

June 18, 1997  
clerk 6/19/97  
ko 7/10/97

Introduced By: Christopher Vance

Proposed No.: 97-390

ORDINANCE NO. **12817**

AN ORDINANCE determining the monetary requirements for the disposal of sewage for the fiscal year beginning January 1, 1998 and ending December 31, 1998; setting the sewer rate for the fiscal year beginning January 1, 1998 and ending December 31, 1998; repealing Ordinance No. 11377, Section 1, as amended and replacing K.C.C. 4.90.010; approving the amount of the sewage treatment capacity charge for 1997 and amending Ordinance 11398 and K.C.C. 28.84.055.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. MONETARY REQUIREMENTS FOR THE DISPOSAL OF SEWAGE; ESTABLISHMENT OF THE SEWER RATE FOR THE FISCAL YEAR BEGINNING JANUARY 1, 1998 AND ENDING DECEMBER 31, 1998. The council hereby determines the monetary requirements for the disposal of sewage as follows:

Administration, operating, maintenance repair and replace (net of other income);  
\$57,110,000.

Establishment and maintenance of necessary working capital reserves: \$1,714,705.

Requirements of revenue bond resolutions (not included in above items and net of interest income): \$93,571,750.

TOTAL: \$152,396,455.

SECTION 2. Ordinance No. 11377, Section 1, as amended and K.C.C. 4.90.010 is each hereby repealed and replaced with the following:

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A. Having determined the monetary requirements for the disposal of sewage, the council also hereby adopts a 1998 sewer rate of \$19.10. Prior to July 1, 1998, a copy of this ordinance shall be delivered to each agency having an agreement for sewage disposal with King County.

SECTION 3. SEWER RATE FOR 1999. The council anticipates sewer rate stability through the end of fiscal year 1999.

SECTION 4. Ordinance 11398 and K.C.C. 28.84.055 is each hereby amended as follows:

The amount of the 1994 metropolitan sewage facility capacity charge adopted by ordinance 11034, Section 5, part O shall be \$7.00 per month per residential customer or residential customer equivalent for 15 years.

The amount of the 1995 metropolitan sewage facility capacity charge adopted by ordinance 11034, Section 5, part O shall be \$7.00 per month per residential customer or residential customer equivalent for 15 years.

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1 The sewage treatment capacity charge shall be seven dollars (\$7.00) per month per  
2 residential customer or equivalent for fifteen years for sewer connections occurring  
3 between and including January 1, 1996 and December 31, 1996.

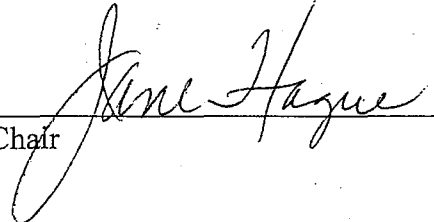
4 APPROVAL OF AMOUNT OF SEWAGE TREATMENT CAPACITY CHARGE  
5 FOR 1997. The amount of the sewage treatment capacity charge established by Ordinance  
6 11034, Section 5, part O shall be seven dollars (\$7.00) per month per residential customer

1 or equivalent for fifteen years for sewer connections occurring between and including  
2 January 1, 1997 and December 31, 1997.

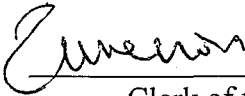
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4 INTRODUCED AND READ for the first time this 23<sup>rd</sup> day of  
5 June, 1997.

6 PASSED by a vote of 13 to 0 on this 28<sup>th</sup> day of July,  
7 1997.

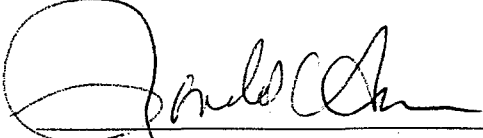
8 KING COUNTY COUNCIL  
9 KING COUNTY, WASHINGTON

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Chair

ATTEST:

  
Clerk of the Council

APPROVED this 8 day of August, 1997

  
King County Executive

Attachments: Water Quality Fund: 1997 - 2001 Financial Forecast  
King County's Sewage Treatment Capacity Charge: 1996-2000

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**WATER QUALITY FUND  
1997-2002 FINANCIAL FORECAST**

**KING COUNTY**  
**Department of Natural Resources**  
*Wastewater Treatment Division*

**INTRODUCTION**

This document presents a multi-year financial plan and cash flow forecast for the period from 1997 through 2002 as required by the Water Quality Program Financial Policies. It is intended that this Forecast will be used by the Metropolitan King County Council (the Council) as the basis for policy decisions including the setting of the 1998 sewer rate and the preparation of the annual budget.

*Submitted by:*

Ron Sims                      King County Executive

*Prepared by the following:*

Pam Bissonette	Director, Department of Natural Resources
Jim Kramer	Deputy Director, Department of Natural Resources
John Bodoia	Chief Financial Officer, Department of Natural Resources
Maureen Welch	Acting Manager, Wastewater Treatment Division
Nigel Lewis	Senior Financial Analyst, Finance Department
Grace Harris	Finance Services Supervisor, Wastewater Treatment Division
Dennis Barnes	Senior Financial Analyst, Wastewater Treatment Division
Nick Carnevali	Senior Financial Analyst, Wastewater Treatment Division

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*EXECUTIVE SUMMARY***1998 and 1999 Sewer Rate Proposal**

The King County Wastewater Treatment Program continues to provide rate stability to regional sewer ratepayers following a period of large annual increases ending in 1996. The program maintains the King County Sewer Rate at \$19.10 for 1998 for the third consecutive year, and proposes this same rate for 1999. The projected 1999 rate is \$1.08 lower than the prior year's Forecast. This was accomplished as a result of implementation of reductions totaling \$3.5 million effective January 1, 1997, and depositing moneys in excess of the minimum target balances of \$5 million accumulated at the end of 1996 in a rate stabilization reserve. This reserve mechanism allows the Executive to be able to provide ratepayers a period of stability during 1996-1999.

In May, 1997, the Regional Wastewater Services Plan (RWSP) was released for public review and comments. The RWSP addresses capacity needs to meet projected growth through 2030 and to comply with regulatory mandates. In addition, the RWSP identifies needed capital expenditures beyond 1999 when most of the projects that comprise the current Comprehensive Plan are expected to be completed. Although the Plan is not expected to be adopted until mid-1998, the projected capital expenditures for 1999 and beyond in this Forecast are based upon estimates for the system configuration currently designated in the RWSP as Service Strategy 1 for financial planning purposes.

