



1 Vehicle/Equipment Maintenance

- Provide a designated area to perform vehicle maintenance including vehicle washing that is inside a covered structure or building and is connected to the sanitary sewer with approval by local sanitary sewer district. See Covered Storage BMPs below.
- Store vehicle fluids separately in closed, labeled, and non-leaking containers and dispose of properly. Perform cleaning at a centralized station to ensure liquids stay in one area.
- Remove batteries & place in a closed, acid-resistant storage container.
- Clean up spills immediately using dry cleanup procedures and properly dispose of cleanup materials.



2 Detention/Retention/Infiltration Basins

- Use detention basins to collect uncontaminated storm water before discharging to surface or ground water.
- Use retention basins for process waste water to ensure capture and containment of all pollutants.
- Use infiltration basins to help remove sediments by infiltrating storm water into the soil.



3 Storm Drain Inlet Protection

- Use rock waddles, sand bags, or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size, that is used in the rock waddle, is no larger than 1 inch in diameter; preferably use pea gravel or sand.
- Inspect inlet protection devices and maintain regularly as needed.
- Divert storm water drainage from liquid storage, loading/unloading facilities, and other operations areas.



4 Minimize Storm Water Discharge

- Direct downspout discharge into a vegetated area to minimize the volume of storm water discharged into the storm drain system.
- Direct downspout drainage to above or below ground cisterns. Water can be used for irrigation of landscapes, lawns, or gardens.
- Direct storm water runoff into a lined retention pond for evaporation.

TOP TEN BMPs

for Pollution Prevention at Industrial & Municipal Sites

See back for more information.

For more information on Best Management Practices (BMPs), go to:

www.BizHelp.utah.gov

For questions contact the Division of Water Quality at:

801-536-4300

To report an Environmental Emergency, call:

1-800-458-0145



5 Clean Paved Surfaces

- Prevent or clean up releases of automotive fluids and chemical spills to prevent surface contamination.
- Sweep and clean storage areas monthly or regularly as needed. Use dry cleanup methods.
- Use de-icing materials only when necessary on the parking lots and access roads in the winter.



6 Fugitive Dust Suppression

- Apply water on haul roads.
- Haul materials in properly tarped or sealed containers.
- Restrict vehicle speeds to 10 mph on-site.
- Prevent visible "track out", e.g., pollutants carried on the tires of vehicles or windblown raw materials.



7 Waste Management

- Cover all waste material with a durable, non-leaking cover and anchor in a way to keep water from entering the dumpster. See Covered Storage BMP below.
- Reuse or recycle paints, fluids, and parts when possible. Store in non-leaking, closed, and labeled container.
- Keep hazardous and non-hazardous wastes separate.



8 Secondary Containment

- Use secondary containment to capture and control leaking materials, including potential leaks from pipes, tanks, and storage containers.
- The secondary container walls, floors, and joints should be made of durable materials, e.g., concrete, concrete block, plastic, or steel.
- Capacity of the secondary container shall be at least 110% of the total volume capacity of the primary container. The total capacity of all primary and secondary containers should be clearly marked.
- Fill locations should have drip trays that drain into a drum or other container. Dispensing areas should have their own containment.



9 Good Housekeeping

- Look for leaks and maintenance issues. This could include loose fittings, gaskets, pumps, piping connections, and rubber nozzles on fuel dispensers.
- Label all containers of hazardous substances with the name of the chemical, expiration date, health or environmental hazards, and dispose of properly.
- Use pesticides, herbicides, fertilizers, and other chemicals only when needed and follow instructions on the label.
- Replace containers that are leaking, corroded, or otherwise deteriorating.
- Keep an accurate, up-to-date inventory of materials.
- Train employees and contractors on proper storm water best management practices.



10 Covered Storage

- Preferably store equipment, deicing materials, etc. in covered structures/buildings. "Covered structures/buildings" are completely roofed and walled, or with top cover but no side coverings, provided materials are not subject to run-on and runoff.
- Drums, barrels, tanks, and similar containers must be tightly sealed, non-leaking, and in good condition. "Sealed" means banded or otherwise secured and without operational taps or valves.
- Preferably store all materials with a durable, non-leaking cover (lid or some other type of cover) and anchor to keep water from entering the container. A "durable, non-leaking cover" means that nothing can enter from the top, drain out of holes in the bottom and no material is lost in loading or unloading.

Best Management Practices

Pollution Prevention

Pollution Prevention at Industrial & Municipal Sites

Do you manage or work at an industrial or municipal facility? If so, this guide is to help YOU minimize the generation of wastes at your facility, reduce or eliminate the discharge of pollutants in storm water runoff, as well as, recycle or reuse as many materials as possible. It covers Best Management Practices or BMPs. BMPs will help you save money by reducing waste disposal costs through better work practices and proper materials storage. BMPs are proven methods to help prevent pollution from being created, known as pollution prevention.

