

THE BOTTOM LINE ON BOAT BOTTOM WASH WATER

SO WHAT IS THE PROBLEM WITH BOAT
BOTTOM WASH WATER AND WHY ARE ALL
THE REGULATORS ALL UPSET ABOUT IT?

by Pam
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Antifouling paint contaminated wash water, to be very specific, is a problem for a number of reasons. First of all it contains high levels of regulated pesticides. Boat antifouling paint is a federally and often state regulated pesticide. The “pests” targeted by the active ingredients in the pesticide are marine and aquatic plant and animals, or fouling organisms, when identified as a whole. Paint manufacturers have a number of proprietary formulas, but most contain high levels of copper or zinc, levels ranging from 5–65 percent. Test results from various state and industry groups has documented that boat bottom wash water, particularly that from pressure washing operations, contains significant levels of copper and zinc originating from the antifouling paint. Concentrations of copper in the wash water have been measured as high as 224 parts per million or 0.2 percent. Unfortunately, this wash water often runs back into the water or onto the ground and eventually into the ground water.

Once contaminated with pollutants like pesticides, that wash water becomes regulated waste water according to the Clean Water Act and parallel state laws. Regulated waste waters are subject to treatment and disposal restrictions that must conform to all the applicable federal and state regulations. There are very strict discharge standards for many pollutants, including copper and zinc. These discharge standards are designed to be protective of the organisms in the water body with waste water containing the pollutant is discharged into the water. Obviously, the reason copper is used as a pesticide in the first place is because it is very effective and so it stands to reason that the standards for copper in the waste water would be very low because of its toxicity.

But wait a minute, what about all of those boats in the harbor covered with antifouling paint quietly discharging all those very same toxic pesticides? Why is it OK on the boat and not OK when we wash it off the boat? The answer gets back to approved uses and concentration. When a boat is painted with antifouling paint and launched, the pesticide is being used as directed and approved. Those specific directions and approval were based on large and elaborate toxicity studies that documented the effectiveness of the pesticide on reducing fouling while minimizing impact to the ecosystem as a whole. In other words, the dose to the whole ecosystem was found to be minimal. If, however, you wash a bunch of that pesticide off a boat, the wash water has a much higher concentration of the pesticide when it goes back into the receiving water and can have significant impacts that were not studied and approved as part of its use. The old adage “the dose makes the poison” holds true in this case. Interestingly, more recent studies conducted in San Diego Bay have documented that there are significant water quality impacts of those boats sitting in their slips or on their moorings. Those studies are already changing the discussion around antifouling paint formulations and use.

So what does this all mean? Historically, antifouling paint contaminated wash water was ignored by regulators

because there were so many larger pollutant sources. Because of the Clean Water Act, the larger discharges of pollutants have generally been controlled, reduced or eliminated all together, resulting in dramatic water quality improvements over the past 30 years. Now, the impacts of cumulative smaller discharges and storm water are under the regulatory microscope. Antifouling paint contaminated wash water can discharge concentrated levels of pesticides into the water body potentially impacting the organisms that form the base of the food chain. The regulators are now paying attention to discharges like these so the marina and boatyard industry have to come into compliance with the same laws that the big dischargers have been dealing with for over 30

The EPA Virtual Trade Show

EPA has posted a Boat Pressure Wash Water Control Virtual Trade Show, located at www.epa.gov/region1/assistance/ceitts/bpwvts/technologies.html, to assist those involved in pressure washing boats in complying with the environmental regulations. Though no systems are endorsed by the EPA, information on a variety of methods of wastewater treatment which may be suitable is presented. Information on the technology used, specifications, site requirements, performance, maintenance costs, longevity, secondary impacts, and manufacturer and contact information is provided.

years. In short, the discharge of antifouling paint contaminated wash water to the surface water is illegal without a permit from the appropriate state environmental department or the Environmental Protection Agency (EPA). Currently, it is my understanding that the EPA does not have plans to issue individual discharge permits or develop a general permit for these discharges. So, in states where EPA is the waste water permitting authority, discharge of antifouling paint contaminated wash water to the surface water is essentially prohibited. A number of states are trying to develop their own permits to address these discharges requiring collection and treatment prior to discharge to the public sewer, the surface water, or the ground water. Those permitting efforts are still under development.

The bottom line is that all antifouling paint contaminated wash water should be collected and recycled, held and disposed of at an approved facility, or treated and discharged under the authority of a waste water permit. I strongly recommend that boatyards and marinas involved in washing boats coated with antifouling paint contact their local waste water permitting authority for guidance on how to manage the waste water to avoid environmental law violations. We may not always have the answer right away, but a proactive industry is a welcome partner in the development of reasonable and implemental rules and standards

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