This rate proposal continues with the Executive's commitment to depositing moneys in excess of the minimum target fund balance of \$5 million into a rate stabilization reserve.

**Basis for Rate Proposal**

Five factors have contributed to the program's ability to maintain the sewer rate at a \$19.10 level for both 1998 and 1999. These include:

**1. Savings**

Implementation of a multiple year rate program required reductions in the operating program totalling approximately \$3.5 million. These reductions were taken in three areas of the program: forty full-time equivalents and nine extra help positions were eliminated resulting in a savings of \$1,062,164, and approximately \$2 million in reductions were taken in Wastewater cost/volume program elements of chemicals, electricity, and the biosolids handling program. Another approximate \$500,000 was reduced in professional services allocations. These reductions were formally implemented January 1, 1997.

**2. Rate Stabilization Reserve**

The Reserve was established in conjunction with establishing the 1997 King County Sewer Rate in June, 1996, with the purpose of achieving rate stability on a multiple year basis beginning with the 1998 rate. This Forecast identifies that use of such a reserve is feasible and necessary to achieve a



\$19.10 rate for 1998. The projected reserve amount resulting from the 1997 program year is \$16 million and this will be dedicated to the funding of capital expenditures in 1998 and 1999.

### **3. Reduced Capital Expenditures**

Capital expenditures during the 4-year period from 1996 through 1999 are projected to be substantially lower than shown in the 1996-2001 Financial Forecast (See discussion on page 7 under CAPITAL PROGRAM.). Allowing for an associated delay in the receipt of capital grant revenues, the cumulative effect of reduced capital expenditures on the 1998 and 1999 rates is approximately \$.20 and \$.60, respectively. One significant factor behind this decline in projected capital spending is the use of an 85% capital accomplishment rate assumption for rate-setting purposes for the years 1998 and 1999. In years 2000-2002, the amounts have been equally added back.

### **4. Debt Refinancing**

During 1996, favorable interest rates allowed for the refinancing of \$131 million in outstanding sewer revenue bonds. This financing coupled with interest rates lower than last year's projections has lowered the targeted 1999 sewer rate by approximately \$.30.

### **5. Capacity Charge**

Increasing the maximum allowed for the capacity charge from the current rate of \$7.00 to \$10.50 in 1998 has lowered the 1999 sewer rate by approximately \$.10. (It should be noted that City of Seattle capacity charge payments towards combined sewer overflow control, which are indexed to the capacity charge, will also increase.)

### **Future Rates**

The projected sewer rates for the balance of the Forecast period are shown in the chart below. It shows that rates are expected to increase between 2000-2002 in total by \$2.59.

It must be noted, however, that the need for these projected increases is largely based on the assumed ramp-up of the capital expenditures associated with the system configuration selected under the RWSP. Any lowering or delay of such costs would act to moderate the rates needed for the period 2000-2002. These increases could also be mitigated if financial markets allow the additional refunding of the system's existing debt at lower interest rates.

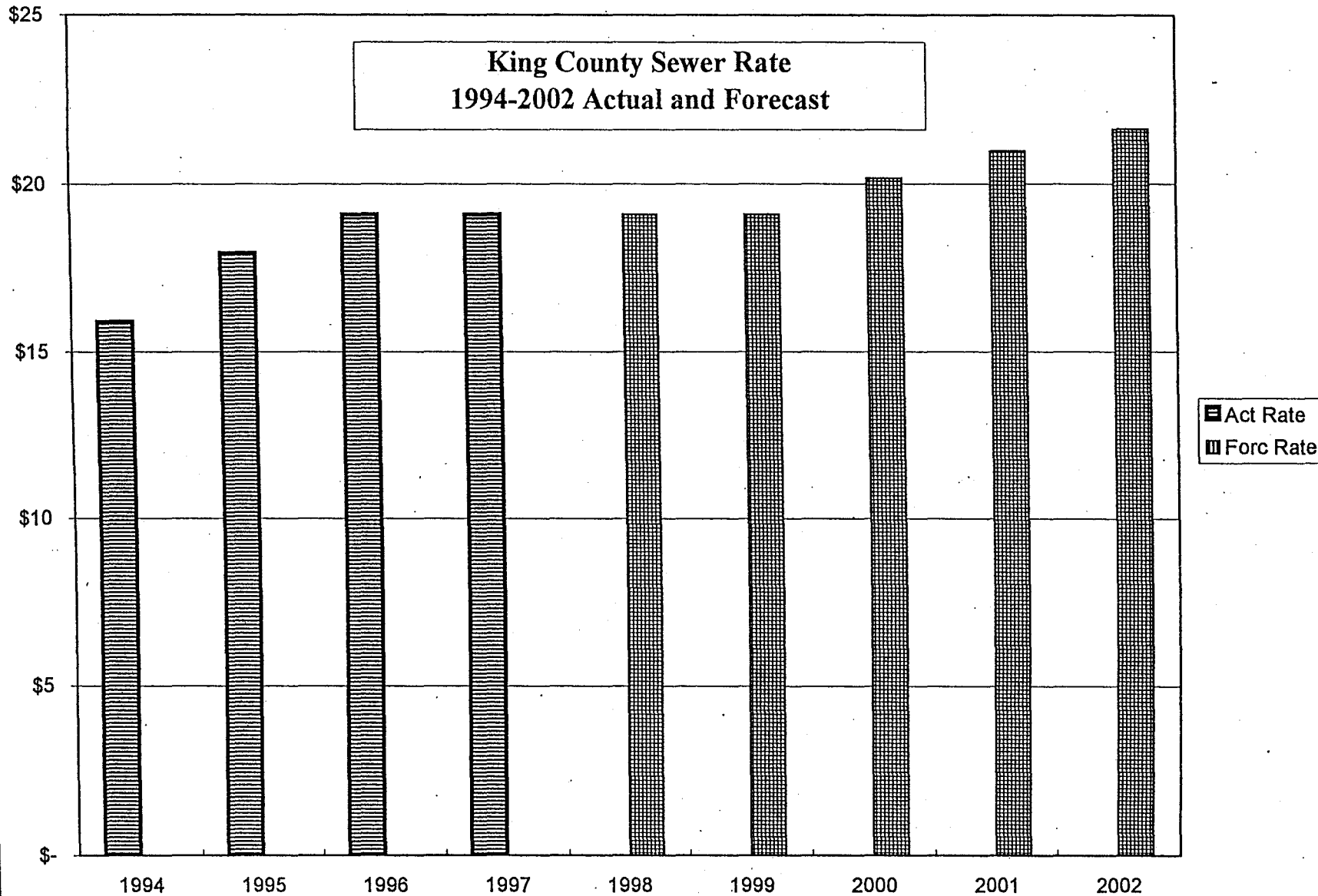
(000 omitted)	WASTEWATER TREATMENT FUND							Totals
	1996	1997	1998	1999	2000	2001	2002	
OPERATING FUND	Actual	Projected	Proposed					
CUSTOMER EQUIVALENTS	672.53	673.94	678.75	685.54	693.70	701.95	710.30	
RATE	\$19.10	\$19.10	\$19.10	\$19.10	\$20.45	\$21.10	\$21.69	
BEGINNING OPERATING FUND	2,676	2,899	3,383	3,636	3,723	3,833	3,975	
OPERATING REVENUE:								
Customer Charges	153,893	154,466	155,570	157,125	170,249	177,751	184,894	1,000,055
Investment Income	10,868	7,084	4,537	6,758	9,430	7,341	8,525	43,675
Capacity Charge	4,357	4,250	4,796	5,651	6,679	7,719	8,772	37,866
City of Seattle CC Benefit	660	888	1,070	1,044	1,178	1,388	1,641	7,209
Other Income	9,930	9,591	11,474	10,670	10,975	11,218	11,098	65,026
TOTAL OPERATING REVENUES	179,707	176,279	177,447	181,248	198,511	205,418	214,928	1,153,831
OPERATING EXPENSE	(67,645)	(72,715)	(74,450)	(76,652)	(79,497)	(82,038)	(83,939)	(469,292)
DEBT SERVICE REQUIREMENT	(78,234)	(75,873)	(78,487)	(83,397)	(95,213)	(98,727)	(104,766)	(536,463)
DEBT SERVICE COVERAGE RATIO	1.43	1.36	1.31	1.25	1.25	1.25	1.25	
OPERATING RESERVE CONTRIBUTION	(223)	(484)	(254)	(87)	(110)	(142)	(127)	(1,203)
SUBORDINATED DEBT SERVICE	(6,464)	(8,951)	(8,951)	(10,301)	(10,301)	(11,651)	(11,651)	(61,806)
TRANSFERS TO CAPITAL	(27,140)	(18,256)	(15,305)	(10,811)	(13,390)	(12,860)	(14,445)	(85,067)
OPERATING BOND RESERVE	2,899	3,383	3,636	3,723	3,833	3,975	4,102	

