

Analysis
Seattle Public Utilities
2017-18 Wastewater/Drainage Treatment Rate

Background

Seattle Public Utilities (SPU) wastewater customers pay a single fee per one hundred cubic feet (CCF) of wastewater discharged into the City's wastewater system. This fee is the sum of two components, a treatment rate and a system rate. The treatment rate is based on the projected cost of treating wastewater at King County¹-owned treatment facilities. The system rate is the rate required to pay all other costs of the wastewater system. It is set through a formal rate process.

In addition, beginning in 2008, SPU's drainage rates share in the recovery of combined system costs, which include a portion of the King County treatment costs. This sharing of costs was initiated by incrementally phasing in one-sixth of the allocation of these costs between 2008 and 2014. Thus, drainage rates are now also comprised of a treatment component and a system component.

In June 2016, the King County Council increased by 5.2% the rate charged to entities using the County's wastewater treatment facilities, effective January 1, 2017. King County projects no additional rate increase for 2018.

Wastewater Treatment Rate Method of Calculation

Payments to King County² for wastewater treatment are the single largest component of both wastewater and total Drainage and Wastewater Fund (DWF) operating expense. The inability to fully recover this expense through the wastewater rate can seriously impact DWF financial performance. To mitigate this risk the Council approved a process to adjust the wastewater treatment rate when there is a change in the underlying cost drivers. The formula for this adjustment is defined in Section 21.28.040 B of the Seattle Municipal Code, allowing for the treatment rate to be adopted at any time by ordinance. The formula is as follows:

Projected wastewater treatment expense/Projected annual wastewater volumes

X

A multiplier to recover revenue reductions and revenue taxes

The projected treatment expense includes an adjustment for cash lags in the full recovery of the treatment expense in years in which there is a rate increase. The treatment expense excludes the portion of budgeted treatment expense associated with the County's High Strength Industrial and Contaminated Stormwater Surcharges. These expenses are recovered directly from applicable customers and not through the wastewater direct service rate.

¹In addition, less than 3% of SPU's customers are served by the Southwest Suburban Sewer District for wastewater treatment. These treatment costs are also included in this analysis.

² King County treats over 99% of the City's sewage. The Southwest Suburban Sewer District treats the balance.

In contrast to this method of setting the system rate, the treatment rate is proposed by the King County Executive via rate studies and adopted by the County Council. The system rate recovers all other operating expense, including operations and maintenance expense, capital financing expense (debt service and cash), related revenue taxes, and is set to ensure that financial policy targets are met.

2017 and 2018 Wastewater Rate

The 5.2% increase in the King County treatment rate results in an increase in the 2017 and 2018 wastewater treatment rate from \$7.69 per one hundred cubic feet (CCF) to \$8.34 per CCF. This includes a multiplier to account for the impact of taxes and low income credits. Seattle Public Utilities' Strategic Business Plan assumed the King County treatment rate based on the County's published projections for planning purposes. Since these were projections, the adopted 2016-2018 wastewater rates assumed a treatment rate of \$7.69 per CCF, which was based on the adopted 2015 King County treatment rate of \$42.03. Through 2018, the adopted treatment rate is 2.3% lower than what was anticipated in the Strategic Business Plan.

Table 1
2017 and 2018 Revised Wastewater Rate, per CCF

		Revised		Revised
	2017	2017	2018	2018
Treatment Rate	\$7.69	\$8.34	\$7.69	\$8.34
System Rate	\$4.59	\$4.59	\$4.74	\$4.74
Total Rate	\$12.28	\$12.93	\$12.43	\$13.08

SPU staff conducted an analysis using financial and forecasting models to project the wastewater treatment expense, the wastewater treatment volume, and the cash lags to support calculation of the treatment rate. Table 2 and Table 3 present the calculation of the 2017 and 2018 treatment rates using the formula described above.

Table 2
2017 SPU Wastewater Treatment Rate Calculation

2017 Treatment Expense (including cash adjustment)	\$151,665,552
Projected Wastewater Volume in CCF	21,429,078
Unadjusted Treatment Rate per CCF	\$7.08
Multiplier	117.8%
Treatment Rate	\$8.34

Table 3
2018 SPU Wastewater Treatment Rate Calculation

2018 Treatment Expense (including cash adjustment)	\$151,519,294
Projected Wastewater Volume in CCF	21,251,879
Unadjusted Treatment Rate per CCF	\$7.13
Multiplier	117.0%
Treatment Rate	\$8.34

Drainage Treatment Rate Method of Calculation

The drainage "treatment rate" is the rate required to pay the drainage share of "treatment cost" which includes a portion of the cost of King County wastewater treatment. The treatment rate is the amount obtained when the projected drainage treatment cost for each rate category is divided by the projected number of billing units in each rate category. The resulting figure is multiplied by 118% to cover the costs of taxes and low income rate assistance. The projected treatment cost is the treatment cost anticipated for the upcoming calendar year, which may include an adjustment to reflect the difference, whether positive or negative, between the drainage share of expected total treatment cost for the current year and the total drainage service charge revenues attributable to the treatment rate expected for the current year. The drainage treatment rate is designed to pass through cost changes driven by King County and may be adjusted by ordinance at any time in response to such changes pursuant to Section 21.33.030 D. In both the 2017 and 2018, drainage rates will increase approximately 1.7% compared with the rates adopted by Council in November 2015 as a result of the treatment rate increase. Tables 4 and 5 show the detailed calculation for the treatment rate increase on all tiers.

