
Chapter 1

Introduction

The purpose of the Regional Wastewater Services Plan (RWSP) 2007 Annual Report is to describe King County's progress in implementing the major elements of the RWSP for the year 2007. This report is presented in response to the RWSP reporting policies outlined in Ordinance 15384 and King County Code 28.86.165.¹

Each chapter in this report describes accomplishments achieved in 2007 for major RWSP programs or projects. Chapters 2 through 9 also mention anticipated achievements for 2008. The subject matter of each chapter is as follows:

- Chapter 2 describes the progress made on the Brightwater Treatment System.
- Chapter 3 discusses the activities associated with the Conveyance System Improvement Program and summarizes the progress made on RWSP conveyance projects that are in design and construction.
- Chapter 4 provides an update on the Infiltration and Inflow (I/I) Control Program and reports progress made on the initial I/I reduction projects.
- Chapter 5 summarizes the key achievements of the Combined Sewer Overflow Control Program. It also describes efforts to improve water quality in the Lower Duwamish Waterway and the activities associated with the county's Sediment Management Program.
- Chapter 6 reports on completion of the Vashon Treatment Plant upgrades and progress on construction of the Carnation Treatment Plant.
- Chapter 7 discusses the efforts to prevent and control nuisance odors at the county's treatment plants and conveyance facilities.
- Chapter 8 describes the activities and achievements of the biosolids program.
- Chapter 9 provides information on reclaimed water and water conservation activities.
- Chapter 10 provides an update of the RWSP cost estimates through 2030.
- Chapter 11 reports on the Wastewater Treatment Division's water quality management and compliance activities.

The remainder of this chapter provides background on King County's wastewater treatment system and the RWSP.

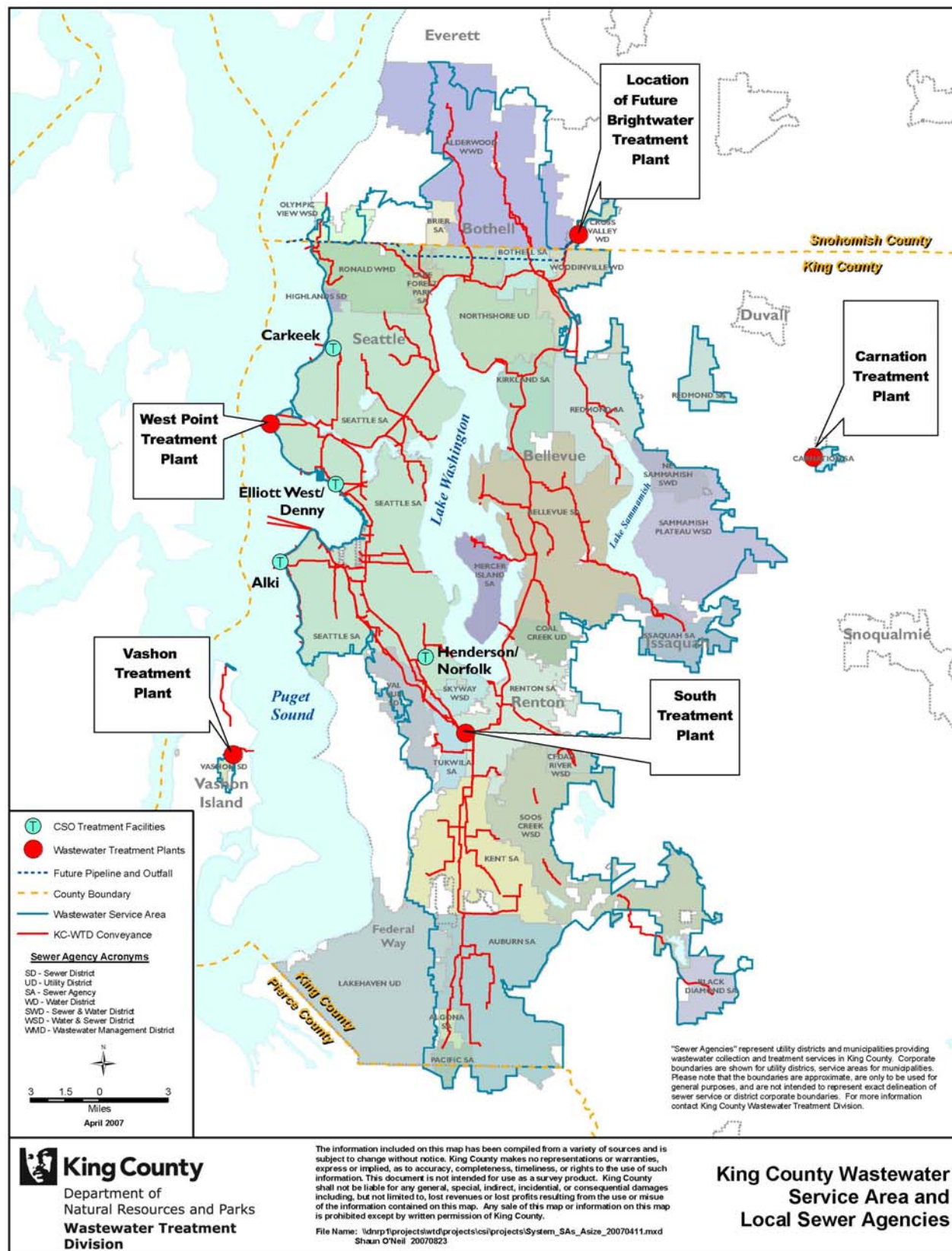
¹ Previous RWSP annual reports are available at <http://dnr.metrokc.gov/wtd/rwsp/library.htm>.