#### CONSTRUCTION FUND

BEGINNING FUND BALANCE	32,898	49,839	20,566	8,591	5,366	4,967	4,989	
REVENUES:								
Bond Proceeds	0	0	75,000	57,000	143,680	47,989	78,649	402,318
Short Term Borrowing (net)	65,000	35,000	0	30,000	0	30,000	0	95,000
Grants	31,374	28,688	21,097	17,893	22,720	28,152	23,282	141,832
Other	4,319	4,130	4,562	3,522	3,255	3,286	3,385	22,140
Transfers From Operating Fund	27,140	18,256	15,305	10,811	13,390	12,860	14,445	85,067
TOTAL REVENUES	127,833	86,073	115,964	119,226	183,045	122,287	119,761	746,357
CAPITAL EXPENDITURES	(110,567)	(125,473)	(126,488)	(121,181)	(170,073)	(117,649)	(112,927)	(773,771)
DEBT ISSUANCE COSTS	(325)	(175)	(1,500)	(1,290)	(2,874)	(1,110)	(1,573)	(8,521)
BOND RESERVE TRANSACTIONS	0	10,301	49	0	(10,498)	(3,506)	(5,746)	(9,399)
AMOUNTS TO RATE STABILIZATION	(44,839)	(15,566)	(3,591)	0	0			(19,156)
ENDING FUND BALANCE	5,000	5,000	5,000	5,366	4,967	4,989	4,504	
CONSTRUCTION FUND RESERVES-Note 1								
Revenue Bond Reserve	60,706	50,405	50,356	50,356	60,853	64,359	70,106	
Bond Contingency Reserve	2,000	2,000	2,000	2,000	2,000	2,000	2,000	
Rate Stabilization	44,839	15,566	3,591	0	0	0	0	
Mountain To Sounds	4,337	2,947	0	0	0	0	0	
West Point Settlement	3,620	3,828	4,048	4,281	4,527	4,788	5,063	
Shoreline Improvement	392	0	0	0	0	0	0	
TOTAL RESERVES	115,894	74,746	59,995	56,637	67,381	71,147	77,169	

Note 1: The use of these reserves is restricted by bond covenant or consent decrea.

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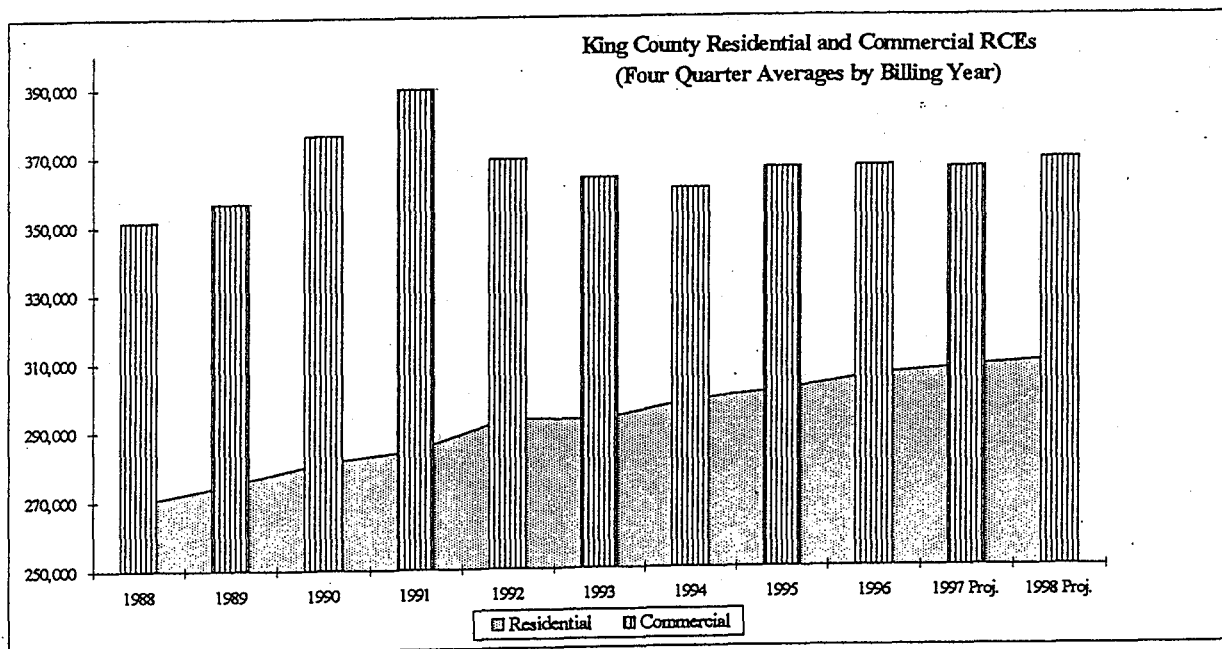
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## PLANNING ASSUMPTIONS: REVENUE

