

O&M Staff Training Module 2: Maintenance Best Practices for Water Quality Protection **Stormwater & Wastewater Systems**



Cleaning Tacoma Storm Lines...

PROTECTING OUR WATERWAYS

Environmental Services • Surface Water Management

City of Tacoma Environmental Services
2018

**How do you select the
right BMP for the job?**

Many of your work activities require BMPs

- Ditch Maintenance
- Pipe or Culvert Cleaning
- Utility Vault Dewatering
- Utility Installation, Replacement or Repair
- Main flushing
- Asphalt and concrete patching
- Plant maintenance
 - Washing buildings
 - Drywall, stucco and painting

Basic BMPs to use on every activity:

Suggested BMP Strategies	Recommended BMPs
Keep Water Away from Area	Schedule work for dry weather. Cover stockpiles. Berm around work area with sandbags, etc.
Good Housekeeping	Sweep area when job is complete
Spill Prevention	Keep Spill Kit on site and clean up spills immediately
Seasonal Limitations	Oct.1-Apr.30 – No soil exposed more than 2 days May 1-Sept.30 – No soil exposed more than 7 days

When maintaining ditches*:

Key steps to remember

1. **Block downstream end** of ditch to prevent sediment from leaving the system using:
 - Berms
 - Coir logs
 - Sand bags
2. Use ditchmaster or excavator to regrade ditch to maintain flowline.



*Note: If water is flowing through ditch in dry weather or if ditch drains into a vegetated area nearby, your work may impact a stream or wetland system. Before starting work, check if environmental permits are required. Contact Merita Trohimovich, (253) 502-2103, mtrohimo@cityoftacoma.org

When maintaining ditches*:

Key steps to remember

3. Stabilize bare soil:

- Apply straw or other mulch for low velocity areas
- Install erosion control blankets or check dams for steep or high velocity areas



4. Spread seed or hydroseed to re-establish ground cover within the ditch line.



*Note: If water is flowing through ditch in dry weather or if ditch drains into a vegetated area nearby, your work may impact a stream or wetland system. Before starting work, check if environmental permits are required. Contact Merita Trohimovich, (253) 502-2103, mtrohimo@cityoftacoma.org

When cleaning stormwater pipes or culverts:

Key steps to remember

1. Follow SAD permit requirements.
2. Plug downstream end of pipe/culvert to contain cleaning waste.
3. Using an eductor truck, jet and suck out the line.

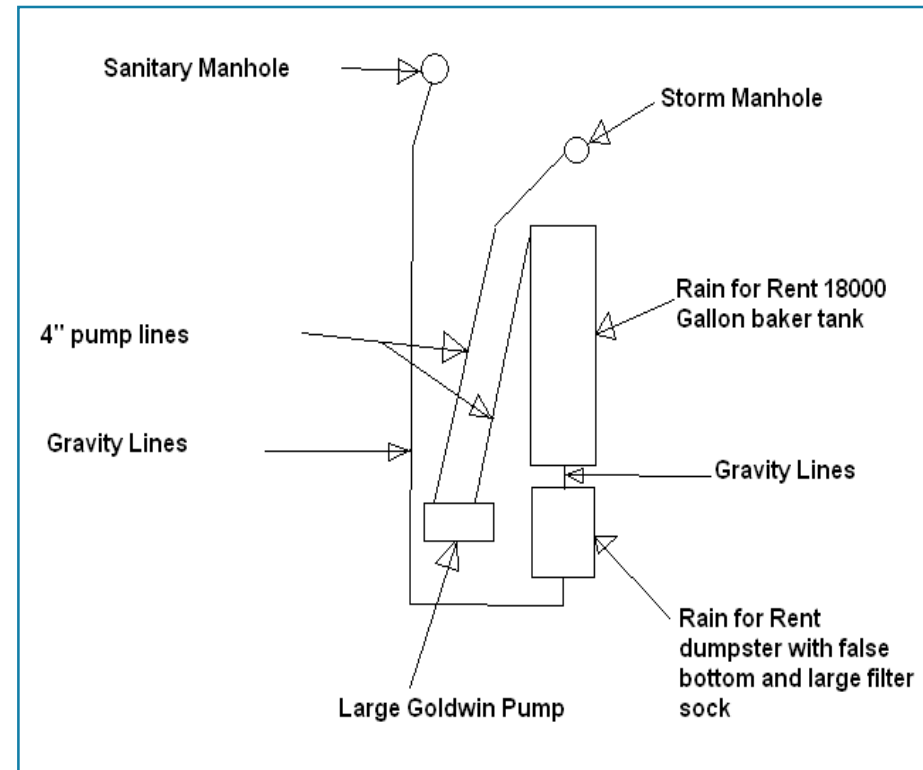


Pretreatment Tank set-up

When cleaning stormwater pipes or culverts:

Key steps to remember

4. Collect and settle out sediment from wash water in plugged downstream pipe segment or a Pretreatment Tank system prior to discharging water to sanitary sewer.
5. Deliver solid materials to the City's Decant Facility.
6. Remove plug when finished.



