

Chemical and Allied Products and the Multi-Sector General Permit (MSGP)

The MSGP is a permit designed to prevent stormwater pollution from entering into our surface waters. Given the nature of the Chemical Manufacturing industry, a wide variety of both organic and inorganic pollutants may be found in a facility's stormwater. The type of pollutant leaving the site depends on what is actually being produced (synthetic rubber, detergent, emulsifiers, etc.). As many of the chemicals used at these facilities may be water soluble, it is important to minimize the possibility of stormwater coming in contact with such chemicals. The following is a list of Best Management Practices (BMPs), organized by area and activity that can be incorporated into a facility's Stormwater Pollution

BMPs reduce, eliminate or prevent stormwater pollution from reaching Vermont's rivers and streams

What is a Stormwater BMP?

Best Management Practices, commonly referred to as BMPs, are effective ways to reduce the amount of pollution in stormwater leaving your facility. There are two types of BMPs:

- Structural BMPs are things that can be built on site and include physical structures like berms, settling ponds, oil-water separators, and storm resistant shelters.
- Behavioral BMPs are changes that can be made in the way a person operates their business. Behavioral BMPs include conducting regular inspections, regular maintenance of vehicles and machinery, prohibition of certain activities, and employee training.

An effective Stormwater Pollution Prevention Plan (SWPPP) will include both types of BMPs.

Stormwater BMPs for Chemicals and Allied Products — Sector C

The following list of suggested BMPs is organized by activity and can be included in your facility's Stormwater Pollution Prevention Plan (SWPPP). The BMPs cover the following operations:

- Loading and Unloading Activities and Chemical Transfer
- Chemical and Raw Materials Storage Areas
- Vehicle Maintenance and Fueling
- Outdoor Tank Storage Areas
- Spill Prevention and Response
- Source Reduction
- Employee Training



Loading and Unloading Activities and Chemical Transfer

- Confine loading and unloading activities to a designated area.
- Conduct loading and unloading indoors or under cover.
- Inspect all containers prior to loading and unloading.
- Avoid loading and unloading materials in the rain.
- All loading operations should occur on an impervious surface.
- Cover storm drains during loading and unloading activities.
- Build berms and dikes around loading and unloading areas. Establish a flow diversion area that redirects stormwater away from loading docks and terminals.
- Minimize run on of storm water by grading areas designated for transportation.

Chemical and Raw Materials Storage Areas

- Confine storage of materials, parts and equipment to designated areas with existing containment and stormwater flow systems.
- Storage areas should be secure and covered, preventing exposure to rain and unauthorized access. Storage areas should be on impervious surfaces.
- Use curbing, berming or diking to redirect stormwater flow away from storage areas. Use materials that will not leach or erode.
- Minimize runoff of stormwater from offsite by grading the land around storage areas to divert flow away from containers.
- Store wastes in covered, leak proof, water tight, non-corrosive containers.
- Convey contaminated waters to the facility's stormwater treatment structures.
- Ensure that all containers are closed (e.g. valves shut, lids sealed, caps closed).

- Store containers away from storm or floor drains. Plug or disconnect floor drains that lead to the facility's stormwater system.
- Label all containers with the name of the chemical, unit number, expiration date, handling instructions, and health or environmental hazards.

Vehicle Maintenance and Fueling

- Clean material handling equipment to remove accumulated dust and residue.
- Use drip pans under all vehicles and equipment waiting for maintenance.
- Regularly inspect for filling or full drip pans.
- Properly dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers.
- Fuel vehicles at designated, impervious and contained areas. Avoid topping off vehicles.
- Use catch basin inserts designed for oil removal around fueling and maintenance areas.
- Wash vehicles at a commercial facility or wash vehicles on an impervious surface. Use only non-phosphorous soaps.
- Wash water must be directed away from any on site streams, stormwater drains, or drainage ditches. Direct wash water to a vegetated area.



Outdoor Tank Storage Areas

- Visually inspect tank systems on a frequent and regular basis. Pay particular attention to the tank's foundation, connections, coatings, walls, and the piping system.
- Use double walled tanks.
- Install a secondary containment system around both temporary and permanent tanks. Incorporate berms, dikes, liners, or vaults.
- Berm or slope the impervious area surrounding the tank to a dead end sump.
- Install dikes or other physical barriers of sufficient height to contain 110 % of the volume contained in the tank.

Spill Prevention and Response

- Use spill troughs for drums with taps to contain any leaks or drips.
- Install high level alarm on tanks to prevent overfilling.
- Clean up all spills immediately upon discovery.
- Store basic safety equipment and spill clean up material in all storage areas. Provide adequate lighting, a telephone, and a list of emergency numbers.
- Use dry clean up methods (such as absorbent materials). Never wash down pavement or other surfaces where spills have occurred.
- Inspect shipping and receiving areas regularly to identify any potential problems.

- Develop an inventory of all chemicals on site. Obtain Material Safety Data Sheets (MSDS) for all chemicals and make this information readily available to all employees.
- Develop a spill prevention and response plan that clearly states procedures to stop the source of a spill and outlines the disposal of contaminated materials.

Source Reduction

- Order only the necessary amount of chemicals and other such materials.
- Adopt a regular schedule for the pick up and disposal of waste materials.
- Recycle leftover materials. Even solvents may be recyclable.
- Go to <http://www.anr.state.vt.us/dec/wastediv/rcra/pubs/Haztrans.pdf> for a list of permitted hazardous waste transporters.

Employee Training

- Inform employees of stormwater pollution sources and prevention.
- Train employees in proper loading and unloading techniques.
- Instruct employees in proper filling and transfer procedures as well as in waste control and disposal.
- Ensure that all employees are familiar with the facility's spill prevention and response plan.



Questions or Assistance with your Stormwater SWPPP, contact:

VT Department of Environmental Conservation
Water Quality Division
103 South Main St. • Bldg. 10 North • Waterbury, VT 05671
802-241-4320

www.VTwaterquality.org