollas Creek Metals TMDL Implementation Compliance Monitoring Plan</i> which is presented in Appendix C of this Implementation Plan

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TTWQ	Threat to Water Quality
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
WARM	Warm Freshwater Habitat
Watershed Activity List	List of Watershed Activities for Phase I Implementation These lists were developed by each Discharger and are presented in Appendix B of this Implementation Plan
Weston	Weston Solutions, Inc.
WLA	Wasteload Allocation
WILD	Wildlife Habitat

## GLOSSARY

Baseline Long Term Effectiveness Assessment: The 2004–2005 municipal urban runoff monitoring report (WESTON, MOE, and LWA, 2005) developed for the San Diego County Copermittees in accordance with San Diego Regional Water Quality Control Board Order No. 2001-01. The monitoring program recommended for 2007–2010 was designed to advance the understanding of conditions in San Diego County watersheds, including the Chollas Creek Watershed. Key data used in this Implementation Plan include the Baseline Long Term Effectiveness Assessment Water Quality Priority Ratings and the Inventory of Potential Sources for the Chollas Creek Watershed.

Best Management Practice: The primary method to control storm water discharges (also referred to as “watershed activities” in the Implementation Plan).

California Toxics Rule: This is the water quality criteria for priority toxic pollutants for California inland surface waters, enclosed bays, and estuaries and is the basis of the numeric targets in the Dissolved Metals Total Maximum Daily Load. Specifically, the numeric targets for the Chollas Creek Dissolved Metals Total Maximum Daily Load were set equal to the California Toxics Rule’s water quality objectives, which are comprised of hardness-based equations for dissolved copper, lead, and zinc.

Channelization: Channelization includes engineering efforts, such as lining the channel bottom with concrete, installing concrete structures (culverts, pipes, etc.), straightening/realigning the flow path, which modified the natural course of the Chollas Creek, typically for flood control purposes.

Chollas Creek Dissolved Metals Total Maximum Daily Load Discharger Workgroup: Representatives from the seven Dischargers subject to the Dissolved Metals Total Maximum Daily Load work cooperatively to plan and coordinate watershed activities outlined in this planning document.

Chollas Creek Dissolved Metals Total Maximum Daily Load Implementation Plan: The planning document outlining the long-term planning, implementation, and assessment strategy used by Dischargers to meet the waste load allocations defined in the Dissolved Metals Total Maximum Daily Load.

Chollas Creek Total Maximum Daily Load Source Loading Assessment, Best Management Practice Evaluation, and Recommended Monitoring Strategy Report: Water quality assessment and planning document published for the City of San Diego in 2006 (WESTON, 2006). This document provides an assessment of potential sources relative to the constituents that have been listed in adopted and anticipated future Total Maximum Daily Loads for the Chollas Creek Watershed (based on the Baseline Long Term Effectiveness Assessment Inventory of Potential Sources data). This document introduced the tiered and phased approach used in this Implementation Plan. This document is available online at:  
<<http://www.sandiego.gov/thinkblue/pdf/chollasfinal0609.pdf>.

Community Based Social Marketing: A strategic process that identifies the barriers to behavioral change, structures a program around those barriers, and then implements and assesses the effectiveness of the program on a small scale (i.e., target audience).

Cost-Share Agreement: Cost-sharing agreement developed by the seven Dischargers to address the Dissolved Metals Total Maximum Daily Load monitoring requirements.

Criteria Continuous Concentration: Water quality criterion in the metals Total Maximum Daily Load equal to the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time without deleterious effects.

Criteria Maximum Concentration: Water quality criterion in the metals Total Maximum Daily Load equal to the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects.

Dischargers: The May 2007 version of the Dissolved Metals TMDL lists seven Dischargers that participated in the creation of this Implementation Plan, including Caltrans, the United States Navy, and five of the San Diego Region Municipal Stormwater Copermittees (RWQCB Order No. R9-2007-0001). The five Copermittees include the City of La Mesa, the City of Lemon Grove, the City of San Diego, the County of San Diego, and the San Diego Unified Port District.

Integrated Total Maximum Daily Load Watershed Approach: A holistic, multi-pollutant approach to watershed activity planning and implementation that consists of an iterative four component process, including 1) Initial Assessment, 2) Planning, 3) Implementation, and 4) Effectiveness Assessment/Re-Evaluation. Each component of this approach includes planning tools, which helped Dischargers develop and select Total Maximum Daily Load watershed activities, a framework for implementation, and an assessment process. The Implementation Plan currently focuses on the first five years (i.e., Phase I) of the Total Maximum Daily Load Compliance Schedule, but using this approach, Dischargers are enabled to identify and plan watershed activities beyond this five-year scope.

List of Watershed Activities for Phase I Implementation: Each Discharger developed a list of prioritized watershed activities that they plan to implement over the first five years of the 20-year Total Maximum Daily Load Compliance Schedule. Dischargers may modify the watershed activities implemented based on the outcomes of Phase I implementation (in accordance with the Integrated Total Maximum Daily Load Watershed Approach) and/or based on available resources.

Low Impact Development: Low impact development is an approach to land development and land re-development that works with nature to manage storm water as close to its source as possible. Low impact development design includes minimizing effective imperviousness, infiltrating or filtering flows, preserving and recreating natural landscape features, facilitating evapotranspiration, and treating storm water so it can be used as a resource. The Green Lot, Green Street, and Green Mall watershed activities are integrated low impact development designs introduced in this Implementation Plan (see watershed activity definitions in Tool C of Appendix D).

Mass Loading Station: Water quality monitoring station. In the Chollas Creek Watershed, the two mass loading stations are SD8(1) and DPR2.

