



PACE
PARTNERS FOR A
CLEAN ENVIRONMENT

New Construction *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 flow untreated to the water bodies we use for drinking water, swimming, and fishing.

As mandated by the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has developed a National Pollutant Discharge Elimination System (NPDES) stormwater permitting program. In 2003, this program required local municipalities in the Boulder and St. Vrain Watersheds to apply for stormwater permits with the Colorado Department of Public Health and the Environment. This permit covers municipal operations, small construction sites, and commercial industry not required to have individual permits.

Stormwater Protection and Street Maintenance?

The objective in stormwater protection is that only rainwater and snow melt go down the storm drain. Street sweeping and maintenance operations can have a significant effect on pollutants entering storm drains. Street debris can contain sediments, organics, oil and grease. Maintenance work like concrete repair, saw-cut slurry, asphalt repair, and painting can also be a source of storm water pollution. Regular sweeping can prevent debris from entering the storm drain system. 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)

Building Maintenance

- If it is expected that a building or structure will be pressure washed regularly, design the landscaping to allow wastewater to soak into the soil or vegetation.
- Design rooftop cooling towers to drain to a sanitary drain, if permitted. Cooling tower wastewater must not enter roof drains.
- Design boiler rooms to allow blow-down from utility boilers to be discharged to sanitary sewer.
- Design cooling towers, air conditioners and HTE HVAC units to discharge to the sanitary sewer (not to roof or storm drains) if allowed by the local wastewater treatment facility.
- Design fire sprinkler systems to discharge to the sanitary sewer, not to storm drains or outside.

Bulk Liquid Storage Tanks & Transfer Areas

- All bulk liquid storage areas (i.e. tanks) must have adequate secondary containment (either double-wall containers or separate impervious structures).
- Provide secondary containment around all bulk liquid transfer areas such as tank truck loading and unloading areas.
- Drainage devices installed in secondary containment structures must be capable of being locked and sealed in the closed position.
- Do not install bulk liquid storage tanks within 100 feet of any surface water.
- Spill kits appropriate for the material(s) being stored must be maintained near storage areas and signage must be posted at the storage area identifying the location of the spill kit.

- **Food Waste Areas or Kitchens**

- If food and grease waste containers must be stored outdoors, design a bermed or diked area where run-on and run-off can be diverted. Dumpsters or containers must be covered.
- Install a mop sink in the kitchen for disposal of cleaning wastewater.

Fueling Stations

- Construct canopies or covers over all fueling stations.
- Construct impervious berms around fueling stations to contain spills and to divert run-on and run-off. Grade, contour and install pavement around fueling stations to divert stormwater away from fueling area.
- Do not install storm drain inlets inside fueling station berms unless they are equipped with shut-off valves, covers or oil/water separators.
- Install oil/water separators in any storm drain that may receive run-off from a fueling area.
- Do not install fueling stations within 100 feet of any surface water.

Landscaping

- Design new or re-landscaped areas using xeriscaping techniques to the maximum extent possible. Use hardy plants appropriate to the climate.
- Where possible, utilize grassy swales and other vegetative buffer areas to slow down run-off and provide a natural filter.
- Ensure that overflow drains from decorative ponds and fountains are discharged to the sanitary sewer or re-used for irrigation. If treated with algaecides or other chemicals, discharge must be approved by the local wastewater treatment facility.

Material Loading & Unloading Areas

- All loading and unloading areas must be designed to have a roof, canopy or overhang and must be paved, graded and/or sloped to prevent stormwater run-on.
- Do not design or install storm drain inlets in loading/unloading areas unless they are equipped with shut-off valves.

Salt & Sand Storage Areas

- Rock Salt, Salt/Sand mix or "Ice Slicer" storage areas must be covered, paved, totally enclosed under a roof or building with impervious berms or walls, and protected from run-on and run-off.

Storm Drainage System Connections

- No connections are allowed from any indoor drains to the storm drainage system.
- No connections to stormwater are allowed from outdoors drains located within 25 feet of areas where supplies, chemicals or containers will be transferred, mixed, handled or stored.
- Do not install any storm drain inlet or drainage ditch within 100 feet of any bulk liquid storage tanks such as gasoline, diesel, motor oil or other chemicals.
- Do not design or install down spouts that discharge in or near areas that are designated for handling, transfer, or storage of chemicals, liquids and/or other materials.
- Illicit connections to storm drainage systems discovered during renovations must be disconnected immediately and reported to the local municipal storm sewer system manager.

Swimming Pools

- New or renovated pools should have a connection to the sanitary sewer for pool water discharges as allowed by the local wastewater treatment authority.

Vehicle and Equipment Maintenance, Washing and Storage

- Design all vehicle or equipment maintenance areas to be indoors only.
- Install floor traps or other engineered structures along bay door thresholds to capture spills and floor washing water.
- Install oil/water separators near the trench drains, oil loading areas or bay doors to capture oil or petroleum products. Clean the oil/water separator as recommended.
- Construct vehicle and equipment washing bays or racks indoors only. Connect wash rack drains to the local sanitary sewer.
- If possible, recycle wash water via a closed-loop system.
- Design new vehicle storage areas to be covered and with an impervious floor surface.

Waste Management

- Dumpsters and compactors should be located on a paved, sloped surface, with berms to protect from run-on and run-off. If a drain is installed, it must be plumbed to sanitary sewer with permission from the local wastewater treatment facility.
- Design new waste and recycling areas to be indoor or covered under a roof with drainage to sanitary sewer.

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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