### Residential Customers and Residential Customer Equivalents (RCEs)

Sewer system billings to the Component Agencies are based on the number of single-family households (residential customers) and on the water consumption of other users such as factories, offices, and apartment complexes (commercial customers). Water consumption for commercial customers is converted to residential customer equivalents (RCEs) using the value of 750 cubic feet and then averaged over four quarters. Each 750 cubic feet unit of water consumption therefore comprises one RCE.

While the number of residential customers typically exhibits steady growth, the RCEs actually declined during the period 1992-1994 (see chart). Although it is difficult to measure each factor's contribution, the decline in RCEs was attributable to a combination of drought conditions, reduced activity levels at many local companies especially those that are relatively heavy water users, and the continuing introduction of cost-saving water conservation devices.



Another factor that may have contributed to the decline was a change made in Metro's billing methodology in 1993 that effectively shifted more of the system costs to these large users from households (the previous 900 cubic feet standard used for residential equivalency was revised to the current 750 cubic feet standard described above).

Economists project the region's population growth to be 2.0% and 2.5% respectively in 1997 and 1998. Based on projections of regional economic growth over the next few years, RCEs are expected to grow at about 1.0% annually for 1998 and through 2002. The 1996 year-end sewer revenue results were 0.2% over the published 1996-2001 Forecast, which is consistent with recent years' positive revenue variances..

Based on these assumptions, total residential customers and RCEs of 673,937 and 678,750 are projected for 1997 and 1998 respectively. This compares to the estimate of 670,400 and 677,104 that were used for both of these years in the 1997 Financial Forecast.

### Capacity Charge

The projection of capacity charge revenues is based on the assumption that the amount of the charge will be increased from \$7.00 to \$10.50 per month for new customers beginning 1998. This is the maximum amount currently permitted by state law, which provides that new sewer hook-ups pay this charge for a period of 15 years.

The assumptions and data underlying the increase to \$10.50 were recently reviewed as a result of recommendations included in a report by the King County auditor. Specifically, this review was undertaken as recommended using updated information regarding costs of excess capacity in sewage treatment facilities and growth projections. The results of this review were presented to the King County Council in May and June, 1996, and confirm the basis for the increase to \$10.50.

The adoption of a \$10.50 rate by the Council would not have a substantial near-term revenue impact since it would only be applied to new sewer hookups. Projected new revenues total \$200,000, and \$485,000 for the years 1998 and 1999. The majority of capacity charge revenues would still be derived from existing accounts billed at the current \$7.00 rate. The RWSP baseline costs assume the \$10.50 rate will remain constant through 2035.

### Capital Grants

No significant new capital grants beyond those already identified in the 1997 Budget appropriation are anticipated during the Forecast period. By the same token, however, the Forecast does not incorporate the possibility that certain grant receipts may be jeopardized as a result of recent audit findings.

*PLANNING ASSUMPTIONS: EXPENSES***Inflation-**

The 1997-2002 Financial Forecast includes an unchanged assumed annual inflation rate, as measured by the CPI, of 3.0%.

For 1998 rate-setting purposes, this inflation rate is used as the basis for cost-of-living adjustments (COLAs) and for adjusting the costs of all non-salary line items in the 1997 Budget that do not warrant separate price projections. Beyond 1998, other sources of operating expenses are also assumed to increase broadly in line with this inflation rate.

**Salaries-**

Salary expense is assumed to increase in line with inflation. Under existing pay practices, this would be sufficient to cover COLAs, which are calculated as 90% of appropriate year-over-year inflation measures, as well as some limited merit and longevity increases.

**Medical Benefits-**

The Forecast assumes the continuation of the historical pattern of increasing medical benefit costs. It is expected that the 1998 medical benefit costs will increase by about 7.2% over 1997 levels. In addition, the Wastewater Treatment Division will be making a one-time payment of approximately \$300,000 to the County's medical benefit reserve fund in 1997. Such a reserve is recommended by governmental accounting standards for self-insured health and benefits programs in order to provide adequate reserve levels to cover 'incurred but not reported' claims against the fund.

**Electricity -**

Projections of electricity rates for 1997 and 1998 were based on forecast kilowatt consumption for the system and expected rates from Seattle City Light and Puget Power. Seattle City Light expects rates to be reduced by 5.0% between 1997 and 1998, while the rate reductions negotiated with Puget Power in November, 1996 is expected to produce savings over the period through 1999.

**Chemicals**

Chemical costs are formally reviewed and revised every 6 months for both price and volume variances, and adjusted accordingly. The net effect of adjustments and projected 1998 requirements result in a overall 2.0% increase when comparing the 1997 and 1998 Forecasts.

## *OPERATING PROGRAM*

The 1998 projected expenditures reflect an increase of 2.9% over the 1997 Budget appropriation. Reductions made in the prior year in the amount of \$3.5 million have been implemented as of January 1, 1997. Certain of these reductions corrected projections for key cost items such as chemicals, electricity, and biosolids recycling. These costs have been updated to reflect more than a full year's operating experience at the West Point Treatment plant, and are discussed previously under Planning Assumptions-Expenses. In summary, the expenses in 1998 are projected to total \$74.5 million as compared to the 1997 Budget appropriation of \$72.2 million. The projected increase in expenses for 1998 as compared to the prior year's Forecast is possible due to forecasted increases in RCE revenue of approximately \$400,000, Exchange Building lease income in the amount of \$1.6 million, plus a reduction in debt service cost in the amount of approximately \$4 million.

Together, these corrections and adjustments in operating expenses, which are assumed to carry through into succeeding years, contribute significantly to the program's ability to avoid a sewer rate increase for both 1998 and 1999.

Looking further ahead to the last three years of the Forecast period 2000-2002, the operating expenses of the Water Quality program are projected to keep pace with the assumed underlying inflation in resource costs and the start up costs associated with the RWSP. This projection therefore reflects an assumption that any significant new program initiatives, other than RWSP related, that are contemplated during this timeframe will have to be driven directly by cost reductions or be accommodated by savings and workload reprioritizations in other cost areas.

