O&M Staff Training Module 3: Maintenance Best Practices for Water Quality Protection

Maintenance for Water, Power and Click! Utilities

City of Tacoma Environmental Services 2018
How do you select the right BMP for the job?
Many of your work activities require BMPs

- Main Flushing
- Utility Vault/Reservoir Dewatering
- Utility Installation, Replacement or Repair
- Asphalt or Concrete Patching
- Pavement flushing/street cleaning
Basic BMPs to use on every activity:

<table>
<thead>
<tr>
<th>Suggested BMP Strategies</th>
<th>Recommended BMPs</th>
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<tbody>
<tr>
<td>Keep Water Away from Area</td>
<td>Schedule work for dry weather. Cover stockpiles. Berm around work area with sandbags, etc.</td>
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<tr>
<td>Good Housekeeping</td>
<td>Sweep area when job is complete</td>
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<tr>
<td>Spill Prevention</td>
<td>Keep Spill Kit on site and clean up spills immediately</td>
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<tr>
<td>Seasonal Limitations</td>
<td>Oct.1-Apr.30 – No soil exposed more than 2 days</td>
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<td></td>
<td>May 1-Sept.30 – No soil exposed more than 7 days</td>
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When flushing water mains or reservoirs:

Key steps to remember

1. **Follow the discharge conditions** outlined in the existing Environmental Services Department Special Approved Discharge (SAD) Permit. Notify Environmental Services at 253-502-2222 two days prior to planned discharges.

2. Walk downstream curbs to **remove and dispose of garbage and debris** in the downstream pathway to prevent it from washing into the storm drain.

3. Install BMPs to **direct water away** from easily erodible areas (e.g. coir logs, berms.) Any sediment that impacts the storm or sanitary sewer will need to be cleaned by Environmental Services and will be charged to the Water Department.
When flushing water mains or reservoirs:

Key steps to remember

4. **Use a diffuser** on the discharge, if possible, to reduce erosive force of the water.

5. **Dechlorinate water** if discharging to the stormwater system. Test for turbidity, pH and chlorine levels per the SAD permit.

6. **Check the upstream and downstream systems while discharging**, to make sure the discharge is not impacting the municipal sewer systems. If it does, contact Environmental Services at 253-502-2222.
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 observe presence of pollutants (sheen, odor, color), cease discharge and contact Environmental Services at 253-502-2222 dewater vault into the nearest wastewater manhole. Discharging to wastewater system requires an Special Approved Discharge (SAD) Permit from the Environmental Services Department.
   c) **If testing shows contaminants exceed PCB/MTCA limits,** vactor 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 cuts, underground utilities, vaults or pole setting):

Key steps to remember

1. Install BMPs to **protect nearby catch basin/storm drain** inlets and adjacent watercourses before starting work.
   - CB sock
   - Inlet Cover Mat
   - Coir Logs
When installing utilities (open trench cuts, underground utilities, vaults or pole setting):

Key steps to remember

2. **Cover stockpile** material that will be reused.

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

4. **Permanently stabilize utility cuts** 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 basin/storm drain** inlets and adjacent watercourses before starting work.
   - CB sock
   - Inlet Cover Mat
   - Coir Logs
When patching asphalt or concrete:

Key steps to remember

2. If saw-cutting concrete, **vacuum up the slurry** and dispose properly at a decant/washout facility.

3. Install patching material.

4. **Sweep up excess materials** and dispose of properly.

5. Remove storm drain inlet protection BMPs.
When flushing pavement:

Key steps to remember

1. Install BMPs to **protect nearby storm drain inlets** and adjacent watercourses before starting work.
   - Inlet Cover Mats
   - Berms

2. **Plug outlet pipe in nearest downstream catch basin** to contain cleaning washwater (and remove plug when finished).
When flushing pavement:

Key steps to remember

3. Use a water tank truck to flush the sediment out of the street and into the catch basin.

4. **Station an eductor truck at the catch basin** to suck flushed water and sediment out of the curbline or catch basin.

5. **Dispose of eductor waste** at approved decant facility.
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

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 flushing a hydrant or reservoir, which one of these BMPs is not key to prevent stormwater pollution?

a) **Inform the neighbors** of the day and time of the flushing operations.

b) Walk downstream curbs to *remove and dispose of garbage and debris* in the downstream pathway to prevent it from washing into the storm drain.

c) Install BMPs to **direct water away** from easily erodible areas (e.g. coir logs, berms.)

d) **Dechlorinate water** if discharging to stormwater system.
Question #3

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: a)
• Question #3: a), b) and d)