

Focus on: Antifouling boat paint



Figure 1: Boats at a marina.

WHY IT MATTERS

Boats kept in marinas, lakes, and other water bodies are exposed to organisms such as bacteria or barnacles. When these organisms grow and colonize on the surface of vessels and structures, it is called “fouling.”

Fouling reduces vessel performance and can cause physical damage. To prevent fouling, boat owners often use hull paints that contain pesticides and other toxic chemicals. Copper-based hull paints have been the most popular antifouling choice since the 1980s.

Although these paints are effective at discouraging growth, these paints also have toxic environmental properties that can have negative effects on fish and other aquatic life.

Proposed legislation

A 2018 law bans copper-based antifouling paints for recreational boats beginning in 2021. The law also directed the Washington Department of Ecology (Ecology) to review alternatives to copper-based antifouling paints and develop recommendations for the Legislature. In the summer of 2019 Ecology completed this report, but found there are still significant unanswered questions about existing alternatives to copper-based paints.

Because of these concerns, Ecology is requesting that the Legislature delay the ban on copper-based paints to allow more time to study the issue. Ecology is also requesting authority to require paint manufacturers to disclose information on the chemical ingredients in their products. Finally, Ecology recommends that the Legislature ban paints containing one specific alternative antifouling ingredient, Cybutryne (sold under the brand name Irgarol 1051), which Ecology found poses a serious threat of environmental harm.

The problem

In 2011 Washington enacted legislation to ban the use of copper-based antifouling paint starting in 2018. A 2017 follow-up investigation by Ecology showed that some non-copper alternatives might be more harmful to the environment than the copper-based paints they replaced.

In 2018 the Legislature delayed the ban and directed Ecology to conduct additional research. Ecology was directed to review risk assessments, scientific studies, and other relevant analyses regarding the toxicity and environmental impacts of antifouling paints.

Ecology was also directed to report back to the Legislature about those reviews, safer alternatives that might be available, and recommendations as to whether regulatory changes are needed.

Antifouling options

Today, most recreational boaters rely on biocidal antifouling coatings to prevent marine growth from damaging the hulls of their boats and degrading performance. By their nature, biocidal coatings have the potential to affect non-target species and cause unintended environmental harm.

However, there are other potential approaches to prevent marine growth and fouling. In its report, Ecology considered non-biocidal options, including:

- Slick coatings that marine organisms cannot latch onto
- Boat lifts and dry storage
- Boat washes
- Liners systems and drive-in dry docks
- Sonic systems

At this point, there are still questions about the tradeoffs and performance of each of these potential non-biocidal alternatives. More development, study, and research on the tradeoffs involved with these systems may show one or more to be possible safer alternatives.



Figure 2: Motorboat being cleaned by a drive-in boat wash system.

The solution

Delaying the effective date of the ban on the sale and use of copper-based antifouling paints will give time to better understand the impacts of current alternatives to copper, and to consider other approaches such as setting a leach rate standard to limit the amount of copper reaching Washington waters.

A delay will also provide more time for less-toxic alternatives to demonstrate their effectiveness in the marketplace.

Ecology's proposal

Ecology proposes:

- Changing the effective date of the ban in RCW 70.300.020 to January 1, 2026.
- Adding a new restriction in Chapter RCW 70.300 banning the use of antifouling paints containing the chemical Cybutryne.
- Granting Ecology authority to request information from paint manufacturers and importers.

More information

Ecology's report, "Antifouling Paints in Washington State Report and Recommendations," is available at www.ecology.wa.gov.

Contact information

Kimberly Goetz, HWTR Legislative Coordinator
Hazardous Waste and Toxics Reduction
(360) 407-6754
kimberly.goetz@ecy.wa.gov

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