You can find storm water resources by selecting Storm Water on the Division of Water Quality website at:

www.waterquality.utah.gov

Most storm water discharges from Municipal and Industrial sites are considered point sources and an UPDES permit is required to prevent or minimize the discharge of pollutants in storm water runoff. You can find information on UPDES permits by selecting Storm Water > Industrial Activities or MS4:

www.waterquality.utah.gov

For best practices in storm water management, go to the Center for Watershed Protection website at:

www.cwp.org

For additional BMPs, go to the International Stormwater BMP Database website at:

www.bmpdatabase.org

Resources

Local Sanitary Sewer Districts (SSD)

Contact the city's sanitary sewer district.

Salt Lake County Health Department's Small Business Waste

Select Program/Services > Household Hazardous Waste at: www.slcohealth.org.

Utah Division of Air Quality

(Air quality permits/Fugitive Dust Plan) (801-536-4000)
Select Permits or Compliance at: www.airquality.utah.gov.

Utah Division of Solid and Hazardous Waste

(Recycling Information) (801-536-0200)
Select Recycling Information at: www.hazardouswaste.utah.gov.

Utah Division of Water Quality

(Storm Water Program) (801-536-4300)
Select Programs > Storm Water Program at: www.waterquality.utah.gov.

Utah Department of Environmental Quality

(Report Spills: 801-536-4123) or
(DEQ Hotline: 1-800-458-0145)
www.deq.utah.gov

Environmental

BEST MANAGEMENT PRACTICES

at Industrial & Municipal Sites

Hazardous Wastes: Identifying Hazardous Wastes

Business owners and operators are responsible for determining whether wastes that are generated on-site are hazardous or non-hazardous, as defined by the Resource Conservation and Recovery Act. There are several ways to identify hazardous wastes:

- Review Material Safety Data Sheets (MSDS) and product labels.
- Send a sample of waste to a laboratory for analysis. Important tests may include: pH, volatile organics, total petroleum hydrocarbons and heavy metals. If you use the same industrial process, you may only need to periodically test a waste stream.

The following materials are not considered hazardous waste:

- Spent lead acid batteries and mercury devices that will be sent off-site for reclamation.
- Gasoline, diesel, and used oil that has not been mixed with hazardous waste and is reused or recycled on or off-site.
- Solvent-contaminated wipes that are cleaned at industrial laundries or dry cleaners and reused or disposed of at a landfill.

For information on specific waste generator categories, go to: EPA's Managing Your Hazardous Waste: A Guide for Small Businesses at:

www.epa.gov/osw/hazard/generation/sqg/sqghand.htm

Spill Management

Clean up spills and leaks immediately:

- Store and maintain spill cleanup materials in a location that is readily accessible.
- Use absorbent to clean up spills.
- Store used absorbent in closed, labeled, and non-leaking container and dispose of properly.
- For guidance on disposing of spills of hazardous waste properly (R315-9 of the Utah Administrative Code), contact Utah Division of Solid and Hazardous Waste at 801-536-0200.
- Report spills to Utah DEQ at 801-536-4123.

Storm Water

The goal of a Storm Water Pollution Prevention Plan (SWPPP) is to eliminate or minimize the discharge of pollutants in storm water runoff. Storm water can carry pollutants such as oils, solvents, and heavy metals directly into streams or other surface waters, causing harm to Utah's rivers and lakes. The plan:

- Describes the facility and its operations.
- Identifies potential sources of storm water pollution at the facility.
- Lists Best Management Practices (BMP) or pollution control measures to reduce the discharge of pollutants in storm water runoff.

For more information on SWPPP, select Storm Water at:

www.waterquality.utah.gov

Outdoor Loading/Unloading

To minimize the discharge of pollutants in storm water runoff, follow these practices in outdoor loading/unloading areas:

- Conduct loading and unloading in dry weather if possible.
- Cover designated loading/unloading areas or use building overhangs at loading docks to reduce exposure of materials to rain.
- Consider placing a seal or door skirt between delivery vehicles and buildings to prevent exposure to rain.
- Design loading/unloading area to prevent storm water runoff, including grading or berming the area and positioning roof downspouts to direct storm water away from loading/unloading areas.
- Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfers and while making and breaking connections.
- Pave loading areas with concrete instead of asphalt.
- Avoid placing storm drains in the loading/unloading area.

Vehicle and Equipment Fueling

Fueling-related releases are a major source for contamination of surface waters and aquifers. Proper design and operation of fueling facilities and systems should be an environmental priority.

- Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against "topping off" of vehicle fuel tanks.
- Cover fueling area with an overhanging roof structure or canopy.
- If a covering is not feasible and the fuel island is surrounded by pavement, apply a suitable sealant that protects the asphalt from spilled fuels.

Solvents

Solvents offer a quick, easy way to clean grease, oil, and dirt off parts but many solvents are harmful to employees and the environment. Use the following practices to minimize impacts:

- Use solvents sparingly and use nonhazardous or less hazardous materials whenever possible.
- Store solvents in closed, labeled, and non-leaking container and dispose of properly.
- Use solvents at a centralized station only.
- Never dispose of any solvents into drains, on the ground, in the garbage, or by evaporating to the air.

Employee Training/Education

Train employees and contractors on proper storm water best management practices including:

- Procedures for loading and/or unloading.
- Proper cleanup and spill response procedures.
- Proper handling and disposal of engine fluids and waste materials.
- Proper fueling and cleanup procedures.
- Recordkeeping of significant spills and leaks of toxic or hazardous pollutants.