## *CAPITAL PROGRAM*

The 1997-2002 period will focus on completion of the fourth stage Comprehensive Plan projects and commencement of new projects under the Regional Wastewater Services Plan (RWSP). The final RWSP configuration is expected to be determined by the Council during the third quarter of 1998 however for financial planning purposes, capital cashflow estimates assumed Service Strategy 1.

The schedules for some of the major capital projects, notably Alki and Renton Enlargement III projects and the RWSP projects, have been pushed back from those shown in the 1996-2001 Financial Forecast. These deferrals result from contract bid disputes for Alki and Renton projects, and in the 1996-1999 timeframe coupled with an assumed accomplishment rate of 85% for 1997-1999 have reduced capital expenditures by \$60.5 million through 1999.

### Accomplishment Rate Assumption

Projected annual capital expenditures have been reduced for rate-setting below the level of total forecast capital expenditures for 1997-1999 because the long-term financing assumption assumes only 85% of total forecast expenditures will be spent in 1997-1999. (The expenditure accomplishment adjustments in 1997-1999 are assumed to be made up during the 2000-2002 timeframe resulting in no change to the total Program Costs). The reduced accomplishment rate assumption is assumed because unanticipated events such as bid protests and permit delays have

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historically caused annual capital expenditures to fall short of projections used during the rate-setting process. The assumed 85% 1997-1999 is lower than the 90% assumption used to set the 1997 sewer rates. This change has taken place to reflect current trends in underspending patterns.



**WASTEWATER TREATMENT DIVISION CAPITAL FINANCIAL PLAN**

<i>(\$s in Thousands)</i>	Actuals 1987-95	1996 Actual	1997 Plan	1998 Plan	1999 Plan	2000 Plan	2001 Plan	2002 Plan	1998 Forecast Thru 2002	1997 Forecast Thru 2001	Change
Alki Stormweather/Transfer	58,598	23,209	16,931	14,065	7,738	5,459	0	0	126,000	126,000	0
North Creek Connection	4,527	3,359	11,897	22,245	3,375	282	0	0	45,684	43,412	2,272
Renton Enlargement III	111,270	34,275	14,797	27,493	29,362	18,916	0	0	236,113	236,147	(34)
University Regulator	16,243	519	439	674	1,509	22	0	0	19,405	19,474	(69)
West Point	537,571	26,386	26,985	1,757	253	279	25	0	593,254	593,493	(238)
Denny Way CSO	5,623	2,951	5,173	7,029	7,629	20,280	22,761	22,761	94,206	67,749	26,457
Other Secondary/CSO Projects	109,910	170	162	1,175	843	254	0	0	112,514	112,559	(45)
Capital Assets Management	27,037	1,901	13,259	12,285	12,172	10,410	10,459	10,558	98,082	87,367	10,715
Biosolids Management Plan	5,398	2,751	2,439	2,809	585	718	790	2,219	17,708	17,457	251
Facilities Improvements	29,225	8,116	31,040	27,411	29,825	27,133	7,810	8,347	168,907	152,344	16,562
Transmission Improvements	17,314	5,786	8,417	10,314	22,525	24,671	14,980	7,880	111,887	67,807	44,080
South Interceptor	11,135	1,006	2,189	17,311	11,986	1,728	0	0	45,354	45,261	93
RWSP	0	140	2,591	4,243	14,742	41,739	42,641	42,978	149,074	162,765	(13,691)
<b>Total Capital Program</b>	<b>933,851</b>	<b>110,567</b>	<b>136,320</b>	<b>148,809</b>	<b>142,543</b>	<b>151,889</b>	<b>99,466</b>	<b>94,743</b>	<b>1,818,189</b>	<b>1,731,836</b>	<b>86,353</b>
Accomplishment Assumptions- Note 1			(10,847)	(22,321)	(21,381)	18,183	18,183	18,183			
<b>Total Financial Plan - 1998</b>	<b>933,851</b>	<b>110,567</b>	<b>125,473</b>	<b>126,488</b>	<b>121,161</b>	<b>170,073</b>	<b>117,649</b>	<b>112,927</b>			

Note 1 - For the years 1997-99, the accomplishment assumption is 85%; for 200-2002, the amounts have been equally added back.

## FINANCING STRATEGY

A significant factor behind the program's ability to maintain stable sewer rates through 1999 is the willingness to place somewhat greater reliance on short-term borrowing as a semi-permanent source of financing for the capital program. Specifically, outstanding short-term debt is planned to be increased to \$132 million in 1999 from the current level of \$100 million.

At such a level, short-term borrowing would be equal to approximately 11% of projected outstanding long-term debt in 1999. An increase to this ratio is considered prudent since it will contribute to a better maturity matching of assets and liabilities and thereby help to reduce the program's overall exposure to interest rate movements.

Beyond 1999, the Forecast assumes that short-term borrowing will be increased incrementally in line with management's goal of maintaining the ratio of such debt to outstanding long-term obligations in a range of somewhere between 10% and 12%. This target is lower than the 15% limitation proposed in the Water Quality Financial Policies because management also considers it important to reserve some unused short-term borrowing capacity as a safeguard to cover any unforeseen constraints on long-term debt issuance or other funding needs.

Even with this increased reliance on short-term borrowing, the Forecast still projects the need to issue \$131 million of long-term (35-year) bonds in 1998 and 1999 in order to provide continued funding for the Water Quality capital program. It is assumed that such debt will again take the form of Limited Tax General Obligation (LTGO) bonds that are payable from sewer revenues. The use of LTGO bonds helps reduce sewer rates since the interest costs are between 15 to 25 basis points lower than on traditional sewer revenue bonds and there is no requirement to contribute a portion of the proceeds into a reserve fund.

Given that the County's non-voted general obligation debt capacity is limited, however, the Financial Forecast assumes renewed reliance on traditional sewer revenue bonds for the long-term debt issues needed after 1999. The critical policy choice between these instruments will need to be revisited annually in the context of the competing demands for use of the County's available debt capacity.

### Interest Rate Assumptions

The interest rates on future long-term LTGO and revenue bond issues are assumed to be 6.30% and 6.50% respectively. These rates are approximately 25-50 basis points higher than current market levels, a cushion that is considered prudent for planning purposes to allow for some potential deterioration in financial market conditions. These have been decreased from last years assumed 6.50% and 6.75%, respectively

The interest cost of commercial paper and other forms of short-term borrowing is assumed to be 4.50% (inclusive of remarketing and liquidity support fees) while the yield on new investments is assumed to average 5.50%.

