

Multi-Sector General Permit

Stormwater Best Management Practices for
Sector E: Glass, Clay, Cement, Concrete and Gypsum Products

Glass, Clay, Cement, Concrete and Gypsum Products and the Multi-Sector General Permit (MSGP)

The MSGP is a permit designed to prevent stormwater pollution from entering into our surface waters. The actual pollutants found in stormwater will vary from one manufacture to the next. Some common pollutants to manage for are sediment (any sand, aggregate, cement, etc) and minerals (such as lead, iron, and zinc). Oil, grease, lubricants, and other fluids found in vehicles and equipment used and repaired on site are also potential stormwater pollutants. Dust, or very small particles, generated by material handling may also contaminate stormwater. Runoff that comes into contact with erosion prone areas or sediment can be directed to stormwater ponds, wetlands, or open channels for treatment. Stormwater pollution can be prevented or reduced by incorporating the following BMPs, organized by areas and activities, into the facility's stormwater pollution prevention plan.

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 Glass, Clay, Cement, Concrete and Gypsum Products — Sector E

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:

- Material Storage
- Handling of Bulk Materials
- Mixing Operations
- Loading and Unloading
- Vehicle and Equipment Maintenance
- Washing Mixers and Wash Out Water Disposal
- Concrete Production
- Spill Prevention and Response
- Employee Training



Material Storage

- Store materials on impervious surfaces, such as concrete or asphalt pads.
- Revegetate areas used for stockpiling to reduce any soil erosion.
- House dry bulk, raw material, admixtures, and aggregate in three sided structures.
- Grade, pave or curb areas where sediment is prevalent. Direct stormwater runoff from these areas to settling basins or extended detention ponds.
- Use curbs, berms, channels, and dikes to divert stormwater away from material storage areas.
- Slope stockpile storage areas to prevent ponding or puddling under the piles.
- Sweep or shovel areas surrounding stockpiles on a regular basis.
- Cover sludge piles to prevent leachate and dust dispersal.
- Minimize runoff of stormwater by grading the land around storage areas to divert flow away from containers.



Confine storage of materials, parts and equipment to designated areas with existing containment and stormwater flow systems.

- Cover storage piles with weighted tarps or awnings.
- Construct silt fences, vegetated filter strips, or vegetated berms around outdoor

Handling of Bulk Materials

- Use dust collection systems (e.g., bag houses) to collect airborne particles generated as a result of handling operations. Maintain the facility's dust collection and baghouse system.
- Remove spilled material and settled dust from paved portions of the facility by shoveling and sweeping on a regular basis.
- Periodically clean material handling equipment and vehicles to remove accumulated dust and residue.
- Develop an inventory of all hazardous and non-hazardous substances present at the facility.
- Obtain a Material Safety Data Sheet (MSDS) for all chemicals. Make this information readily available to employees.

Mixing Operations

- Minimize traffic on contaminated surfaces to prevent the dispersal of any bulk materials.
- Remove spilled material and settled dust from the mixing area. Shovel or sweep mixing areas on a frequent and regular basis.
- Pave the mixing, production, or pouring areas with a slope to a central run-off collection area.
- Clean exposed mixing equipment after mixing operations are complete.
- Grade, pave and curb yard areas where the dust generated by bulk materials is prevalent. Use grass swales or diversion ditches to direct run-off away from these areas and into settling ponds or basins.

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Loading and Unloading

- Confine loading and unloading activities to a designated area.
- Conduct loading and unloading indoors or in a covered area.
- Inspect all containers for leaks, cracks, and other damage 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.
- Use socks, curtains or a metered water spray while loading dry ingredients into delivery trucks to minimize dust production.

Vehicle and Equipment Maintenance

- 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.
- Wash vehicles at a commercial facility or follow the Wastewater Management guidance document for washing vehicles. 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.

Washing Mixers and Wash Out Water Disposal

- Designate an area specifically for washing concrete mixers and tools.
- Contain wash water in a basin. If possible, allow the wash water to infiltrate.
- Pump wash water from collecting pits to a wash water containment basin.
- Use expansion joint board, polyethylene or sandbags to prevent wash water from reaching storm drains.
- Utilize appropriate off site storage facilities.
- Use the minimum amount of water to wash down the shoot, finishing tools, pump hoses, and other equipment.
- Reuse wash water when possible. Do several small washes instead of one large wash.
- Use a squeegee or similar tool to remove all excess concrete from the chute.
- Use stabilizers to allow the rinse water to be used as part of the process water.
- Use a spray with flow restriction or spring loaded triggers.
- Remove larger pieces of concrete from wash water.

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Concrete Production

- Incorporate returned concrete into subsequent batches. Use leftover concrete in pre-cast production.
- Place all excess concrete in a form, holder, box, or a designated washout area where it may be removed once it is hardened.
- Pour and cure precast products in a covered area.
- Mix and pour concrete in area separate from the curing area.
- Clean the forms before storing outdoors.
- Always wash finishing tools and pumping hose in the wash out area.

Spill Prevention and Response

- 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.
- Establish a regular schedule for non- and hazardous waste pick up.
- Always use dry methods (granular absorbents, absorbent socks or pads) to clean up spills.
- Locate spill kits in high activity areas or areas where spills are more likely to occur (such as loading and unloading areas). Keep drip pans, shovels, and brooms in these areas as well.

- Stencil storm drains to remind employees that the site drains to the local waterway.
- Always use spigots or pumps when dispensing new materials. Use funnels when transferring wastes to storage containers.
- Check equipment daily to wipe up spills and to find leaks that need repairs.

Employee Training

- Inform employees of stormwater pollution sources, prevention, and applicable BMPs
- Instruct employees to properly implement applicable BMPs.
- Ensure that all employees are familiar with the facility's spill prevention and response plan.



Questions or Assistance with your Stormwater SWPPP, contact:

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