

Copper Pollution in Marina del Rey Harbor

An Overview of the Copper/Toxics TMDL for Boaters and Anchorages

What is the Marina del Rey Harbor Toxics TMDL?

When it comes to water quality, Marina del Rey Harbor is categorized as an impaired water body due to high concentrations of copper in the water. In 2014, the Los Angeles Regional Water Quality Control Board imposed a limit on the total maximum amount of dissolved copper Marina del Rey Harbor can receive while still meeting water quality standards. This restriction is known as a “total maximum daily load” or TMDL. The TMDL requires the County of Los Angeles, anchorages, and boat owners in the harbor to reduce copper loading by 85% by March 2024.

Where is the copper pollution coming from?

Copper antifouling paints are the primary source of dissolved copper in the harbor. Paints release copper from passive leaching (while the boat sits at the slip) and from in-water hull cleaning activities (that release both dissolved and particulate copper from the paint while the hull is being cleaned).

Who is responsible for complying with the TMDL?

Boat owners in Marina del Rey Harbor, individual anchorages, and the County of Los Angeles are identified as responsible parties for the copper pollution issue in Marina del Rey Harbor. The TMDL requires these responsible parties to reduce copper loading by 85% by March 2024.

How can we reduce copper pollution in the harbor?

The County has identified several strategies to provide guidance to anchorages and boaters in Marina del Rey Harbor on how to reduce copper loading from boat hull paints. These strategies are summarized below.



Paint Conversion

Alternative Hull Paints & Coatings

Since 2017, the County has focused on studying the effectiveness and economic feasibility of non-biocide hull paints through its Pilot

Hull Paint Study. Non-biocide hull paints do not contain metals or other toxic chemicals that leach into the water. The County is committed to using non-copper or non-biocide hull paints on county-owned vessels and encourages other boat owners to convert to alternative hull paints.



Hull Cleaning BMPs

In-Water Hull Cleaning Best Management Practices

In-water hull cleaning releases copper from antifouling paints into the water column.

In-water hull cleaning best management practices reduce the release of copper and other pollutants during hull cleaning.

In 2018, the County passed an ordinance requiring in-water hull cleaners to become certified in and use best management practices. Boat owners may be cited if using a hull cleaner that is not certified and in violation of the ordinance.



Photo by Dennis W. Butler



Separate Boat Hull from Water

In-Water Dry Docking Systems

An in-water dry docking system works by separating the hull of the boat from the water without lifting the boat out of the water. A dry dock pumps out the water from between the boat hull and the liner to keep the hull dry when docked, at the waterline. These devices eliminate the need for hull paint because they protect the hull from marine growth. They also protect the boat from damage and electrolysis, providing potential cost savings over the lifespan of the boat. The County purchased two in-water dry docks (located at Anchorage 47) to demonstrate and evaluate the benefits of these devices.



Boat Lifts

Boat lifts raise a boat above the waterline while it is docked at the slip. Similar to in-water dry docks,

the devices can be used instead of antifouling paint to prevent marine growth on the hull. The County continues to support use of boat lifts where feasible.

Special Studies

The County conducted several studies related to the TMDL to better understand the nature of the impairment in the Marina del Rey Harbor as well as the physical, chemical, and biological processes at work in the harbor.

For a summary of special studies completed to support the TMDL, visit the County's website at: beaches.lacounty.gov/toxics-tmdl-special-studies/

What can boaters do to reduce copper pollution in the harbor?

- Choose a non-toxic/non-biocide, non-copper hull, or very low copper hull paint for your boat
- Purchase and use an in-water dry dock or boat lift at your slip
- Only hire a diver certified in best management practices for any in-water hull cleaning

What can anchorages do to reduce copper pollution in the harbor?

- Encourage use of non-toxic, non-copper hull, or very low copper boat hull paints at your anchorage
- Purchase for use or incentivize use of in-water dry docks or boat lifts at your anchorage
- Monitor your anchorage to ensure only divers certified in best management practices are used



For more information about these copper reduction initiatives, scan the QR code or visit the County's Toxics TMDL webpage at: beaches.lacounty.gov/toxics-tmdl/



This material was prepared by the County of Los Angeles, Department of Beaches and Harbors.

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