Code Amendments to Stormwater Development Standards to Implement NPDES Permit Requirements

Eugene City Council
Work Session
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Agenda

- Background
- Why these amendments
- Low Impact Development and Green Infrastructure
- Stormwater Development Standards and proposed amendments
- Planning Commission process and Public Testimony

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Background

- Stormwater Development Standards
  - Regulate the location, design, construction and maintenance of stormwater facilities
  - Requirement of the federal Clean Water Act
  - Regulated through the National Pollutant Discharge Elimination Systems (NPDES) Permit issued by Oregon DEQ
  - To protect and improve the water quality of streams and rivers like Amazon Creek and the Willamette River
- Apply to construction of more than 1,000 square feet of new or replaced impervious surface in a 12-month period
  - Examples: Streets, building, parking lots.
- Stormwater Management Manual
  - Design guide
  - Low Impact Development and Green Infrastructure

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Why amend Stormwater Development Standards

- NPDES Permit condition to update Stormwater Development Standards to align with Permit conditions
- Update is important for continued improvement of Stormwater Quality
- Promote Low Impact Development and Green Infrastructure
- Simplify and clarify language

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Low Impact Development and Green Infrastructure

- Low Impact Development includes the construction of Green Infrastructure that infiltrate and filter runoff in order to mimic the natural hydrologic condition
- Green Infrastructure:
  - Ponds
  - Stormwater Planters
  - Rain Gardens
  - Swales
  - Sand Filters
  - Green Roofs
  - Filter Strips

Stormwater Planter can infiltrate and filter stormwater runoff

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Green Infrastructure

Ferndale Park Swale

Large swales and ponds infiltrate stormwater and provide flood control for a neighborhood

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Green Infrastructure

Curb side swales
filter stormwater

Swale by the Federal Court House in Eugene

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Proposed amendments

- EC Chapter 9.6791 Stormwater Flood Control
- EC Chapter 9.6792 Stormwater Quality
- EC Chapter 9.6793 Stormwater Flow Control (Headwaters)
- EC Chapter 7.010 and 7.143 Public Improvement Construction – Wastewater Sewer Systems and Stormwater Management Facilities for Public Ways

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Stormwater Flood Control

- Protect life and property from flooding and drainage hazards
- Infrastructure designed to manage large flows - flood control design storm
- Traditional piped systems and green infrastructure like ponds, rain gardens, stormwater planters

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Stormwater Flood Control amendments

- Most amendments to simplify and clarify language
- Standardize reference to the Stormwater Management Manual
- Remove unneeded references to federal and state requirements

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Stormwater Quality

- Reduce pollutants
- Reduce the volume and flow rate of runoff
- Protect water quality of receiving waters

- Stormwater Quality hierarchy:
  - Infiltration first – rain gardens, ponds and stormwater planters
  - Extended Filtration second – rain gardens, ponds, planters, filter strips, and swales
  - Offsite Water Quality Mitigation third – through additional mitigation SDC

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Stormwater Quality amendments

- Proposed amendments to simplify and clarify language
- To conform with the requirements of the NPDES permit
- The current code and proposed amendments have exemptions to the requirement to infiltrate based on geologic and hydrologic conditions
  - Low infiltration rate less than 2 inches per hour
  - Bedrock less than 5 feet below the ground surface
  - Groundwater elevation less than 6 feet below the ground surface
  - Ground surface slope greater than 10%
- Exemptions for Maintenance and Repair activities
- Exemptions based on not enough land area for green facilities