Table 4
Seattle Public Utilities
King County Treatment Rate
2017 Passthrough to Drainage Rates

(a)			(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)		(l)	(m)	(n)
Customer Class			Increase(Note 1)			Percent of 2017 Cost	Projected 2017 Treatment Expense	Revenue Leads/Lags	Net Cash Treatment Expense	Multiplier	Total Treatment Cost	Projected Billing Units per Rate Category		Adjusted Treatment Rate	System Rate	Adjusted Total Rate
			Treatment Rate	System Rate	Total Rate											
1								(Note 2)			(h)*(i)			(j)/(k)	(l)+(m)	
2	<u>Small Residential</u>															
3		Under 2000 sq. ft.	\$12.37	\$126.78	\$139.15	1.4%	\$133,536	n/a	\$133,536	118.0%	\$157,573	11,520	Parcels	\$13.68	\$126.78	\$140.46
4		2000-2999 sq. ft	\$18.90	\$210.68	\$229.58	1.1%	\$110,857	n/a	\$110,857	118.0%	\$130,811	6,293	Parcels	\$20.79	\$210.68	\$231.47
5		3000-4999 sq. ft	\$24.79	\$288.84	\$313.63	11.4%	\$1,113,949	n/a	\$1,113,949	118.0%	\$1,314,460	43,509	Parcels	\$30.21	\$288.84	\$319.05
6		5000-7999 sq. ft	\$33.73	\$391.25	\$424.98	18.2%	\$1,775,749	n/a	\$1,775,749	118.0%	\$2,095,384	50,862	Parcels	\$41.20	\$391.25	\$432.45
7		8000-9999 sq. ft.	\$42.65	\$491.94	\$534.59	12.2%	\$1,192,089	n/a	\$1,192,089	118.0%	\$1,406,666	27,030	Parcels	\$52.04	\$491.94	\$543.98
8																
9	<u>General Service/Large Residential</u>															
10	Undeveloped	(0-15% impervious)														
11		Regular	\$2.85	\$31.39	\$34.24	2.3%	\$223,507	n/a	\$223,507	118.0%	\$263,738	78,311	Thousand Sq Ft	\$3.37	\$31.39	\$34.76
12		Low Impact	\$1.66	\$18.69	\$20.35	2.7%	\$264,615	n/a	\$264,615	118.0%	\$312,246	157,432	Thousand Sq Ft	\$1.98	\$18.69	\$20.67
13																
14	Light	(16-35% impervious)														
15		Regular	\$4.27	\$48.37	\$52.64	4.8%	\$466,296	n/a	\$466,296	118.0%	\$550,229	106,446	Thousand Sq Ft	\$5.17	\$48.37	\$53.54
16		Low Impact	\$3.35	\$38.19	\$41.54	1.2%	\$119,305	n/a	\$119,305	118.0%	\$140,780	34,599	Thousand Sq Ft	\$4.07	\$38.19	\$42.26
17																
18	Moderate	(36-65% impervious)														
19		Regular	\$6.09	\$70.12	\$76.21	9.9%	\$972,792	n/a	\$972,792	118.0%	\$1,147,895	153,505	Thousand Sq Ft	\$7.48	\$70.12	\$77.60
20		Low Impact	\$4.92	\$56.81	\$61.73	0.6%	\$61,610	n/a	\$61,610	118.0%	\$72,700	12,009	Thousand Sq Ft	\$6.05	\$56.81	\$62.86
21	Heavy	(66-85% impervious)	\$8.10	\$92.61	\$100.71	11.1%	\$1,086,324	n/a	\$1,086,324	118.0%	\$1,281,862	129,929	Thousand Sq Ft	\$9.87	\$92.61	\$102.48
22	Very Heavy	(86-100% impervious)	\$9.53	\$111.11	\$120.64	23.1%	\$2,261,856	n/a	\$2,261,856	118.0%	\$2,668,991	225,653	Thousand Sq Ft	\$11.83	\$111.11	\$122.94
23	Total					100.0%	\$9,782,487									

(1) Council , passed November 2015

(2) Revenue leads and lags are factored into the calculation of the wastewater treatment rate. These leads and lags relate to revenues billed in December and collected in January.

