

APPENDIX I

STREETS AND ROADS MAINTENANCE GUIDANCE

I.1 SWEEPING

I.1.1 Frequency of Street Sweeping

Curbed streets must be swept at a targeted frequency of once per month (12 times per year). In areas generating significant refuse, Priority A and B curbed streets must be swept more frequently. Areas generating significant refuse may include the following:

- high vehicle (ADT above 20,000) or pedestrian traffic areas
- construction areas
- industrial areas

The timing of street sweeping may also need to be coordinated with streets and roads maintenance activities and the occurrence of special events such as fairs, parades, or green waste collection days. For example, where appropriate, street sweeping may be conducted immediately after such special events in addition to regularly scheduled sweeping.

I.1.2 SCAQMD Rule 1186

The SCAQMD adopted Rule 1186, PM10 Emissions From Paved and Unpaved Roads and Livestock Operations, in February 1997. The purpose of Rule 1186 is to reduce the amount of particulate matter (10 microns or less) entrained in the ambient air as a result of vehicular travel on paved and unpaved roads, and at livestock operations. A summary of the requirements of Rule 1186 for paved roads follows:

- Any owner or operator of a paved public road on which there are visible roadway accumulations shall begin removal of such material through street cleaning within 72 hours following any notification of the accumulations and shall completely remove such materials as soon as feasible. If removal cannot be completed within 10 days of notification, the owner/operator shall notify the Executive Officer of the SCAQMD and provide information on the location of the accumulation(s) and estimated removal completion date; and
- Any agency intending to purchase, lease, or otherwise contract for street sweeper equipment shall be required to procure PM10-efficient street sweeping equipment after January 1, 1999.

PM10 efficient street sweepers are street cleaning equipment designed to prevent the venting of particulate matter 10 microns or less that have been outfitted with a filter, bag

Appendix I

Streets And Roads Maintenance Guidance

house, cyclone, or other system. Some vacuum sweepers are considered PM10-efficient street cleaning equipment.

However, any owner or operator of a paved road shall be exempt from procuring PM10-efficient street sweeping equipment for exempt paved roads, which are defined as paved public roads that (1) have curbs or other paved shoulders in excess of four feet, and (2) are not within 1,000 feet of an unpaved road. This exemption requires annual submittal of documentation to the SCAQMD. Specific requirements regarding this or other exemptions are described in SCAQMD Rule 1186.

I.1.3 Guidance for Operating Street Sweepers

Permittees use two common types of street sweepers: vacuum sweepers and mechanical broom/brush sweepers. Vacuum sweepers are more effective at picking up finer particles (which heavy metals are often bound to) than mechanical sweepers but are noisier and more expensive to purchase. Mechanical sweepers are most effective at picking up large pieces of debris and in cleaning wet streets. However, if the streets are not wet, mechanical sweepers can create more airborne dust than vacuum sweepers.

For optimal sweeping efficiency when operating vacuum and mechanical sweepers, it is suggested that the following BMPs be implemented:

- Operate sweepers at speeds recommended by the manufacturer (typically 6 to 8 miles per hour or less);
- Replace worn parts as required and install brooms of the appropriate weight;
- Check sweepers weekly to maintain proper brush adjustment, rotation rate, and sweeping pattern;
- Periodically review maintenance and operation procedures to determine if procedures are being properly implemented;
- Keep maintenance records to note operational problems and ensure timely adjustments and repairs;
- Properly dispose of materials generated by street sweeping operations; sweepers or brushes are not to be washed in the street for discharge into the storm drain;
- Post sufficient signage to notify vehicle owners of parking restrictions on scheduled street sweeping days; and
- Patrol designated routes to ticket illegally parked cars.

I.2 MATERIAL MANAGEMENT BMPs

I.2.1 Saw-Cut Slurry

Other suggested BMPs for the management of saw-cut materials and wastes, which are effective at reducing stormwater pollution, include the following:

- Use dry cutting techniques when possible and sweep or vacuum up residue;
- Construct sediment barriers with low weirs of sandbags to protect storm drains from wet saw-cut runoff;
- Place drip pans or absorbent materials under saw-cut equipment when not in use.

I.2.2 Paving

Other suggested BMPs for the management of paving activities, which are effective at reducing stormwater pollution, include the following:

- Prevent paving materials and wastes from entering the storm drain system.
- Minimize the area of soils left exposed or graded.
- Collect any loose sand, gravel, asphalt, or other material as soon as possible after construction activities.
- When placing chip seals, limit spreading aggregate to the sealed surface and sweep up excess aggregate once cured and each day thereafter until aggregate loss is insignificant.

I.2.3 Concrete

Other suggested BMPs for the management of concrete materials and wastes, which are effective at reducing stormwater pollution, include the following:

- If an onsite area is to be used, construct a temporary pit or bermed area large enough for liquid and solid waste generated from washout;
- Wash wastes only into the temporary pit or bermed area;
- Collect washwater from concrete cleanup for offsite disposal;
- Properly dispose of waste materials;
- Have a planned use for excess concrete or dispose of waste as trash; and
- Schedule concrete pours as large as possible to minimize having to cleanup several "short loads."

I.3 GOOD HOUSEKEEPING BMPs

Other suggested good housekeeping BMPs, which are effective at reducing stormwater pollution include the following:

- Use the minimal amount of water possible when cleaning;
- Carry materials such as shovels, brooms, dust pans, disposable gloves, adsorbent, berming, and catch basin covers on maintenance vehicles;
- Replace leaking trash containers immediately;
- Place lids on all trash containers;
- Avoid dispatching leaking vehicles or equipment from the municipal yard;
- Avoid fueling, maintaining, or washing vehicles or equipment at the job site; if these activities must occur on site, they should be performed only in designated areas by trained personnel;
- Store vehicles and equipment at job sites on impermeable surfaces and place drip pans under stored equipment;
- Recycle and reuse thinners, solvents, and paints.

I.4 EMPLOYEE TRAINING

The following guidance may be used to develop and implement a streets and roads maintenance employee training program:

- Identify all appropriate departments and employees who should receive training. Applicable departments and employees are those involved in planning, contracting for, performing, or overseeing streets and roads maintenance activities, including some traffic control activities.
- Develop a training program that describes general stormwater program requirements and that establishes the relationship between streets and roads maintenance activities and the potential for stormwater pollution or non-stormwater discharges to the storm drain system and the associated impacts on receiving waters.
- Provide guidance on the selection of appropriate BMPs by referring to information in Sections 6.2.1 through 6.2.4 of this model program, and include examples or case studies to illustrate proper BMP selection and implementation for streets and roads maintenance activities.

Appendix I

Streets And Roads Maintenance Guidance

- Provide employees with handouts, checklists, manuals, or other documentation that can be used later as reference information. These may include:
 - California Storm Water Best Management Practices Handbook, Municipal Activities
 - Storm Water Pollution Control for Road Maintenance, Caltrans District 7
 - Storm Water Management Training Course for Caltrans Maintenance Personnel, Inspection Support and Field Services
 - Los Angeles County's Public Employee Trainer Manual, Volume I (Municipal Activities)