
Chapter 1

Introduction

The Regional Wastewater Services Plan (RWSP) 2006 Comprehensive Review and Annual 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 a specific set of RWSP policies and how the policies were implemented in 2004–2006. Elements of the RWSP 2006 annual report, such as progress on RWSP projects in design or construction, are also included as appropriate.

The major topics of each chapter are as follows:

- Chapter 2 provides details on implementation of the RWSP treatment plant policies and information on design or construction activities in 2006 associated with the Brightwater, Carnation, and Vashon treatment plants.
- Chapter 3 provides details on implementation of the RWSP conveyance policies and includes information on activities in 2006 associated with Brightwater conveyance and other RWSP conveyance improvement projects in design or construction.
- Chapter 4 provides details on implementation of the RWSP infiltration and inflow (I/I) policies. It also describes the efforts in 2006 to implement the *Executive's Recommended I/I Control Program*.
- Chapter 5 provides details on implementation of the RWSP combined sewer overflow (CSO) control policies, including efforts to improve water quality in the Lower Duwamish Waterway and the activities associated with the county's Sediment Management Program.
- Chapter 6 provides details on implementation of the RWSP biosolids policies.
- Chapter 7 provides details on implementation of the RWSP water reuse policies.
- Chapter 8 provides details on implementation of the RWSP wastewater services policies.
- Chapter 9 provides details on implementation of the RWSP water quality protection policies. It also provides information on programs that support King County's water quality management efforts.
- Chapter 10 provides details on implementation of the RWSP wastewater planning policies and includes information on the planning assumptions used to determine flow projections and facility sizing.

¹ RWSP annual reports and comprehensive reviews are available on the Web at <http://dnr.metrokc.gov/wtd/rwsp/library.htm>

- Chapter 11 provides details on implementation of the RWSP environmental mitigation policies.
- Chapter 12 provides details on implementation of the RWSP public involvement policies.
- Chapter 13 provides details on implementation of the RWSP financial policies. The chapter also includes information on sewer rate projections and provides an update of the RWSP cost estimates through 2030.
- Chapter 14 provides details on implementation of the RWSP reporting policies.

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

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, including 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), one small treatment plant on Vashon Island, 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 335 miles of pipes, 19 regulator stations, 42 pump stations, and 38 CSO outfalls. Construction on two new treatment plants began in 2006: the Brightwater Treatment Plant, the system's third regional plant, scheduled for completion in 2010, and a smaller local treatment plant in the City of Carnation, scheduled for completion in 2008.

