



## DEP ISSUE PROFILE

### Boat Bottom Wash Water

#### Antifouling Paint Contaminated Wash Water

October 2009  
Revised 2020

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#### What is boat bottom wash water?

Most boats that travel on tidal rivers, bays, and oceans have antifouling paint applied to the submerged portion of the boat's hull. Antifouling paints are pesticides which prevent algae, barnacles, mussels, and other marine life from attaching to the boat and generally protect the boat from marine life that could be destructive. Keeping boat bottoms clean is also reduces fuel consumption and increases speed through the water. Heavily fouled boats use a lot more fuel to move through the water than un-fouled boats. This is particularly true for large container or oil transport ships.



On a regular basis, boats are dry docked or hauled out of the water to be serviced. Normal servicing includes removing any marine growth that has attached to the boat and reapplying the antifouling paint. In Maine, most recreational boats are launched in the spring with a fresh coat of antifouling paint and hauled out of the water in the fall for storage. Because of our short boating season, boats that are hauled out for annual servicing often have significant amounts of antifouling paint still on them. Typically, boatyards and marinas will use high pressure water sprayers to rinse the salt water off and quickly remove dirt and any marine growth on the boat. Along with the dirt and marine growth, antifouling paint can also be washed off, resulting in wash water containing not only dirt, marine organisms but pesticides as well.

#### Why is boat bottom wash water a problem?

Because antifouling paint is a pesticide, it contains a number of compounds that are toxic to marine life. When used as directed, toxic levels of active ingredients are generally limited to the boat itself, although boats moving through the water or sitting at anchor continuously discharge minute amounts of pesticides into the water. But when antifouling paint is washed off, those compounds are concentrated in the wash water resulting in levels of toxic pollutants in the wash water that are much higher than the levels approved by the regulatory agencies as part of the normal use of the paint on boats. Compounds such as copper, zinc and lead are used in antifouling products and have been found at high levels in boat bottom wash water.

The contaminated wash water is often allowed to run back into the water or soak into the ground at the location where the boat is hauled. This results in significant levels of pesticides being discharged into the water and the groundwater, potentially harming the marine environment or contaminating drinking water supplies.

## How is boat bottom wash water regulated?

The Maine Department of Environmental Protection (DEP) has recently issued a waste discharge general permit to regulate the discharge of boat bottom wash water (antifouling paint contaminated wash water) to the surface waters of the state. A similar general permit for discharges to groundwater is forthcoming.

The general permit requires boatyards and marinas to collect and treat all antifouling paint contaminated wash water before it can be discharged to the surface water. Treatment of the boat bottom wash water required in the general permit will reduce the amount of pollutants going into the surface water by more than 95%. The DEP will also be providing educational materials to commercial and recreational boaters and working with towns to eliminate pressure washing of boats at public boat ramps.

Nationally, many states prohibit the discharge of antifouling paint contaminated wash water to surface waters all together. Boatyards and marinas in those areas must either recycle their wash water or discharge it to the municipal sewer system with authorization.

Internationally, a number of countries in the European Union have restricted or prohibited the use of copper based antifouling paints in specific locations. There is also a lot of research on nontoxic methods to prevent hull fouling.

### **If a boat has a lot of growth on it, is there any antifouling paint left?**

Maybe, depending on the type of antifouling paint on the boat and the type of fouling, there could be enough antifouling paint remaining to contaminate any wash water.



### **Are there alternatives to collection and treating the wash water?**

Boatyards and marinas can choose not to pressure wash antifouling paint coated boats, avoiding the production of contaminated wash water. If not heavily fouled, when hauled out boats can be allowed to dry and then sanded prior to repainting in the spring. It is easier to control and collect paint flakes and dust but it is still very important to handle the dust carefully and dispose of it properly.

Boatyards and marinas can also install a wash water recycling system; doing so eliminates the discharge to surface or ground water and bypasses the need for a permit but still requires collection and treatment.

### **How do boat owners comply with the laws if they launch and haul their own boat?**

First, a boat owner should determine whether they need to apply antifouling paint to the boat. If the boat needs antifouling paint on it, the boat owner should choose the most appropriate type of antifouling paint for the particular boat and its use.

Unless it is heavily fouled, rinsing the boat off using low pressure fresh water and scraping any marine growth off can be very effective and will result in little if any boat bottom wash water. Boaters can also allow the antifouling paint to dry and scrape or sand off any marine growth then. The boat owner should be sure to collect any of the paint chips and dust for proper disposal in the household trash.

