

STORMWATER BMPS: FACILITIES AND BUILDING MAINTENANCE

AFFECTED FACILITIES

These Best Management Practices (BMPs) apply at all buildings, facilities, and fixed structures operated or maintained by a municipality or county.

BACKGROUND

Stormwater runoff from building or facility maintenance activities can be contaminated with hydrocarbons from solvents, suspended solids, heavy metals or abnormal pH. Following these BMPs will prevent or reduce the discharge of pollutants.

BEST MANAGEMENT PRACTICES

Fire Suppression (Sprinkler) System Testing

- Discharges from chemical suppression systems must be disposed properly either in the sanitary sewer or other disposal methods and must not be allowed to flow outside to paved surfaces that may lead to storm drains.
- Discharges from underground flush tests, fire pump tests, and hydrant flushing should utilize BMPs from CDPHE's [Low Risk Discharge Guidance: Discharges of Potable Water](#).
 - No chemicals are added.
 - Discharge water has not been used for another process (washing, heat exchange, manufacturing and hydrostatic testing of pipelines or not associated with treated water distribution systems).
 - Discharge shall not cause erosion.
 - Discharge shall not contain solid materials.
 - Discharge shall comply with lawful requirements of applicable local agencies regarding discharges to storm sewer systems.
 - Discharge must not contain residual chlorine at the point where it discharges to State Waters (stream, creek, gully whether dry or flowing).
 - Removal of any residual chlorine may be achieved by allowing water to stand or pool until no chlorine is detected or by de-chlorination using a potable de-chlorinator.
 - Water should not cause toxicity to vegetation.
 - Promote infiltration to the extent possible.
 - Obtain permission if discharge is to sanitary sewer.
- Discharges from inspector tests, main drain tests and full flow (back flow) tests are subject to a "Hydrostatic Testing of Pipelines, Tanks and Similar Vessels Discharge Permit". The application can be found at: <http://www.coloradowaterpermits.com/>.
- Discharges can be collected and disposed of to the sanitary sewer with permission from the waste water treatment facility.

Floor Drains and Elevator Shaft Pumps

- Ensure that elevator sump pumps, interior floor drains, and parking garage floor drains are plumbed to the sanitary sewer (not to storm drains).
- Note: A State of Colorado Wastewater Discharge Permit may be required if these drains do NOT go to sanitary sewer.
- If there are any hydraulic fluid leaks, assure proper cleanup.

Graffiti Removal

- Capture any wastewater, debris, solvent wastes or solid wastes from graffiti removal with tarps or shop vacs.
- Use rub-on techniques or re-paint over the affected areas.
- Do not pressure wash walls or buildings if the wastewater will enter the storm drain system or parking lots.

Grounds Maintenance

- Maintain the storm drain system (ditches, inlets, catch basins, drainage channels, or underground lines) on your property. Clean at least twice a year, late in the fall and after storms in the spring.
- When sealing a roof, sidewalk or parking lot, prevent the sealant from reaching the gutters or drains. Use absorbent booms or pigs to protect storm drains.
- If you clean the roof or sidewalk before sealing, sweep up thoroughly using dry cleanup methods.
- Maintain sprinkler systems as to not over-irrigate. Never water at rates that exceed the infiltration rate of the soil. Moisture sensors are recommended to minimize irrigation.
- Overflow drains from ponds and decorative fountains should be discharged to the sanitary sewer, drained to a vegetated area, or re-used for irrigation. If fountains or decorative ponds are treated with algaecides or other chemicals, the discharge must be approved by the local wastewater treatment facility.
- Stencil storm drains on your property with the message "*Warning: Drains to Creek, Do Not Dump*".

Heating and Cooling Systems

- Do not allow cooling towers to discharge, leak, or mist-out into roof drains. Cooling towers should discharge to the sanitary sewer, if permitted by your local wastewater facility.
- Blow-down from utility boilers may not be discharged to storm drains.
- Air conditioner (HVAC) condensate that has been treated with algae inhibitors must be discharged to the sanitary sewer as allowed by the local wastewater treatment facility.
- HVAC or chiller condenser tube flushing liquid must be captured and disposed of properly. A State of Colorado Discharge Permit is required for any discharge from cleaning of Heat Transfer Equipment: [Industrial Permit Requirements for Commercial Washing of Outdoor Structures](#).

Janitorial Practices

- Never dump mop water or cleaning wastewater into parking lot or storm drain. Dispose of wastewater in sink or other sanitary sewer drain. This includes automated floor or carpet cleaning equipment.
- Do not pour, transfer or dispose of any material outdoors or near a storm drain.

Painting and Staining

- Use a ground cloth or oversized tub for paint mixing and tool cleaning. Properly dispose of the wastes.
- Enclose spray-painting operations with tarps or other means to minimize wind drift and to contain overspray.

- Clean paintbrushes and tools used to apply water-based paints in sinks plumbed to a sanitary sewer or in portable containers that can be emptied into sanitary sewer drains. Never clean tools over a storm drain or outside.
- Brushes and tools used for oil-based paints, finishes, thinners, solvents or other materials must be cleaned over a tub or container and the cleaning wastes disposed or recycled at an approved hazardous waste facility. Never clean tools over a storm drain or outside.
- Promptly cleanup any spills of paints, cleaners or other maintenance chemicals or supplies. See *BMP: Spill Cleanup* for details.

