



PACE
PARTNERS FOR A
CLEAN ENVIRONMENT

Parking Lot 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 Maintenance & Sweeping

- Clean leaves, trash, sand, and other debris regularly to prevent debris from reaching any storm drain inlet or storm detention area (preferably by dry sweeping).
- Establish frequency of parking lot sweeping based on usage and observations of waste accumulation. Sweep after special events or fairs.
- Contact your municipal public works department or private street sweepers to sweep parking lot(s) after winter storms and during leaf season in the fall.
- Maintain a map of the property identifying directions of stormwater flow and the location(s) of any storm drains on site.
- Stencil or mark any storm drain inlets in or near the parking lot with the message "Do not to dispose of any materials or wastes here; drains to creek".

Contracts & Leases

- All contracts with service providers and property leases must stipulate that contractors and lessees comply with applicable storm water BMPs in the conduct of their services or occupancy.

Concrete and Construction Work

- Do not allow slurry from saw-cutting to enter storm drains.
- Install storm drain protection devices (hay bales, "pigs", socks or drain covers) around or over storm drain inlets when doing any construction or maintenance work within 25 feet of the inlet(s).

- Designate a “Wash Out Area” on the job site in a grassy or graveled area where pooled water can soak into the ground. Never wash out on a street or paved area or near a storm drain.
- If no “Wash Out Area” is available, wash out into a container (5-gallon bucket or wheelbarrow) and dispose of material properly.

Material Storage

- Do not store any potentially hazardous liquid or solid materials (paints, pesticides, fertilizer or salt/sand) outside unless adequate secondary containment and cover are provided or the container is specifically designed for outdoor storage.
- Do not load or unload materials near a storm drain inlet, pipe, culvert, or drainage ditch unless drains are blocked.

Inspections

- Designate personnel to conduct inspections of parking facilities and stormwater conveyance systems on a regular basis. Recommend cleaning if necessary.

Paving/Re-surfacing

- Re-seal or pave only on dry days when no rain is expected.
- Stop paving activities during or immediately before rainfall.
- Pre-heat, transfer or load hot, bituminous material (asphalt) far away from storm drain inlets.
- Protect nearby, downstream, storm drain inlets from debris from maintenance work. (ex: preparing the surface for an asphalt cap, chip sealing, concrete breaking, or saw cutting).
- Cover and seal all storm drains before applying seal coat or slurry seal. Leave covers in place until the job is complete and until all water from emulsified oil sealants has drained or evaporated. Clean up debris from inlets and dispose of properly.
- Only use asphalt-based or petroleum-based sealants. (Do not use coal tar sealants.)

Surface Cleaning Sidewalks & Parked Areas

- Do not hose down any sidewalks or parking areas except where wash water will only enter the sanitary sewer (if approved) or vegetated areas.
- 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 on site 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.
- 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. Use absorbents on oily spots prior to sweeping or washing. The waste material should be disposed of properly.
- If you must pressure wash, identify where all storm drains are located before starting. Wash water must not be allowed to flow down gutters or enter storm drains. All wash water must be captured for proper disposal.
 - 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.

- o Once wash 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 local wastewater treatment plant. DO NOT dispose wastewater to a septic system.)

Storm Drains, BMPs or Detention Areas

- Contact your municipal Public Works Department to clean out any storm drain structures or detention/infiltration areas yearly, if possible.
- Inspect storm structures, detentions areas or structural BMPs often for debris accumulation.

Landscaping

- Sweep pavement or sidewalks where grass clippings, fertilizer or other dry chemicals have fallen. Sweep the chemicals back onto grassy areas.

Training

- Ensure that all applicable employees are trained on Stormwater Pollution Prevention.

Salt or Deicer Application

- Hand-apply deicer or sidewalk salt. Use sparingly.
- If truck-applying, use the lowest application rate that will be effective. Ensure that the equipment is calibrated to optimum levels according to manufacturer's instructions.
- Avoid applying liquid or solid salt products directly on bridges, near creeks or other water bodies.
- Place barriers (booms, concrete barriers or other materials) in site-specific locations (along streams, wetlands, ditches, or drainage areas) to divert deicing material away from water bodies where practical.

Snow Plowing & Snow Storage

- Never plow, push, blow or store excess snow, deicer, or other debris into creeks, watercourses or storm drainage systems.
- Snow disposal areas should be located at least 500 feet from any storm drain inlets, drainage ditches, ponds, creeks or wetlands.
- If possible, store excess snow in a pervious area where melt water can infiltrate into the ground and not into storm drain system.
- Reduce plowing speed in sensitive areas (creeks, wetlands or other water courses) to prevent snow and deicing materials from entering waterways.

New Construction and Design

- Incorporate Low Impact Development (LID) and/or infiltration techniques into new construction or re-construction of existing, impervious areas such as:
 - o Rain gardens
 - o Constructed wetlands
 - o Infiltration swales or basins
 - o Grass (or vegetated) filter strips or swales
 - o Tree islands or planters
 - o Permeable pavement
 - o Surface sand filters

Parking Garages and Elevated Structures

- Inspect and clean parking garages or structures routinely.
- 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).
- 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 the sanitary sewer.

Painting and Striping

- Schedule painting, marking, and striping projects during dry weather only. Cease all activities when rain threatens.
- Use thermoplastic markings in place of paint whenever feasible.
- Promptly clean up any spills of paints, cleaners or other chemicals.
- Block nearby storm drain inlets when painting or striping.

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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