

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>

Title 33: Planning and Zoning

<http://www.portlandoregon.gov/citycode/28197?>

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.

<http://www.portlandonline.com/shared/cfm/image.cfm?id=68621>.

[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

King County, Washington, “Surface Water Design Manual”, originally published in 1990 (effective January 24, 2005)

<http://www.kingcounty.gov/environment/water-and-land/stormwater/documents/surface-water-design-manual.aspx>

Oregon Specialty Plumbing Code 2011

<http://www.iapmo.org/Pages/2011OregonPlumbingSpecialtyCode.aspx>

Oregon State University, Sea Grant, Oregon Rain Garden Guide

<http://seagrants.oregonstate.edu/sppubs/oregon-rain-garden-guide>

Pervious Paving Resources

ODOT 2015 Standard Specifications PART 00700 - WEARING SURFACES:

http://www.oregon.gov/ODOT/HWY/SPECS/pages/2015_Standard_Specifications.aspx

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](#):

<http://store.asphaltpavement.org/index.php?productID=759>

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

https://www.portofportland.com/PDFPOP/Stormwater_Design_Standards_Manual.pdf

Rainwater harvesting Resources

Building Codes Division Oregon Smart Guide

<http://www.bcd.oregon.gov/pdf/3660.pdf>

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

<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

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.mccd.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/wg/uic/uic.htm>

Oregon Department of State Lands

Provides information on regulations associated with activities within waters of the state.

<http://www.oregon.gov/DSL/pages/index.aspx>

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.

<http://stage.oeconline.org/wp/wp-content/uploads/2014/11/Stormwater-Solutions-Report.pdf>

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/>