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

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

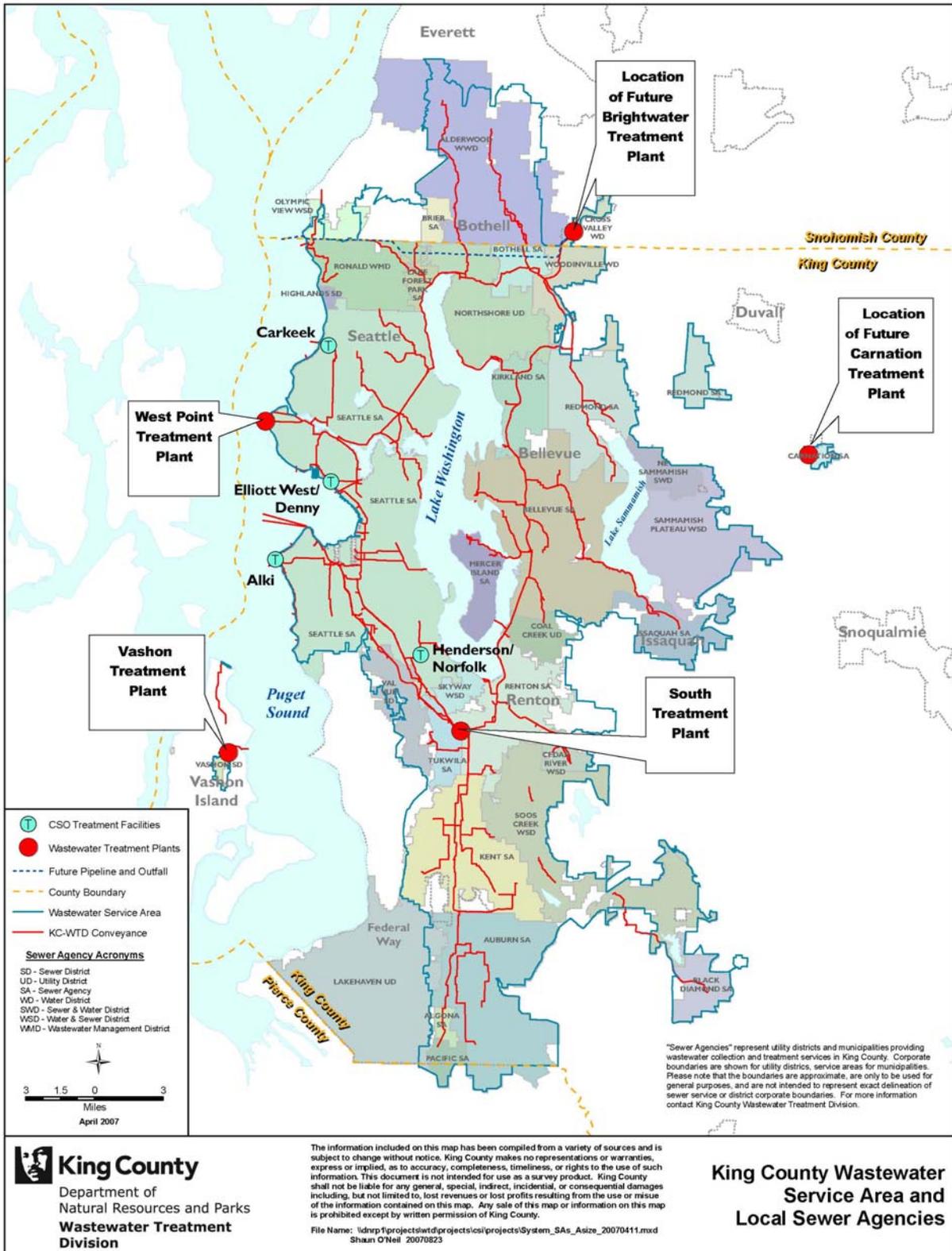


Figure 1-1. King County Wastewater Service Area and Facilities

1.2 Regional Wastewater Services Plan

In the 1990s, wastewater 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 (Figure 1-2). The RWSP calls for building a new treatment plant, now known as "Brightwater," to accommodate growth in the northern portion of the wastewater service area. The plan also calls for improvements to the county's 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

The RWSP also 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 Comprehensive Review Reporting Policies

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

B.1 The executive shall submit a written report to council and RWQC that provides a comprehensive review of the RWSP. The report will review the following:

- a. assumptions on the rate and location of growth, the rate of septic conversions and the effectiveness of water conservation efforts;*
- b. phasing and size of facilities; and*
- c. effectiveness of RWSP policies implementation, for infiltration and inflow reduction, water reuse, biosolids, CSO abatement, water quality protection, environmental mitigation and public involvement;*

2. The next comprehensive regional wastewater services plan review is due in September 2007. Subsequent reports will be prepared every three to five years as established by the council and RWQC following their review of the current report. The specific due date will be based upon the availability of necessary information, the completion of key milestones, and the time needed to collect and analyze data. The executive may recommend policy changes based on the findings of the report and other information from changing regulations, new technologies or emerging or relevant factors;

3. The comprehensive regional wastewater services plan review will include all elements of the RWSP annual report, replacing it for that year.

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).

