

INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector O: Steam Electric Power Generating Facilities, Including Coal Handling Areas



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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 steam electric power generating facilities including:

- ◆ Steam electric power generation using coal, natural gas, oil, nuclear energy, etc. to produce a stream source, including coal handling areas
- ◆ Coal pile runoff
- ◆ Dual fuel co-generation facilities

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 steam electric generating facilities, including coal handling areas, 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

Pollutants may be present in stormwater as a result of outdoor activities associated with steam electric power generating facilities such as: material handling and transport operations; waste disposal; and deposition of airborne particulate matter. In addition, sources of pollutants other than stormwater, such as illicit connections, spills, and other improperly dumped materials, may increase the pollutant loadings discharged receiving waters.

Although there are many activities that occur at a facility, this fact sheet only discusses those activities that occur outdoors and where activities or materials may be exposed to precipitation. The primary and largest potential source of stormwater pollutants from fossil-fueled steam electric generating facilities is ash refuse piles. Vanadium, sodium, sulfur, and nickel are all common elements found in oil ash. Silica, alumina, ferric oxide, calcium oxide, magnesium oxide, and sodium and potassium oxides are all common.

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at steam electric generating facilities, including coal handling areas.

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Steam Electric Generating Facilities, including Coal Handling Areas

Activity	Pollutant Source	Pollutant
Above ground liquid storage tanks	External corrosion and structural failure	Fuel, oil and grease (O&G), heavy metals, ammonia, chloride, sodium hydroxide, and other materials being stored
	Installation problems	
	Spills due to operator error	
	Failure of piping systems	
	Leaks or spills during pumping of liquids from barges, trucks, rail cars to a storage facility	
Vehicle and equipment maintenance	Parts cleaning	Oil and grease (O&G), heavy metals, chlorinated solvents, acid/alkaline wastes, ethylene glycol
	Spills of oil, degreasers, hydraulic fluids, transmission fluid, radiator fluids	Oil and grease (O&G), arsenic, heavy metals, organics, chlorinated solvents, ethylene glycol
	Fluids replacement	Oil and grease (O&G), arsenic, heavy metals, organics, fuel

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Activity	Pollutant Source	Pollutant
Fueling operations	Spills and leaks during fuel delivery	Fuel, oil and grease (O&G), heavy metals
	Spills caused by “topping off” fuel tanks	
	Leaking storage tanks	
	Allowing rainfall on the fuel area or stormwater to run onto the fuel area	
Coal handling areas	Coal storage	Suspended solids, copper, iron, aluminum, nickel, and trace metals
	Fugitive dust emissions from coal handling	
	Spills during delivery	
	Offsite tracking of coal dust	
Ash handling areas, ash landfills	Spills during transfer of ash to landfills	Suspended solids, chromium, copper, iron, zinc, oil and grease, aluminum
	Offsite tracking of ash	
Scrapyards, refuse sites	Discarded material	Fuel, oil and grease (O&G), heavy metals

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 steam electric generating facilities, including coal handling areas. 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 cleanup, 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.

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 from coming into contact with stormwater. 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 for steam electric power generating facilities include:

- ◆ Spill and overflow protection under chemical connectors to contain spillage at liquid storage tanks

- ◆ Dry cleanup methods at liquid storage tank areas
- ◆ Coal pile management
- ◆ Load covers on residue hauling vehicles and ensure gates on trucks are sealed and the truck body is in good condition
- ◆ Containment curbs around loading/unloading areas or tanks
- ◆ Techniques to reduce ash residue which may be tracked on to access roads traveled by residue trucks or residue handling vehicles.
- ◆ Techniques to reduce ash residue on exit roads leading into and out of residue handling areas

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 can be a very effective pollution prevention measure.

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.

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 steam electric generating facilities, including coal handling areas, 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 steam electric generating facilities, including coal handling areas; 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 at Steam Electric Generating Facilities, including Coal Handling Areas

