INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector Q: Water Transportation Facilities with Vehicle Maintenance Shops and/or Equipment Cleaning Operations

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What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet specifically discusses stormwater discharges from water transportation facilities with vehicle maintenance shops and/or equipment cleaning operations as defined by Standard Industrial Classification (SIC) Major Group 44. This includes water transportation facilities that perform vessel and equipment fluid changes, mechanical repairs, parts cleaning, sanding, blasting, welding, refinishing, painting, fueling, vessel and vehicle exterior washdown. Facilities and products in this group fall under the following categories, all of which require coverage under an industrial stormwater permit:

- Deep Sea Foreign Transportation of Freight (SIC 4412)
- Deep Sea Domestic Transportation of Freight (SIC 4424)
- Freight Transportation on the Great Lakes—St. Lawrence Seaway (SIC 4432)
- Water Transportation of Freight, Not Elsewhere Classified (SIC 4449)
- Deep Sea Transportation of Passengers, Except by Ferries(SIC 4492)
- Ferries (SIC 4482)
- Water Transportation of Passengers, Not Elsewhere Classified (SIC 4489)
- Marine Cargo Handling (SIC 4491)
- Towing and Tugboat Services (SIC 4492)
- Marinas (SIC 4493)
- Water Transportation Services, Not Elsewhere Classified (SIC 4499)

Bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels are not covered under the industrial stormwater program. These discharges must be covered by a separate NPDES permit if discharging to receiving waters or to a municipal separate storm sewer system.

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to **www.epa.gov/npdes/stormwater** and click on "Industrial Activity."

What pollutants are associated with activities at my facility?

Pollutants conveyed in stormwater discharges from water transportation facilities with vehicle maintenance shops and/or equipment cleaning operations will vary. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- Geographic location
- Topography
- Hydrogeology
- Extent of impervious surfaces (e.g.,, concrete or asphalt)
- Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- Size of the operation
- Type, duration, and intensity of precipitation events

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at water transportation facilities with vehicle maintenance shops and/or equipment cleaning operations.

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Water Transportation Facilities with Vehicle Maintenance Shops and/or Equipment Cleaning Operations

Activity	Pollutant Source	Pollutant
Pressure washing	Wash water	Paint solids, heavy metals, suspended solids, debris
Surface preparation, paint removal, sanding	Sanding, mechanical grinding, abrasive blasting, paint stripping	Spent abrasives, paint solids, heavy metals, solvents, dust, debris
Painting	Paint and paint thinner spills, overspray, paint stripping, sanding, and paint cleanup	Paint solids, spent solvents, heavy metals, dust, debris
Drydock operation and maintenance	Sanding, mechanical grinding, abrasive blasting, paint stripping, building materials	Spent abrasives, paint solids, heavy metals, solvents, dust, low density waste (floatables)
Engine maintenance and repairs	Parts cleaning; waste disposal of greasy rags, used lubricants, coolants, and batteries; fluid spills; fluid replacement	Spent solvents, oil, heavy metals, ethylene glycol, acid/alkaline wastes, detergents, rags, batteries, loose parts
Material handling: Transfer Storage Disposal	Fueling: spills, leaks, and hosing area	Fuel, oil, heavy metals
	Liquid storage in above ground storage: spills and overfills, external corrosion, failure of piping systems	Fuel, oil, heavy metals, material being stored
	Waste material storage and disposal: paint solids, solvents, trash, and spent abrasives and petroleum products	Paint solids, heavy metals, spent solvents, oil, trash
Shipboard processes improperly discharged to storm sewer or into receiving water	Process and cooling water, sanitary waste, bilge and ballast water	Biochemical oxygen demand (BOD), bacteria, suspended solids, oil, fuel, trash

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from water transportation facilities with vehicle maintenance shops and/or equipment cleaning operations. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular clean-up, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

The measures commonly implemented to reduce pollutants in stormwater associated with water transportation facilities with vehicle maintenance and/or equipment cleaning operations are generally not complicated and simple to implement. The implementation of BMPs should be used in the following areas of the site:

- Pressure washing areas
- Blasting and painting areas
- Material handling areas
- Engine and maintenance and repair areas
- Drydock activity areas
- General yard areas

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources, including debris, from coming into contact with stormwater and degrading water quality. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Specific good housekeeping practices that should be implemented by marine transportation facilities include routine removal from the general yard area of scrap, metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, and packaging. Additional practices include securing and covering any containers, supplies, or equipment that could become sources of pollution.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary

structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed and covering trash and recycling receptacles can be a very effective pollution prevention measure to prevent solid materials from entering receiving waters.