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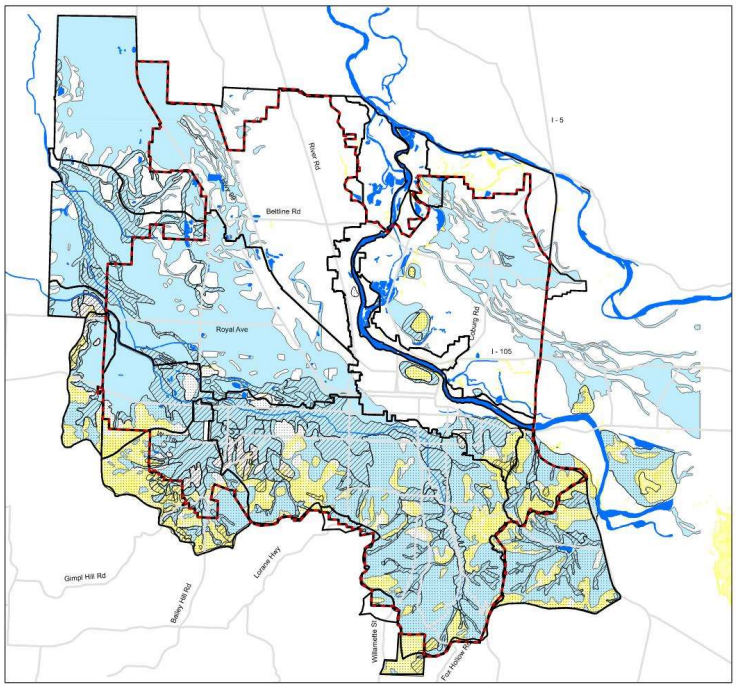

Infiltration Limited Areas

LEGEND

- Eugene Urban Growth Boundary
- Storm Water Basins
- Rivers and Streams

Infiltration Limiting Criteria

- Depth to Bedrock less than 5 feet*
- Permeability less than 0.6 inches/hour*
- Depth to Groundwater less than 6 feet*
- Slopes greater than 15 percent

This map displays areas that are not likely to meet the City's proposed subsurface infiltration design requirements. Detailed site-specific information will be required for all proposed infiltration facilities whether required by the City or initiated by the property owner.

** from USDA Natural Resources Conservation Services*

Figure 1. Infiltration limited areas in Eugene

1 0.5 0 1 2 3 Miles

Map produced by City of Eugene PW Eng Info Team, May 25 2006 (refit 0605-1407)

Map based on imprecise source data, subject to change

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Stormwater Quality amendments

- The current code provides exemptions that may not be consistent with the NPDES permit
- The current code has exemptions to current standards for construction of single-family units or duplexes on lots established prior to March 1, 2014, these exemptions are being removed

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Stormwater Flow Control (Headwaters)

- Protect waterways from erosion
- Protect downstream properties and infrastructure
- Reduce flow rate and volume of runoff
- Construction of ponds, pipes and tanks to release the water at slow rates

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Stormwater Flow Control (Headwaters) amendments

- Proposed amendments to simplify and clarify language
- To conform with the requirements of the NPDES permit
- Amend or remove exemptions not consistent with NPDES requirements

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Planning Commission process

- Planning Commission Work Session September 10, 2024
- Planning Commission Public Hearing September 24, 2024
- Planning Commission deliberation November 12, 2024
  - PC recommended the City Council adopt the amendments

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Stakeholders and Public Testimony

- Key external stakeholders
  - Western Oregon Builders Association (WOBA) previously Lane County Home Builders Association
  - Local engineering community
- City staff met with WOBA and local engineer prior to and during the process
- Public Testimony received from WOBA, local engineer and others
- City Staff made edits to the proposed amendments in response to input and the public testimony

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Stakeholders and Public Testimony

- Public Testimony concerns
  - Removing exemptions for construction of single-family units or duplexes on lots established prior to March 1, 2014
- Amendments consistent with NPDES
  - Exemptions based on dates are not consistent with NPDES
  - Stormwater runoff from new impervious surface should be managed onsite
- State law ORS 92.040
  - Allows lots formed by subdivision to follow land use laws in place for 10-years after approval

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More information

- City of Eugene Stormwater Program website:
- https://www.eugene-or.gov/463/Stormwater
- City of Eugene NPDES Permit website:
- https://www.eugene-or.gov/476/NPDES-Municipal-Stormwater-Permit

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Willamette River

Questions?

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