Appendix C: Resources and References

This appendix provides references for City program and regulations relating to the design, construction, permitting and maintenance of stormwater management and conveyance facilities. It also provide information on non-City programs and design information that may be helpful in design of stormwater management and conveyance facilities. It consists of the following sections:

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C.1. Stormwater Management Manual Contact Information

Stormwater Management Manual website:
http://www.portlandoregon.gov/bes/swmm

To request more information on development standards within the Stormwater Management Manual, write to: BESStormManual@portlandoregon.gov

Stormwater Presumptive Approach Calculator (PAC)
https://www.portlandoregon.gov/bes/pac/

C.2. Permitting and Development Review

Development Services Center (DSC)
Provides expertise and services for all permitting needs and processes. Specific services are listed below.

1900 SW 4th Avenue, 1st Floor
Portland, OR 97201

For hours and availability, visit or call:
http://www.portlandoregon.gov/bds/34154

- Permitting Services   (503) 823-7310
- Planning and Zoning (Zoning questions) (503) 823-7526
- Plumbing, Electrical, Mechanical, Sign Permits (503) 823-7363
- Resource/Records (503) 823-7660
- Permit Status via Voicemail (503) 823-7000 (4)
- Stormwater facility inspection: (503) 823-7000 (1) Request #487

Bureau of Environmental Services, Development Review Hotline
For questions related to project or site-specific development proposals, including guidance on submittal requirements or required inspections.

(503) 823-7761
Bureau of Development Services (BDS) Early Assistance Appointments
Services are available prior to submittal of a land use review or building permit application. These services are intended to provide useful feedback for projects ranging from relatively simple to very large and complex.

Questions: (503) 823-7526

Application form: http://www.portlandoregon.gov/bds/36648

Application Submittal: Early assistance appointment request forms should be submitted to the Development Services Center

Public Works Permitting Process
For information on improvements in the public right of way.
http://www.portlandoregon.gov/53147

Site Development Permits
Site development permits are issued for work such as clearing, grading, tree cutting, landslide repair, private streets and groundwork related to new subdivisions, where no building or structure is altered, moved or constructed.

(503) 823-6892

http://www.portlandoregon.gov/bds/36670

C.3. City Codes

Title 10: Erosion and Sediment Control
http://www.portlandoregon.gov/citycode/28175?

Title 11: Trees
http://www.portlandoregon.gov/auditor/index.cfm?c=66002&

Title 17: Public Improvements
http://www.portlandoregon.gov/citycode/28181?

Title 21: Water
http://www.portlandoregon.gov/citycode/?c=28185

Title 24: Building Regulations
http://www.portlandoregon.gov/citycode/28188?

Title 29.30.170 Plumbing
http://www.portlandoregon.gov/citycode/?c=28732&a=18206
C.4. City of Portland Resources

City resources are available for design guidance as well as resources for programmatic support and information.

C.4.1. City Design Resources

**BES Auto CAD Files**
http://www.portlandoregon.gov/bes/53917

**Bird Friendly Design**
Guidance on practical design approaches to reduce risks to birds, with a focus on exterior glass and lighting design
http://www.portlandoregon.gov/bds/article/408796

**City of Portland Standard Details and Drawings**
http://www.portlandoregon.gov/transportation/50383

**City of Portland Standard Construction Specifications**
http://www.portlandoregon.gov/transportation/40032

**Erosion and Sediment Control Manual**
http://www.portlandoregon.gov/bes/article/474129

**Pervious Paving Resources**
Provides (BDS) administrative rules on private streets including land use submittal requirements and design and construction requirements.
https://www.portlandoregon.gov/bds/article/311179

**Portland Plant List**
Contains a list of Portland’s approved native plants and nuisance plants. Nuisance plants are prohibited from being planted and native plants are required in certain environmental zones and drainage reserves.
https://www.portlandoregon.gov/bes/article/473164

**Rainwater Harvesting Resources**

Rainwater Harvesting Code Guide
Portland’s code guide for installing rainwater harvesting systems.
Rainwater Harvesting Resource Guide
This factsheet provides information on the benefits of rainwater harvesting and the various city bureaus that are involved in installing a rainwater harvesting system.

http://www.portlandoregon.gov/water/article/278777

Sewer and Drainage Facilities Design Manual
http://www.portlandoregon.gov/bes/article/360710

Transportation Design and Construction Standards and Documents
Improvements in the public right-of-way must also meet design and construction standards for transportation elements.

https://www.portlandoregon.gov/transportation/40032

Water Valves Hydrants and Assemblies
https://www.portlandoregon.gov/transportation/article/255439

C.4.2. City Programs and Bureaus

Clean River Rewards – Stormwater Discount Program
Information on Portland’s stormwater utility discount program. Property owners can receive up to a 100% discount on on-site stormwater management charges.

