KING COUNTY, WASHINGTON

SURFACE WATER DESIGN MANUAL

King County
Department of Natural Resources and Parks

July 23, 2021

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[1] http://www.kingcounty.gov/elected/executive/constantine.aspx
[2] http://www.kingcounty.gov/council/councilmembers/find_district.aspx

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INTRODUCTION

OVERVIEW

King County's surface water features -- the rivers, lakes, wetlands, streams, and Puget Sound -- are a significant part of our natural beauty and rich heritage. Spawning salmon, meandering rivers, and clean water are important natural resources which must be managed wisely to protect their values.

As development of the County's landscape occurs and changes the quantity and quality of surface and storm water runoff, great care must taken to minimize the impacts of these changes to natural resources, public safety, and property. This necessitates the provision of surface and storm water management systems that not only mitigate such impacts but must comply with the County's National Pollutant Discharge Elimination System (NPDES) General Municipal Stormwater Permit issued by the Washington State Department of Ecology pursuant to the Clean Water Act.

This manual contains the requirements and standards for designing such surface and storm water management systems in King County. As part of the permit approval process for certain types of permits for proposed development projects, King County requires the construction of surface and storm water management systems to mitigate the impacts of new development and redevelopment on natural and existing man-made drainage systems.

This manual regulates proposed projects through a mixture of requirements, performance standards, and design standards. These requirements and standards are primarily enforced by the King County Department of Local Services, Permitting Division (DLS-Permitting), which is responsible for the drainage review and approval of engineering plans and inspection of development projects during construction. This responsibility and how it is carried out is governed not only by King County Code but to some extent by the County's NPDES municipal stormwater permit, which contains specific requirements for drainage review and inspection of development projects. In addition to the Surface Water Design Manual, DLS-Permitting is also responsible for enforcement of all other King County regulations governing development.

The Water and Land Resources (WLR) Division of the King County Department of Natural Resources is responsible for developing the requirements and standards, which includes publishing, updating and providing the technical support for the Surface Water Design Manual. The WLR Division also reviews requests for experimental design adjustments and blanket adjustments as described in Chapter 1, Section 1.4.

The chapters of this manual are organized as follows:

Chapter 1 - DRAINAGE REVIEW AND REQUIREMENTS

Describes the basic drainage requirements that implement King County adopted surface water runoff policies and explains how these requirements are applied to proposed projects through the drainage review process.

Chapter 2 - DRAINAGE PLAN SUBMITTAL

Describes the requirements and specifications for submittal of design plans for drainage review, including report and plan formats, and scopes.

Chapter 3 - HYDROLOGIC ANALYSIS AND DESIGN

Presents the acceptable methods of hydrologic analysis used to estimate runoff and design flow control, conveyance, and water quality facilities.

Chapter 4 - CONVEYANCE SYSTEM ANALYSIS AND DESIGN

Presents the acceptable methods, details, and criteria for analysis and design of conveyance systems.

Chapter 5 - FLOW CONTROL DESIGN

Presents the acceptable methods, details, and criteria for analysis and design of flow control facilities.

Chapter 6 - WATER QUALITY DESIGN

Presents the acceptable methods, details, and criteria for analysis and design of water quality facilities.

DEFINITIONS - A comprehensive list of the words, terms, and abbreviations accompanied by their meaning as applied in this manual.

APPENDICES:

- APPENDIX A - MAINTENANCE REQUIREMENTS FOR FLOW CONTROL, CONVEYANCE, AND WQ FACILITIES

  Contains the thresholds and standards for maintenance of all flow control facilities and BMPs, conveyance systems, and water quality facilities required in this manual.

- APPENDIX B - MASTER DRAINAGE PLAN OBJECTIVES, CRITERIA AND COMPONENTS AND REVIEW PROCESS

  Describes in a general outline, the objectives, criteria, components and review process for Master Drainage Plans prepared for Urban Planned Developments and very large projects.

- APPENDIX C - SIMPLIFIED DRAINAGE REQUIREMENTS (Separate Detached Publication)

  Describes, the simplified drainage requirements for smaller projects that qualify for Simplified Drainage Review.

- APPENDIX D - CONSTRUCTION STORMWATER POLLUTION PREVENTION STANDARDS (Separate Detached Publication)

  Describes, the required measures to be implemented during construction to prevent discharges of sediment-laden runoff from the project site. It also describes effective management practices for spill control and chemical pollutants used during construction that may be needed to supplement the required erosion and sedimentation control measures,.

REFERENCE - Includes materials that are strictly **for reference only** and have not been adopted by the public rule adopting this manual. The applicant is responsible to insure that the most current materials are used in preparing a permit application.