## *FINANCING OPTIONS FOR RATE REDUCTION*

The projected \$19.10 sewer rate for 1998 and 1999 already incorporates the reductions in operating expenses made possible by the consolidation as well as various other programmatic initiatives undertaken by management in recent years. Furthermore, the consolidation has also yielded benefits on the financing front since the Water Quality program's ability to utilize LTGO bonds has allowed significant savings in debt service costs associated with the funding of the capital program.

While already substantially reduced, however, there are still some strategies that could be used to produce a lower sewer rate for 1998 and 1999. Two that are frequently suggested are the further lowering of the assumed accomplishment rate for capital expenditures and the greater use of short-term borrowing. The merits of these options are discussed below.

### **1. Reduction of Capital Expenditure Accomplishment Rate Assumption**

One option would be to further reduce the assumed rate of capital expenditure accomplishment below the 85% assumption used as the basis for the current proposal. For example, use of an 80% assumption would permit a reduction of another \$.07 cents in the 1999 monthly sewer rates.

Such a proposal might be supported by the fact that the actual accomplishment rate has averaged just 80% over the past five years and was actually below 70% in 1996. In spite of this recent pattern of increasing under-performance, however, it does not seem prudent to reduce the accomplishment rate assumption below 85% since it seems likely that this recent average will be exceeded over the next few years. As of December 31, 1996, construction was complete on all of the West Point facilities and the System had complied with the requirements of the consent decree. The resolution of various contractor disputes should allow work on the Alki and Renton projects to progress quite rapidly.

### **2. Use of Additional Short-Term Financing**

Another option would be to rely even more heavily on short-term debt to fund the capital program. Full utilization of the short-term debt capacity defined in the Water Quality Financial Policies would permit approximately \$175 million of such debt by 1999 rather than the proposed \$130 million. Issuance of this additional \$45 million could lower the 1999 sewer rate by approximately \$.25 cents.

Management would not endorse such a recommendation, however, since retention of some unused short-term borrowing capacity provides a vital element of financial flexibility in the event that adverse events limit the ability to raise long-term debt or generate additional funding needs. The key reason for preserving such a significant volume of unused short-term debt capacity is that the RCE projections that underpin the Forecast are still subject to a significant degree of uncertainty. Specifically, it is estimated that approximately \$45 million of additional short-term borrowing would be needed to offset the adverse financial impact of a 1% shortfall in total residential customers and RCEs relative to the level shown in this Forecast. To put this potential need in context, the program faced just such a situation in 1993 when the drop-off in RCEs caused a sharp decline in revenues and forced the issuance of \$50 million of Bond Anticipation Notes in lieu of additional parity bonds. Furthermore, preservation of some unused short-term borrowing capacity could be especially

important if capital expenditures exceed the accomplishment rate assumption used for rate-setting purposes.

Management therefore believes that it is prudent to retain this flexibility by planning to borrow less than the full 15% limit. In addition, since investment funds on hand during 1999 average approximately \$130 million, the rationale for short-term borrowing beyond this level as a tool for asset-liability management appears to weaken.

### 3. Rate Reduction in 1998

During the review of the rates for 1998, a reduction in the current rate of \$19.10 to \$18.52 was considered as achievable due to the savings previously mentioned. However, in subsequent years annual increases would be necessary, i.e., the reduction in rates could not be sustained and would result in larger increases in the later years. The savings in 1997 and 1998 provide the opportunity to implement this policy over a four year period (1996 - 1999) if these savings are reserved to "buy down" rates in 1999. Therefore, the option of reducing rates in 1998 was rejected in favor of accomplishing rate stabilization over a four year period.

## Appendix A

Water Quality Program  
Financial Goals and Policies**Introduction and Purpose**

The mission of the Water Quality Program is to support an improved quality of life by protecting the public health and enhancing the quality of the aquatic environment. This is accomplished through programs that plan, operate and maintain wastewater treatment facilities, manage certain combined sewer overflows (CSO's), provide education and technical assistance regarding action leading to clean water, reduce generation and disposal of hazardous materials into collection systems, manage reuse of wastewater treatment products and provide regional environmental laboratory services. This mission is conducted through the exercise of powers granted by Chapter 35.58 RCW and in conformance with the agreements for sewage transport and treatment between King County and the cities and special purpose districts it serves. The financial policies for the Water Quality Program provide a policy framework for financial planning of operating and capital programs. The purpose of these policies is to assure long term service integrity and stability by sound and prudent management of the Water Quality Program's financial resources.

**Financial Policies**

- **Multi-year Planning.** The Water Quality Program will maintain a multi-year financial plan and cash-flow projection of six years or more, estimating service growth, operating expenses, capital requirements, reserves and debt service. The financial plan will be reviewed and adopted by the Council and used as a policy basis for budget and related financial planning.
- **Prudent Budget Standards.** Bond covenants set requirements that ensure a prudent budget standard. Net operating income (operating income minus operating expense) must exceed parity bond debt service requirements by at least 15 percent. The resulting balance on operations is available along with bond proceeds to cover annual capital expenditures. Staff will advise Council if either operating or capital expenditures are expected to exceed adopted levels.
- **Alternative Financial Plan.** If the operations and maintenance component of the proposed annual budget increases by more than a reasonable cost of the addition of new facilities, increased flows, new programs authorized by the Council, and inflation, a feasible alternative spending plan shall be presented, identifying steps to reduce cost growth. An alternative spending plan shall also be available in the event that actual revenues drop below prudent estimates. A program of reviewing business practices for savings and efficiency potential shall be ongoing.
- **Future Claims and Liabilities.** Reserves needed for future liabilities, claims, and replacement will be reported in budget planning.

- **Minimum Fund Balance.** To maintain sufficient funds to meet bond covenants for betterment reserves, requirements for cash flow and potential future liabilities, the water quality program will maintain a minimum cash balance of \$5 million each year. This amount may be changed in budget planning and will be included in the annual Sewer Rate Explanation Report.

- **Sewer Rates.** Sewer rates will be set at a level sufficient to meet the following financial policies:

Debt Service Coverage. Bond covenants require the ratio of net operating income to debt service to be 1.15. For rate-setting purposes, the policy is to target the ratio at a minimum of 1.25. Budgets will be planned and monitored against this 1.25 standard. This policy assures budgets are planned with a margin of error so that bond covenant agreements are met.