Specific exposure minimization practices that should be implemented by marine transportation facilities include:

- Storing all stored and containerized materials (fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains and plainly labeled.
- Containing all blasting and painting activities to prevent abrasives, paint chips, and overspray from reaching the receiving water or the storm sewer system.
- Securing any equipment or supplies so that they are not transported during storm events into receiving waters or storm sewer systems.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures.

Specifically, these techniques can be applied at water transportation facilities with vehicle maintenance shops and/or equipment cleaning operations. Several examples include:

- Planting vegetation as a buffer along the water's edge to filter stormwater runoff and remove contaminants and soil particles before they reach surface waters
- Building infiltration trenches and (vegetated) swales to create an underground reservoir to hold runoff, allowing it to slowly percolate through the bottom into the surrounding soil
- Building dry wells to collect and store stormwater runoff from rooftops and other relatively "clean" runoff
- Utilizing deep sump catch basins and water quality inlets with or without a retention/ infiltration chamber

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at water transportation facilities with vehicle maintenance shops and/or equipment cleaning operations,

to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to water transportation facilities with vehicle maintenance shops and/or equipment cleaning operations; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2. BMPs for Potential Pollutant Sources Water Transportation Facilities with Vehicle Maintenance shops and/or Equipment Cleaning Operations

Pollutant Source	BMPs
Vessel cleaning (in the water)	❑ When possible, remove boat from water and perform cleaning where debris can be captured and properly disposed. ❑ Avoid in-the-water hull scraping and any abrasive process that occurs underwater that may remove anti-fouling paint from the boat hull. ❑ When washing above the waterline: detergents and cleaning compounds used should be phosphate-free and biodegradable and amounts should be kept to a minimum. ❑ Prohibit the use of traditional sudsing cleaners that must be rinsed off and the use of detergents containing ammonia, sodium hypochlorite, chlorinated solvents, petroleum distillates, or lye. ❑ Educate employees on negative impacts of traditional cleaners and supply biodegradable spray type cleaners that do not require rinsing. ❑ Control all equipment, supplies, and trash.
Engine parts washing	❑ Parts washing should be done in a container or parts washer with a lid to prevent evaporation. The parts should be rinsed or air dried over the parts cleaning container. ❑ Prevent and contain spills and drips. Water soluble engine washing fluid should be treated in the same manner as other industrial wastewaters and either recycled or disposed of by a licensed waste hauler.
Surface preparation, sanding, and paint removal	❑ Confine activities to designated areas outside drainage pathways and away from surface waters. ❑ Enclose, cover, or contain blasting and sanding activities to the extent practical to prevent abrasives, dust, and paint chips, and equipment from reaching storm sewers or receiving water. ❑ Hang plastic barriers or tarpaulins to contain debris. ❑ Where feasible, cover drains, trenches, and drainage channels to prevent entry of blasting debris to the system. ❑ Prohibit un-contained blasting or sanding activities performed over open water. ❑ Where sanding is conducted in the water, cover the water near the vessel with floating traps or surround the immediate area with floating booms and remove debris with a skimmer. ❑ Prohibit blasting or sanding activities performed during windy conditions which render containment ineffective. ❑ Bottom paint removal should be conducted over an impermeable surface such as sealed asphalt or cement (not over open ground) with a retaining berm so that the wastewater can be contained. ❑ Collect bottom paint residues for disposal by a licensed waste hauler. ❑ Inspect and clean sediment traps to ensure the interception and retention of solids prior to entering the drainage system. ❑ Use vacuum sanding systems to collect sanding dust as it is created. ❑ Sweep accessible areas of the drydock to remove and properly dispose of debris and spent sandblasting material prior to flooding.