If the boat is heavily fouled, contacting a local boatyard or marina that has a collection and treatment system installed and inquiring about discounts for self service may be a very effective alternative.

**Is there anything a boat owner can do to minimize the impact of the antifouling paint on their boat?**

Yes, boaters can learn about the different types of antifouling paint and how to choose the antifouling paint that the best for the type and use of their boat, ensuring that the boat will not be fouled but will also not be the source of high concentrations of contaminants in the wash water. Boaters should avoid scrubbing or cleaning their boat's bottom while in the water, doing so can result in discharges of pollutants similar to bottom wash water. Regularly wiping off the boat's water line with a sponge or a scrub pad reduces any fouling that happens above the antifouling paint and tipping engines out of the water are good practices. If a boat is not stored in the water during the boating season, boaters may avoid using antifouling paint at all.



Boaters who use the service of a Maine boatyard or marina should inquire about the yard's environmental policies and procedures with the manager or owner. Most boatyards in Maine are vigilant stewards of the marine environment, understanding that clean water is good for their business. A number of facilities participate in the Maine Clean Boatyards and Marinas Program (MCBMP). The MCBMP is a voluntary program run through the Maine marine trade Association that recognizes boatyards and marinas that meet or exceed all environmental standards related to their industry. Designated facilities have gone through a rigorous evaluation process involving independent inspection and review before being awarded the MCBMP designation. For a list of designated clean boatyards and marinas or for more information about the program contact the Maine Marine Trades Association by phone at 207-773-8725, or on the web at <http://www.mainemarinetrades.com>.



**What do boatyards and marinas need to do to comply with the general permit?**

First they need to determine if they are eligible for coverage under the general permit. Only boatyards and marinas on the ocean or certain tidal rivers may be covered by the permit. Boatyards and marinas on fresh water bodies are not eligible for coverage, nor are those on the Saco River or in certain pristine coastal areas. Boatyards and marinas in those areas may be eligible for individual discharge permits.

The boatyard or marina will need to install a wash water collection area and a treatment system to collect all the boat bottom wash water and treat it to

standards set in the permit. Installation of the collection and treatment systems may present a significant capital expense for the boatyard or marina. Ongoing monitoring of the effluent and permit fees are additional costs.

### **What are the environmental consequences for illegally discharging boat bottom wash water?**

Discharging boat bottom wash water to surface water can harm small plants and animals that are the basis of the marine food chain. Similarly, discharges to other surface waters, wetlands, streams, or ponds, can have a serious impact on the environment due to a much lower potential for dilution. Boat bottom wash water discharged to the ground surface can contaminate the soil and drinking water in the area. Preventing or reducing the amount of antifouling paint residue being discharged to the environment protects Maine's water bodies, fisheries, and public health.

If a boatyard or marina has determined that they want to continue pressure washing boat bottoms and believes that it is eligible for coverage under the general permit, they should do the following:

- Request a copy of the general permit and a Notice of Intent (NOI) form from the DEP.
- Complete the NOI form and submit it and all the required attachments to the DEP.
- If the facility does not have a collection and treatment system, it needs to determine the location and design of the collection and treatment system.
- Submit the collection and treatment system plans to the DEP by August 1, 2010, along with revised site maps.
- Install an approved collection and treatment systems by October 1, 2010.
- Conduct periodic sampling of the treated wash water and report the results to the DEP per the permit requirements.
- Maintain the collection and treatment system so it is in good working order.

### **How can people learn more about clean boating?**

Contact staff at the DEP or visit our website

<http://www.state.me.us/dep/blwq/topic/boat/index.htm>.

<b>For more information:</b>	<b>Contact</b>	<b>Telephone</b>	<b>Email</b>
On boat bottom wash water, treatment systems, permitting and clean boating	Pam Parker	(207) 287-7905	<a href="mailto:pamela.d.parker@maine.gov">pamela.d.parker@maine.gov</a>
Maine Clean Boatyards and Marinas Program	Maine Marine Trades Assoc.	(207) 773-8725	<a href="mailto:swanton@mainemarinetrades.com">swanton@mainemarinetrades.com</a>

Or write us at:

Maine Department of Environmental Protection  
State House Station 17  
Augusta, ME 04333-0017

<http://www.maine.gov/dep/index.shtml>