CHAPTER ONE
Introduction

Pierce County is responsible for surface water management in unincorporated areas of the County. The County builds and maintains surface water management facilities. Property owners are charged a fee for surface water management services. Planning, design, permitting, construction, and maintenance of surface water management facilities is the responsibility of the Water Programs Division of the Pierce County Public Works and Utilities Department (Water Programs).

1.1 THE BASIN PLANNING PROGRAM

The Water Programs Division is preparing ten plans for drainage basins in the County. The purpose of the plans, referred to as basin plans, is to describe the actions needed to reduce flood hazards and protect water quality and wildlife habitat in each of the 26 drainage basins in Pierce County and to optimize the available funds for implementation. Water Programs will use the basin plans to set priorities within each basin and revise or supplement existing storm drainage programs outlined in the *Pierce County Storm Drainage and Surface Water Management Master Plan*, also known as the *Countywide Storm Drainage Plan*, prepared in 1991 (1). The plans also include advisory recommendations that may be useful to other departments or agencies.

The basin plans embody a new approach to surface water management. Historically, conventional stormwater drainage plans have had a single purpose, removal of excess water from city streets and away from properties as rapidly as possible. With this single purpose in mind, stormwater drainage solutions have tended to rely on piped systems and engineered channels that minimize resistance to water flow. But the conventional approach has significant disadvantages. The value of natural water bodies as fish and wildlife habitat and as a public amenity is often lost, as is the water body's ability to remove and break down pollutants. Rapid downstream flow of stormwater decreases opportunities for groundwater recharge that in turn leads to a reduction in stream flow during dry periods. Water Programs seeks to avoid these disadvantages by preparing basin plans that provide practical solutions to surface water problems without sacrificing environmental quality. The specific goals and objectives of the basin plans are described in the following section.

The basin plans also provide opportunities to ensure that actions taken to improve stormwater drainage are in compliance with federal and state laws and regulations. Of particular concern is compliance with two federal laws, the Clean Water Act and the Endangered Species Act. The requirements of both have changed since the earlier *Countywide Storm Drainage Plan* was prepared. In 1995, Pierce County was issued a National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit to discharge stormwater pursuant to the Clean Water Act. To comply with its NPDES MS4 permit the County developed and implemented a stormwater management plan, which protects water quality. The permits are up for renewal. The Washington Department of Ecology has developed a draft permit that is

expected to be issued for public comment in October, 2005, and finalized in March, 2006. In 1999, Puget Sound chinook salmon and bull trout were listed as threatened under the terms of the Endangered Species Act (ESA). The ESA prohibits any activities that kill, injure or harass the listed species, or damage or destroy their habitat.

The basin plans further the County's compliance with its federal Clean Water Act NPDES MS4 stormwater permit. The County's NPDES MS4 stormwater permit provides for and favors basin planning as a major strategy for water quality compliance. Specific recommendations in the basin plans will result in improved compliance for the County. Also, under the stormwater NPDES MS4 Phase II program that went into effect in March 2003, numerous Pierce County cities are required to address stormwater quality. The basin plans enable coordination with cities within and adjacent to the basin and provides for programs that can leverage both County and cities' compliance requirements.

In addition, the basin plans further the County's Endangered Species Act (ESA) compliance by identifying projects and programs intended to eliminate or reduce existing potential habitat issues that could cause "jeopardy" for protected species. The basin plans also provide information and recommendations that could be used for salmonid conservation and recovery planning. The information in the basin plans will support the County's efforts to utilize the Ecosystem Diagnosis and Treatment (EDT) method to determine the effects of environmental change on salmonid populations and assess the overall effectiveness of County actions on salmonid conservation and recovery.

The basin plans are intended to support Pierce County's upgrade to a Class 4 or better Community Rating under the Federal Emergency Management Agency's (FEMA) Community Rating System (CRS). Under that system, communities that conduct effective flood hazard management planning and develop infrastructure associated with that planning are eligible for discounts on flood insurance premiums for local residents. Some of the CRS Class 4 prerequisites are accomplished through the basin plans.

The basin plans also support the County's Hazard Mitigation Planning, which is required by FEMA (as a result of Congressional action) for local governments to retain eligibility for federal disaster relief funding (44 CFR, Section 201.1). The basin plans provide flood hazard planning information, which is consistent with FEMA's Hazard Mitigation Plan requirements.

Finally, Water Programs will submit the basin plans to the Washington Department of Fish and Wildlife (WDFW) for consideration as a programmatic memorandum of agreement or five-year maintenance approval agreement under RCW 77.55.100 which allows counties, at their request, to complete certain types of work without needing individual permits. In this instance, certain aspects of the basin plans would serve as an agreement with WDFW.

Work on each basin proceeds in three phases. In the first, or basin characterization phase, basic data that are needed for analysis and basin plan development will be acquired in the field or compiled from published and other data sources. A strategy for stakeholder involvement will also be developed. In the second phase, present and potential future flooding and environmental problems will be analyzed, and alternative solutions to the problems will be developed. Alternative solutions will be reviewed with stakeholders, preferred solutions selected, and a

recommended basin plan will be prepared for consideration by policy makers. Each basin plan will be implemented and its effectiveness monitored in a third phase of work.