Emergency Reserves. Bond covenants require three emergency funds. The Operating Reserve is required to have a balance the greater of \$300,000 or five percent of total operating and maintenance costs and may be used for operating costs if sufficient revenues are not available. The Contingency Reserve is required to have a minimum balance of \$2,000,000 and may be used for emergency repairs or unforeseen capital improvements. The Betterment Reserve is required to have a minimum deposit each year of \$750,000 and may be used for emergency repairs, capital improvements in the Comprehensive Water Pollution Abatement Plan, replenishment of other reserves, and payment of outstanding parity bonds. Council approval shall be sought for any use of these funds.

Maintenance of the System. Revenues will be sufficient to maintain capital assets in sound working condition, providing for maintenance and rehabilitation of facilities at a level intended to minimize total cost while continuing to provide reliable, high quality service and maintain high water quality standards.

Sewer Bond Covenant Provisions. Covenants contained in Resolution No. 90 and subsequent resolutions authorizing issuance of bonds are hereby affirmed.

- **Capital Funding.** King County will attempt to structure the term of its borrowings to match the expected useful life of the assets to be funded. The water quality capital program will be financed predominately by annual staged issues of long-term general obligation or parity bonds backed by sewer revenues, provided that:

All available sources of grants are utilized;

The balance on operations available after reserve requirements are met will be used for the capital program; any excess reserves may also be used for capital;

Consideration is give to competing demands for use of Water Pollution Control's overall general obligation debt capacity; and

Consideration is given to the overall level of debt financing that can be sustained over the long term given the size of future capital expenditures, potential impacts credit ratings, and other relevant factors.

- **Short-term Borrowing.** To achieve a better maturity matching of assets and liabilities, thereby reducing interest rate risk, short-term borrowing will be used to fund a portion of the capital program, provided that:

Short-term debt outstanding comprises no more than 15 percent of total outstanding parity and general obligation bonds;

Appropriate liquidity is in place to protect to day-to-day operations of the agency.

- **Sewer Rate Explanation.** A report shall be prepared in support of the proposed annual sewer rates, including the following information:

**Key Assumptions.** Key financial assumptions such as inflation, bond interest rates, investment income, size and timing of bond issues, and the considerations underlying the projection of future growth in residential customer equivalents;

**Significant Financial Projections.** All key projections, including the annual projection of operating and capital costs, debt service coverage, cash balances, revenue requirements, revenue projections, and a discussion of significant factors that impact the degree of uncertainty associated with the projections; and

**Historical Data.** A discussion of consistent over or under projections of costs and revenues from previous recent budgets, and;

**Policy Options.** Calculations and/or analyses of the effect of certain policy options on the overall revenue requirement. These options should include alternative capital improvement accomplishment percentages (including a 90 percent, a 95 percent, and a 100 percent accomplishment rate), and that rate shall be selected which most accurately matches historical performance for capital projects and which will not negatively impair the bond rating.

- **Fees and Reimbursement.** Water quality services performed for a fee for other public or private organizations will be reimbursed to recover all direct and indirect costs of the service unless otherwise directed by council. The Department Director may waive this policy in specific circumstances where recovery of all direct and indirect expenses may interfere in the wastewater program goals or mission.
- **Other Policy Items.**
  1. King County should periodically review the sewage treatment capacity charge to ensure that the true costs of system expansion are reflected in the assessed charge. All reasonable steps

should be taken to coordinate fee assessments and accounting with local sewer service providers to reduce redundant program overhead costs.

2. Selective monitoring should be increased for inflow and infiltration system flows of component agencies. While this may not have an immediate financial impact, it could better identify long-term system operating and capital needs, and could aid in the equitable distribution of costs.
  3. As a program policy, King County should continue its long standing commitment to research and development funding at least at current functional levels.
  4. Expenditures from the Water Quality Program budget on behalf of septic systems shall be conducted only if financially beneficial to sewer rate payers.
  5. King County should attempt to adopt a multi-year sewer rate to provide stable costs to Water Pollution Control customers. If a multi-year rate is established, a rate stabilization reserve account shall be created to ensure that adequate funds are available to sustain the rate through completion of the rate cycle. Funds shall not be removed from this rate stabilization account without prior review of the Regional Water Quality Committee.
  6. King County should prepare explicit policies for the setting of customer rates, in consultation with the Regional Water Quality Committee, for adoption into future budget policies by the Metropolitan King County Council.
- **Pricing Policy.** The customers of the Water Pollution Control sewer system shall pay their pro rata share of the cost of the system which serves them. To implement this policy:
    1. A capacity charge is levied against new connections, reconnections, or establishment of a new service. This charge is to pay for the capital cost of excess capacity that has already been built to serve future customers. The charge is currently set at the maximum amount permitted by state law.
    2. Based on an analysis of residential construction patterns, Water Pollution Control currently uses a value of 750 cubic feet per month to convert water consumption of volume-based customers to residential customer equivalents for billing purposes. Water Pollution Control will periodically review the appropriateness of this value to ensure that all accounts pay their fair share of the cost of the sewer system.
  - **Use of Funds Not Directly Related to Sanitary Sewerage Function.** Water quality activities, programs and projects, in addition to those that are functions of sewage treatment, may be eligible for funding assistance from sewer rate revenues as may be recommended by the Regional Water Quality Committee after consideration of criteria and limitations suggested by the Metropolitan Water Pollution Abatement Advisory Committee, and shall be limited to 1.5 percent of the Water Quality Program's annual operating budget. This policy will remain in



effect until such time as a financial plan for the Surface Water Regional Needs Assessment is developed.

The calculation of general government overhead to be charged to the wastewater fund shall be based on a methodology which provides for the equitable distribution of overhead costs throughout Metropolitan King County government. Estimated overhead charges shall be calculated in a fair and consistent manner, utilizing a methodology that best matches the estimated cost of the services provided to the actual overhead charge. The overall allocation formula and any subsequent modifications shall be reported to the Regional Water Quality Committee.

The assets of the water quality fund are pledged to be used for the benefit of the sewer system including operating expenses, debt service payments and capital improvements associated therewith. The fund will be fully reimbursed for the costs associated with any use or transfer of such assets for other county government purposes. The Executive will provide reports to the Regional Water Quality Committee pertaining to any significant transfers of assets for other county government purposes in advance of and subsequent to any such transfers.

