



State of Oregon Department of Environmental Quality
Clean Water State Revolving Fund

Guide 2: Stormwater Management Code Updates

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The [Clean Water State Revolving Fund](#) finances all phases of stormwater management, from planning to construction. This guide provides resources for Clean Water State Revolving Fund applicants and borrowers.

The resources below are intended to assist planners, public works staff and consultants to identify barriers in existing land use development standards and provides several examples of how to integrate nonstructural controls into local codes. The loan program offers [a comprehensive guide to stormwater water management](#) on the program website.

Municipalities interested in managing stormwater through low impact development will need to assess and revise existing codes if these contain provisions that might preclude the use of low impact development and impervious area reduction. Land use and stormwater management ordinances supportive of low impact development give needed flexibility to developers meet retention requirements in stormwater performance standards. They also minimize the reliance on more costly structural stormwater treatment controls.

Assessing existing codes

There are several assessment tools highlighted below to evaluate whether municipal codes support low impact development to more cost-effectively manage stormwater.

- The Center for Watershed Protection's [Better Site Design: A Handbook for Changing Development Rules in Your Community](#) walks users through the process of evaluating how their community's code measures up to 22 better site design principles. This handbook covers everything from basic engineering principles to actual and perceived design barriers, development guidelines and a detailed rationale for each principle. It also examines current practices in local communities, details the economic and environmental benefits of a better site design approach and presents case studies from across the country.
- EPA developed the [Overcoming Barriers to Green Infrastructure Website](#), which includes a series of "barrier busting" fact sheets about low impact development and covers numerous topics from cost savings to maintenance.
- EPA also created the [Water Quality Scorecard](#) to help local governments identify and remove barriers and revise and create codes, ordinances and incentives to better protect water quality. The scorecard provides a guide to review key local ordinances across departments to ensure that a municipality's regulatory authorities work together.

Development standards, codes and zoning for stormwater management



Capturing stormwater onsite through a bioswale, shown above, is effective and adds attractive landscaping features.

DEQ and the Oregon Department of Land Conservation and Development [developed a Water Quality Model Code and Guidebook](#), providing nonstructural stormwater controls to meet retention requirements. The guide includes a number of examples of using site design standards to incorporate nonstructural controls into, for example, standards for parking lots, front and side yard setbacks and minimum lot sizes.

Providing flexibility in lot sizes allows a developer to protect and use more permeable soils and protect wetlands, riparian areas and floodplains that benefit stormwater management. The guide also provides model comprehensive plan language to support the establishment of stormwater codes.

Reviewing and revising development standards for streets provides another opportunity to reduce impervious surfaces, as described in [Neighborhood Street Design Standards – an Oregon Guide to Reducing Street Widths](#). EPA developed [Stormwater to Street Trees – Engineering Urban Forests for Stormwater Management](#), a guide that explores using street trees for management and disposal of stormwater in the urban environment.

Model codes for post-construction stormwater management

Model Code	Source
New Development and Redevelopment Model Code	Appendix B of Oregon DEQ’s TMDL Implementation Guidance for Including Post-Construction Elements in TMDL Implementation Plans
Post-Construction Stormwater Runoff Control Ordinance Webpage	EPA
Stormwater Operation and Maintenance Ordinance webpage*	EPA
Stormwater Control Ordinance	New Jersey Stormwater BMP Practices Manual Appendix D
Stormwater Management Ordinance	Maryland Department of the Environment
Implementing Model Stormwater Ordinance	Minnesota Department of Natural Resources
Stormwater Utility	University of Tennessee

*This is not a stand-alone ordinance and should be integrated into an ordinance to regulate post-construction stormwater

Model codes for nonstructural stormwater controls

Land use planning techniques covered	Source
<ul style="list-style-type: none"> • Model comprehensive plan language • Model code language for: <ul style="list-style-type: none"> ○ Density averaging ○ Site design specifications ○ Sensitive land overlay zones ○ Riparian protection ○ Wetland protection ○ Impervious surface reduction ○ Retention and treatment of stormwater through structural & nonstructural strategies ○ Groundwater protection 	Oregon Department of Land Conservation and Development’s Water Quality Model Code and Guidebook
<ul style="list-style-type: none"> • Transfer of development rights 	Oregon Department of Land Conservation and Development’s Transfer of Development Rights Pilot Program
<ul style="list-style-type: none"> • On-site density transfers for critical areas • Flexible buffer widths • Transfer of development rights • Incentive programs for low impact development • Incentive programs for critical areas 	Municipal Research and Service Center’s Flexibility in Environmental Regulation Website
<ul style="list-style-type: none"> • Density transfers • Lot size averaging • Feature-based density • Conservation subdivision • Infill development • Riparian buffer and wetland protection • Protection of groundwater and surface water resources 	New Hampshire multi-agency consortium: “Innovative Land Use Planning Techniques: A Handbook for Sustainable Development”

Example codes in Oregon

Oregon’s larger municipalities have been implementing ordinances requiring stormwater management to improve water quality since the 1990s. Examples are provided in the table below.

Oregon municipal stormwater ordinance examples

Portland city code
Chapter 17.37 Downspout Disconnection Chapter 17.38 Drainage and Water Quality Chapter 17.39 Storm System Discharges
Salem city code
Chapter 71 Stormwater
Bend city code
Title 16.15 Stormwater Management Design Standards and Post-Construction Maintenance Controls
Corvallis city code
Chapter 2.09 Storm Water System
Oregon City code
Chapter 13.12 Stormwater Management Chapter 13.16 Storm Drainage Service Charges

<u>Newberg city code</u>
Chapter 13.20 Stormwater System Chapter 13.25 Stormwater Management
<u>The Dalles city code</u>
Chapter 3-9 Storm Drainage Regulations Chapter 3-11 Storm Water System Development Charges Chapter 3-12 Cross Connection Control
<u>Stayton city code</u>
Chapter 13.32 Storm Drainage Utility

For additional information, contact [Chris Bayham](#) from DEQ’s Clean Water State Revolving Fund at 541-687-7356.

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us