



SIDEWALK, PLAZA, AND FOUNTAIN MAINTENANCE AND CLEANING

Pollutants on sidewalks and other pedestrian traffic areas and plazas are typically due to littering and vehicle use. Fountain water containing chlorine and copper-based algaecides is toxic to aquatic life. Proper inspection, cleaning, and repair of pedestrian areas and city surfaces and structures can reduce pollutant runoff from these areas. Maintaining these areas may involve one or more of the following activities:

1. **Surface Cleaning**
2. **Graffiti Cleaning**
3. **Sidewalk Repair**
4. **Controlling Litter**
5. **Fountain Maintenance**

POLLUTION PREVENTION:

Pollution prevention measures have been considered and incorporated in the model procedures. Implementation of these measures may be more effective and reduce or eliminate the need to implement other more complicated or costly procedures. Possible pollution prevention measures for sidewalk, plaza, and fountain maintenance and cleaning include:

- Use dry cleaning methods whenever practical for surface cleaning activities.
- Use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal).
- Once per year, educate municipal staff on pollution prevention measures.

MODEL PROCEDURES:

1. **Surface Cleaning**

Discharges of wash water to the storm water drainage system from cleaning or hosing of impervious surfaces is prohibited.

Sidewalks, Plazas

- ✓ Use dry methods (e.g. sweeping, backpack blowers, vacuuming) whenever practical to clean sidewalks and plazas rather than hosing, pressure washing, or steam cleaning. DO NOT sweep or blow material into curb; use devices that contain the materials.
- ✓ If water must be used, block storm drain inlets and contain runoff. Discharge wash water to landscaping or contain and dispose of properly.

Parking Areas, Driveways, Drive-thru

- ✓ Parking facilities should be swept/vacuumed on a regular basis. Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- ✓ If water must be used, block storm drain inlets and contain runoff. Discharge wash water to landscaping or contain and dispose of properly.
- ✓ Sweep all parking lots at least once before the onset of the wet season.
- ✓ Use absorbents to pick up oil; then dry sweep.
- ✓ Appropriately dispose of spilled materials and absorbents.

OPTIONAL:

- Consider increasing sweeping frequency based on factors such as traffic volume, land use, field observations of sediment and trash accumulation, proximity to water courses, etc.

Building Surfaces, Decks, etc., without loose paint

- ✓ Use high-pressure water, no soap.
- ✓ If water must be used, block storm drain inlets and contain runoff. Discharge wash water to landscaping or contain and dispose of properly.

Unpainted Building Surfaces, Wood Decks, etc.

- ✓ If water must be used, block storm drain inlets and contain runoff. Discharge wash water to landscaping or contain and dispose of properly.
- ✓ Use a biodegradable cleaning agent or acid wash to remove deposits, wood restorer, or other chemicals. Screen wash water using an appropriate filtering device (e.g. filter fabric), if needed, to catch debris.
- ✓ Make sure pH is between 6.5 and 8.5 THEN discharge to landscaping (if cold water without a cleaning agent) otherwise dispose of properly.

2. Graffiti Cleaning

Graffiti Removal

See Roads, Streets, and Highways Operation and Maintenance procedure sheet.

- ✓ Avoid graffiti abatement activities during rain events.
- ✓ When graffiti is removed by painting over, implement the procedures under Painting and Paint Removal in the *Roads, Streets, and Highway Operation and Maintenance* procedure sheet.

- ✓ Protect nearby storm drain inlets prior to removing graffiti from walls, signs, sidewalks, or other structures needing graffiti abatement. Clean up afterwards by sweeping or vacuuming thoroughly, and/or by using absorbent and properly disposing of the absorbent.
- ✓ Note that care should be taken when disposing of waste since it may need to be disposed of as hazardous waste.

OPTIONAL:

- Consider using a waterless and non-toxic chemical cleaning method for graffiti removal (e.g. gels or spray compounds).

3. Sidewalk Repair

Surface Removal and Repair

Also see the street sweeping section of the Roads, Streets, and Highways Operation and Maintenance procedure sheet.

- ✓ Schedule surface removal activities for dry weather if possible.
- ✓ Avoid creating excess dust when breaking asphalt or concrete.
- ✓ Take measures to protect nearby storm drain inlets prior to breaking up asphalt or concrete (e.g. place hay bales or sand bags around inlets). Clean afterwards by sweeping up material.
- ✓ Designate an area for clean up and proper disposal of excess materials.
- ✓ Remove and recycle as much of the broken pavement as possible.
- ✓ When making saw cuts in pavement, use as little water as possible. Cover each storm drain inlet with filter fabric during the sawing operation and contain the slurry by placing straw bales, sandbags, or gravel dams around the inlets. After the liquid drains shovel or vacuum the slurry, remove from site and dispose of properly.
- ✓ Always dry sweep first to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquid in storm drains. Once dry sweeping is complete, the area may be hosed down if needed. Discharge wash water to landscaping, pump to the sanitary sewer if permitted to do so or contain and dispose of properly.

Concrete Installation and Repair

See Roads, Streets, and Highways Operation and Maintenance procedure sheet.

- ✓ Avoid mixing excess amounts of fresh concrete or cement mortar on-site. Only mix what is needed for the job.
- ✓ Wash concrete trucks off-site or in designated areas on-site, such that there is no discharge of concrete wash water into storm drain inlets, open ditches, streets, or other storm water conveyance structures.
- ✓ Store dry and wet concrete materials under cover, protected from rainfall and runoff and away from drainage areas. After job is complete remove temporary stockpiles (asphalt materials, sand, etc.) and other materials as soon as possible.
- ✓ Return leftover materials to the transit mixer. Dispose of small amounts of

excess concrete, grout, and mortar in the trash.

- ✓ When washing concrete to remove fine particles and expose the aggregate, contain the wash water for proper disposal.
- ✓ Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stock pile, or dispose in the trash.
- ✓ Protect applications of fresh concrete from rainfall and runoff until the material has hardened.

4. Litter Control

- ✓ Enforce anti-litter laws.
- ✓ Provide litter receptacles in busy, high pedestrian traffic areas of the community, at recreational facilities, and at community events.
- ✓ Cover litter receptacles and clean out frequently to prevent leaking/spillage or overflow.

OPTIONAL:

- Post "No Littering" signs.

5. Fountain Maintenance

- ✓ Do not use copper-based algaecides. Control algae with chlorine or other alternatives, such as sodium bromide.
- ✓ When draining fountains, never discharge water to a street or storm drain; discharge to the sanitary sewer
- ✓ Allow chlorine to dissipate for a few days and then recycle/reuse water by draining it gradually onto a landscaped area. Water must be tested prior to discharge to ensure that chlorine is not present (concentration must be less than 0.1 ppm).

LIMITATIONS:

Surface cleaning activities that require discharges to the local sanitation agency will require coordination with the agency.

REFERENCES:

Bay Area Stormwater Management Agencies Association. 1996. Pollution From Surface Cleaning.

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality

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Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Plan. 2001. Municipal Activities Model Program Guidance. November.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

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