

Multi-Sector General Permit

Stormwater Best Management Practices for Sector AA: Fabricated Metal Products Facilities

Fabricated Metal Products Facilities and the Multi-Sector General Permit (MSGP)

The MSGP is a permit designed to prevent stormwater pollution from entering into our surface waters. While many metal fabrication operations take place indoors, the outdoor storage of waste, solvents, and raw materials are possible sources of stormwater pollution. BMPs for this particular sector focus on these sources. Potential pollutants include sediment, solvents, oil, paints, other spilled materials and heavy metals.

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 Fabricated Metal Products Facilities — Sector AA

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:

- Metals Fabrication Areas
- Raw Metal, Raw Steel, and Scrap Metal Storage Areas
- Metal Working Fluids, Chemical Cleaners, and Rinse Water
- Paints and Painting Equipment
- Source Reductions
- Spill Prevention and Response
- Vehicle and Equipment Maintenance
- Drum Storage
- Shipping and Receiving



Multi-Sector General Permit

Stormwater Best Management Practices for Sector AA: Fabricated Metal Products Facilities

Metals Fabrication Areas

- Minimize the tracking of metal dusts and metal fines (particles) outdoors, where they are easily swept up by stormwater run off.
- Sweep fabrication and all accessible fabrication areas on a frequent and regular basis.
- Keep floors clean and dry.
- Remove obsolete equipment as soon as possible.
- Avoid heavy accumulation of steel ingots, fines, and scraps.



Raw Metal, Raw Steel, and Scrap Metal Storage Areas

- Frequently check raw materials for corrosion.
- Store raw materials in a covered area (such as a shed or small warehouse) or cover exposed materials.
- Stack materials on pallets or a similar structure to prevent contact with the ground.
- Cover materials with a weighted tarp or awnings.
- Use dikes, berms, or curbs to divert stormwater around these areas.

- Avoid long-term exposure of raw materials – this increases the likelihood of corrosive activity.
- Always store fine metal dusts in tightly sealed containers indoors.
- Store materials close to where they will be used, particularly liquids that could be spilled during transport.
- Keep storage areas clean.



Metal Working Fluids, Chemical Cleaners, and Rinse Water

- Store used metal working fluid indoors.
- Store solvents in a single, centralized location.
- Use tightly sealed lids on all fluid containers.
- Establish recycling programs for used fluid. Store recyclable waste indoors.
- Use drip pans to reduce the probability of solvents or other liquids spilling.
- Follow the manufacturer's instructions for the use of cleaners. Properly dispose of cleaners. This reduces the need to store contaminated liquids for an extended period of time.
- Reuse cleaners or substitute non-toxic cleaning agents.
- Obtain Material Safety Data Sheets (MSDS) for all fluids. Note which chemicals have special handling or storage procedures. Make this information available to all employees.

Paints and Painting Equipment

- Paint and sand indoors when possible.
- Avoid painting and sandblasting operations outdoors during windy weather.
- Enclose outdoor sanding and painting areas with tarps or plastic sheeting.
- Use water-based paints.
- Use tarps, drip pans, or other spill collection devices to contain and collect any spills.
- Immediately collect and properly dispose of any waste.



Source Reduction

- Recycle metal working fluids by filtering, skimming, or coalescing used fluids or investigate other applicable methods of fluid recycling.
- Minimize the amount of metal working fluids needed by using a high quality brand.
- Properly dispose of outdated materials and chemicals.
- Maintain a low inventory of chemicals. Purchase only necessary chemical in small quantities.
- Purchase chemicals used in large quantities by participating in a “refillable tote” program. Doing so reduces the storage of chemical containers.
- Use fluids that are easily recycled.

Spill Prevention and Response

- Always use dry clean up methods such as absorbent socks or pads to contain spills. Never “wash down” an area where spills have occurred.
- Clean up all spills immediately upon discovery.
- Inspect shipping and receiving areas regularly to identify any potential problems.
- 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.



Vehicle, Equipment, and Parts Washing

- Do all vehicle maintenance under cover and on impervious surfaces (i.e., in a garage).
- Change fluids and parts indoors.
- Never pour liquid waste down floor drains or stormwater inlets. Place or paint signs above drains reminding employees not to dump liquids or solids down storm drains.
- Recycle or properly dispose of fluids.
- Sweep up leaks using a granular, absorbent material.

Drum Storage

- Use non-corrosive, non-leaking, durable drums. Always use tightly sealed drums.
- Store drums on an impervious surface, in a roofed or three-sided structure, or cover with weighted tarps or awnings. Cover empty drums.
- Provide secondary containment for drum storage areas. Use berms, dikes, or other physical barriers to contain 110% of the total volume of all drums.
- Incorporate swales, drainage ditches, curbing, or grading to direct stormwater away from drum storage area.
- Store drums as close to areas of operations as possible.
- Label all drums with proper warning and handling instructions.

Shipping and Receiving

- Confine loading and unloading activities to a designated area.
- Conduct loading and unloading indoors or in a covered area.
- 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



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