

STORMWATER POLLUTION PREVENTION FOR INDUSTRIAL SITES

Brought to you By:



Contaminated stormwater is the largest source of pollution to our waterways. Storm drains carry runoff from streets, urban centers, open spaces and industrial sites, directly into nearby streams, ponds, rivers and oceans.

Industrial operations are only one contributor to the stormwater problem, but they are known to be a source of **heavy metals, oils, salts** and other **hazardous substances**. Reducing or eliminating exposure of stormwater to industrial waste is a proven way to reduce pollution to our surface waters.

HOW TO PREVENT STORMWATER POLLUTION AT INDUSTRIAL SITES

SALT STORAGE

Any facility using salt must manage its contact with stormwater. Usual BMPs include **covering salt** piles and installing an **impervious pad under salt** storage and other work areas. Other BMPs include:

- Using **eco-friendly de-icing** products,
- Applying salt or other de-icers sparingly,
- **Sweeping** salt that is tracked out of area,
- **Training** employees.

DUST CONTROL

Dust comes from smokestacks, vents, stockpiles, cleared ground, gravel roads, open areas and outdoor processing areas. Non-structural methods to control dust include:

- Storing all materials and waste **inside facility**,
- Routine **cleaning of vents** and filters,
- Regular **sweeping**,
- **Spraying** controlled amounts of uncontaminated stormwater to dampen dust-generating areas.

EROSION PREVENTION, SEDIMENT CONTROL and RUNOFF MANAGEMENT

Where soil is exposed to water, wind or ice, erosion can result. Typical non-structural BMPs that can be implemented to limit on-site erosion and control sediment include:

- Leaving as much **vegetation** as possible on site,
- Minimizing time that bare soil is exposed,
- **Stabilizing disturbed soil** as soon as possible,
- Preventing runoff from flowing over exposed areas.

ELIMINATING UNAUTHORIZED STORMWATER DISCHARGES (ILLICIT DISCHARGES)

Your site's stormwater system is designed to handle stormwater, but it is not designed to handle illicit discharges such as sewage or septic flows, washwater, oil spills, or other dumped materials. Non-structural BMPs for non-stormwater discharges include:

- **Inspecting and testing** floor drains, sinks, process drains (**eliminating connections** to storm sewers, surface or subsurface drains),
- **Preventing mixing of non-stormwater and stormwater discharges**; once mixed, the discharge cannot be managed as stormwater and requires a different permit.

SPILL PREVENTION & RESPONSE PROCEDURE

A spill prevention and response procedure enables your staff to quickly and consistently respond to any spills that may occur on site. Typical procedures include:

- **Identifying potential discharge locations** (drains or other stormwater access points),
- Identifying monitoring locations of **surface waters that may be impacted** by spill or necessary response,
- Developing and implementing proper material **handling, storage and disposal routines**,
- **Posting contact information** for all individuals or agencies that need to be notified in the event of a spill,
- **Promptly reporting and documenting** any spills or leaks to the appropriate parties,
- Properly **training employees** of spill prevention and response procedures.

STORMWATER POLLUTION PREVENTION PLAN

A Stormwater Pollution Prevention Plan (SWPPP) describes how you are going to reduce or eliminate stormwater pollution from your site's operation. Based on SIC codes and stormwater exposure, your facility may need to be covered under the Multi Sector General Permit (MSGP). If so, you need to prepare a SWPPP that summarizes your Best Management Practices (pollution control measures) such as the ones described on this brochure.

For more information on coverage under the MSGP, visit www.epa.gov/npdes/stormwater-discharges-industrial-activities#guidance

EMPLOYEE TRAINING

Employee training is crucial to making sure these BMPs are effectively implemented and actually reduce pollution. Training should occur at least once a year and can be achieved through formal classes, in-house training sessions, webinars, or other workshops. Be sure to ask your regional stormwater collaborative for necessary training materials.

LOW IMPACT DEVELOPMENT

Low Impact Development (LID) includes a suite of landscaping and site design techniques that maintain and utilize the natural, predeveloped ability of a site to manage rainfall. LID techniques capture water on-site, filter it through vegetation or other natural media, and let it soak into the ground where it can recharge the local water table rather than being lost and polluted as surface runoff. An important LID principle includes the idea that stormwater is not merely a waste product to be disposed of but a resource.

LID can easily be incorporated into any development or redevelopment project, even at the industrial level. [Rain Gardens](#), [Vegetated Swales](#), [Bioretention Cells](#) and [Porous Pavement](#) are all viable techniques that could be implemented at your industrial site.

For more information on these particular LID options, and other types of development and on-site stormwater management ideas, go to www.greenscapes.org/LID-Toolkit

IS MY SITE INDUSTRIAL ?

The EPA has defined twenty nine different Sectors of Industrial sites that may be found in your community, and would require a MSGP.

Sector A - Timber Products Facilities

Sector B - Paper and Allied Products Manufacturing Facilities

Sector C - Chemical and Allied Products Manufacturing and Refining

D - Asphalt Paving and Roofing Material Manufacturing and Lubricant Manufacturing

E - Glass, Clay, Cement, Concrete and Gypsum Product Manufacturing

F - Primary Metal Facilities

G - Metal Mining (Ore Mining and Dressing) Facilities

H - Coal Mines and Related Facilities

I - Oil and Gas Extraction Facilities

J - Mineral Mining and Processing Facilities

K - Hazardous Waste Treatment, Storage and Disposal Facilities

L - Landfills and Land Application Sites

M - Automotive Salvage Yards

N - Scrap Metal Recycling and Waste Recycling Facilities

O - Steam Electric Power Generating Facilities

P - Motor Freight Transportation Facilities, Passenger Trans. Facilities, Petroleum Bulk Oil Stations and Terminals, Rail Trans. Facilities, and US Postal Service Trans. Facilities

Q - Water Transportation Facilities with Vehicle Maintenance Shops or Equipment Cleaning Operations

R - Ship or Boat Building and Repair Yards

S - Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas at Air Trans. Facilities

T - Treatment Works

U - Food and Related Products Facilities

V - Textile Mills, Apparel, Other Fabric Product Manufacturing Facilities

W - Wood and Metal Furniture Building and Fixing Facilities

X - Printing and Publishing Facilities

Y - Rubber and Misc. Plastic Product or Miscellaneous Manufacturing Facilities

Z - Leather Tanning and Finishing Facilities

AA - Fabricated Metal Product Manufacturing Facilities

AB - Transportation Equipment, Industrial or Commercial Machinery Manufacturing Facilities

AC - Electronic and Electrical Equipment and Component, Photographic and Optical Goods Manufacturing Facilities.

For additional "Industrial Fact Sheets" prepared by the EPA, visit:

www.epa.gov/npdes/industrial-stormwater-fact-sheet-series