

Multi-Sector General Permit

Stormwater Best Management Practices for
**Sector V: Textile Mills, Apparel, and Other
Fabric Product Manufacturing; Leather and Leather Products**

Textile Mills, Apparel, and Other Fabric Product Manufacturing 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 textile and fabric producing processes are done indoors, using fewer chemicals or less toxic chemicals as well as less water can reduce the possibility of stormwater contamination. Waste or raw materials stored out doors are also possible source of stormwater pollution. Sediment, oil or grease, lead, chromium, copper, sulfides and peroxides, phenols, and benzene are potential stormwater contaminants for the textile industry. The following BMPs are organized by activity and area and can be incorporated into the facility's Stormwater Pollution Prevention

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

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 Textile Mills, Apparel, and Other Fabric Product Manufacturing; Leather and Leather Products— Sector V

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:

- Preparation, Dyeing, and Finishing
- Materials Handling or Mixing
- Tank Storage
- Individual Drum and Container Storage
- Source Reduction and Inventory Control
- Spill Prevention and Response



Preparation, Dyeing, and Finishing

- Reuse waste from typical bleach unit processing. Recycle J-box or kier drain wastes to saturator. Use washer waste from scour operations for batch scouring.
- Reuse residual portions of finish mixes for the next mix. Reuse dye bath when possible.
- Return non-contact cooling water and stream condensates to a hot water holding tank or clear well.
- Segregate waste streams requiring treatment from waste streams that do not require treatment.
- Incorporate countercurrent washing and pad batch dyeing, which eliminates the need for salts and specialty chemicals.
- Minimize or eliminate the use of “problem” chemicals such as aryl phenol ethoxylates, chlorinated aromatics, and metals.
- Use low liquor ratio dyeing machines or foam processing.



Materials Handling or Mixing

- Use portable drips pans. Place containers in tubs or buckets during use.
- Promptly transfer used fluids to proper containers. Avoid leaving full or open containers or drip pans in work spaces. Keep containers closed as much as possible during active use.
- Cover or disconnect floor drains that are connected to the stormwater system.
- Mix solvents in designated, contained areas.
- Use catch basin inserts designed to remove sediment and small particles.

Tank Storage

- 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.
- Install high level alarms and overflow protection mechanisms.
- Use double walled tanks. Ensure that all tanks are in excellent working condition, and labeled clearly.
- 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.

Individual Drum and Container Storage

- Use non-corrosive, non-leaking, durable drums and containers. Always use tightly sealed drums and containers. Label all drums and containers.
- When fire codes allow, store drums and containers indoors.



- Replace or tighten bungs in drum as needed. Use spill troughs or drip pans for drums with taps.
- Store drums on an impervious surface, in a roofed or three sided structure, or cover with weighted tarps or awnings.
- Avoid storing containerized materials near floor drains or in obvious drainage areas.
- Slope areas where containers or drums are stored so that runoff flows away from the storage area. Store containers on an elevated pad.
- 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
- Put individual containers on pallets. Limit the stack height of individual containers/ drums.

- Use straps or plastic wrap to stabilize containers.
- Frequently and regularly inspect storage areas for spills and leaks. Examine containers for degradation or vandalism.
- Provide adequate clearance to allow material movement and access by material handling equipment.
- Prohibit washing down of material storage areas – disconnect or seal all floor drains from storm drain system.

Source Reduction and Inventory Control

- Employ prescreening practices prior to purchasing chemicals or materials in bulk. Consider the facility's processes, how the product will react to chemicals currently used, and the product's environmental effects.
- Develop and implement quality control (QC) program for raw materials. Inspect storage areas and work spaces to see that QC methods are properly implemented.
- Purchase chemicals, metals, and materials only in necessary amounts. Minimize the purchase, storage, and handling of hazardous materials.
- Label all materials. Clearly identify hazardous materials. Obtain a Material Safety Data Sheet (MSDS) for chemicals.
- Develop and maintain a register or log for chemicals and raw materials. Include the quantity, receipt date, service life, users, and disposal route.

Spill Prevention and Response

- Frequently and regularly inspect all storage tanks and drums for leaks or spills.
- Clean up all leaks and spills immediately upon discovery.
- Always use dry clean up methods. Never “wash down” areas where there has been a spill or use emulsifiers or dispersants.
- Locate spill kits in high activity areas.
- 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.
- Keep important numbers and contacts posted in a well visible area.
- Establish a regular schedule for hazardous waste pick up.



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