



## King County

### Ron Sims

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KING COUNTY COUNCIL

September 25, 2008

The Honorable, Julia Patterson  
Chair, King County Council  
Room 1200  
C O U R T H O U S E

Dear Councilmember Patterson:

I am pleased to provide you with the 2007 Annual Report for the Regional Wastewater Services Plan (RWSP) prepared by the Wastewater Treatment Division (WTD) of the Department of Natural Resources and Parks. This report meets the reporting requirements outlined in Ordinance 15384 and King County Code 28.86.165 for RWSP annual reports.

WTD continues to implement the RWSP on schedule and has many successes to report. Implementation of the RWSP ensures our region will have sufficient wastewater capacity to accommodate population growth. Constructing the Brightwater Treatment System, making improvements to the regional conveyance system, reducing the levels of infiltration and inflow (I/I) in local collection systems, and local treatment plant improvements are important elements in providing this needed capacity. Major accomplishments achieved in 2007 to meet these capacity needs are listed below.

### Brightwater Treatment System

King County made substantial progress on the Brightwater project in 2007. The project is expected to be treating wastewater in May 2011. Activities in 2007 included construction and contracting for the treatment plant, conveyance tunnels, and mitigation projects, as well as site preparation and foundation work. Three tunnel boring machines were launched in 2007 for construction of the East and Central Tunnels of the Brightwater conveyance system. Other Brightwater conveyance work included award of construction contracts for the Marine Outfall and the Influent Pump Station. Brightwater mitigation activities in 2007 included construction of the North Habitat Area. This 40-acre area of the treatment plant site now includes native wildlife habitat, restored salmon streams, trails, and boardwalks.

### Conveyance System Improvements

WTD continues to make improvements to the regional wastewater conveyance system. Seven RWSP conveyance projects were in design or construction in 2007. In addition, the Conveyance System Improvement Program Update was completed in 2007. King County worked closely with the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) and individual local agencies to update this program. MWPAAC involvement was instrumental in formulating the approved recommendations and in helping to identify program needs, projects, and priorities to meet projected conveyance needs through 2050.

### Reducing Infiltration and Inflow

In 2007, King County began work with MWPAAC and individual local agencies to implement initial I/I projects to test the effectiveness of I/I reduction on a larger scale than previously done. A primary goal of these projects is to determine whether and under what conditions it is possible to cost-effectively remove enough I/I from the collection system to delay, reduce, or eliminate some otherwise needed regional conveyance system improvement projects. Activities during 2007 included completing interlocal agreements with host jurisdictions; selecting consultants for predesign and sewer system evaluation surveys (SSES); and starting SSES, predesign, and flow monitoring work.

### Local Treatment Plants

A great deal of progress was made in 2007 on improvements to the Vashon Treatment Plant and completion of the Carnation Treatment Facility. The Vashon Treatment Plant, which was brought online in late 2006, operated well during 2007. Carnation Treatment Facility construction was 75 percent complete by the end of 2007, and the facility began operating on May 5, 2008.

### Controlling Combined Sewer Overflows

Protecting water quality and complying with regulations are important elements of the RWSP. Implementation of the county's combined sewer overflow control program, water quality monitoring and source control programs, and commitment to ensuring King County's wastewater facilities are operated to meet or exceed permit requirements, are some of the methods outlined in the RWSP to help protect our region's water quality. A summary of achievements made on controlling combined sewer overflows (CSOs) and water quality management and compliance follows.

King County continued to make progress on controlling CSOs in 2007. Project planning and design for the four Puget Sound Beach CSO control projects were begun, and WTD started a pilot program to assess CSO treatment technologies for future CSO control projects.

Progress continued in 2007 on the county's sediment management plan. Design was completed and remediation work began on the Denny Way sediment cleanup. Work also began on cleanup of the Hanford/Lander CSOs as part of Harbor Island Superfund project. In addition, the draft remedial investigation for the Lower Duwamish Waterway Superfund site was released in late 2007.