(503) 823-1371

http://www.portlandoregon.gov/bes/41976

Columbia South Shore Well Field Wellhead Protection Program
Information on the groundwater protection program, regulations, area map and technical assistance.

http://www.portlandoregon.gov/water/29890

Combined Sewer Overflow (CSO) Program
Information on Portland’s 20 year combined sewer overflow program that was completed in 2011.

http://www.portlandoregon.gov/bes/31030
Ecoroof Resources
Information on a variety of ecoroof resources in the city of Portland including project examples, technical guidance and how to find an ecoroof professional.

http://www.portlandoregon.gov/bes/44422

Green Street Steward Program
Information on how community members can participate in the care and maintenance of Portland’s green streets.

http://www.portlandoregon.gov/bes/52501

Maintenance Inspection Program
The City of Portland has a program to inspect stormwater management facilities installed on private property and provide property owners with the Technical Assistance they need to ensure that stormwater management facilities are functioning as intended.

http://www.portlandoregon.gov/bes/45464

Revegetation Program
The City of Portland has a program that designs, plants, inspects and maintains stormwater management facilities in the public right of way and on public property.

http://www.portlandoregon.gov/bes/article/394076

Urban Forestry
Portland Parks & Recreation Urban Forestry's Department manages Portland’s forest infrastructure. Information on permits for planting, pruning, and removal of all public and some private trees. The site also provides information on 24 hour tree emergency response.

(503) 823-4489

http://www.portlandoregon.gov/parks/38294

C.5. Site Evaluation Maps

Portland Maps
This site includes public storm and sewer utility information. Inquirers can search by address to find detailed information about properties. Sewer and environmental information is located under the utilities tab. Tax lot information is located under the assessor and assessor detail tab.

http://www.portlandmaps.com
Soil Survey of Multnomah County
Soil Conservation Service, 1982
This document contains soil survey data and soil property data for Multnomah County.
http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR051/0/or051_text.pdf

C.6. Additional Resources
Additional programmatic and design resources are available through other states and jurisdictions.

C.6.1. Outside Design Resources
East Multnomah Soil and Water Conservation District – Rain Garden design and construction
http://emswcd.org/in-your-yard/rain-gardens/

Environmental Protection Agency National Stormwater Calculator
http://www.epa.gov/water-research/national-stormwater-calculator

King County Surface Water Management

Oregon Specialty Plumbing Code 2011

Oregon State University, Sea Grant, Oregon Rain Garden Guide
http://seagrant.oregonstate.edu/sgpubs/oregon-rain-garden-guide

Pervious Paving Resources
ODOT 2015 Standard Specifications PART 00700 - WEARING SURFACES:

City of Tacoma permeable paving specifications
http://www.cityoftacoma.org/cms/one.aspx?objectId=81563
Pervious Asphalt
National Asphalt Paving Association, Porous Asphalt Pavements for Stormwater Management:


Pervious Concrete
National Ready Mix Concrete Association:

http://www.perviouspavement.org/

Pervious Pavers
Interlocking Concrete Pavement Institute:

http://www.icpi.org/paving-systems/permeable-pavers

Port of Portland - Stormwater Design Standards Manual

Rainwater harvesting Resources
Building Codes Division Oregon Smart Guide


For information from the Oregon Specialty Plumbing Code, refer to the website:
http://www.cbs.state.or.us/external/bcd/programs/plumbing/2008opsc.html

Seattle Washington Stormwater Code
http://www.seattle.gov/dpd/codesrules/codes/stormwater/

Washington State Department of Ecology
Stormwater Management Manual for Western Washington


C.6.2. Outside Programmatic Resources

Clean Water Services
Private Water Quality Facility Management Program
http://www.cleanwaterservices.org/PermitCenter/Inspections/privatewaterqualityfacility.aspx
**Metro**  
Portland’s regional form of government that oversees regional land use planning, research, natural areas and solid waste and recycling.  
http://www.metro-region.org/

**Multnomah County Drainage District**  
The Multnomah County Drainage District prevents flooding through the management of levees, pump stations and drainageways, facilitates recreation within drainage district facilities and maintains habitat friendly environments along the Columbia River and Columbia Slough.  
http://www.mcdd.org/

**Oregon Department of Environmental Quality (DEQ)**  
DEQ is Oregon’s state agency that regulates the protection of Oregon’s land, water and air quality.  
http://www.oregon.gov/DEQ/Pages/index.aspx

Oregon Department of Environmental Quality (DEQ), Underground Injection Control Program (UIC)  
http://www.deq.state.or.us/wq/uic/uic.htm

**Oregon Department of State Lands**  
Provides information on regulations associated with activities within waters of the state.  

**Oregon Environmental Council – Low Impact Development Guidance Template**  
A guidance manual that cities and counties throughout Western Oregon can use to use to reduce stormwater runoff, prevent flooding, and improve the health of our rivers, lakes and streams  
http://oeconline.org/lidmanual/

**Oregon Environmental Council - Stormwater Solutions Report**  
A report developed to recommend strategies (including policies, projects, and programs) that will reduce stormwater impacts in Oregon’s urban areas.  
Salmon Safe Certification
A guide for site developers and designers interested in developing environmentally innovative projects that help restore our urban watersheds

https://www.salmonsafe.org/getcertified/development

U.S. Green Building Council
The US Green Building Council helps advance buildings are designed, constructed and operated through Leadership in Energy and Environmental Design, (LEED). LEED, or is a certification program for buildings and communities that guides their design, construction, operations and maintenance toward sustainability

http://www.usgbc.org/

West Multnomah Soil and Water Conservation District – Healthy Stream Program
The Healthy Streams Program provides full funding, project planning and technical assistance to landowners for streamside restoration to improve water quality, wildlife habitat and the condition of the land.

https://wmswcd.org/programs/healthy-streams/