

This bulletin is published monthly by the Storm Water Compliance Review Task Force to support the Caltrans maintenance staff in its efforts to achieve and maintain compliance with storm water pollution prevention regulatory requirements.

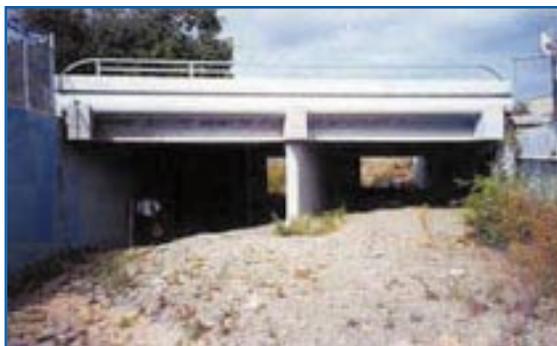
Storm Water Drainage System Facilities Inspection and Cleaning

Additional information is available in the Caltrans Maintenance Manual, Chapter C-6, or from your District Maintenance Storm Water Coordinator. Questions or comments may be directed to Jack Broadbent, Maintenance Storm Water Coordinator, (916) 653-0361

A properly functioning storm drainage system removes storm water from the pavement and right of way. As the storm water flows along the roadway and drainage system, it picks up litter and sediment. The litter and sediment can be deposited into the storm drain system or may be carried to a river or stream. In addition to storm water concerns, an improperly functioning storm drainage system may contribute to ponding and flooding.

Drain, Drain, Drain...

For maintenance staff, the key to ensuring effective storm drainage is to inspect, clean and repair the drainage facilities that make up the system. This bulletin reviews the key elements of the Best Management Practices (BMPs) for maintaining storm drainage facilities.



Inspect storm drain culverts and clean out sediment regularly. Don't forget those bridge crossings.

A Time to Inspect...

Inspect culverts, pump houses, protected stream banks, drain inlets and outlets periodically throughout the winter as needed, and in the fall before the rainy season begins.

- Inspect ditches and gutters periodically to maintain unobstructed flows.
- Inspect drainage facilities that are known trouble spots more frequently.
- Ensure that water does not overflow drainage facilities or pond in active traffic lanes or material storage areas.
- Districts 7 and 11 have specific legal requirements that also apply.

...and a Time to Clean

Perform routine cleaning as part of the inspection activity and additional cleaning as conditions warrant.

- Remove litter and debris from drain inlet grates.
- Clean culverts, cross conveyances and drain inlets when sediment accumulation impairs their function.
- Clean ditches to maintain the hydraulic capacity prior to the rainy season.

Permits may be required prior to conducting maintenance activities in ditches, canals, and culverts. Be certain to review environmental regulations such as the Army Corps of Engineers (404), Department of Fish and Game (1601), and the Regional Water Quality Control Board (401) permit requirements. Check your environmental handbook at the following web site for more details and other regulations: <http://www.dot.ca.gov/hq/Environmental/offdocs/mandocs/handbook/chp1.html-1-2.1>

A Time to Prevent...

Preventing sediment from reaching the storm water drainage systems will reduce the need for maintenance and intensive sediment removal.

- Identify potential sources of sediment and debris upstream and implement appropriate measures to prevent their introduction into storm water runoff.
- When cleaning drainage ditches below cut slopes or steep slopes, minimize slope disturbance to prevent loosened earthen material from entering the ditch.
- Reduce the amount of potential sediment by operating equipment in a slow, controlled manner.
- Prevent removed material and waste from re-entering the storm drainage system by following the procedures in the *Maintenance Manual*, Section C5.34 for disposal of waste material.

...and a Time to Repair

- Report damaged drainage facilities.
- Schedule repairs as needed.
- Repair ditches and gutters when structural integrity is directly endangered.
- Identify facilities upstream that may need to be modified or repaired to improve sediment and debris control.
- Replace damaged grates, bars, and covers.