Pretreatment Tank set-up

When dewatering utility vaults:

Key steps to remember

1. Inspect water prior to discharge.

- a) If no odor sheen or other indicator of water pollution exists: you may dewater vault to the **stormwater system** or a **vegetated area**.
- b) If odor, sheen or other indicator of water pollution exists: If you observe presence of pollutants (sheen, odor, color), cease discharge and contact Environmental Services Environmental Compliance at 502-2222.
- c) .
- d) If testing shows contaminants exceed PCB/MTCA limits, vector and properly dispose as a hazardous waste.

When dewatering utility vaults:

Key steps to remember

2. Install BMPs to direct water away from easily erodible areas (e.g. coir logs, berms.)
3. Use a diffuser on the discharge from the pump to reduce erosive force of the water.

When installing utilities (Open Trench):

Key steps to remember

1. Install BMPs to protect nearby catch basins/storm drain inlets and adjacent watercourses before starting work.
 - CB sock
 - Inlet Cover Mat
 - Coir Logs
2. Cover stockpile material that will be reused.



When installing utilities (Open Trench):

Key steps to remember

3. Temporarily stabilize bare soil using straw or erosion blankets.



4. Permanently stabilize utility trench by repaving or spreading seed or hydroseed to re-establish ground cover.



When patching asphalt or concrete:

Key steps to remember

1. Install BMPs to protect nearby catch basins/storm drain inlets and adjacent watercourses before starting work.
 - CB sock
 - Inlet Cover Mat
 - Coir Logs
2. If saw-cutting concrete, vacuum up the slurry and dispose at the decant/washout facility at the Asphalt Plant.



When patching asphalt or concrete:

Key steps to remember

3. Install patching material.
4. **Sweep up excess materials** and dispose of properly.
5. Remove catch basin/storm drain inlet protection BMPs.



**When performing plant
maintenance activities...**

When washing down buildings or roof equipment:

Key steps to remember

1. **Regularly inspect roofs and sweep up process residues** (paper dust, saw dust, steam condensate, paint) to keep from washing down storm drains.
2. **Clean greasy roof vents** on a regular basis.
3. **Capture wash water from equipment cleaning** and discharge to the sanitary sewer system.
4. **If using detergents, cleaners or acids**, wash water shall be captured and **routed to sanitary sewer**. Contact Environmental Services 502-2222 to check on SAD permit.
5. **If using cold water with no detergents or other cleaners**, building washwater may discharge to landscape or storm drain. Contact Environmental Services 502-2222 to check on SAD permit.



When washing down buildings or roof equipment:

Key steps to remember

Options to capture wash water:

- Berm work area and wet-vac wash water
- Let work area dry and sweep up
- Collect in a plugged catch basin and pump to sanitary sewer drain or landscaping area



When remodeling drywall stucco and painting:

Key steps to remember

1. When cleaning and prepping surfaces to apply new finishes, **collect scrapings and old finish material on tarp and dispose in garbage.**
2. **Avoid mixing excess** amounts of stucco, drywall mud or plaster.
3. **Store materials under cover,** protected from rain, wind and runoff. Store oil-based paint in a flammable storage cabinet.



When remodeling drywall stucco and painting:

Key steps to remember

4. Designate drywall or plaster wash out areas that will not discharge to storm drain system.
5. Dispose of leftover dry material in trash.
6. Capture and properly dispose all oil-base paint as hazardous waste.
7. Wash and clean all latex water-based paint equipment in a sink connected to the sanitary sewer.



Field Assistance

Need some help with your BMPs?

Call any time:

(253) 502-2222



Environmental Services Department - Environmental Compliance Team
Available 24/7

**What to watch for in the
field...**

City Staff Water Pollution Call-in Line

(253) 502-2222

Same easy
number!

Please call if you notice:

- Muddy construction site track-out or runoff
- Accidental spills or illegal dumping
- Car washing, power washing with soapy water
- People hosing or washing away oil, paint, or other garbage into the street or down the storm drain
- Oily sheen or colored liquid
- Chemical or sewage smell
- Sudsy foam
- Garbage accumulation in or around catch basins
- Liquid seeping from garbage dumpsters
- Hoses connected to catch basins
- What else have you seen?



You are our eyes in the field...



Review Questions

Question #1

Which of these BMPs should be used on every job?

- a) Silt fence
- b) Good housekeeping – sweeping up excess material
- c) Inlet protection
- d) Straw mulch

Question #2

When cleaning a stormwater pipe, which one of these BMPs is not key to prevent stormwater pollution?

- a) Plug downstream end of pipe/culvert to contain cleaning waste.
- b) Collect and settle out sediment from wash water in Pretreatment Tank.
- c) Collect and settle out sediment from wash water in plugged downstream pipe segment.
- d) Install catch basin/storm inlet protection.

Question #3

When washing down buildings or equipment, what are the best three options for disposing of the wash water?

- a) Filter through catch basin insert
- b) Berm work area and wet-vac wash water
- c) Let work area dry and sweep up
- d) Collect in a plugged catch basin and pump to sanitary sewer drain or landscaping area

Question #4

Call the Staff Water Pollution Call-in Line (253-502-2222), if you see which of the following:

- a) People hosing or washing away oil, paint, or other garbage into the street or down the storm drain
- b) Oily sheen, muddy runoff or sudsy foam
- c) Car accident
- d) Garbage accumulation or liquid seeping from garbage dumpsters

Quiz Answers

- Question #1: b)
- Question #2: d)
- Question #3: b), c) and d)
- Question #4: a), b) and d)