Table 2. BMPs for Potential Pollutant Sources Water Transportation Facilities with Vehicle Maintenance shops and/or Equipment Cleaning Operations (continued)

Pollutant Source	BMPs
Surface preparation, sanding, and paint removal (continued)	❑ Collect spent abrasives routinely and store under a cover to await proper disposal. ❑ Store and re-use/recycle used strippers. Solvent strippers, particularly stripping baths, can generally be reused several times before their effectiveness is diminished. ❑ Use environmentally-sensitive chemical paint strippers. ❑ Inspect the area regularly to ensure BMPs are implemented. ❑ Train employees on waste control and disposal procedures.
Painting	❑ Confine activities to designated areas outside drainage pathways and away from surface waters. ❑ Enclose, cover, or contain painting activities to the maximum extent practical to prevent overspray and related debris/equipment from reaching surface waters. ❑ Hang plastic barriers or tarpaulins during blasting or painting operations to contain debris ❑ Prohibit uncontained spray painting activities over open water. ❑ Prohibit spray painting activities during windy conditions which render containment ineffective. ❑ Use spray equipment that delivers more paint to the target and less overspray. ❑ Mix paints and solvents in designated areas away from drains, ditches, piers, and surface waters, preferably indoors or under cover. ❑ Have absorbent and other cleanup items readily available for immediate cleanup of spills. ❑ Allow empty paint cans to dry before disposal. ❑ Store paint and paint thinner away from traffic areas to avoid spills. ❑ Recycle paint, paint thinner, and solvents. ❑ Establish and implement effective inventory control to reduce paint waste, including tracking date received and expiration dates. ❑ Store waste paint, solvents, and rags in covered containers to prevent evaporation to the atmosphere. ❑ Use solvents with low volatility and coatings with low VOC content; use high transfer efficiency coating techniques such as brushing and rolling to reduce overspray and solvent emissions. ❑ Train employees on proper painting and spraying techniques.
Drydock maintenance	❑ Clean and maintain drydock on a regular basis to minimize the potential for pollutants in the stormwater runoff. ❑ Sweep accessible areas of the drydock to remove and properly dispose of debris and spent sandblasting material prior to flooding. ❑ Collect wash water to remove solids and metals for disposal by a licensed waste disposal company. Clean the remaining areas of the dock after a vessel has been removed and the dock raised. ❑ Remove waste, including floatable and other low-density waste (wood, plastic, insulations, etc), and place in closed containers for disposal. ❑ Have absorbent materials and oil containment booms readily available to contain/clean up any spills.

Table 2. BMPs for Potential Pollutant Sources Water Transportation Facilities with Vehicle Maintenance shops and/or Equipment Cleaning Operations (continued)

Pollutant Source	BMPs
Drydock operations	❑ Control all equipment, supplies, and waste. ❑ Use plastic barriers beneath the hull, between the hull and drydock walls for containment. ❑ Use plastic barriers hung from the flying bridge of the drydock, from the bow or stern of the vessel, or from temporary structures for containment. ❑ Weight the bottom edge of the containment tarpaulins or plastic sheeting during a light breeze. ❑ When sandblasting (scuppers, railings, freeing ports, ladders, and doorways), use plywood and/or plastic sheeting to cover open areas between decks. ❑ Install tie rings or cleats, cable suspension systems, or scaffolding to make implementation containment easier. ❑ Inspect the maintenance area regularly to ensure BMPs are implemented. ❑ Train employees on waste control and disposal procedures.
Vehicle and equipment fueling	Stationary fueling areas ❑ Conduct fueling operations (including the transfer of fuel from tank trucks) on an impervious or contained pad and under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. ❑ When fueling in uncovered area, use concrete pad (asphalt is not chemically resistant to the fuels being handled). ❑ Use drip pans where leaks or spills of fuel can occur and where making and breaking hose connections. ❑ Use fueling hoses with check valves to prevent hose drainage after filling. ❑ Keep spill cleanup materials readily available. ❑ Clean up spills and leaks immediately. ❑ Use dry cleanup methods for fuel area rather than hosing down the fuel area. Sweep up absorbents as soon as spilled substances have been absorbed. ❑ Do not "top-off" fuel tanks. ❑ Minimize/eliminate run-on into fueling areas with diversion dikes, berms, curbing, surface grading or other equivalent measures. ❑ Collect stormwater runoff and provide treatment or recycling. ❑ Provide curbing or posts around fuel pumps to prevent collisions from vehicles. ❑ Regularly inspect and perform preventive maintenance on fuel storage tanks to detect potential leaks before they occur. ❑ Inspect the fueling area for leaks and spills. ❑ Train personnel on vehicle fueling BMPs. Mobile fueling areas ❑ Use drip pan under the transfer hose. ❑ Use fueling hoses with check valves to prevent hose drainage after filling. ❑ Ensure the fueling vehicle is equipped with a manual shutoff valve. ❑ Do not allow topping off of the fuel in the receiving equipment. ❑ Train personnel on vehicle fueling BMPs.

