

EXECUTIVE SUMMARY

It has been almost one year since King County issued its *Draft Regional Wastewater Services Plan (RWSP)*. Much has happened between then and now to move us closer to a final plan for managing the wastewater flows that our region's growing population will generate in the next 40 years. The major activity during this year was to go into the community and hear from citizens about services they

are willing to support. This was no small effort. The choices are complex, involving a number of issues. The King County Executive carefully weighed the public's views and is now ready to recommend a plan to the King County Council—a plan that reflects a strong commitment to protecting our water resources so that future generations can enjoy them as much as we do.

What Are the Issues?

What Are the Choices?

The King County wastewater system serves 1.3 million residents within a 420 square-mile service area. A total of 255 miles of pipes, 38 pump stations, and 22 regulator stations move wastewater from our homes and businesses to two treatment plants. Treated and disinfected liquid effluent leaves the plants through outfalls to Puget Sound. Biosolids, the organic by-product of the treatment process, are recycled for agricultural and forestry uses.

Choices made in the past have consistently favored building and maintaining a regional system that protects public health and maintains the quality of our region's water bodies. The County provides a high level of treatment—secondary treatment—at both treatment plants and has implemented an aggressive program to reduce the amount of untreated wastewater that overflows into nearby water bodies. This level of service costs money. And it will cost even more money to build new facilities and expand existing facilities to serve our customers in the years to come.

The King County wastewater system serves 1.3 million residents within a 420 square-mile service area.

During the planning process, we gave citizens an opportunity to tell us what level of service they would like us to provide in the future. The choices were presented in the draft RWSP as options that could be adopted under four possible strategies. Two of the strategies proposed expanding the capacity of the two existing treatment plants—the West Treatment Plant in Seattle and the East Treatment Plant in Renton;¹ the other two strategies propose building a new treatment plant (North Treatment Plant) in north King County or south Snohomish County. Each strategy and option presents difficult and complex issues to consider:

- **How much can we expand our existing treatment plants?** And when do we want to expand them? The West Treatment Plant has very limited room for expansion. Under both two-plant strategies, this plant would be expanded to its maximum capacity. The East Treatment Plant would have more room for expansion. In considering expansion, should we allow flexibility for meeting demands beyond our 40-year planning window?
- **How do we serve the fastest growing parts of the service area?** It looks as if the fastest rate of growth will occur in the north

¹The word "capacity" used throughout this document refers to the volume of average wet weather flows that the treatment plant or conveyance system is designed to handle. Average wet weather flows are wastewater flows that occur during wet months but not during storms.

and northeastern parts of the service area. Should we build more pipes to convey flows from these parts to existing treatment plants? Or should we build a new plant to serve these areas?

- **What levels of flow should we plan for?** In addition to the wastewater that comes from our homes and businesses, rain water (stormwater) enters wastewater pipes through sources such as roof drains and leaking pipes (inflow and infiltration).
- **What is the appropriate level and timing to control combined sewer overflows?** In parts of Seattle, sanitary sewers collect both stormwater and wastewater. During storms, flows in these pipes may exceed the capacity of the conveyance pipes and treatment plants and then discharge untreated combined sewer overflows (CSOs) to local water bodies. Should measures be taken to reduce the amount of stormwater entering the sewer system to reduce the need to expand treatment plant and conveyance pipes in the future?
- **How much of a role should reclaimed water play in the region's future water supply picture?** We may choose to use reclaimed water from our treatment plants not only for irrigating lawns and golf courses, but also to add indirectly to existing water supply. Scientific studies are needed to understand how reclaimed water can be used to supplement water supply without impacting human and environmental health. What should we do now to prepare for a future in which reclaimed water may be an important part of our region's water supply?
- **How much do we value water quality?** The four strategies in the draft RWSP would meet or exceed state and federal standards for water quality. Do we need to go further?



Rapid population growth in the Puget Sound region requires timely decisions about managing wastewater.

