Preparing a Stormwater Management Utility Plan

Guidelines for sites with existing development

Are you moving property lines? Creating a new lot? Constructing an addition or new structure? You need to locate the existing utilities on your site to determine if your project will affect those systems. This worksheet provides information to help you (or your surveyor or engineer) prepare a utility plan for your project. A utility plan shows the boundaries of your property, development on the lot, and the location of underground utilities, including water, sanitary, and stormwater facilities. A complete utility plan will help avoid delays and expedite city review of your project.

Step One: Inventory the existing stormwater system for your site. Effectively managing stormwater from your site helps to protect your property and neighboring land and structures. To prepare your utility plan, verify where stormwater from your property is currently directed and if your project will affect where stormwater is disposed. See if structures have gutters and downspouts, and determine where the downspouts are directed. Stormwater must be disposed on the site by infiltration into the ground, when feasible, or be piped offsite to an approved disposal point.

Step Two: Locate existing subsurface systems. The following resources can help you determine where underground utilities (water, sewer, and stormwater) are located and what public services are available in your area.

- **Online Maps and Permit Records:** *PortlandMaps.com* contains maps, aerial photos, permit records, public utility locations, and other information you can use to prepare your site utility plan. Attach permit records and as-built drawings for sewer connections, stormwater facilities, on-site stormwater and/or sanitary disposal systems, and underground tanks to the utility plan.
- **Utility Locate Service:** If there are no permit records and you don't know where the underground pipes and facilities are located, you will need to hire a utility locater. The locate service will video the utility lines and install markers on the surface to show where pipes (underground tanks, etc) are positioned. Submit a utility locate report and a copy of the scoping video with your utility plan.

Step Three: Conduct an infiltration test. If you propose to direct stormwater to an onsite facility, infiltration testing may be required to determine if your site is suitable for onsite infiltration. The type of test will vary depending on the scale of your project.

The Stormwater Management Manual (SWMM) provides detailed information about infiltration testing and stormwater facility designs *www.portlandonline.com/bes/2008swmm*.

If you need help, contact BDS Site Development, 503-823-6892, for assistance in determining the testing requirements for your site.

Step Four: Prepare a stormwater management report. If you will be modifying the existing stormwater system or installing new stormwater facilities you may need to prepare a stormwater management report. The report must describe the rationale for your selected facilities, provide sizing calculations for the system components, and identify the disposal point(s) for stormwater. See detailed requirements for the Simplified, Presumptive, and Performance methods of stormwater management in Appendix D of the SWMM.

If you propose to discharge stormwater offsite to a public facility, such as a public sewer line or stream, ditch, or waterway, you must receive approval from the Bureau of Environmental Services (BES). An Operations and Maintenance Plan must be provided for all stormwater facilities that discharge to an offsite location. See the Appendix D.6 of the SWMM for details.

Step Five: Prepare a utility plan/survey. Walk around your site and check all the items that apply to your project. Show all the relevant information on your utility plan. Your utility plan must show the location of the existing utilities and any changes you propose to make.

Lot(s): Identify the size and configuration of your property.

- ❑ Boundary lines, show dimensions and total site area
- ❑ Corner elevations and 5-foot contours
- ❑ Proposed lot layout, if applicable

Waterways, Groundwater, and Hazard Designations: Research city maps to determine if your site has the following features:

- ❑ Drainageway(s) available for stormwater disposal
- ❑ 100-year Floodplain Boundary
- ❑ Potential Flood Hazard Area
- ❑ Wellhead Protection Area
- ❑ Depth to Groundwater
- ❑ Potential Landslide Hazard Area
- ❑ Slopes steeper than 20-percent

continued on back

Right-of-way Improvements: Show existing and proposed improvements along the site frontage(s).

- ❑ Fully improved (paved street, sidewalks, planters, street trees)
- ❑ Paving and curb only
- ❑ Paving only
- ❑ Unimproved
- ❑ Catch basins in the street
- ❑ Roadside ditch and any outfalls or culverts
- ❑ Weepholes in curb

Easements, Covenants, and Maintenance Agreements: Show the location, dimensions, and purpose of any easements and/or covenants on your site. Provide a copy of all public and private easements, covenants, and related maintenance agreements from the county recorders office.

Development on your property and abutting lots: Show existing and proposed development and trees on your lot and within 10 feet of your property.

- ❑ Total impervious area: all roofed structures and paved areas
- ❑ House/Basement
- ❑ Other structures (garage, etc)
- ❑ Vacant/no improvements
- ❑ Retaining wall(s), show height
- ❑ Decks, Patios, Walkways
- ❑ Driveways and parking areas
- ❑ Trees and planting areas, show required plantings and tree protection measures
- ❑ Subsurface facilities (fuel tanks, pipes, etc)

Existing/Proposed Stormwater Management Facilities: Identify all existing and proposed stormwater facilities. Determine if stormwater is disposed into an onsite system or if it is routed offsite.

Identify the location of gutters and downspouts for all roofed structures, and show where downspouts are/will be directed:

- ❑ Underground pipes: show location(s) and end point(s)
- ❑ Subsurface infiltration facility (drywell, soakage trench, etc): show size, depth, and location. Facility must be set back at least 10 feet from structures, and 5 feet from property lines. An existing facility may need to be decommissioned if it conflicts with the proposed project
- ❑ Drainageway: show drainageway location and name
- ❑ Splashblocks: set back at least 6 feet from basements, 5 feet from property lines, and 10 feet from structures on adjacent lots; 2 feet from any crawl space or slab foundation
- ❑ Planter: show location, size, type (infiltration or lined), and plant materials

Show where stormwater from paved areas (driveways, parking areas, walkways, etc) is/will be directed

- ❑ Planter
- ❑ Catch basin
- ❑ Swale

Sanitary sewer: Show the location of existing/proposed sanitary sewer connections and public sewer lines that serve/will serve the site. Changes may be required if existing services conflict with the proposed project.

Identify if the site has/will have:

- ❑ Public sanitary-only sewer
- ❑ Public combination-sewer
- ❑ Onsite septic system:
  - ❑ Cesspool
  - ❑ Septic tank/drainfields: show drainfield replacement area(s)

If public services are available, onsite systems must be decommissioned.

Next Steps: Submit the following with your application:

- ❑ Utility Plan/Survey
- ❑ Permit Records, As-built Drawings
- ❑ Scoping Video
- ❑ Stormwater Report with Infiltration Test
- ❑ Easements, Covenants, and Maintenance Agreements
- ❑ Operations and Maintenance Plan (for stormwater facilities that discharge offsite)

During the city review process, city staff will determine if more information or changes to the utility plan are needed. Improvements or upgrades to the stormwater, sanitary, or water systems may be required if the existing systems are deficient or will be affected by the proposed project. The permits and inspections required for this work will vary depending on the extent of the alterations.

Need Technical Assistance? Contact technical staff for assistance in determining the requirements for your site.

- Onsite Stormwater Management and Infiltration Testing: BDS Site Development: 503-823-6892.
- Public Sanitary and Stormwater Services: Bureau of Environmental Services (BES) at 503-823-7761.

All information is subject to change.