*Approved by Metropolitan King County Council  
May 28, 1996  
Motion No. 9869*

## King County's Sewage Treatment Capacity Charge: 1996 to 2000

Prepared by the Department of Natural Resources  
May 21, 1996 and Revised October 7, 1996 and May 9, 1997

### Introduction

The audit of King County's sewage treatment capacity charge submitted to the county council January 18, 1996 recommended a detailed review of the assumptions and data used to support the amount of the charge. This recommendation followed an audit finding that some of the original data was either unavailable or outdated. The Water Pollution Control Division (now Wastewater Treatment Division) addressed these audit findings and recommendations as it formulated the basis for the capacity charge for 1996 through 2000. Assumptions and data used as the basis for the charge as proposed for 1997 and 1998 are described in this report. The statute under which the charge is levied requires annual approval of the amount of the charge by the county council.

### The facilities with excess capacity

State law that has governed the capacity charge since its inception requires that the charge be based on "the cost of the sewage facilities excess capacity that is necessary to provide sewage treatment for new users to the system". Facilities in the county's Water Pollution Abatement Plan that have been constructed, or are under construction, that potentially include "excess capacity" as of 1995 have been identified. The list includes 16 projects and is somewhat different than the list of 11 projects identified when the charge was originally formulated in 1990. This report focuses on eight major projects. Documentation of the excess capacity in these eight projects has been established. Excess capacity in these projects justify a charge amount that exceeds what the county is able to charge under state law. These facilities/projects are as follows:

- Renton Effluent Transfer System
- Renton Expansion III from 72 mgd to 108 mgd
- West Point Secondary Treatment Facilities
- Redmond Connection
- Sunset/Heathfield/Eastgate
- South Interceptor
- North Creek Connection
- Richmond Beach Flow Transfer

Eight additional projects, generally smaller than those above, include some measure of excess capacity but are not included in this analysis.

### The methodology

For the eight foregoing facilities wastewater flows were estimated for 1995 and 2000 using the wastewater flow estimates contained in the "existing conditions" report described under Sources. The incremental difference was then identified as the percentage of design capacity of the facility that would be used by customers projected to come "on line" from 1995 to 2000. This percentage applied to the cost of the facility is the cost of the facilities excess capacity necessary to serve customers connecting during this five year period (See Exhibit A). The cost of excess capacity in the foregoing facilities is then totaled and divided by the number of new customers projected from 1995 to 2000 to generate an amount to be compared to the statutory limit.

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Estimating the number of new customers

Estimates of new customers can be derived from several sources. One methodology is to compare the actual number of customers in 1995 to estimated residential population and commercial and industrial employment for that same year. The resultant ratio can then be used to project a customer count from population and employment estimates for the year 2000. The difference would then be the estimated number of new customers for that time frame. That methodology, using Puget Sound Regional Council estimates developed from the 1990 census (as refined in 1995), would result in an estimate of 27,000 new customers from 1995 to 2000. This would be slightly higher than the 23,000 projected in the division's financial forecast used for rate forecasting and other financial planning purposes. This latter projection is based largely on historical rates of increase and is intended to be conservative.

The second methodology is to project the next five years from the actual annual number of new customers connected for the last five years. The average number of new customers per year from 1991 to 1995 is 6,588. There is no pattern of year to year increase. The 1991 and 1995 counts of actual new customers are almost identical. Using this average to project customers for the next five years results in an estimate of 33,000 new customers. We believe this is the more appropriate methodology, inasmuch as variations in consumption among existing non-residential customers can affect the calculation when using the first methodology. (Because of this possible variation, the total number of customers and equivalents in the system can actually decrease, even as population increases, which changes the ratio). For capacity charge purposes, the larger number of projected customers is also the more conservative projection.

The cost per customer

The per customer cost of the excess capacity identified in this report for the period 1995 to 2000, using the estimate of 33,000 new customers, is \$2243 (based on actual costs.) If grants are deducted from project costs the number is then \$1737. The current charge of \$7. per month for 15 years produces \$1260 over a fifteen year period or \$823 present value. A charge set at the new statutory limit (effective January 1, 1996) of \$10.50 per month for 15 years produces \$1890 over the fifteen year period or \$1235 present value.

The proposed charge amount of \$10.50 per month is justified by the cost of the excess capacity in the eight projects discussed in this paper. The charge as proposed will, depending on whether or not grants are deducted from project costs, recover 55% to 70 % of that cost.

The future

The Regional Wastewater Services Plan will identify additional system improvements that will be necessary to accommodate growth. The limitations in current state law will prevent the county from recovering costs associated with some of those improvements. In recognition of that fact, the council's Regional Water Quality Committee has already recommended that the county seek the necessary changes in state law that will enable local decision makers to more fully recover costs to serve new customers from new customers.

Sources

All flow projections used in this analysis, except for the Redmond Connection, are described in the Regional Wastewater Services Plan document entitled "Wastewater 2020 Plus Existing Conditions" dated August, 1994 and prepared by HDR Engineering, Inc. Flow projections for the Redmond Connection are

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King County Sewage Treatment Capacity Charge  
May 9, 1997  
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described in the "System Predesign Report Task 317 Technical Memorandum (Redmond Connection)" dated July, 1987 and prepared by HNTB, Inc. 1995 flows are interpolated from the 1990 and 2000 flows identified in those reports.

Population and employment forecasts used to project new customers from 1995 to 2000 were provided by the Puget Sound Regional Council in 1991. The forecasts were derived from 1990 census data and Washington State Employment Security Department commercial and industrial employment estimates. The forecasts were revised in 1995.

Exhibits (1)

**EXHIBIT A**

Cost of Excess Capacity (\$000)

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Cost of Projects			
Project	Costs Through 1995	Grants Through 1995	Cost Excluding Grants
Renton Expansion III	111,266	22,278	88,988
Renton ETS	195,364	73,710	121,654
West Point Secondary	537,563	100,000	437,563
Redmond Connection	22,308	4,873	17,435
Sunset/Heathfield/Eastgate	13,730	0	13,730
South Interceptor	11,145	0	11,145
North Creek Connection	4,527	0	4,527
Richmond Beach	29,760	9,686	20,074
<b>TOTALS</b>	<b>925,663</b>	<b>210,547</b>	<b>715,116</b>

Cost of Excess Capacity			
Project	Percentage of Capacity for Growth 1995-2000	Apportioned Cost	Apportioned Cost Excluding Grants
Renton Expansion III	38.89%	43,271	34,607
Renton ETS	8.47%	16,547	10,304
West Point Secondary	0.90%	4,838	3,938
Redmond Connection	18.90%	4,216	3,295
Sunset/Heathfield/Eastgate	13.02%	1,788	1,788
South Interceptor	15.30%	1,705	1,705
North Creek Connection	11.30%	512	512
Richmond Beach	5.74%	1,174	1,174
<b>TOTALS</b>		<b>74,051</b>	<b>57,323</b>