



**Targeted Constituents**

● Likely to Have Significant Benefit		○ Probable Low or Unknown Benefit	
○ Sediment	● Heavy Metals	▶ Floatable Materials	● Oil & Grease
● Nutrients	● Toxic Materials	● Oxygen Demanding Substances	● Bacteria & Viruses

**Implementation Requirements**

● High		○ Low	
▶ Capital Costs	○ O & M Costs	○ Maintenance	▶ Training

**Description** Eliminate non-stormwater discharges to the stormwater collection system. Non-stormwater discharges may include oils, paints, acids, solvents, process wastewaters, cooling waters, wash waters, and sanitary wastewater. This task is intended to eliminate nutrients, heavy metals, toxic materials, floatable debris, oxygen demand substances, oil and grease, bacteria and virus.

**Approach** To ensure that the stormwater system discharge contains only stormwater, industry should:

- Locate discharges to the municipal storm sewer system or “Waters of the State” from the industrial storm sewer system from:
  - “as-built” pipeline schematics, and
  - visual observation (walk boundary of plant site).
- Locate and evaluate all discharges to the industrial storm sewer system (including wet weather flows) from:
  - “as-built” pipeline schematics,
  - visual observation,
  - dye tests,
  - TV camera,
  - chemical field test kits, and
  - smoke tests.
- Develop plan to eliminate illicit connections:
  - replumb sewer lines,
  - isolate problem areas, and
  - plug illicit discharge points

- Develop disposal options.
- Document that non-stormwater discharges have been eliminated by recording tests performed, methods used, dates of testing, and any on-site drainage points observed.

The following approaches may be used to identify non-stormwater discharges:

- Visual Inspection
  - The easiest method is to inspect each discharge point during dry weather.
  - Keep in mind that flow from a storm event can continue for three days or more and groundwater often infiltrates the underground stormwater collection system.
- Piping Schematic
  - The piping schematic is a map of pipes and stormwater systems used to carry wastewater, cooling water, sanitary wastes, etc.
  - A review of the “as-built” piping schematic is a way to determine if there are any connections to the stormwater collection system.
  - Inspect the path of floor drains in older buildings. It is not uncommon to find cross-connections in older buildings.
- Smoke Testing
  - Smoke testing of wastewater and stormwater collection systems is used to detect connections between the two systems.
  - During dry weather the stormwater collection system is filled with smoke and then traced to sources. The appearance of smoke at the base of a toilet indicates that there may be a connection between the sanitary and the stormwater system.
- Dye Testing
  - A dye test can be performed by simply releasing a dye into either your sanitary or process wastewater system and examining the discharge points from the stormwater collection system for discoloration.

**Limitations**

- It can be difficult to locate illicit connections especially if there is groundwater infiltration.
- Many facilities do not have accurate, up-to-date schematic drawings. Mistakes in construction may not be reflected in the schematics.
- TV and visual inspections can identify illicit connections to the storm sewer, but further testing is sometimes required (e.g., dye, smoke) to identify sources.

Non-stormwater discharges to the stormwater collection system may include any water used directly in the manufacturing process (process wastewater), air conditioning condensate and coolant, non-contact cooling water, cooling equipment

condensate, outdoor secondary containment water, vehicle and equipment wash water, sink and drinking fountain wastewater, sanitary wastes, or other wastewaters. Table ICP-15-01 in the Employee/Subcontractor training BMP fact sheet presents disposal alternatives information for specific types of wastewaters.

**Additional Information**

Substances illegally dumped on the street and into the storm drain system and creeks include paints, used oil and other automotive fluids, construction debris, chemicals, fresh concrete, leaves, grass clippings, and pet wastes. All of these wastes can cause stormwater and receiving water quality problems as well as clog the storm drain system itself.

**Primary References**

*California Storm Water Best Management Practice Handbooks, Industrial Handbook*, CDM et.al. for the California SWQTF, 1993.

*Caltrans Storm Water Quality Handbooks*, CDM et.al. for the California Department of Transportation, 1997.

**Subordinate References**

*General Industrial Storm Water Permit*, SWRCB, 1992.

*NPDES General Permit for Discharges of Storm Water Associated with Industrial Activity in Santa Clara County to South San Francisco Bay or its Tributaries*, SFBRWQCB, 1992.

*Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans, and Best Management Practices*, EPA 832-R-92-006, USEPA, 1992.