

# STORWATER BMPs: STREET SWEEPING AND ROAD MAINTENANCE

## **AFFECTED FACILITIES**

These BMPs apply at all municipal and county roads, streets, medians and rights-of-way where sweeping, repair work, painting, striping or maintenance is performed and at all locations where debris is transferred from sweepers or temporarily stored prior to permanent disposal. These BMPs also cover sweeping and maintenance of municipal parking lots, sidewalks and other municipally-owned, outdoor paved surfaces.

## **BACKGROUND**

Streets, roads, highways and other large paved surfaces are significant sources of pollutants in storm water discharges. Operation and maintenance practices, if not conducted properly, can contribute to the problem. Street sweepings can contain sediments, organics and oil and grease. Maintenance work like concrete repair, saw cutting, asphalt repair, and painting can also be a source of storm water pollution.

## **BEST MANAGEMENT PRACTICES**

### **Street Sweeping**

- Do not wash down any streets or curbs (fine water spray for dust control is acceptable but it should use as little water as possible).
- Operate all sweepers to get optimal debris removal as recommended by the manufacturer. This includes adjusting sweeper speed, brush alignment and rotation rate, and sweeping pattern.
- Develop a street sweeping schedule including prioritized roads, secondary roads and frequency of sweeping.
- Schedule sweeping...
  - In areas where storm drain plugging or high pollutant loadings occur.
  - Immediately following special events like street fairs, art shows and parades.
  - Immediately after street repair projects that involve saw cutting, chip sealing or other operations that might have left wastes or debris on road surfaces.
  - After leaf collection in the fall
  - After salt/sand application in the winter.
  - During new construction projects involving temporary storage of construction materials like dirt, sand and road base along the roadway.
  - Immediately following median grass cutting operations.
- Avoid conducting sweeping operations during rainstorms.
- Consider using street signage or windshield flyers advising residents of “No Parking: Street Sweeping” days. Consider enforcement for parked vehicles that consistently ignore the no parking days.

### **Debris storage and wastewater disposal**

- Sweeper wastewater must be decanted to the sanitary sewer.
- Ensure that debris from sweeper hoppers is collected and taken to a temporary storage area or directly to its' permanent disposal site. Debris should be disposed of regularly and not allowed to accumulate.

- The sweeper debris storage area should be more than 100 feet from and at a lower elevation than any water body, creek, river, ditch, or storm drain inlet.
- Ensure that any temporary storage areas for debris are protected from run-off, run-on and wind or rain re-entrainment.
- Do not empty sweeper hoppers near storm drains or surface water bodies or where wind or rain could re-entrain or scatter the debris.

### **Road Maintenance Activities**

- Schedule painting, striping, marking, asphalt paving, concrete replacement and concrete cutting activities for dry weather. Do not conduct these activities during or immediately after a rainfall.
- Protect nearby (within 25 feet) storm drain inlets from maintenance work (e.g. preparing the surface for an asphalt cap, chip sealing, concrete breaking or saw cutting). Place covers, rock wattles, straw bales, sand bags, filter fabric or plastic around or over inlets to protect them from entry of wastes, dusts, overspray or slurry.
- Sweep up wastes and dispose of the wastes appropriately.
- Do not sweep or hose down wastes into storm drains.
- When saw cutting concrete, use the minimum amount of water. Let the waste slurry dry and then sweep or vacuum it up before leaving the location. Alternately, a wet vacuum may be used to pick up the wet slurry immediately after cutting is complete.
- Store maintenance supplies including cement bags, sealants and tars under cover (such as a tarp) and away from drainage areas. Secure or cover open cement bags to prevent the wind from spreading cement dust.
- When working on bridges, transport paint and materials to and from the job site in containers with secure lids and tied down to the transport vehicle. Do not transfer or load paint over water.
- Capture waste, scraps, rust or paint from any sandblasting or painting projects. It may be necessary to suspend nets or tarps below the bridge to catch falling debris. If sanding, use a vacuum bag attachment.
- Do not spray herbicides on roadways or along curbs. Use a heat lance or manual methods to control weeds.

### **REQUIRED STRUCTURES AND EQUIPMENT**

- Use high-efficiency, vacuum-assisted, or regenerative air sweepers whenever possible. Utilize water spray bars for dust control.

### **INSTALLATIONS REQUIRED FOR NEW CONSTRUCTION OR RENOVATIONS**

- During road construction projects, control erosion to the maximum extent possible. Provide permanent erosion control that will remain effective for the life of the street.
- Design the sweeper and vac truck debris dumping area to be covered and on an impervious surface or on a concrete-lined area that drains to sanitary sewer.
- Install concrete berms or other containment structures around debris storage areas.

### **REQUIRED EMPLOYEE AND CONTRACTOR TRAINING**

- Train all current employees who perform street sweeping or maintenance on this BMP.

- Train all new hires and job transferees who will perform street sweeping or maintenance on this BMP.
- Conduct refresher training on this BMP for all employees and contractors who perform street sweeping or maintenance yearly or as needed.
- Train all contractors who provide street maintenance services on this BMP.
- Contracts should stipulate that all contracted employees are trained in stormwater pollution prevention.

### **REQUIRED MAINTENANCE**

- Inspect and maintain all sweepers, vehicles, and striping/painting equipment according to manufacturer's recommendations.
- Inspect and maintain any temporary debris storage areas. If debris is stored in containment or under cover, repair any cracks or splits that might allow debris to escape back into the environment.
- Maintain all erosion or sediment control devices or equipment installed in erosion-prone areas in road construction projects.

### **RECORDS**

- Keep schedules of street sweeping road priorities including frequency of sweeping.
- Record the number of curb miles of streets swept.
- Record the amount of debris collected/disposed of and any waste analysis results.
- Keep records of location(s) of debris disposed of.
- Keep records of employee and/or contractor trainings.

### **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. Keep It Clean Partnership, Construction Training:  
<http://www.KeepItCleanPartnership.org/pollution-prevention/construction/training/>
8. Partners for a Clean Environment, Municipal Program Stormwater Tools:  
<http://pacepartners.com/municipal-operations/>