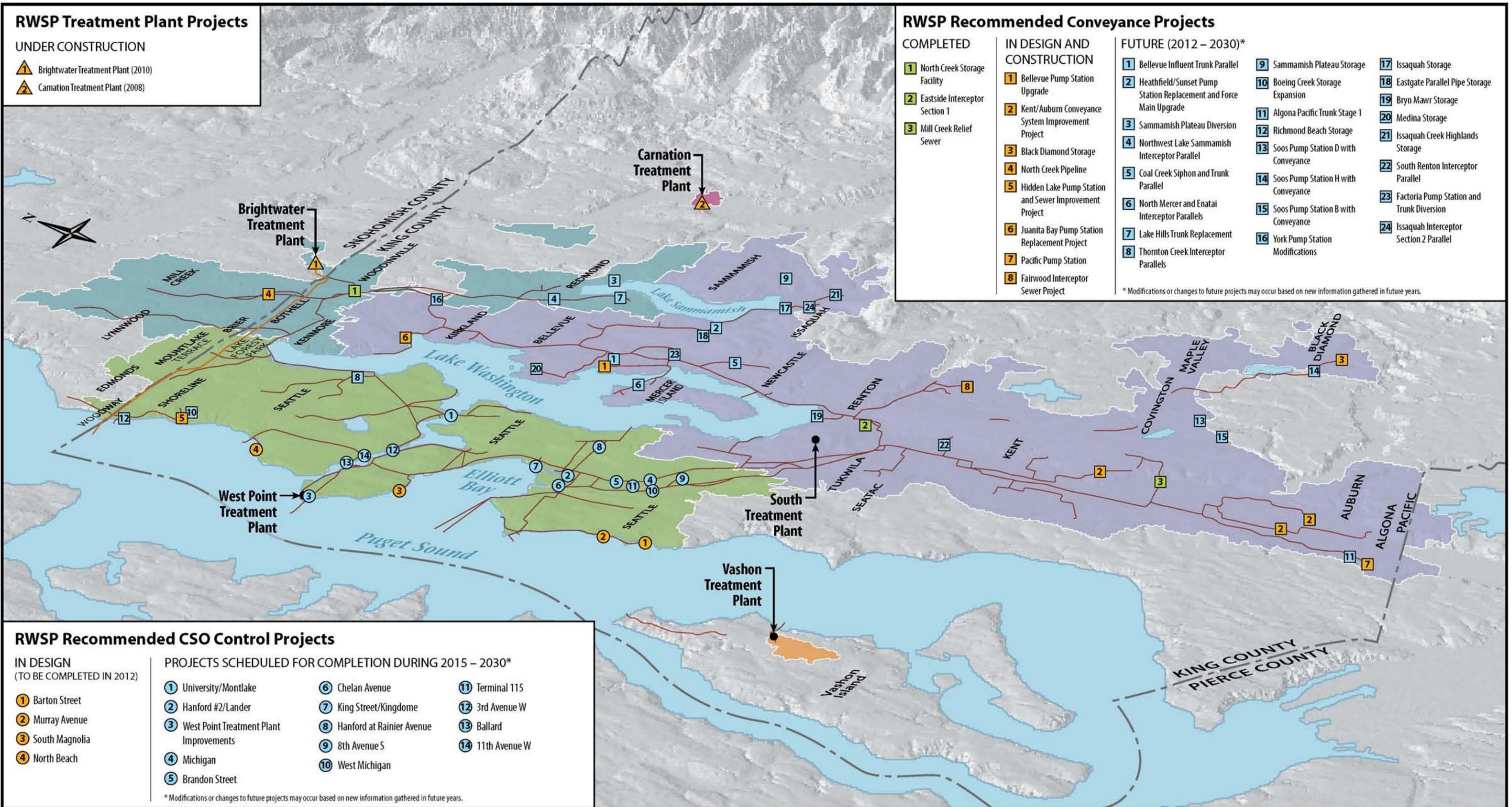


Figure 1-2.

Regional Wastewater Services Plan Projects and Service Areas (1999-2030) As Revised December 2006

- Brightwater Service Area
- West Service Area
- South Service Area
- Carnation Service Area
- Vashon Service Area

- Existing Wastewater Pipeline
- Brightwater Conveyance



Department of Natural Resources and Parks
Wastewater Treatment Division

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Data Sources/Hillshade: King County GIS Center
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The RWSP recognizes the value of wastewater. WTD's vision of creating resources from wastewater aligns with the RWSP policies that call for the beneficial use of biosolids and expanded production and use of reclaimed water.

Ordinance 13680 was codified in the King County Code (KCC) as Chapter 28.86. Amendments to Ordinance 13680 and the KCC Chapter 28.86 have been made since the RWSP's adoption.

The ordinances adopting amendments to the RWSP and KCC Chapter 28.86 are as follows:

- Ordinance 14219 was adopted by the King County Council in October 2001 and updated the RWSP financial policies
- Ordinance 14712 was adopted by the King County Council in July 2003; this ordinance amended the RWSP treatment plant policies to include new odor control policies for the county's existing and future wastewater facilities
- Ordinance 15384 was adopted by the King County Council in March 2006 and added a new section on reporting policies
- Ordinance 15602 was adopted by the King County Council in September 2006 and deleted RWSP policies that were fully implemented, added additional requirements for reports or studies, and clarified existing policy language; these amendments resulted from the Regional Water Quality Committee's review of the *2004 RWSP Update*

Visit the RWSP Web site for more information on this regional plan:

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

The entire contents of the *RWSP 2006 Comprehensive Review and Annual Report* are available on the Web at: <http://dnr.metrokc.gov/wtd/rwsp/library.htm>