Pollutant Source	BMPs
Coal pile management	<ul style="list-style-type: none"> <input type="checkbox"/> Confine storage to areas outside of drainage pathways and away from surface waters. <input type="checkbox"/> Divert stormwater around storage areas with vegetated swales, and/or berms. <input type="checkbox"/> Practice good housekeeping measures such as frequent removal of dust and debris. Cleanup methods may include mobile sweepers, scrapers, or scoops. <input type="checkbox"/> Use properly designed basins for collection, containment, and recycling of pile spraying materials. <input type="checkbox"/> Use control measures such as berms, silt fences or waddles to control sediment from leaving storage area. <input type="checkbox"/> Train employees in good housekeeping measures
Fugitive dust emissions	<ul style="list-style-type: none"> <input type="checkbox"/> Establish procedures to minimize offsite tracking of coal dust. <input type="checkbox"/> Use specially designed tires. <input type="checkbox"/> Wash vehicles before they leave the site in a designated area where wash water can be controlled.
Delivery vehicles	<ul style="list-style-type: none"> <input type="checkbox"/> Develop procedure for the inspection of all vehicles arriving on the plant site and ensure overall integrity of the body or container. <input type="checkbox"/> Control leakage or spillage from vehicles or containers and ensure that proper protective measures are in place.
Fuel oil unloading areas	<ul style="list-style-type: none"> <input type="checkbox"/> Confine loading/unloading activities to designated areas outside drainage pathways and away from surface waters. <input type="checkbox"/> Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. <input type="checkbox"/> Use containment curbs in unloading areas. <input type="checkbox"/> Use spill and overflow protection (drip pans, drip diapers, etc.) beneath fuel oil connectors. <input type="checkbox"/> For rail transfer, a drip pan shall be installed within the rails to collect spillage from the tank. <input type="checkbox"/> Develop and implement spill prevention, containment, and countermeasure (SPCC) plans. <input type="checkbox"/> Train employees in spill prevention, control and cleanup. <input type="checkbox"/> Personnel familiar with spill prevention and response procedures should be present during unloading to ensure that any leaks or spills are immediately contained and cleaned up.
Chemical loading/unloading areas	<ul style="list-style-type: none"> <input type="checkbox"/> Cover chemical loading/unloading areas and store chemicals indoors, when possible. <input type="checkbox"/> Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. <input type="checkbox"/> Use containment curbs at chemical loading/unloading areas. <input type="checkbox"/> Develop and implement spill prevention, containment, and countermeasure (SPCC) plans. <input type="checkbox"/> Train employees in spill prevention, control and cleanup. <input type="checkbox"/> Personnel familiar with spill prevention and response procedures should be present during unloading to ensure that any leaks or spills are immediately contained and cleaned up.
Miscellaneous loading/unloading	<ul style="list-style-type: none"> <input type="checkbox"/> Confine loading/unloading activities to designated areas outside drainage pathways and away from surface waters. <input type="checkbox"/> Inspect containers for leaks or damage prior to loading/unloading. <input type="checkbox"/> Avoid loading/unloading materials in the rain or provide cover or other protection for loading docks.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Pollutant Source	BMPs
Miscellaneous loading/unloading (continued)	<ul style="list-style-type: none"> <input type="checkbox"/> Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. <input type="checkbox"/> Cover loading and unloading areas and perform these activities on an impervious pad to enable easy collection of spilled materials. <input type="checkbox"/> Slope the impervious concrete floor or pad to collect spills and leaks and convey them to proper containment and treatment. <input type="checkbox"/> Regularly sweep area to minimize debris on the ground.
Liquid storage tanks	<ul style="list-style-type: none"> <input type="checkbox"/> Cover and/or enclose chemical storage areas (including temporary cover such as a tarp that prevents contact with precipitation). Provide secondary containment around chemical storage areas. <input type="checkbox"/> 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. <input type="checkbox"/> Use double-walled tanks with overflow protection. <input type="checkbox"/> Locate storage areas away from high traffic areas and surface waters. <input type="checkbox"/> Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventive maintenance. <input type="checkbox"/> Maintain an inventory of fluids to identify leakage. <input type="checkbox"/> Provide fluid level indicators. <input type="checkbox"/> Properly dispose of chemicals that are no longer in use. <input type="checkbox"/> Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. <input type="checkbox"/> Provide drip pads/pans where chemicals are transferred from one container to another to allow for recycling of spills and leaks. <input type="checkbox"/> Use dry cleanup methods. <input type="checkbox"/> Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. <input type="checkbox"/> Train employees in spill prevention and control and proper materials management.
Large bulk fuel storage	<ul style="list-style-type: none"> <input type="checkbox"/> 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.
Above ground tanks	<ul style="list-style-type: none"> <input type="checkbox"/> 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). <input type="checkbox"/> 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. <input type="checkbox"/> Use double-walled tanks with overflow protection. <input type="checkbox"/> Keep liquid transfer nozzles/hoses in secondary containment area. <input type="checkbox"/> Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. <input type="checkbox"/> Train employees in spill prevention and control.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Pollutant Source	BMPs
Oil bearing equipment switchyards	<ul style="list-style-type: none"> <input type="checkbox"/> Construct level grades and gravel surfaces to retard flows and limit the spread of spills. <input type="checkbox"/> Collect stormwater runoff in perimeter ditches.
Residue hauling vehicles	<ul style="list-style-type: none"> <input type="checkbox"/> Inspect all residue hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the body or container. <input type="checkbox"/> Repair vehicles lacking in the above qualities.
Ash loading areas	<ul style="list-style-type: none"> <input type="checkbox"/> Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before each loaded vehicle departs
Vehicle and equipment maintenance	<p data-bbox="415 646 630 678">Good Housekeeping</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 hauler. <input type="checkbox"/> Do all cleaning at a centralized station so the solvents stay in one area. <input type="checkbox"/> If parts are dipped in liquid, remove them slowly to avoid spills. <input type="checkbox"/> Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. <input type="checkbox"/> Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. <input type="checkbox"/> Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. <input type="checkbox"/> Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. <input type="checkbox"/> Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. <input type="checkbox"/> Do not pour liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. <input type="checkbox"/> Maintain an organized inventory of materials. <input type="checkbox"/> Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. <input type="checkbox"/> Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). <input type="checkbox"/> Store batteries and other significant materials inside. <input type="checkbox"/> Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations. <p data-bbox="415 1591 630 1623">Minimizing Exposure</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. <input type="checkbox"/> If operations are uncovered, perform them on a concrete pad that is impervious and contained. <input type="checkbox"/> Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. <input type="checkbox"/> Check vehicles closely for leaks and use pans to collect fluid when leaks occur.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Pollutant Source	BMPs
Vehicle and equipment maintenance (continued)	<p>Management of Runoff</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use berms, curbs, or grassed swales other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. <input type="checkbox"/> Collect the stormwater runoff from the cleaning area and provide treatment or recycling. <input type="checkbox"/> Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. DO NOT discharge washwater to a storm drain or to surface water. <p>Inspections and Training</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inspect the maintenance area regularly to ensure BMPs are implemented. <input type="checkbox"/> Train employees on waste control and disposal procedures.
Material storage areas	<ul style="list-style-type: none"> <input type="checkbox"/> Store materials indoors. <input type="checkbox"/> Cover material with a temporary covering made of polyethylene, polyurethane, polypropylene, or hypalon. <input type="checkbox"/> Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. <input type="checkbox"/> Construct an enclosure or build a berm around the area. <input type="checkbox"/> Regularly sweep area to minimize debris on the ground. <input type="checkbox"/> Train employees in spill prevention, control, cleanup and proper materials management techniques.
Fueling operations	<ul style="list-style-type: none"> <input type="checkbox"/> Conduct fueling operations (including the transfer of fuel from tank trucks) on an impervious or contained pad or under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. <input type="checkbox"/> When fueling in uncovered area, use a concrete pad (not asphalt, which is not chemically resistant to the fuels being handled). <input type="checkbox"/> Use drip pans where leaks or spills of fuel can occur and where making and breaking hose connections. <input type="checkbox"/> Use fueling hoses with check valves to prevent hose drainage after filling. <input type="checkbox"/> Keep spill cleanup materials readily available. <input type="checkbox"/> Clean up spills and leaks immediately. <input type="checkbox"/> Minimize/eliminate run-on onto fueling areas with diversion dikes, berms, curbing, surface grading or other equivalent measures. <input type="checkbox"/> Collect stormwater runoff and provide treatment or recycling. <input type="checkbox"/> Provide curbing or posts around fuel pumps to prevent collisions from vehicles. <input type="checkbox"/> Use dry cleanup methods for fuel area rather than hosing the fuel area down. <input type="checkbox"/> Perform preventive maintenance on storage tanks to detect potential leaks before they occur. <input type="checkbox"/> Inspect the fueling area to detect problems before they occur. <input type="checkbox"/> Discourage "topping off" of fuel tanks. <input type="checkbox"/> Train personnel on vehicle fueling BMPs.