#### Water Quality Management and Compliance

King County regularly monitors major marine and fresh waters and wastewater effluent to meet RWSP water quality and protection policies and to protect public health. The 2007 monitoring results indicate that the quality of marine and fresh waters in King County is fair to good, with a slight decrease in quality from 2006 results in some localized areas.

In 2007, both the South and West Point plants earned the National Association of Clean Water Agencies Gold Peak Performance Award for achieving 100 percent National Pollution Discharge Elimination System permit compliance for an entire calendar year. In addition, both plants received the Platinum Peak Performance Award for multiple years of consecutive gold performance. The Vashon plant experienced no permit violations in 2007—the first full year of operation of the upgraded plant.

#### Biosolids Program and Reclaimed Water

The RWSP provides guidance on finding beneficial uses for byproducts from wastewater treatment—biosolids and digester gas from the solids treatment process and reclaimed water from the liquids treatment process. Achievements made to create resources from wastewater in 2007 are listed below.

##### Biosolids

Approximately 108,000 wet tons of biosolids were produced in 2007, all of which were recycled as soil amendment for forestry and agricultural applications and to make compost. King County also continued to use energy-rich methane gas produced during solids treatment at the West Point and South plants to produce power and heat for plant processes and buildings.

##### Reclaimed Water

King County continues to produce and use reclaimed water at the West Point and South plants. The plants used about 294 million gallons of reclaimed water for landscape irrigation, internal plant reuse, and other non-drinking purposes in 2007. Work was under way in 2007 to install reclaimed water pipelines west of Brightwater as part of the Brightwater conveyance tunnel construction, and planning, design, and permitting took place for the distribution pipes that will serve users south of the plant. King County completed a reclaimed water feasibility study to meet the provisions outlined in RWSP Water Reuse Policy-2.

#### Odor Control Program and RWSP Cost Estimates

The RWSP reporting policies also call for including in annual reports a status report on the county's odor control program and an update on anticipated costs to implement RWSP programs and projects through 2030. A summary on each of these items follows.

##### Odor Control Program

Progress was made in 2007 at many facilities to meet the RWSP's goals to prevent and control odor, including the West Point and South plants. Site preparation for the construction of Brightwater odor control facilities occurred and the construction contract for these facilities was awarded in 2007. Progress was also made on several of the projects that have been identified to improve odor control in the county conveyance system. Two of the projects,

Hidden Lake Pump Station and University Regulator Station, are scheduled to be complete in 2008.

**RWSP Cost Estimates**

In accordance with the RWSP reporting policies, updated cost estimates are included in the 2007 Annual Report. The 2007 cost estimate for implementing the projects and programs associated with the RWSP through 2030 is approximately \$3.26 billion, an increase of about \$57 million, or 1.8 percent, from the 2006 cost estimate. The majority of this increase is attributed to increases in the cost of materials and commodities and modifications needed for certain projects.

If you have any questions about the RWSP 2007 Annual Report, or would like a briefing on its contents, please feel free to contact Christie True, Director of the Wastewater Treatment Division of the Department of Natural Resources and Parks, at 206-684-1236, or Laura Wharton, Comprehensive Planning Supervisor in the Wastewater Treatment Division, at 206-684-1238.

Thank you for your review of this report. I look forward to continuing to work with the King County Council and the Regional Water Quality Committee to implement this important regional effort.

Sincerely,



Ron Sims  
King County Executive

Enclosure

- cc: King County Councilmembers  
ATTN: Ross Baker, Chief of Staff  
Saroja Reddy, Policy Staff Director  
Anne Noris, Clerk of the Council  
Frank Abe, Communications Director  
Regional Water Quality Committee Members  
Bob Cowan, Director, Office of Management and Budget  
Theresa Jennings, Director, Department of Natural Resources and Parks (DNRP)  
Christie True, Division Director, Wastewater Treatment Division (WTD), DNRP  
Laura Wharton, Supervisor, Comprehensive Planning, WTD, DNRP