Table 2. BMPs for Potential Pollutant Sources Water Transportation Facilities with Vehicle Maintenance shops and/or Equipment Cleaning Operations (continued)

Pollutant Source	BMPs
Engine maintenance and repairs	Minimizing Exposure ❑ Conduct maintenance and repair operations over land, avoid repairs conducted over water whenever possible. ❑ Move work indoors, if possible, or create temporary work enclosures using heavy-gauge polypropylene plastic stretched over a tubular metal frame (or comparable materials).Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. ❑ If operations are uncovered, perform them on concrete pad that is impervious and contained. ❑ Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. ❑ Check vehicles closely for leaks and use pans to collect fluid when leaks occur. Management of Runoff ❑ Use berms, curbs, or similar means to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. ❑ Collect the stormwater runoff from the cleaning area and providing treatment or recycling. ❑ Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycled on-site. DO NOT discharge washwater to a storm drain or to surface water. Good Housekeeping ❑ Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste disposal company. ❑ If parts are dipped in liquid, remove them slowly to avoid spills. ❑ Use drip plans, drain boards, and drying racks to direct drips back into a sink or fluid holding tank for reuse. ❑ Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. ❑ Promptly transfer used fluids to the proper container; ❑ Empty drip pans once they become full and dispose of the contents properly. ❑ Cover and contain waste until it can be disposed, recycled, or reused. ❑ Use suction-style oil pumps to drain crankcase oil, and use absorbent pads to remove oil from bilges. ❑ Engine test tanks should never be drained to surface waters or septic systems. ❑ Maintain an organized inventory of materials. ❑ Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. ❑ Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). ❑ Store batteries and other significant materials inside. ❑ Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations. Inspections and Training ❑ Inspect the maintenance area regularly to ensure BMPs are implemented. ❑ Train employees on waste control and disposal procedures.

Table 2. BMPs for Potential Pollutant Sources Water Transportation Facilities with Vehicle Maintenance shops and/or Equipment Cleaning Operations (continued)

Pollutant Source	BMPs
Engine and parts storage	❑ Store on an impervious surface such as sealed asphalt or cement, and cover to avoid contact with stormwater. ❑ Use drip pans to prevent oil and grease from leaking onto the open ground. ❑ Secure engines and parts.
Storing liquid fuels	❑ If area is uncovered, connect sump outlet to sanitary sewer (if possible) or an oil/water separator, catch basin filter, etc. If connecting to a sanitary sewer check with the system operator to ensure that the discharge is acceptable. If implementing separator or filter technologies ensure that regular inspections and maintenance procedures are in place. ❑ Develop and implement spill plans. ❑ Train employees in spill prevention and control. Above ground tank ❑ Provide secondary containment, such as dikes, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). ❑ If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. ❑ Use double-walled tanks with overflow protection. ❑ Keep liquid transfer nozzles/hoses in secondary containment area. Portable containers/drums ❑ Store drums indoors when possible. ❑ Store drums, including empty or used drums, in secondary containment with a roof or cover (including temporary cover such as a tarp that prevents contact with precipitation). ❑ Provide secondary containment, such as dikes or portable containers, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). ❑ Clearly label containers with its contents.
Material handling: Storing chemicals	❑ Store containerized materials (fuels, paints, solvents, etc.) in a protected, secure location and away from drains. ❑ Clearly label all containers. ❑ Specify which materials are stored indoors and use containment/enclosure for those stored outdoors. ❑ Store reactive, ignitable, or flammable liquids in compliance with the local fire code. ❑ Identify potentially hazardous materials, their characteristics, and use. ❑ Implement an inventory control plan to control excessive purchasing, storage, and handling of potentially hazardous materials. ❑ Keep records to identify quantity, receipt date, service life, users, and disposal routes. ❑ Secure and carefully monitor hazardous materials to prevent theft, vandalism, and misuse of materials. ❑ Use temporary containment where required by portable drip pans. ❑ Use spill troughs for drums with taps. ❑ Store used lead-acid batteries on an impervious surface, under cover, protected from weather and freezing. If a battery is dropped treat it as if it is cracked. Neutralize acid spills, such as with baking soda, and dispose of the resulting waste as hazardous.

