



PACE
PARTNERS FOR A
CLEAN ENVIRONMENT

Facilities Maintenance

Stormwater Protection

Spring 2009

What is Stormwater?

Stormwater is rainwater and snowmelt. When stormwater flows across our parking lots and streets, it can pick up pollutants that are discharged directly into our rivers and streams through the storm drains located on streets and in parking lots. Any pollutants entering these drains flows untreated to the water bodies we use for drinking water, swimming, and fishing.

What is Stormwater Protection?

The objective in stormwater protection is that only rainwater and snow melt go down the storm drain. Best Management Practices (BMPs) are specific steps taken to prevent stormwater pollution as a result of day-to-day activities of street maintenance operations. All employees shall review this information sheet as a training tool, and make every effort to keep pollutants from going down the storm drain by putting the following BMPs into practice.

BEST MANAGEMENT PRACTICES (BMPs)

General

- Do not dump any liquids or other materials outside.
- Maintain a map of the property identifying directions of stormwater flow and the location(s) of any storm drains and of spill kits in the facility.
- Mark any storm drain inlets at or near the facility with a marker or message such as “Do not dump, drains to creek”.

Material Storage and Loading

- Do not store any liquids or materials outside that could impact surface water unless adequate secondary containment and cover are provided or the container is specifically designed for outdoor storage. (Cover and contain!)
- Do not load or unload materials near a storm drain inlet or drainage ditch or over unpaved surfaces.
- Cover storm drains located near loading/unloading areas.

Landscaping, Lawn & Vegetation Maintenance

- Mulch-mow grass. Sweep up and dispose of any grass clippings on paved surfaces.
- Avoid broadcast spraying of pesticides.
- Avoid spraying pesticides or fertilizers within 50 feet of any surface water or storm drainage structure (unless stricter limits apply).
- Follow all manufacturers’ recommendations for mixing, applying, cleaning-up, storage and handling of pesticides and fertilizers.
- Apply wastewater from rinsing pesticide containers on target pests or use it to dilute the next batch.
- Maintain sprinkler systems at rates that do not exceed the infiltration rate of the soil. Moisture sensors are recommended to minimize irrigation.

Fire Suppression/Sprinkler System Inspection

- If possible, discharge water systems (lines and valves) to the sanitary sewer or to landscaping, not to parking lots or storm drains.
- Discharge from dry chemical suppression systems must be disposed of properly.

Exterior Cleaning or Pressure Washing

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 frequently.

Pressure Washing (Sidewalks, Buildings, & Patios)

- 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 scraping off dried debris. The waste material should be disposed of properly.
- IF you do not use any chemicals or detergents and are only cleaning surfaces of ambient dust, THEN you may direct the wash water to nearby landscaping OR contain it onsite and allow it to evaporate. When discharging to landscaping, make sure water is being absorbed into the ground and not running off into a storm drain or paved area. All other wash water must be captured for proper disposal.
- Prior to pressure washing, identify where all storm drains are located. Storm drains may be located in the gutter at the end of a block or in landscaping - hidden from view. Wash water must not be allowed to flow down gutters or enter storm drains.
- Determine where water will pool for collection. Use the following types of equipment to protect storm drains and to contain and collect wash water: vacuum pumps, booms / berms, portable containment areas, weighted storm drain covers, inflatable plumber's plugs, oil/water separators, holding tanks, portable sump pumps, hoses, absorbents.
- Once water is collected, dispose of it properly; dispose of wastewater in a sanitary sewer drain at the job site or at the contractor's place of business. (Ask for permission from property owner and the wastewater treatment plant. DO NOT dispose wastewater to a septic system.)

Good Housekeeping

- Keep all outdoor work areas neat and tidy. Sweep around work areas after each shift and properly dispose of all wastes.
- Do not hose down any outdoor work areas or trash/waste container storage areas except where wash water will only enter the sanitary sewer (if approved).
- Dispose of all wastewater from cleaning into the sanitary sewer (including floor and carpet cleaning wastewater).

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).
- If there are any hydraulic fluid leaks, assure proper cleanup.

Waste Management & Disposal

- All waste receptacles (dumpsters) must be sturdy, leak-tight, and equipped with lids or covers. Keep all outdoor dumpsters closed unless adding or removing material.
- Place dumpsters indoors or under a roof or overhang whenever possible.
- Do not wash out waste receptacles unless wastewater will be discharged to a sanitary sewer.
- Never place liquids or liquid containing wastes in an outdoor waste receptacle.

Spill Clean-up and Prevention

- Develop a formal “Spill Response Plan” and post near spill clean up materials.
- Ensure that adequate spill kits are located near all work areas where materials are used, stored, loaded, off-loaded or transferred and on vehicles.
- Clean up any spills or leaks quickly and thoroughly. Use only “Dry Clean-up Methods”. Never hose down a spill!
- If a spill threatens escape the facility boundaries, enter a storm drain or any surface water, place absorbents, earth, or other impervious material to block its’ entry and call 911 and the State’s Spill Notification Hotline at (877-518-5608).

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 or paved areas.
- 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. Comply with CDPHE’s Industrial Permit requirements for Washing of Outdoor Heat Transfer Equipment (HTE) at <http://www.cdphe.state.co.us/wq/PermitsUnit/Industrial/index.html>.

Parking Lots and Parking Garages

- Parking lots and structures should be cleaned and inspected routinely.
- Drains located within parking structures must 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).

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.
- Clean brushes and tools used for oil-based paints, finishes, thinners, solvents or other materials over a tub or container and dispose of the cleaning wastes 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.

Swimming Pool Maintenance

- Do not discharge pool water to a street or storm drain when draining pools or hot tubs. Discharge water to the sanitary sewer if permitted to do so.
- Never clean pool filters in the parking lot or near a storm drain.

Allowable Non-Storm Water Discharges include the following only: *(Note: This list may vary per municipality and may require a State of Colorado Discharge Permit.)*

- Discharges approved by the authorized enforcement agency as being necessary to protect public health and safety, such as flows from firefighting, and dye testing, provided the person undertaking such testing provides verbal notification to the authorized enforcement agency 24 hours prior to the time of the test.
- Water line or hydrant flushing or other potable water sources (May require a State Permit)
- Landscape irrigation or lawn watering irrigation return flows
- Uncontaminated ground water infiltration to storm drains (as defined by 40 CFR 35.2005(20))
- Diverted stream flows
- Uncontaminated pumped ground
- Foundation or footing drains
- Rising groundwater
- Crawl space pumps
- Air conditioning condensation
- Individual residential car washing or car washing of less than two (2) consecutive days in duration for charity or nonprofit fund raising
- Natural springs, riparian habitat or wet-land flows
- Swimming pools (if de-chlorinated or less than 0.05 PPM chlorine)

Helpful Resources

See the PACE website for a list of helpful resource sheets

www.pacepartners.com

Keep It Clean Partnership

KICP is a collaborative approach in creating cost-effective solutions to implement a regional stormwater management program, not only to comply with Phase II regulations, but also to address broader water quality and watershed issues.

www.keepitcleanpartnership.org



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