Total Maximum Daily Load Progress Report

Regional Water Board: San Diego, Region 9

Beneficial uses affected: WARM, WILD
Pollutant(s) addressed: Diazinon
Implemented through: NPDES Permit, MS4 Permits
Approval date: November 3, 2003

TMDL Summary

Storm water in Chollas Creek at station SD8(1) showed sub-lethal toxicity on water fleas (87%) and fathead minnows (67%) in biological toxicity tests. Toxicity identification evaluation (TIE) results indicated that the insecticide diazinon had caused the toxicity to the water flea. The Chollas Creek Watershed TMDL for Diazinon was adopted by the San Diego Regional Water Board on August 14, 2002 and approved by the U.S. EPA in November 2003. The TMDL is implemented through the municipal storm water permit, which requires actions to be taken to reduce diazinon entering the creek. U.S. EPA banned the sale of diazinon for non-agricultural outdoor uses effective December 31, 2004. Diazinon levels in Chollas Creek have declined markedly.

TMDL Waste Load Allocations/Load Allocations

Both WLAs and LAs for point and nonpoint sources are concentration-based, equal to 90% of the Numeric Target* value after applying 10% of Margin of Safety:

Acute WLA/LA = 0.072 μg/L; Chronic WLA/LA = 0.045 μg/L

*For the Chollas Creek diazinon TMDL the Regional Board has set the numeric targets equal to the California Department of Fish and Game (CDFG) Water Quality Criteria for the protection of freshwater aquatic organisms from diazinon (Menconi and Cox 1994). The acute Water Quality Criterion protects aquatic life from short-term exposure to diazinon, while the chronic criterion protects aquatic life from long-term diazinon exposure.

Water Quality Outcomes

- Water quality data show significant reductions in diazinon loading from San Diego’s municipal storm water conveyance system.
- Diazinon concentrations at monitoring station SD8 (1) have been meeting the WLA/LA since December 2007 (8 consecutive sampling events).
- Diazinon concentrations at station DPR2, on the south fork of the creek, have been meeting the WLA/LA since February 2005 (17 consecutive sampling events).
- Continue monitoring for TMDL achievement/delisting.

Chollas Creek Water Quality at Chollas Creek Site SD8 (1)

Diazinon WQO and Acute WLA (0.08 and 0.072 ug/l)
Diazinon Chronic WLA (0.045 μg/l)
Retail Sales for indoor use ends (12/2002)
Diazinon manufacturing stops; retail sales for lawn/garden care ends (8/2003)
Diazinon is no longer available for purchase (1/2005)

Updated September 2011