

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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FACT SHEET

Tentative Determination General Discharge Permit No. 10-MA
NPDES Permit No. MDG99
Boat and Vessel Maintenance

Background

The Maryland Department of the Environment (Department) regulates industrial facilities discharging storm water and wastewater under the Clean Water Act. Since 1997, the Department has fulfilled this requirement with a general permit for discharges associated with marinas and other facilities performing vessel maintenance.

The Department is revising this permit to reflect water quality standards for the environmentally sensitive waters of the State, such as the Chesapeake Bay. This revision contains several changes from its predecessor, including: limitations on wastewater discharging to surface waters from cleaning of boat bottoms painted with antifouling paints, submission of an electronic copy of a current storm water pollution prevention plan and quarterly storm water visual inspections. Changes in this revision are clarified below.

Required Permittees

Establishments in Maryland that repair, clean or maintain aquatic vessels and equipment or allow for similar services to be rendered on their property and discharge wastewater or storm water to surface or ground waters must obtain this permit. Typical activities include vessel maintenance, painting, mechanical repairs, cleaning, etc.

For facilities that do not discharge waste waters and have no potential contaminants exposed to storm water, a "no exposure" form provided by the Department must be completed and submitted. The certification must be renewed every five years.

Permit Restrictions

This permit regulates discharges of wash water, collected bilge water, condensate, cooling water and storm water exposed to marina activities. This general permit cannot address all possible pollutants, but addresses the most common found where these activities occur: suspended sediments, oil & grease, and metals. This permit limits these parameters both directly and indirectly, i.e. by establishing end-of-pipe numerical limits and by requiring operational measures to prevent the generation of pollutants or their entrainment in storm water. If there are other significant pollutants likely to be discharged from a facility, then the Department may require an individual permit for that facility. New facilities may not be eligible for coverage under this permit if they discharge to streams on the State's 303(d) list, or to streams for which TMDLs have been established.

Restrictions on wash water discharges

Vessel washing can cause discharges of harmful pollutants either directly discharged to waters of the State or intermingling with storm water. The permit identifies specific conditions on where and how vessels are to be washed, where and how maintenance activities are to be performed and how to prevent exposure of storm water to these activities. Washing of boat bottoms painted with soft abrasive paints, or paints which create a visible plume, may not be performed in water. Additionally, the removal of any paints while a vessel is in the water is prohibited. Discharges that contain visible oil sheen, persistent foam or floating solids are prohibited from being discharged to waters of the State.

The Department requires effluent limitations on wash water discharges to surface water from cleaning of boat bottoms painted with antifouling paints as described below. Monitoring of these constituents begins the end of the first year; permittees must meet the effluent limits by the end of the fourth permit year. A permittee may opt to redirect wash water to eliminate surface water discharge. If the permittee submits a compliance plan to the Department for approval detailing how and where they will discharge, permittee's requirement to monitor metals will be waived. The redirection of the discharge must be completed by the end of the fourth year of the permit.

Origins of the numerical limits

Maryland permits include limits based on water quality and available technology. Because a general permit applies to facilities in many parts of the state, it must reflect the most stringent conditions necessary to protect water quality.

Water quality-based limits are derived from water quality criteria, which the Department establishes in its regulations, [COMAR 26.08.02 \(http://www.dsd.state.md.us/comar\)](http://www.dsd.state.md.us/comar). Water quality criteria describe the physical and chemical conditions to support water contact recreation, fishing, aquatic life, wildlife, use as public water supply, and consumption of fish and shellfish. For this permit, the metals copper, lead and zinc are limited by the water quality criteria with a fixed dilution factor of 10.

Since the EPA has not established effluent limitation guidelines for suspended solids and oil & grease for this industry, technology-based limits in this permit are derived from best professional judgment.

Specific numerical limits for this permit

Total Suspended Solids (TSS)

Total Suspended Solids is a measure of particulates in wastewater which make water more opaque and less supportive of aquatic life. Limiting this parameter is appropriate for wash water discharges associated with cleaning of boat bottoms painted with antifouling paints as the techniques used in washing and/or prepping vessels for paint remove the residual build up of old paints (high in metallic content) and other materials adhered to the vessel such as soils, aquatic plants and animals. The Department has identified best management guidelines for wash water discharges and, based on the best practical treatment, has set discharge limitations for suspended solids at 50 mg/L maximum.

Oil and Grease

Oil or grease introduced to water may float at the surface, become emulsified in the water column, or adhere to sediments and sink to the sea floor. Limiting this parameter is appropriate for collected bilge water discharges which may contain substantial quantities of oil/grease. Limiting this parameter in wash water discharges is also appropriate as the area being washed is adjacent to equipment using petroleum products. There is no water quality standard for oil & grease; however, for this permit the Department sets effluent limits of 10 mg/L average (bilge water only), 15 mg/L maximum based upon the design performance of gravity oil/water separators and marina discharge data. The limit of 15 mg/l represents the concentration achievable by traditional oil separation technology. This permit also requires that discharges shall not cause visible oil sheen in receiving waters, nor shall any bilge waters be discharged to waters of the State if solvents, detergents, emulsifying agents or dispersants have been added to the bilge (this includes soaps).

Copper

The Department has evaluated testing and research associated with marinas across the country which has identified the presence of copper (both in the dissolved and precipitated form) in wash water from the cleaning of boat bottoms painted with antifouling paint. Copper is the main ingredient acting as a biocide in most bottom paints and is toxic to aquatic life, even at low levels. Permittees are required to perform two seasonal (September - December) samplings of total copper concentration for wash water discharging to surface waters by the end of the second permit year. By the end of the fourth permit year, permittees must meet the effluent limit of 0.06 mg/L of total copper to continue to discharge to surface waters.

Lead & Zinc

Like copper, concentrations of lead and zinc are found to be prevalent in marina activity discharges. Lead can be present in some antifouling paints. Zinc is used as sacrificial anode material to prevent corrosion of metals on boats and is the primary component in some antifouling paints (zinc pyrithione). Permittees are required to perform two seasonal (September - December) samplings of total lead and total zinc concentration for wash water discharging to surface waters by the end of the second permit year. By the end of the fourth permit year, permittees must meet the effluent limit of 0.08 mg/L of total lead and 0.81 mg/L of total zinc to continue to discharge to surface waters.

Additional Permit Requirements

Storm Water Pollution Prevention Plan (SWPPP)

To minimize the need for treatment of storm water, the Department requires the permittee to practice pollution prevention, i.e., keep the pollutants out of the storm water. The primary objective of the plan is to identify ongoing or potential sources of pollution to storm water and to optimize Best Management Practices (BMPs), such as storing materials under cover or controlling the flow by adding storm water mitigation technologies, in order to minimize pollutants in storm water runoff. Unlike previous permits, the Department now requires the SWPPP be submitted electronically to the Department with application (notice of intent for permit coverage).

Visual Inspections

Quarterly visual examinations of storm water discharges are useful and inexpensive means for permittees to evaluate the effectiveness of their SWPPPs. They provide immediate feedback and allow for any necessary modifications to address the results of the visual exam. The goal of sampling is to capture meaningful data illustrating the effectiveness of BMPs and the SWPPP. The [Quarterly Visual Monitoring Form](#) summarizing these self-performed examinations must be maintained on-site with the SWPPP; instructions are at the back of the form.

Obtaining a Permit

Application

Applications (NOI) must include the appropriate fee and electronic submission of the current storm water pollution prevention plan (SWPPP). Fees are unchanged from the previous permit and range from \$100 to 500 for the five year permit.