Parking Lots and Garages

- Parking lots and structures should be cleaned and inspected routinely.
- Do not hose down any parking areas except where wash water will only enter the sanitary sewer (if approved) or vegetated areas.
- Drains located within parking structures should discharge to the sanitary sewer.
- Any debris around the storm drain or sump pump must be removed and disposed of properly.
- Any automotive spills and/or drips must be cleaned up with Dry Clean-up Methods (absorbents).

Pressure Washing

- Dry clean up methods should be used prior to any pressure washing. These include using absorbents (kitty litter, rags, sand, etc) to clean up spills, sweeping, vacuuming, and scrapping off dried debris. The waste material should be disposed of properly.
- Prior to pressure washing, identify where all storm drains are located. Wash water must not be allowed to flow down gutters or enter storm drains. Block or cover all storm drains before pressure washing. Determine where water will pool for collection.
- Use the following equipment to protect storm drains and to contain and/or to collect wash water: vacuum pumps, booms, berms, portable containment areas, weighted storm drain covers, fabric filter, sand bags, wattles, inflatable plumber's plugs, oil/water separators, holding tanks, and portable sump pumps.
- Solids should be removed from the area prior to pressure washing and a filter bag or similar filtration device should be used to remove suspended solids from the wastewater.
- A visible sheen must not be evident in the discharge. Use an absorbent pad or boom to eliminate any oil from the discharge.
- If you do not use any chemicals or detergents and are only cleaning surfaces of ambient dust, then you may be discharge wastewater to nearby landscaping or vegetated area or allow it to evaporate from a pooled area. When discharging to landscaping, make sure the water is being absorbed into the ground or permeable surface and not ponding or running off into a storm drain.
- All other wash water (that contains soap or cleaning products) must be collected for proper disposal.
- Once water is collected, dispose of it properly. Collected wash water may be disposed of into a sanitary sewer drain at the job site or at the contractor's place of business. First, ask for permission from property owner and the wastewater treatment plant. A permit may be required prior to disposal to the sanitary sewer. Check with your local wastewater treatment plant for authorization.
- Do NOT dispose wastewater to a septic system.

- Ensure contracted, privately owned, pressure washers also follow these BMPs.
- Do not pressure wash an entire building. Spot clean, steam clean, or scrape dirty areas rather than pressure washing the entire structure.

Sandblasting

- Place a tarp or ground cloth beneath the work area to capture the blasting media and particles from the surface being blasted.
- Enclose the area with tarps or plastic to protect from wind and to capture airborne particles.
- Cease operations on a windy day.
- Clean up work area frequently.

Waste Management

- All waste receptacles must be leak-tight with tight-fitting lids or covers. This includes dumpsters and compactors.
- Keep all container lids closed at all times unless adding or removing material.
- Store waste receptacles indoors, under a roof or roof overhang, or inside a shed or covered structure.
- Sweep up around outdoor waste containers regularly.
- Do not hose-out dumpsters outdoors. Return dumpsters to the owners for cleaning at the owner's facility. If dumpsters must be washed, do so in a wash bay or in an area where wastewater will drain to the sanitary sewer.

REQUIRED EMPLOYEE AND CONTRACTOR TRAINING

- Train all current employees and contractors who perform building maintenance of this BMP.
- Train all new hires and job transferees who will conduct building or facilities maintenance.
- Conduct refresher training for all employees who conduct building or facilities maintenance as needed.
- Train all employees who might be required to clean up a spill or leak on proper spill clean-up procedures. See: *Spill Clean-Up BMP*.
- Contracts should stipulate that all contracted employees have been trained in proper stormwater management BMPs.

REQUIRED STRUCTURES AND EQUIPMENT

- See *New Construction and Renovation BMP*.

INSTALLATIONS REQUIRED FOR NEW CONSTRUCTION OR RENOVATIONS

- If it is expected that a building or structure will be pressure washed regularly, design the landscaping and paving to accommodate pressure-washing procedures described above.
- Design cooling towers to drain to a sanitary drain, if permitted. Cooling tower wastewater must not enter roof drains if they ultimately lead to the parking lot or storm drains.
- See: *New Construction and Renovation BMP*.

REFERENCES

1. Colorado's Phase II Municipal Guidance, October 2001
2. *California Stormwater BMP Handbook*, January 2003

3. *Knoxville (TN) BMP Manual, Activities & Methods*, January 2001
4. *City of Tacoma: Surface Water Management Manual (Vol. IV Source Control BMPs)*, January 2003
5. *Municipal Facility Runoff Control Plan* (City of Lakewood, CO)
6. *Best Management Practices for Industrial Storm Water Pollution Control* (Santa Clara Valley, CA)
7. Best Management Practices for Pressure Washers, Sacramento, CA
<http://stoppp.tripod.com/downloads/pressurewashbmps.doc>