1.1 King County's Wastewater Treatment System

King County protects water quality and public health in the central Puget Sound region by providing high quality and effective treatment to wastewater collected from 17 cities, 16 local sewer utilities, and 1 Indian tribe. The county's Wastewater Treatment Division (WTD) serves about 1.4 million people within a 420-square-mile service area, which includes most urban areas of King County and parts of south Snohomish County and northeast Pierce County. King County's wastewater system (Figure 1-1) includes two large regional treatment plants (the West Point Plant in the City of Seattle and the South Plant in the City of Renton), two small treatment plants (one on Vashon Island and one in the City of Carnation), one community septic system (Beulah Park and Cove on Vashon Island), four combined sewer overflow (CSO) treatment facilities (Alki, Carkeek, Mercer/Elliott West, and Henderson/Norfolk—all in the City of Seattle), over 350 miles of pipes, 19 regulator stations, 42 pump stations, and 38 CSO outfalls. Construction on the Brightwater Treatment Plant, the system's third regional treatment plant, began in 2006 and is scheduled for completion in early 2011.

Visit WTD's Web site for more information on projects and programs:

<http://dnr.metrokc.gov/wtd/>



1.2 Regional Wastewater Services Plan

In the 1990s, flow estimates based on projected population growth estimates in King County's wastewater service area indicated that King County's regional wastewater treatment system would run out of capacity by 2010. To ensure the continuation of high quality and effective wastewater treatment services in the future, the county carried out an intensive planning effort, involving numerous elected officials, representatives from local sewer agencies, organizations, and individuals from around the region. The RWSP resulted from this effort and was adopted by the Metropolitan King County Council in November 1999, via Ordinance 13680.

The RWSP outlines a number of important projects, programs, and policies for King County to implement through 2030. It calls for building a new treatment plant, known as "Brightwater," to accommodate growth in the northern portion of the wastewater service area. The plan also calls for improvements to the regional conveyance system to meet the 20-year peak flow storm design standard and accommodate increased flows; improvements to reduce existing and future levels of infiltration and inflow (clean groundwater and stormwater) into local collection systems; and improvements to control CSOs so that an average of no more than one untreated discharge occurs per year at each CSO site by 2030.²

In addition, the RWSP identifies the need to expand the South Plant in Renton by 2029 to handle projected increased wastewater flows in the southern and eastern portions of the county's wastewater service area.

RWSP Annual Reporting Policies

The policies below were established via adoption of Ordinance 15384. They guide the preparation of the RWSP annual reports.

"A. Regional wastewater services plan annual report. The executive shall submit a written report to the council and RWQC in September each year until the facilities in the RWSP are operational. This report, covering the previous year's implementation, will provide the following:

- 1. A summary of activities for each major component of the RWSP, including treatment, conveyance, infiltration and inflow, combined sewer overflows, water reuse, biosolids and highlights of research and development projects underway and proposed for the coming year;*
- 2. Details on each active RWSP project in the capital budget, including a project summary, project highlights, project issues, upcoming activities, schedules, and expenditures summary including labor staff and miscellaneous services, a description of adjustments to costs and schedule and a status of the projects contract;*
- 3. A status of the odor prevention program, including a listing and summary of odor complaints received and progress on implementing odor prevention policies and projects;*
- 4. A summary of the previous year's results for the comprehensive water quality monitoring program;*
- 5. A review of the plan elements, including water pollution abatement, water quality, water reclamation, Endangered Species Act compliance, biosolids management and variability of quality over time, wastewater public health problems, compliance with other agency regulations and agreements, to ensure it reflects current conditions; and*
- 6. An update of anticipated RWSP costs through the year 2030."*

² The Washington State Department of Ecology (Ecology) regulates the level of CSO control based on the number of untreated CSO events that occur in a year. Ecology defines "the greatest reasonable reduction" in CSOs (RCW 90.48) as being "control of each CSO in such a way that an average of one untreated discharge may occur per year" (WAC 173-245-020).

Ordinance 13680 was codified in the King County Code as Chapter 28.86. Amendments to Ordinance 13680 and the King County Code Chapter 28.86 have been made since the RWSP's adoption. Amendments have included updates to the financial policies, new odor control policies for the county's existing regional treatment plants and facilities, a new section on reporting policies, and updates to the conveyance policies.

Visit the RWSP Web site for more information: <http://dnr.metrokc.gov/wtd/rwsp/rwsp.htm>

The entire contents of this RWSP 2007 Annual Report are available at <http://dnr.metrokc.gov/wtd/rwsp/library.htm>