#10 Utility Construction Considerations

Utility Construction

As utility infrastructure ages, and as communities grow, there is a demand for installation of new underground utility lines, and upgrade and maintenance of existing lines. Many times this work is located in streets, where storm inlets can be impacted, or along or across drainageways. Although the work is generally short lived, the close proximity to storm drainage systems provides ample opportunity for land disturbance and sediment transport that can negatively impact stormwater runoff.

GESC permitting for utility work with a land disturbance under an acre is limited to Cherry Creek Basin sites; or sites that cross or otherwise impact a drainageway and require a Floodplain Permit and possible 404 permitting; or require dewatering of a trench; or have the potential to discharge off-site through the storm drain system from work in the flow line/ROW. In general, dry utility work does not involve trenching, so can be permitted as either an Annual Utility Permit or a Low Impact Permit. Some minor, discrete utility work done in the ROW does not need to be formally permitted for GESC and is considered a Low Risk activity. There is no permit for the activity, but the activity does have to follow ROW regulations and a Minor Right-of-Way Construction Activity Fact Sheet (www.semswa.org) that lists BMPs that need to be installed to protect stormwater quality.

Wet utility construction that involves trenching usually requires GESC Permitting. Annual Permits for repetitive and consistent wet utilities are available. Wet utility projects under an acre of disturbance with no floodplain or drainageway implications can be permitted as Low Impact. All large scale trench wet utility work will require a Standard GESC Permit addressing dewatering and other construction practices associated with large areas of disturbance with open trenches.

Utility work without a GESC Permit

Utility line projects which do not require a GESC permit, must still adhere to GESC BMP requirements associated with a Street Cut and Right-of-Way Use or Access Permit (ROW Permit) as issued by the local jurisdiction. Additionally, a Fact Sheet for Minor Construction in the ROW is available on the SEMSWA website to provide guidelines for work that does not require a permit from SEMSWA. If these guidelines are not followed sufficiently to keep sediment out of the storm drain system, a permit may be required.

GESC Report and Drawings for Applicable Utility Work

No GESC Report is required for Utility construction other than for a large open trench wet utility activity with over an acre of disturbance that is being permitted as a Standard GESC Permit with engineering GESC Drawings. Low Impact Permits for under an acre utility activities may require a narrative if complexities exist with the particular site. A Sample Utility GESC Plan for Bore Pits has been prepared that is a typical drawing to be used as the GESC Drawing for dry utility applications for Annual Permits or for one-off utility projects that will use a Low Impact Permit.

Utility Activity GESC Inspections

- During the utility construction phase, erosion and sediment controls will be inspected periodically by a SEMSWA Inspector to determine the overall effectiveness of the controls for reducing erosion and trapping sediment on the site.
- The Inspector will check for proper installation and maintenance of the controls.
- The Inspector coordinates inspection results with the Permittee, whose responsibility it is to ensure that the site remains in compliance with all GESC requirements.
- Permittee Inspections
  - During the construction phase, controls are to be inspected by the Permittee regularly to ensure the BMPs are adequately maintained and functioning as intended.
  - The frequency of inspections will be consistent with specific BMP installation and maintenance requirements.
**Standard Operating Procedures & BMPs for Utility Work Under Jurisdictional ROW Permit**

The following list provides responsibilities and requirements to achieve adequate erosion and sediment controls during utility construction. These are generally good practices that can be used for any utility project, and are accepted guidelines that may or may not be relevant to a particular utility project depending on if the activity is for a wet or dry utility of varying complexity:

- Develop and implement erosion and sediment control plan/practices specific for the project.
- Schedule excavation and grading work for dry weather.
- Identify all storm drains, drainage swales and creeks located near the construction site and make sure all subcontractors are aware of locations to prevent pollutant transport.
- Delineate clearing limits, easements, and setbacks. Sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure. Phase in the process of clearing and grubbing the site on an as necessary basis rather than clearing and grubbing the entire work zone at one time, thus creating a maintenance item until such time that the area is under active construction.
- Designate a “Wash-out Area” on the job site in a grassy or gravelled area where pooled water can soak into the ground. Use for all application and mixing equipment. If no “Wash-out Area” is available, washout into container, dispose in a posted “Wash-out Area” at another site (with owner permission) or return to the batch plant for disposal.
- Designate one area for parking, equipment/vehicle refueling, and routine maintenance. The designated area should be well away from gutter, storm drains, and creeks.
- Keep materials out of the drain. Store them under cover, with temporary roofs or plastic sheets protected from rainfall, runoff, run-on, and wind. Store all material away from creeks and storm drains. Cover stockpiles (road base, excavated material, etc.) and other materials with plastic tarps. Use containment around the entire stockpile to prevent run-on and run-off.
- Clean up leaks, drips, and other spills immediately. If spills occur on dirt areas, dig up and remove contaminated soil and dispose of properly.
- Sweep and remove materials from surfaces that drain to storm drain inlets, creeks, or channels, throughout the workday. When precipitation is forecasted, increase the frequency of the sweeping.
- Make sure portable toilets are in good working order. Check frequently for leaks/service regularly.
- Inspect frequently for leaks and maintain all vehicles/heavy equipment repairs and washings should NOT be done in work zone. Do not lubricate parts with diesel oil.
- After breaking up old pavement and concrete, remove all chunks and pieces to avoid contact with rainfall and runoff.
- Catch drips from paving equipment with drip pans, absorbent material (cloth, rags, etc.) heavy cardboard or plywood place under the machine when not in use.
- When making saw-cuts in pavement (asphalt or concrete), use as little water as possible. Cover each storm drain inlet per the inlet protection detail during saw operation and contain the slurry. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove it from the site.
- Completely sweep the streets immediately following milling operations. All areas that are not accessible to the street sweeper must be hand broomed.
- Filter the water from concrete flow line sections that have been removed, left open and have collected rain/irrigation; discharge to grassy area. Protect inlet(s) that may receive the filtered water.
- Delivered materials or excavated material are NOT to be placed in the flow-line.
- Never hose down dirty pavement or surfaces. Clean up all spills and leaks using “dry” methods (with absorbent materials and/or rags).
- Do NOT spray concrete curing compound or tack oil if rain is on the “horizon.”
- Do NOT discharge any concrete, slurry or rinse water into street, flow line, storm drains, or drainage channels from concrete activities and concrete pumping equipment.