Table 2. BMPs for Potential Pollutant Sources Water Transportation Facilities with Vehicle Maintenance shops and/or Equipment Cleaning Operations (continued)

Pollutant Source	BMPs
Material handling: Storing chemicals (continued)	❑ Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. ❑ Train employees in spill prevention and control and proper materials management.
Designated material mixing areas	❑ Mix paints and solvents in designated areas away from drains, ditches, piers, and surface waters. Locate designated areas preferably indoors or under a shed. ❑ If spills occur: - Stop the source of the spill immediately. - Contain the liquid until cleanup is complete. - Deploy oil containment booms if the spill may reach surface water. - Cover the spill with absorbent material. - Keep the area well ventilated. - Dispose of cleanup materials in the same manner as the spilled material. - Do not use emulsifier or dispersant.
Shipboard process water handling	❑ Keep process and cooling water used aboard ships separate from sanitary wastes to minimize disposal costs for the sanitary wastes. ❑ Keep process and cooling water from contact with spent abrasives and paint to avoid discharging these pollutants. ❑ Inspect connecting hoses for leaks.
Shipboard sanitary waste disposal	❑ Discharge sanitary wastes from the ship being repaired to the yard's sanitary system or dispose of by a commercial waste disposal company. ❑ Develop and implement spill plans. ❑ Train employees in appropriate material transfer procedures, including spill prevention and containment activities.
Material	❑ Anti-freeze: Re-use or dispose to a sanitary sewer (if permitted) or by a waste transporter permitted to handle this waste. ❑ Used lead-acid batteries: Disposal by an approved recycler. ❑ Waste oil: Removed by a permitted waste oil transporter or used in a waste oil heater on-site. ❑ Oil filters: Crush or puncture and hot-drain by placing the filter in a funnel over an appropriate waste collection container to allow the excess petroleum product to drain into the container. Drained filters should be collected and recycled when possible. Only filters that have been crushed or hot-drained to remove all excess oil may be disposed of as solid waste. ❑ Mercury lamps and switches: Spent fluorescent bulbs, other mercury lamps, and mercury switches are hazardous waste. They should be stored safe from breakage and recycled or disposed as hazardous waste. ❑ Fiber reinforced plastic (epoxy and polyester resins) Small amounts of unused resins may be catalyzed prior to disposal as solid waste. However, catalyzation is not an acceptable method of disposing of outdated or unneeded resin stores. These materials must be treated as hazardous waste and disposed of by a licensed waste disposal company. ❑ Common solvents such as acetone or methylene chloride evaporate easily and should be kept in covered containers. ❑ Glue and adhesives: Residual amounts of glues and adhesives remaining in empty caulking tubes may be disposed of as solid waste. All other glue and adhesive related wastes must undergo a determination for hazardous waste characteristics. Non-hazardous glues and adhesives in liquid form cannot be disposed of as solid waste and should be used for their originally intended purpose.

Table 2. BMPs for Potential Pollutant Sources Water Transportation Facilities with Vehicle Maintenance shops and/or Equipment Cleaning Operations (continued)

Pollutant Source	BMPs
Material (continued)	❑ Paints, waste diesel, kerosene, and mineral spirits: Disposal should be performed by a licensed waste transporter. These waste products should not be allowed to evaporate; poured on the ground; disposed of in storm sewers, septic systems, or POTWs; or discharged to surface waters. ❑ Waste gasoline: When possible, filter and use as fuel. It should not be allowed to evaporate; poured on the ground; disposed of in storm sewers, septic systems, or sanitary sewers; or discharged to surface waters. It should be removed from site by a licensed waste transporter. ❑ Trash and other solid waste: All trash and solids should be contained and disposed of appropriately in covered trash cans or recycling receptacles. ❑ Plastic barriers and tarpaulins: Properly store plastic barriers and tarpaulins for reuse or disposal.
Bilge and ballast water	❑ Collect and dispose of bilge and ballast waters which contain oils, solvents, detergents, or other additives to a licensed waste disposal company.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see **www.epa.gov/npdes/stormwater/msgp**.

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at **www.epa.gov/npdes/stormwatercontacts**.

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

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