

Appendix H
Site-Specific Objectives

Chollas Creek Metals Total Maximum Daily Loads

California Regional Water Quality Control Board, San Diego Region

Site-Specific Objectives

Currently, there are no site-specific objectives (SSOs) for the Chollas Creek Metals Total Maximum Daily Load (TMDL) project. The following is the San Diego Regional Water Quality Control Board general comment about developing site-specific objectives with respect to TMDLs.

In the TMDL, the numeric targets are set equal to numeric water quality criteria for dissolved copper, lead, and zinc, as defined in the California Toxics Rule (CTR). The CTR's numeric criteria serve as legally applicable water quality standards in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act. Criteria are derived based on a rigorous set of guidelines to provide both short-term and long-term protection to aquatic life. In the absence of site-specific objectives, the CTR's water quality criteria represent the most appropriate water quality objectives and therefore numeric targets for dissolved copper, lead, and zinc at Chollas Creek.

The CTR criteria are based on the toxicity results of a large number of nationally representative species to a single pollutant in clean controlled laboratory waters. The physical and chemical characteristics of ambient water at a particular site may result in an increase or decrease in the bioavailability and/or toxicity of a given pollutant. Examples of potentially confounding water chemistry characteristics may include dissolved organic matter, particulate matter, other contaminants, pH, and hardness. Similarly, the aquatic life community at a particular site may be more or less sensitive to a pollutant than the aquatic organisms used to develop the CTR criteria. Because (1) ambient water chemistry, and/or (2) the biological communities at Chollas Creek may be different than the chemistry and biological communities upon which the CTR criteria were based, the CTR criteria may be over- or under- protective for Chollas Creek.

Differences in bioavailability and toxicity may exist for several reasons, including the presence of dissolved organic matter, particulate matter, other contaminants, pH, and hardness. Additionally, the aquatic organisms that live in the receiving waters may be more or less sensitive than the organisms used in the controlled laboratory waters. Therefore, by definition, site-specific criteria may be more or less stringent than the criteria presented in the CTR.

The Regional Board recognizes that there are situations where site-specific conditions affect the toxicity of a pollutant, which results in a criterion that is over- or under-protective. Water quality criteria are primarily based on studies conducted using laboratory water in which organisms are exposed to one pollutant. Site-specific objectives adjust water quality objectives to account for differences in toxicity among sites based on site-specific information and scientific studies. Site-specific objectives must protect the beneficial uses of a water body, must be developed in accordance with federal and State laws and regulations based on sound scientific rationale and must be adopted by the Regional Board in a Basin Plan amendment..

The Regional Board agrees that it may be appropriate to investigate the relevance of site-specific objectives for copper, lead, and zinc in the Chollas Creek watershed. However, the Regional Board does not plan to initiate or fund studies to develop site-specific objectives. Typically, such studies are initiated by dischargers or other interested parties under the regulatory oversight of the Regional Board. There is no effort currently underway or planned by interested persons to fund the scientific studies needed to develop SSOs for copper, lead, and zinc in Chollas Creek. The development of a copper, lead, and zinc SSOs for Chollas Creek waters, including the scientific studies necessary to support it, would be costly, time consuming and resource intensive. Dischargers or other interested parties would need to fund and initiate the scientific studies to develop SSOs.

The appropriate strategy is for the Regional Board to proceed with adoption of the TMDL at this time, which will mandate copper, lead, and zinc load reductions. If scientific studies demonstrate that the ambient water chemistry and/or biological communities at Chollas Creek are significantly different from the chemistry and biological communities upon which the CTR criterion were based, a site specific objective for copper, lead, and zinc may be appropriate. If and when site-specific copper, lead, and zinc water quality objectives are developed for Chollas Creek, this TMDL will be modified accordingly. The Regional Board will not delay adoption of this TMDL mandating copper, lead, and zinc load reductions on the premise that it is necessary to first develop site-specific copper, lead, and zinc water quality objectives. Studies by interested parties supporting the development and adoption of site-specific objectives may occur concurrently with actions by dischargers to meet compliance with this TMDL. Development of site-specific objectives is discussed in more detail in the State's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed bays, and Estuaries of California* (State Board, 2000). The State Board's 2000 Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) provides further guidance on when SSOs may be used.