This report documents the results of the first and second phases of planning work for the Key Peninsula-Islands Basin. It is designed to supplement and build on other planning programs in the basin.

1.2 GOALS AND OBJECTIVES

Pierce County developed goals and objectives for the basin planning program in order to provide direction and consistency to the basin plans developed.

1.2.1 Purpose

The purpose of the basin planning program is to create a comprehensive approach to reducing flood hazards, improving fish and wildlife habitat, and improving water quality throughout unincorporated Pierce County by updating the Pierce County Storm Drainage and Surface Water Management Plan.

1.2.2 Goals and Objectives

In this instance, *goals* refer to the desired outcomes of implementing the plan. The goals should remain the same in each basin plan. The *objectives* describe measurable indicators that the goals are being achieved and may be supplemented to reflect the unique character of a specific basin. The goals (shown in bold) and objectives (listed as bullets) of the basin planning program are described below.

Reduce flood hazards

- Incidents of property loss and repeat damage are reduced.
- Streams are not adversely impacted by flood events.
- Pierce County's standing under the Federal Emergency Management Agency Community Rating System is improved.
- New development is located outside of flood prone areas.

Improve fish and wildlife habitat

- Number of stream miles available for wild, native fish populations is increased.
- Population numbers of species listed as endangered or threatened under the Federal Endangered Species Act (ESA) are maintained or increased.
- Quality and quantity of available wetland, riparian, and upland habitat is improved.

Improve water quality

- State Surface Water Quality Standards (WAC 173-201a) are met or exceeded.
- Potential for impaired (303d listed) waterbodies is reduced.
- Pierce County is in compliance with it's National Pollutant Discharge Elimination System (NPDES) permit for stormwater by meeting permit terms and conditions.
- All commercial and recreational shellfish beds meet Department of Health water quality criteria for harvest.
- Risk of groundwater contamination is reduced.
- Rates of erosion are reduced.

Coordinated and responsible use of public resources

- Costs of maintaining stormwater facilities are reduced.
- Project value is favorable when measured against costs and benefits.
- Polls demonstrate that public awareness of flooding, habitat, and water quality issues has increased.
- Monitoring and enforcement programs demonstrate an increase in services per dollar spent.
- Basin plan implementation also implements elements of other Pierce County plans.
- Basin plan development and implementation include soliciting and incorporating input from other departments and agencies.

Influence location and methods for new development

- New development in flood prone, riparian, or significant habitat areas is prohibited.
- Low Impact Development techniques are widely used.
- Effective BMPs are identified and widely used.

1.3 THE KEY PENINSULA-ISLANDS BASIN PLAN

The Key Peninsula-Islands Basin Plan is a comprehensive guide to surface water management in unincorporated areas of four Pierce County Basins: Key Peninsula (Basin 10), Islands (Basin 17), Burley-Minter (Basin 25), and Fox Island (Basin 26). The plan focuses on multiple aspects of surface water management, including water quality, flooding, and habitat issues. The plan was developed as part of Pierce County's Basin Planning Program, discussed above in Section 1.1.

The purpose of the Key Peninsula-Islands Basin Plan is to ensure that available financial and staff resources are applied to the best capital facility projects and programs for comprehensive surface water management in the basin. To that end, the basin plan strategically identifies and evaluates surface water management issues in the basin and recommends a comprehensive suite of projects and programs to reduce flood hazards, improve water quality, improve fish passage, and improve riparian habitat throughout the Key Peninsula-Islands Basin. This plan complements the actions developed for the *Key Peninsula–Gig Harbor–Islands Watershed Characterization and Action Plan*, the result of a multi-year planning effort to identify projects for implementation by local stakeholder groups.

1.4 REPORT ORGANIZATION

Following this introduction, Chapter 2 provides a description of the regulatory context in which the basin plan was prepared including existing related planning programs. Chapter 3 describes stakeholder involvement in plan preparation. A description of existing physical, biological, and socioeconomic conditions in the Key Peninsula-Islands Basin is contained in Chapter 4. This chapter includes a detailed description of surface streams in the basin and their condition as recorded in the course of field surveys conducted in September and October of 2003.

Chapter 5 describes various problems in the basin including flooding, degradation of water quality and degradation of fish and wildlife habitat. Problems are analyzed and conceptual solutions developed in Chapters 6, 7 and 8. The development of basin plan alternatives is discussed in Chapter 9. Chapter 10 describes the recommended basin plan. Chapter 11 provides the Final Environmental Impact Statement (Final EIS), which analyzes the environmental impacts of the basin plan, as required by the State Environmental Protection Act.

NOTES:

(1) *Pierce County Storm Drainage and Surface Water Management Master Plan*, 1991, Montgomery Engineers