

APPENDIX H

STORM DRAIN OPERATION AND MANAGEMENT GUIDANCE

H.1 BMPs FOR CATCH BASIN AND STORM DRAIN MAINTENANCE

There is no preferred method for cleaning catch basins as long as the method used is successful in removing accumulated sediment and debris. It should be satisfactory to use methods that have been in place for routine storm maintenance. This may include removal by shovel or by use of a vacuum truck. Similarly, storm drain (channel) maintenance may include use of a backhoe, vacuum truck, or shovel. Methods used should minimize the amount of material that escapes and is reintroduced to the storm drain system. This is discussed in more detail in Section H.3.

All catch basins must be inspected and cleaned at least once per year between May 1 and September 30. Priority A and B Catch Basins (designated catch basins in areas generating significant refuse) must be cleaned more frequently. The following areas may be considered for additional cleaning:

- high vehicle or pedestrian traffic areas
- commercial areas
- industrial areas
- construction areas
- high density residential areas
- areas adjacent to vacant lots

The following BMPs may be considered:

- Consider cleaning all non-Priority Catch Basins at least twice a year
- Aggressively enforce anti-dumping ordinances and anti-littering ordinances

Additional BMPs to minimize contaminant discharge during cleaning activities is discussed in Section H.3.

H.2 RECORD KEEPING FOR CATCH BASINS

To implement this program, records must be kept of the catch basins cleaned and the overall quantity of waste removed. This can be done by logging the information on existing crew day cards or providing crews with an amended form. At a minimum the following information must be recorded when conducting inspections or cleaning of catch basins:

- dates inspected or cleaned
- locations of catch basins inspected or cleaned
- overall amount of material removed (estimated in either volume or dry weight).

Additional information may be collected, such as the type of material removed to help with other stormwater management programs.

An example of catch basin record keeping is shown in Table H-1. A sample form is included as Table H-2.

This information should be summarized regularly, either manually or by modifying an existing maintenance management system or other database. The information will allow staff to determine when all catch basins have been inspected and cleaned, and will help them recognize areas where the heaviest amount of debris collects.

Problems discovered while inspecting catch basins should be routed to the appropriate department for correction or repair. Unusual or potentially hazardous substances found in catch basins should be reported in accordance with the guidance provided in the model *Illicit Connection/Illicit Discharge Elimination Program*.

Permittees who do not have an accurate database of all catch basins may consider using the first-year inspection/cleaning process to inventory all facilities. This can be done using a form such as that shown in Table H-3. The results of the inventory should be compiled in a database or GIS system or in manual tables and maps. A complete record of facilities will allow staff to determine when all catch basins have been cleaned and schedule appropriate maintenance to keep the facilities performing properly. Detailed information such as this could also be kept annually and combined on one form with the catch basin cleaning results.

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<i>Table H-1</i>			
<i>Catch Basin Cleaning Recording Form</i>			
<i>Date</i>	<i>Location</i>	<i>Number of Catch Basins Cleaned</i>	<i>Total Amount Removed</i>
7/15/96	✓ Alameda St./15 th	5	40 cu. ft. * 25 cu. ft.
	Alameda St./Washington	15	
	Alameda St./38 th	5	

Notation

✓: Priority Catch Basin

*: Total amount removed from Priority Catch Basins

<i>Table H-2</i>			
<i>Catch Basin Cleaning Recording Form</i>			
<i>Date</i>	<i>Location</i>	<i>Number of Catch Basins Cleaned</i>	<i>Total Amount Removed</i>

Notation

✓: Priority Catch Basin

*: Total amount removed from Priority Catch Basins

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<i>Table H-3</i>		
<i>Drainage Inlet/Catch Basin Information</i>		
Location		
Street:	Cross Street:	Side (N,S,E,W):
Distance:	Direction (N,S,E,W):	Inlet Number:
Map Number:	Grid:	
Condition		
Length of Opening:	Height of Opening:	Stencil (Y/N):
Bicycle Bars (Y/N):	Grate Size:	Inlet Protection Bar (Y/N):
Repairs Required:		

H.3 MINIMIZATION OF CONTAMINANT DISCHARGE

Routine maintenance activities need to be conducted with care to avoid depositing waste material and other contaminants into the storm drain system. Suggested source control BMPs addressing general maintenance activities are provided below.

H.3.1 Housekeeping/Material Management

- Avoid maintenance activities during windy or rainy weather to minimize waste material transport to receiving waters.
- Place waste in watertight bags, containers, or bins. Keep containers and bins covered to prevent waste from being blown out by wind. Dispose of waste at a licensed sanitary landfill, recycling facility, or other approved location.
- If waste material must be stockpiled before disposal, place stockpiles away from drainage courses.
- Promptly pick up trash and debris from the job site and dispose in designated, leakproof containers.
- Replace leaking trash containers immediately.

H.3.2 Chemical Handling

Chemicals used in storm drain maintenance may include herbicides, disinfectants, and deodorizers. The following BMPs may be implemented as appropriate and feasible:

- Use mechanical means when possible to remove vegetation and odors in the system, thereby reducing or eliminating the amount of disinfectant, deodorizers, and herbicides.
- Chemicals should be safely and properly stored on maintenance vehicles to prevent spills and leaks.
- If chemical means are used to remove vegetation or odors, apply all products in strict accordance with label instructions.
- Avoid mixing products in the field or work in a bermed area to minimize product spills and leaks reaching receiving waters. Completely use up each container, rinse into another container and apply rinse water as product. Dispose of rinsed, empty containers in the trash.
- Any hazardous waste or waste suspected of being hazardous, encountered during maintenance activities must be handled and removed by qualified personnel, as discussed in local emergency response procedures manuals.
- Clean up spills and leaks immediately using appropriate tools such as shovels, brooms, dust pans, disposable gloves, and adsorbent for liquid spills. Sweep up spills of dry material and residue from cleaning operations rather than washing it into the storm drain system.

H.3.3 Surface and Subsurface Water Control

At times it may be necessary to divert the flow of a stream or dewater an excavation or trench to conduct maintenance activities. These waters may become contaminated with soil or pollutants and should not be discharged into the storm drain system. The following BMPs may be implemented as appropriate and feasible:

- Avoid dewatering or diverting water whenever possible if soils, sediment, and/or other pollutants might be detached and entrained.
- Do not divert dirty or contaminated water directly to a storm drain. Allow pollutants to settle out in a detention basin, temporary pit, or a bermed area before discharging the water.
- When water is contaminated with soil only, it may be discharged to the storm drain after settling so that only clear water is discharged. Clean up the settled soil and dispose of it away from drainage courses. Do not wash soil into the storm drain.

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- If the water is contaminated with substances other than soil, remove the water using vacuum equipment, and dispose of the water properly.
- Contact your supervisor for directions before attempting any dewatering or diversion of water suspected to be contaminated with hazardous or unknown materials.

Diverting water in a natural watercourse or drainage channel around a working area may require special permits. Contact your supervisor for specific directions before attempting diversion or dewatering in any channel or natural watercourse.