The main features of the plan are building a new North Treatment Plant, expanding the East Treatment Plant, and building a new outfall into Puget Sound.

What Are the Recommendations?

The majority of the community expressed significant concern for protecting water quality and public health. They are willing to pay more to prevent water quality problems as long as costs and other impacts are distributed equitably. With few exceptions, they ranked CSO control as a top priority so that water bodies can be clean year round for everyone to enjoy. Reducing inflow and infiltration and continuing to recycle biosolids was also rated highly.

After reviewing citizen preferences and available technical and financial data, the Executive decided on a strategy and accompanying options that he could recommend with confidence to the King County Council. The *Executive's Preferred Plan* reflects our region's strong commitment to preserving water quality and recycling our resources in a cost-effective manner. The main features of the plan are building a new North Treatment Plant, expanding the East Treatment Plant, and building a new outfall into Puget Sound.

The plan includes other important features:

- Making improvements to parts of the conveyance system, including pipes and pump stations, to serve treatment plants and to handle additional flows in the system

- Pursuing an aggressive CSO program, including building CSO storage tanks and treatment plants, to reduce discharges from each CSO outfall to meet the state standard of one overflow event per year on average
- Implementing a program that includes financial incentives that encourage local agencies to reduce inflow and infiltration into the King County wastewater system
- Continuing to recycle biosolids and finding ways to make biosolids recycling even more efficient
- Providing opportunities to reuse highly-treated water from the plants and continuing to study ways to economically provide reclaimed water by conducting pilot and demonstration projects, investigating stream-flow augmentation and groundwater recharge, and exploring the idea of building satellite plants to provide reclaimed water to local communities
- In addition to monthly rates, we charge new customers directly for connection to the system—a charge termed a “capacity” or growth charge. The state imposes a limit on these charges. We propose to continue to work with the state to allow us more flexibility in applying these charges so that growth pays its appropriate share of improvements to the system

After the King County Council adopts a final plan by the end of 1998, we expect to begin implementing the plan in 1999 and continue through at least the year 2030. Much can happen in such a long stretch of time—regulations can change and more information can surface. We will monitor conditions and adapt the plan as needed throughout the course of the implementation period.

How Much Will the Plan Cost and Who Will Pay for It?

The costs for each major component of the *Executive’s Preferred Plan* are shown in table 1.

Customers in King and Snohomish Counties connected to the regional system have paid for wastewater services in the past. This plan assumes that they will do so in the future. But the good news is that, even though the costs for the

Treatment	\$262,000,000
Conveyance	\$489,000,000
CSO	\$230,000,000
Biosolids	\$85,000,000
Water Reuse	\$20,000,000
TOTAL	\$1,086,000,000

Note: All numbers are calculated in 1998 net present value. The total includes the net present value of new capital facilities and additional operating expenses stemming from these new facilities

recommended improvements are high, monthly rates are predicted to remain relatively stable. The County will sell revenue bonds each year to obtain the capital to pay “up front” for the projects and then will spread the repayment of the bonds over a 35-year period. Currently, we charge local agencies a monthly wholesale rate of \$19.10 per customer. These agencies, in turn, bill their customers. Monthly rates in 1998 dollars without considering inflation are predicted to rise slightly in the early years of the implementation period but will become even lower than today’s rate toward the end of the period. This lower rate is predicted to occur because the costs will be spread out over a larger population and because repayment costs for current debts will decrease.

The average monthly rate necessary to support the plan over the period 1999-2015 is \$19.92 in today’s dollars. Because of the debt retirement and growth of customers noted above, the average monthly rate needed over the period 1999-2030 would be \$18.97 in today’s dollars although actual rates will be higher due to inflation.

Finally, these costs and rates are based on planned improvements to the wastewater system only. Should additional costs be incurred, for example as part of a salmon recovery plan in response to the proposed listing under the federal Endangered Species Act (ESA), costs and rates will be correspondingly higher.