When there is a rate increase assumes one month cash collected at prior year rate and 11 months at current year rate. Lags and leads can be quite significant for wastewater revenues which are billed on a monthly or bi-monthly basis. They do not currently have a significant impact on drainage rates as bills go out bi-annually, in April and October, and most revenues related to the current billing year are collected prior to year end. Leads and lags may become a more significant factor in drainage rate calculation if billing is moved to CCSS and

Summary Ex A – SPU Analysis of King County Passthrough Rates
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Table 5
Seattle Public Utilities
King County Treatment Rate
2018 Passthrough to Drainage Rates

(a)		(b)			(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)		(k)		(l)	(m)	(n)
Customer Class		Increase(Note 1)			Percent of 2018 Cost	Projected 2018 Treatment Expense	Revenue Leads/Lags	Net Cash Treatment Expense	Multiplier	Total Treatment Cost	Projected Billing Units per Rate Category		Adjusted Treatment Rate	System Rate	Adjusted Total Rate			
		Treatment Rate	System Rate	Total Rate														
1																		
2	<u>Small Residential</u>						(Note 2)						(h)*(i)			(j)/(k)		(l)+(m)
3		Under 2000 sq. ft.	\$12.37	\$141.28	\$153.65	1.4%	\$134,339	n/a	\$134,339	118.0%	\$158,453	11,520	Parcels	\$13.75	\$141.28	\$155.03		
4		2000-2999 sq. ft	\$18.90	\$231.22	\$250.12	1.1%	\$111,523	n/a	\$111,523	118.0%	\$131,542	6,293	Parcels	\$20.90	\$231.22	\$252.12		
5		3000-4999 sq. ft	\$24.79	\$315.40	\$340.19	11.4%	\$1,120,644	n/a	\$1,120,644	118.0%	\$1,321,804	43,509	Parcels	\$30.38	\$315.40	\$345.78		
6		5000-7999 sq. ft	\$33.73	\$425.42	\$459.15	18.2%	\$1,786,422	n/a	\$1,786,422	118.0%	\$2,107,091	50,862	Parcels	\$41.43	\$425.42	\$466.85		
7		8000-9999 sq. ft.	\$42.65	\$533.98	\$576.63	12.2%	\$1,199,254	n/a	\$1,199,254	118.0%	\$1,414,525	27,030	Parcels	\$52.33	\$533.98	\$586.31		
8																		
9	<u>General Service/Large Residential</u>																	
10	Undeveloped	(0-15% impervious)																
11		Regular	\$2.85	\$34.26	\$37.11	2.3%	\$224,850	n/a	\$224,850	118.0%	\$265,212	78,311	Thousand Sq Ft	\$3.39	\$34.26	\$37.65		
12		Low Impact	\$1.66	\$20.40	\$22.06	2.7%	\$266,206	n/a	\$266,206	118.0%	\$313,991	157,432	Thousand Sq Ft	\$1.99	\$20.40	\$22.39		
13																		
14	Light	(16-35% impervious)																
15		Regular	\$4.27	\$52.31	\$56.58	4.8%	\$469,098	n/a	\$469,098	118.0%	\$553,303	106,446	Thousand Sq Ft	\$5.20	\$52.31	\$57.51		
16		Low Impact	\$3.35	\$41.29	\$44.64	1.2%	\$120,023	n/a	\$120,023	118.0%	\$141,567	34,599	Thousand Sq Ft	\$4.09	\$41.29	\$45.38		
17																		
18	Moderate	(36-65% impervious)																
19		Regular	\$6.09	\$75.44	\$81.53	9.9%	\$978,639	n/a	\$978,639	118.0%	\$1,154,309	153,505	Thousand Sq Ft	\$7.52	\$75.44	\$82.96		
20		Low Impact	\$4.92	\$61.17	\$66.09	0.6%	\$61,981	n/a	\$61,981	118.0%	\$73,106	12,009	Thousand Sq Ft	\$6.09	\$61.17	\$67.26		
21	Heavy	(66-85% impervious)	\$8.10	\$99.37	\$107.47	11.1%	\$1,092,853	n/a	\$1,092,853	118.0%	\$1,289,025	129,929	Thousand Sq Ft	\$9.92	\$99.37	\$109.29		
22	Very Heavy	(86-100% impervious)	\$9.53	\$119.03	\$128.56	23.1%	\$2,275,451	n/a	\$2,275,451	118.0%	\$2,683,903	225,653	Thousand Sq Ft	\$11.89	\$119.03	\$130.92		
23	Total					100.0%	\$9,841,283											

(1) Council , passed November 2015

(2) Revenue leads and lags are factored into the calculation of the wastewater treatment rate. These leads and lags relate to revenues billed in December and collected in January. When there is a rate increase assumes one month cash collected at prior year rate and 11 months at current year rate. Lags and leads can be quite significant for wastewater revenues which are billed on a monthly or bi-monthly basis. They do not currently have a significant impact on drainage rates as bills go out bi-annually, in April and October, and most revenues related to the current billing year are collected prior to year end. Leads and lags may become a more significant factor in drainage rate calculation if billing is moved to CCSS and bills are issued monthly or bimonthly.