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:

- ◆ Idaho Department of Lands. 1992. Best Management Practices for Mining in Idaho. www.idl.idaho.gov/Bureau/Minerals/bmp_manual1992/bmp_index.htm
- ◆ Pierce County, Washington, Public Works and Utilities. "Best Management Practices for Commercial and Industrial Activities." www.piercecountywa.org/pc/services/home/environ/water/wq/bmpmanual.htm
- ◆ Naval Facilities Engineering Service Center. "Storm Water Best Management Practices (BMP) Decision Support Tool: Storm Water Pollution Prevention Operations by Category. Category: Steam Electric Power Generating Facilities." <http://205.153.241.230/stormwaterbmp/cgi-bin/P2Cat.cfm?Cat=Steam%20Electric%20Power%20Generating%20Facilities>
- ◆ U.S. EPA, 1992. Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. EPA 832-R-92-006. www.epa.gov/npdes/stormwater
- ◆ U.S. EPA, 2001. Coal Remining - Best Management Practices Guidance Manual. EPA-821-B-01-010. www.epa.gov/waterscience/guide/coal/bmp/
- ◆ U.S. EPA, Office of Wastewater Management. *NPDES Stormwater Multi-Sector General Permit for Industrial Activities (MSGP)*. www.epa.gov/npdes/stormwater/msgp