

Water Quality Report Card

Dissolved Copper in Shelter Island Yacht Basin

Regional Water Board:	San Diego, Region 9
Beneficial Uses Affected:	MAR, WILD
Implemented Through:	Investigative Order
Effective Date:	February 8, 2006
Attainment Date:	2022

STATUS	<input checked="" type="checkbox"/> Conditions Improving
Pollutant Type:	<input checked="" type="checkbox"/> Nonpoint Source
Pollutant Source:	Copper Based Paints Underwater Hull Cleaning

Water Quality Improvement Strategy

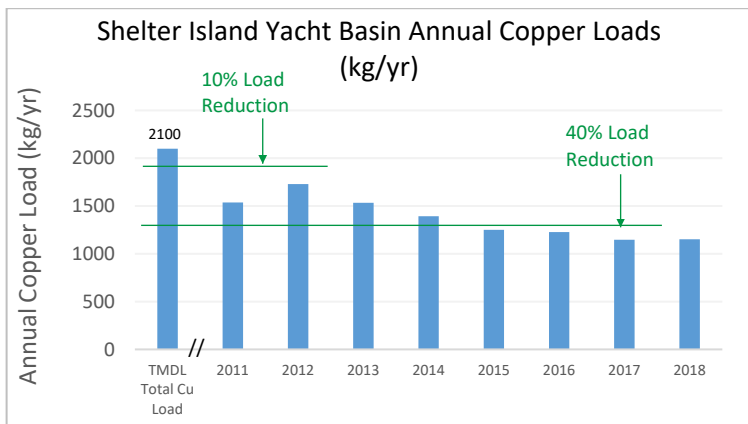
The Shelter Island Yacht Basin (SIYB) is a small semi-enclosed area within San Diego Bay listed on the [Clean Water Act 303\(d\) List](#) for elevated concentrations of dissolved copper. The dissolved copper levels exceed the California Toxics Rule (CTR) chronic (3.1 µg/L) and acute (4.8 µg/L) water quality objectives for the protection of aquatic life in marine waters. To address the high copper concentrations, the San Diego Regional Water Quality Control Board adopted the [SIYB Total Maximum Daily Load \(TMDL\) for Copper](#) in February 2005. The major source of dissolved copper is from the passive leaching of copper-based antifouling boat hull paints.

Under the leadership of the San Diego Unified Port District, the SIYB marinas, boat owners, and hull cleaners have implemented a variety of copper reduction best management practices (BMPs) including the conversion of boat hull paints from traditional copper-based hull coatings to “alternative” hull coatings with no or low-leach copper paints (leach rates ≤9.5 µg/cm²/day). The first two load reductions targets have been achieved. The TMDL implementation schedule calls for reducing copper levels by 76% by 2022.

TMDL Copper Waste load Allocations/Load Allocations

Phase	Year Phase to be Completed	% Reduction from Current Estimated Loading	Estimated Interim Target Loading (kg/yr)
Phase 1	2007	0%	N/A
Phase 2	2012	10%	1,900
Phase 3	2017	40%	1,300
Phase 4	2022	76%	567

Starting TMDL Load Assumed to be 2,100kg/yr



Shelter Island Yacht Basin, San Diego



Water Quality Outcomes

- Water quality data from 2018 show a 20% decrease in dissolved copper concentrations from the 2005-2008 baseline, even though concentrations remain above CTR values.
- The first two targets for annual load reductions, 10% by 2012 and 40% by 2017, were both met prior to the deadlines.
- Conversion of traditional hull paints to no or low-copper paints and other BMP implementation have been effective in reducing copper loads.
- Implementation actions continue towards achievement of 2022 long term dissolved copper targets.

