

Total Maximum Daily Load Progress Report

Newport Bay/San Diego Creek Watershed Diazinon and Chlorpyrifos TMDL

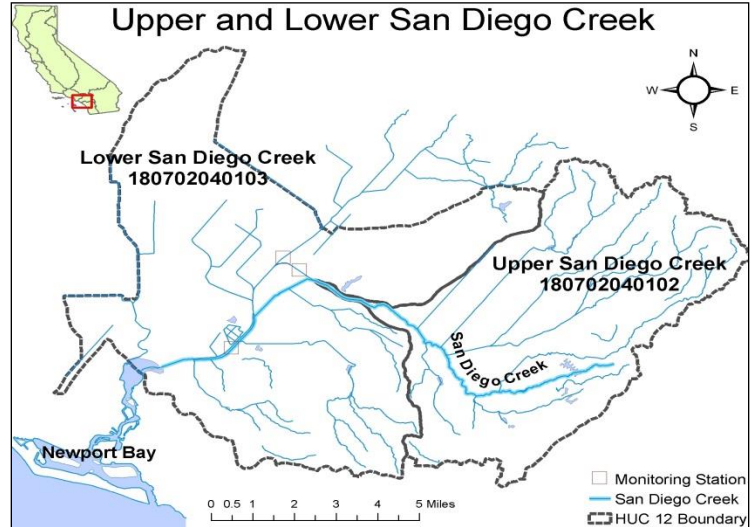
Regional Water Board	Santa Ana , Region 8
Beneficial uses affected:	WARM, WILD
Pollutant(s) addressed:	Diazinon, Chlorpyrifos
Implemented through:	WDRs , MS4 Permit , NPS Permits
Approval date:	February 13, 2004

STATUS	<input type="checkbox"/> Conditions Improving
	<input type="checkbox"/> Data Inconclusive
	<input type="checkbox"/> Improvement Needed
	<input checked="" type="checkbox"/> TMDL Achieved/Waterbody Delisted

TMDL Summary

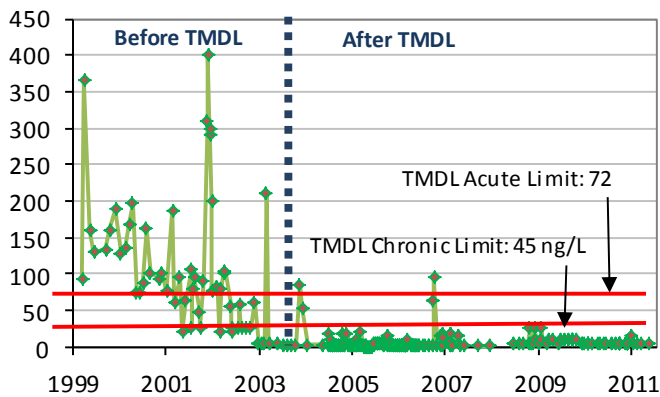
Persistent water-column toxicity to *Ceriodaphnia dubia* (water flea) led to the Santa Ana Regional Water Board adopting the [Diazinon and Chlorpyrifos TMDL for San Diego Creek and Upper Newport Bay](#) in 2003. The TMDL was approved by the U.S. EPA in February 2004.

The TMDL was implemented through Waste Discharge Requirements (WDRs) for large nurseries and through monitoring and outreach/education programs in stormwater permits. These implementation actions were complemented by the EPA's phase-out of most uses of these pesticides by 2005.



TMDL Waste Load Allocations/Load Allocations

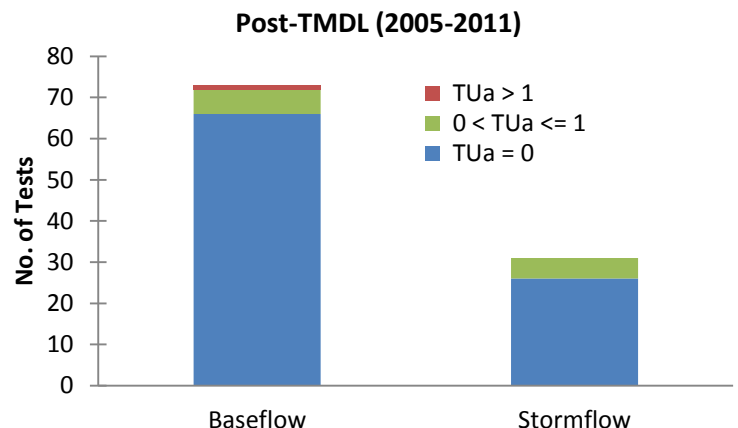
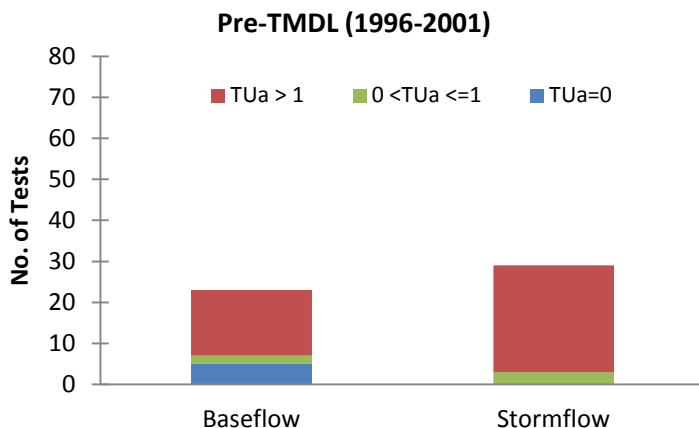
San Diego Creek Diazinon Concentrations (nanograms/liter)



Water Quality Outcomes

- Diazinon and chlorpyrifos concentrations have been reduced below TMDL numeric target levels.
- Toxicity to *Ceriodaphnia dubia* largely absent over the past five years in both dry weather and storm runoff samples.
- Toxicity from replacement pesticides (pyrethroids and fipronil) limited likely due to general reduction in pesticide use and implementation of BMPs.
- Data from the last three years show that San Diego Creek can be delisted for impairment by diazinon/chlorpyrifos.

Water Quality Summary of *Ceriodaphnia dubia* Acute Toxicity Tests



Notes: TUa = Acute Toxic Units = 100/(LC-50). The LC-50 is the concentration lethal to 50 percent of the test organisms, TUa above 1.0 indicates High Toxicity.