

# **City of Everett Stormwater Management Manual**

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City of Everett Surface Water Management

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## **Acknowledgments**

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This manual is heavily based on the 2009 Pierce County Stormwater Management and Site Development manual, as well as the 2005 DOE Stormwater Management manual for Western Washington. Many thanks to the staff of those agencies for making this information available for use by the City.



## Preface

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The objective of this manual is to provide guidance and requirements related to the measures necessary to control the quantity and quality of stormwater produced by new development and redevelopment such that they comply with water quality standards and contribute to the protection of beneficial uses of the receiving waters. The water quality standards include: Chapter 173-200 WAC, Water Quality Standards for Ground Waters of the State of Washington; Chapter 173-201A, Water Quality Standards for Surface Waters of the State of Washington; and Chapter 173-204, Sediment Management Standards.

This manual is based on the premise that development and redevelopment should not negatively impact adjacent and/or downstream property owners nor degrade groundwater or the natural drainage system, including but not limited to streams, ravines, wetlands, potholes, and rivers. Further, development activities should not impact adjacent and/or downstream property owners in a detrimental manner compared to the predeveloped condition.

The Public Works Director shall have the authority to increase requirements to protect the health, safety, and welfare of the public on the basis of information regarding threatened water quality, erosion problems, habitat destruction, historic flooding, protection of uninterrupted services, endangerment to property, or increases in requirements imposed by state or federal agencies or other pertinent factors. However, it is not the intent of this manual to make the City of Everett a guarantor or protector of public or private property with regards to land development activities.

Through this manual, the City of Everett is complying with the Clean Water Act, the Puget Sound Water Quality Management Plan, and the Western Washington Phase II Municipal Stormwater Permit. Where requirements in this document are also covered in any other law, ordinance, resolution, rule or regulation of any kind, the more restrictive law shall govern.

### ***Applicability***

The requirements of this manual apply to all types of land development and redevelopment within the incorporated areas of the City of Everett and to both public and private projects. These requirements also apply to cross-jurisdictional projects (e.g., utility, port, irrigation, drainage or flood control district, city, town, county, or other local, state, or federal government entity) located totally, or in part of, the City unless one of the following applies:

- The project site is legally served by a combined storm and sanitary sewer system.
- The activity is exempted from submittal requirements (see Volume I, Section 2.1.5)
- Development/redevelopment and stormwater activities are conducted in accordance with the Washington State Department of Transportation's Highway Runoff Manual (for WSDOT-related road projects) or the most current edition of the Washington Department of Ecology's Stormwater Management manual for Western Washington (provided that any more restrictive City requirements are also met).

### ***Presumptive versus demonstrative approach***

This manual provides technical requirements for measures to control the quantity and quality of stormwater runoff from new development and redevelopment projects. These measures are considered to be necessary to achieve compliance with state water quality standards and to contribute to the protection of the beneficial uses of the receiving waters (both surface and groundwaters). Stormwater management techniques applied in accordance with this manual are presumed to meet the technology-based treatment requirement of state law to provide all known available and reasonable methods of treatment, prevention and control (AKART; Revised Code of Washington [RCW] 90.52.040 and RCW 90.48.010). However, this technology-based treatment requirement does not excuse any discharge from the obligation to apply whatever technology is

necessary to comply with state water quality standards, Chapter 173-201A WAC; state groundwater quality standards, Chapter 173-200 WAC; state sediment management standards, Chapter 173-204 WAC; and the underground injection control program, Chapter 173-218 WAC. Additional measures to meet those standards may be required by the City, state or federal governments.

It is not the intent of this manual to preclude alternative solutions to design situations. It is expected that the design professional will bring to each project the best of his/her skills and abilities to see that the project is thoroughly analyzed and designed correctly, accurately, and in compliance with generally accepted engineering practices. Alternatives to City of Everett stormwater standard plans, specifications, and design details will be accepted if they meet or exceed the performance of City standards as determined by the City. The burden of proof, however, is on the engineer to document that his/her alternatives meet or exceed the performance of these standards.

### ***Severability***

If any provisions of this manual or their application to any person or property are amended or held to be invalid, the remainder of the provisions in this manual in their application to other persons or circumstances shall not be affected.

### ***Penalties and Enforcement***

Penalties and enforcement shall be in accordance with Title 14.28 of the EMC.

### ***Appeals***

Appeals shall be handled in accordance with EMC Title 14.28.

## **Organization of this manual**

This manual is organized into four volumes:

- Volume I serves as an introduction, summarizes minimum technical requirements, and describes submittal and hydrologic/hydraulic analysis requirements.
- Volume II covers BMPs for short-term stormwater management at construction sites
- Volume III covers BMPs for flow control flow and treatment of runoff from developed sites
- Volume IV addresses BMPs to minimize pollution generated by potential pollution sources at developed sites

This manual also has the following appendices:

- Appendix A – Other Regulatory Permits and Requirements that may Apply to Projects
- Appendix B – Quick Reference Phone Numbers and Web Sites
- Appendix C – Recycling/Disposal of Vehicle Fluids/Other Wastes
- Appendix D – Example of an Integrated Pest Management Program
- Appendix E – Guide Sheet 2B: Guidelines for Protection from Adverse Impacts of Modified Runoff Quantity Discharged to Wetlands
- Appendix F – Maintenance Checklists

## Site Design Techniques and Requirements

The design professional is strongly encouraged to address the issue of stormwater management, both quantity and quality, in the early phases of the site planning process. Through careful consideration of site planning, effective impervious areas (EIAs) can be reduced, thereby reducing the size and costs for stormwater facilities; efficient stormwater facilities can be integrated into the specific site parameters such as topography, soils, etc.; and source control measures can be utilized to prevent problems both during and after construction.

### Site Planning and Layout

Some of the things that should be considered during site planning and layout include: minimizing the creation of impervious surfaces; clustering buildings and preserving larger areas of open space; minimizing directly connected impervious areas (try to separate impervious surfaces with areas of turf, other vegetation, or gravel); incorporation of low maintenance landscaping that doesn't need frequent applications of fertilizers, herbicides, and pesticides; and minimizing the impact area and soil compaction during construction.

The approach to considering and minimizing stormwater impacts at the site layout stage is commonly referred to as low impact development (LID). LID is a land use development strategy that emphasizes protection and use of on-site natural features integrated with engineered, small-scale hydrologic controls at the parcel and subdivision scale to manage stormwater and more closely mimic predevelopment watershed hydrologic functions. This is achieved by recognizing and focusing on the relationships between overland and subsurface flow, infiltration, storage, and evapotranspiration on the site. LID strategies focus on evaporating, transpiring, and infiltrating stormwater on-site through native or amended soils, vegetation, and bioengineering applications to reduce and treat overland flow.

### Protection and Establishment of Natural Buffer Areas

Natural buffer areas protect drainage courses from erosion and pollutants. Natural buffer areas will be required adjacent to all wetlands and other environmentally sensitive areas, per the City's Critical Areas Ordinance (Title 19, Chapter 37 of the Everett Municipal Code (EMC)).

Natural required buffer areas may not be used to provide treatment for stormwater runoff, nor may concentrated flows that could cause erosive damages be discharged through natural required buffer areas.

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**Glossary**