BMP: Concrete Waste Management

OBJECTIVES
- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion

DESCRIPTION:
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:
This technique is applicable to all types of sites.

INSTALLATION/APPLICATION CRITERIA:
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.)
- Train employees and subcontractors in proper concrete waste management.

LIMITATIONS:
- Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:
- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

Materials Adopted from Salt Lake County Engineering Division Guidance Document

Stormwater Discharge Management from Construction Activities 2002
**BMP: Earth Berm Barrier**

**DESCRIPTION:**
A temporary containment control constructed of compacted soil.

**APPLICATION:**
- Construct around waste and materials storage area.
- Construct around staging and maintenance areas.
- Construct around vehicle parking and servicing areas.

**INSTALLATION/APPLICATION CRITERIA:**
- Construct an earthen berm down hill of the area to be controlled. The berm should surround fueling facilities and maintenance areas on three sides to provide containment.
- Berm needs to be a minimum of 1 foot tall by 1 foot wide and be compacted by earth moving equipment.

**LIMITATIONS:**
- Not effective on steep slopes.
- Limits access to controlled area.
- Personnel need to quickly respond to spills with remedial actions.

**MAINTENANCE:**
- Observe daily for any non-stormwater discharge.
- Look for runoff bypassing ends of berms or undercutting berms.
- Repair or replace damaged areas of the berm and remove accumulated sediment.
- Recompact soil around berm as necessary to prevent piping.

**OBJECTIVES**
- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion

---

**HYDE PARK CITY**

**TARGETED POLLUTANTS**
- Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Construction Waste

**IMPLEMENTATION REQUIREMENTS**
- High Impact
- Medium Impact
- Low or Unknown Impact

---

Stormwater Discharge Management from Construction Activities

1999
BMP: Inlet Protection - Concrete Block

**Description:**
Concrete block and gravel filter placed over inlet to storm drain system.

**Application:**
Construct at inlets in paved or unpaved areas where upgradient area is to be disturbed by construction activities.

**Installation/Application Criteria:**
- Place wire mesh (with 1/2 inch openings) over the inlet grate extending one foot past the grate in all directions.
- Place concrete blocks around the inlet with openings facing outward. Stack blocks to minimum height of 12-inches and maximum height of 24-inches.
- Place wire mesh around outside of blocks.
- Place gravel (3/4" to 3") around blocks.

**Limitations:**
- Recommended for maximum drainage area of one acre.
- Excess flows may bypass the inlet requiring down gradient controls.
- Ponding will occur at inlet.

**Maintenance:**
- Inspect inlet protection after every large storm event and at a minimum of once monthly.
- Remove sediment accumulated when it reaches 4-inches in depth.
- Replace filter fabric and clean or replace gravel if clogging is apparent.

**Objectives**
- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion

**Targeted Pollutants**
- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Waste

**Implementation Requirements**
- Capital Costs
- O&M Costs
- Maintenance
- Training

Materials Adopted From Salt Lake County Engineering Division Guidance Document

Stormwater Discharge Management from Construction Activities 2002
BMP: Portable Toilets

**DESCRIPTION:**
Temporary on-site sanitary facilities for construction personnel.

**APPLICATION:**
All sites with no permanent sanitary facilities or where permanent facility is too far from activities.

**INSTALLATION/APPLICATION CRITERIA:**
- Locate portable toilets in convenient locations throughout the site.
- Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel.
- Construct earth berm perimeter (See Earth Berm Barrier Information Sheet), control for spill/protection leak.

**LIMITATIONS:**
No limitations.

**MAINTENANCE:**
- Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection.
- Regular waste collection should be arranged with licensed service.
- All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

**OBJECTIVES**
- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion

**HYDE PARK CITY**
established in 1869

**TARGETED POLLUTANTS**
- Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Waste

<table>
<thead>
<tr>
<th>Impact Level</th>
<th>High Impact</th>
<th>Medium Impact</th>
<th>Low or Unknown Impact</th>
</tr>
</thead>
</table>

**IMPLEMENTATION REQUIREMENTS**
- Capital Costs
- O&M Costs
- Maintenance
- Training

<table>
<thead>
<tr>
<th>Impact Level</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
</table>
**DESCRIPTION:**
A temporary sediment barrier consisting of entrenched filter fabric stretched across and secured to supporting posts.

**APPLICATION:**
- Perimeter control: place barrier at downgradient limits of disturbance
- Sediment barrier: place barrier at toe of slope or soil stockpile
- Protection of existing waterways: place barrier at top of stream bank
- Inlet protection: place fence surrounding catchbasins

**INSTALLATION/APPLICATION CRITERIA:**
- Place posts 6 feet apart on center along contour (or use preassembled unit) and drive 2 feet minimum into ground. Excavate an anchor trench immediately upgradient of posts.
- Secure wire mesh (14 gage min. With 6 inch openings) to upslope side of posts. Attach with heavy duty 1 inch long wire staples, tie wires or hog rings.
- Cut fabric to required width, unroll along length of barrier and drape over barrier. Secure fabric to mesh with twine, staples, or similar, with trailing edge extending into anchor trench.
- Backfill trench over filter fabric to anchor.

**LIMITATIONS:**
- Recommended maximum drainage area of 0.5 acre per 100 feet of fence
- Recommended maximum upgradient slope length of 150 feet
- Recommended maximum uphill grade of 2:1 (50%)
- Recommended maximum flow rate of 0.5 cfs
- Ponding should not be allowed behind fence

**MAINTENANCE:**
- Inspect immediately after any rainfall and at least daily during prolonged rainfall.
- Look for runoff bypassing ends of barriers or undercutting barriers.
- Repair or replace damaged areas of the barrier and remove accumulated sediment.
- Re-anchor fence as necessary to prevent shortcutting.
- Remove accumulated sediment when it reaches ½ the height of the fence.
**BMP: Stabilized Construction Entrance**

**DESCRIPTION:**
A stabilized pad of crushed stone located where construction traffic enters or leaves the site from or to paved surface.

**APPLICATIONS:**
At any point of ingress or egress at a construction site where adjacent traveled way is paved. Generally applies to sites over 2 acres unless special conditions exist.

**INSTALLATION/APPLICATION CRITERIA:**
- Clear and grub area and grade to provide maximum slope of 2%.
- Compact subgrade and place filter fabric if desired (recommended for entrances to remain for more than 3 months).
- Place coarse aggregate, 1 to 2-1/2 inches in size, to a minimum depth of 8 inches.

**LIMITATIONS:**
- Requires periodic top dressing with additional stones.
- Should be used in conjunction with street sweeping on adjacent public right-of-way.

**MAINTENANCE:**
- Inspect daily for loss of gravel or sediment buildup.
- Inspect adjacent roadway for sediment deposit and clean by sweeping or shoveling.
- Repair entrance and replace gravel as required to maintain control in good working condition.
- Expand stabilized area as required to accommodate traffic and prevent erosion at driveways.

**OBJECTIVES**
- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion

**HYDE PARK CITY**
established in 1860

**TARGETED POLLUTANTS**
- Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Waste

**IMPLEMENTATION REQUIREMENTS**
- Capital Costs
- O&M Costs
- Maintenance
- Training

- High  ☑ Medium  ☐ Low