National Pollutant Discharge Elimination System: Special provision based on the Clean Water Act regulating the discharge of pollutants from a point source to waters of the United States without impacting water quality or human health.

National Pollutant Discharge Elimination System Permit: A permit program that requires all point sources discharging pollutants into waters of the United States to obtain a permit.

State Board Office of Administrative Law: State of California agency responsible for reviewing the Total Maximum Daily Loads for clarity, necessity, and legal validity. The dissolved metals Total Maximum Daily Load took effect on October 22, 2008, after it was reviewed and approved by the Office of Administrative Law.

Phase I: In this Implementation Plan, the 20-year Total Maximum Daily Load Compliance Schedule has been subdivided into phases. Phase I of the Implementation Plan consists of the first five years of the Total Maximum Daily Load Compliance Schedule (Years 1–5, or October 2008 to October 2013). Dischargers used the methodology outlined in the Implementation Plan to develop Watershed Activities Lists (Appendix B).

Priority Water Quality Problems: Priority water quality problems in the Chollas Creek Watershed include dissolved metals (copper, lead, and zinc), bacteria, Diazinon, and trash. Other water quality problems include pesticides and synthetic pyrethroids, sediment, turbidity, and toxicity (at the mouth of the creek). These priority water quality problems identified in Table A-2 (Tool A of Appendix D) are based on the Water Quality Priority Ratings from the Baseline Long Term Effectiveness Assessment report and the Frequency of Occurrence ratings from the 2007-2008 San Diego Copermittee Monitoring Report.

Stakeholder(s): Regional stakeholders include residents, non-government organizations, community groups, dischargers that were not named in the May 2007 version of the Dissolved Metals TMDL, and other interested members of the public that were invited to participate in the Implementation Plan development process.

Strategic Plan for Watershed Activity Implementation: Strategic planning document published for the City of San Diego in 2007 (WESTON, 2007). This document represents the Storm Water Pollution Prevention Division strategy for identifying and implementing watershed activities within the City of San Diego's jurisdictional boundaries between 2008 and 2011. The Strategic Plan's tiered and phased approach was the basis of the Integrated Total Maximum Daily Load Watershed Approach used in this Implementation Plan. This document is available online at: <<http://www.sandiego.gov/thinkblue/programreports/index.shtml>>

Threat to Water Quality: The Threat to Water Quality is a rating system developed in the Baseline Long Term Effectiveness Assessment (WESTON, MOE, and LWA, 2005). This rating is based on watershed water quality data and the loading potential of each source for a particular pollutant (e.g. heavy metals, bacteria, pesticides, and sediment). The Threat to Water Quality is one of the two criteria used to identify the twelve Priority Sources of Pollutants identified in the Implementation Plan (Table 2-2).

Tier I Non-Structural Best Management Practices: Tier I best management practices focus on non-structural source control and pollution prevention measures that are designed to reduce the amount and understand the effect of pollutants entering runoff through education, enforcement, and behavioral modification programs. These behavior changing activities are typically targeted at specific pollutant sources and/or land uses. Tier I activities also include source and design studies that will aid in the further identification of pollutant sources and provide design parameters for construction of effective in-line treatment systems (Tier III activities).

Tier II Structural Best Management Practices: Tier II includes structural best management practices such as infiltration basins, bioretention, and low impact development low impact development techniques to reduce wet and dry weather runoff volumes and further reduce pollutant entry into the Chollas Creek Watershed.

Tier III Restoration and Treatment Best Management Practices: Tier III best management practices are infrastructure-intensive structural pollution reduction treatment measures that typically require significant capital investment and/or have impacts on surrounding communities. These activities can also include integrated restoration projects that restore stream habitat and improve water quality or include natural treatment systems. Generally Tier III activities are implemented once Tier I and Tier II best management practices have reached a point of diminishing returns.

Total Maximum Daily Load: The maximum amount of a pollutant a waterbody can receive and still safely meet water quality standards. The metals Total Maximum Daily Load has allocated quantitative limits for point and non-point pollution sources of dissolved copper, lead, and zinc in the Chollas Creek Watershed. The Total Maximum Daily Load requires Dischargers to develop this Implementation Plan.

Water Quality Control Plan for the San Diego Region: The *Water Quality Control Plan for the San Diego Region* is a living document and will be subject to modification based on changing needs and circumstances with respect to applicable laws, policies, technologies, water quality conditions, and priorities in San Diego County. The last major update of the entire document was published in 1994 (Regional Board, 1994). The regulatory provisions of the Dissolved Metals Total Maximum Daily Load were incorporated into the *Water Quality Control Plan for the San Diego Region* on October 22, 2008. The Basin Plan is available online at: [http://www.swrcb.ca.gov/sandiego/water\\_issues/programs/basin\\_plan/](http://www.swrcb.ca.gov/sandiego/water_issues/programs/basin_plan/).

Water Quality Control Plan for Ocean Waters of California: The *Water Quality Control Plan for Ocean Waters of California* establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the state's coastal waters (State Board, 2001). The plan applies to point and non-point source discharges. The current 2001 *Water Quality Control Plan for Ocean Waters of California* is available at: [http://www.waterboards.ca.gov/water\\_issues/programs/ocean/](http://www.waterboards.ca.gov/water_issues/programs/ocean/).

Watershed Activities: Best management practices that prevent, control, or treat constituents in urban runoff to lessen overall environmental impacts.

Wasteload Allocation: The wasteload allocations for the Dissolved Metals Total Maximum Daily Loads are expressed as concentrations equal to 90% of the loading capacities for dissolved copper, lead, and zinc. All point source discharges to the Chollas Creek Watershed will be required to achieve this wasteload allocation.