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Western Lake Superior Sanitary District

February 3, 2020

Mr. Jim Benning
Director of Public Works
207 City Hall
Duluth, MN 55802

Subject: 2019 Wastewater Treatment Year-End Adjustments

Dear Mr. Benning:

At the close of each year, we notify our wastewater treatment users of the year-end adjustment based on the actual flow and load data, and treatment costs.

For 2019, the WLSSD Board has approved total wastewater charges of \$27,841,059 as shown in the attached comparison of billed (budget) to required charges (actual) for 2019. Each wastewater user will receive additional charges or credits based upon their actual flows and loads as compared to budget. This amount will be spread evenly over the 12-month period in 2020.

Attached is a table summarizing the 2019 billing as compared to the 2019 required actual. For Duluth, the total year-end adjustment for 2019 is a charge of \$80,176. The primary contributors to the charge is peak flow and BOD loadings above budget. This will be included as a \$6,681/month charge on your 2020 monthly billing.

Please contact me at 740-4805 if you have any questions.

Sincerely,

Marianne Bohren
Executive Director

xc: Eric Schaffer

Attachment

2019 Year End Adj

	BILLED 2019	REQUIRED 2019	YEAR-END ADJUSTMENT
DULUTH	9,194,886	9,275,062	\$80,176
CLOQUET	984,764	984,427	(\$337)
PROCTOR	307,938	322,799	\$14,861
HERMANTOWN	466,852	493,274	\$26,422
ESKO	134,992	138,209	\$3,217
SCANLON	107,843	123,707	\$15,864
CARLTON	107,773	116,786	\$9,013
RICE LAKE	50,658	52,323	\$1,665
TWIN LAKE	82,514	70,663	(\$11,851)
PIKE LAKE	70,656	67,458	(\$3,198)
KNIFE RIVER	\$18,338	15,862	(\$2,476)
OLIVER	17,364	16,798	(\$566)
THOMSON	8,850	9,004	\$154
WRENSHALL	20,231	23,372	\$3,141
JAY COOKE	3,409	3,549	\$140
MIDWAY	4,674	4,598	(\$76)
MPCA LANDFILL	11,345	10,349	(\$996)
DULUTH/NORTH SHORE	45,105	44,549	(\$556)
MUNICIPALITIES SUBTOTAL	11,638,192	11,772,791	\$134,599
SAPPI	12,056,459	11,873,947	(\$182,512)
GEORGIA PACIFIC	66,784	66,784	\$0
USG	551,685	539,897	(\$11,788)
VERSO	3,292,759	3,362,320	\$69,561
SPECIALTY MINERALS	235,180	225,320	(\$9,860)
INDUSTRIES SUBTOTAL	16,202,867	\$16,068,267	(\$134,599)
TOTAL DISTRICT	\$27,841,059	\$27,841,059	\$0

**2019 Year End Adj
Wastewater Unit Costs**

	BUDGET 2019	REQUIRED 2019	% CHANGE
<u>VOLUME</u>			
FLOW (MGD)	36.53	37.69	3.18%
BOD (LBS/DAY)	78,343	76,624	-2.19%
SUSPENDED SOLIDS (LBS/DAY)	38,241	47,990	25.49%
<u>O & M UNIT COSTS</u>			
FLOW (COST/1000 GAL)	\$0.5621	\$0.5558	-1.11%
PEAK FLOW	\$0.0420	\$0.0265	-36.89%
BOD (COST/LB)	\$0.1663	\$0.1847	11.07%
SUSPENDED SOLIDS (COST/LB)	\$0.3381	\$0.2951	-12.71%
<u>O & M + DEBT SERVICE UNIT COSTS</u>			
FLOW (COST/1000 GAL)	\$0.7543	\$0.7480	-0.84%
PEAK FLOW	\$0.0975	\$0.0787	-19.25%
BOD (COST/LB)	\$0.2315	\$0.2499	7.94%
SUSPENDED SOLIDS (COST/LB)	\$0.4196	\$0.3766	-10.25%
DOMESTIC EQUIV (COST/1000GAL)	\$1.9376	\$1.8717	-3.40%

Table 5

USER'S WASTEWATER FLOW AND STRENGTH CHARACTERISTICS

Flow and Strength Characteristics

Western Lake Superior Sanitary District

2019 Year End Adj

Line No.	Class of Service	Billing Basis	Notes	Base Flow			Peak Flow			BOD			TSS		
				Actual (Mgd)	Allocated (Mgd)	Actual (Mgd)	Actual (Mgd)	Allocated (Mgd)	Actual (Lbs./Day)	Allocated (Lbs./Day)	Actual (Lbs./Day)	Allocated (Lbs./Day)	Actual (Lbs./Day)	Allocated (Lbs./Day)	
Municipalities:															
1	Duluth	Budget		13.485	17.325	73.639	73.639	73.639	12,534	15,500	16,581	23,000			
2	Cloquet	Budget		1.193	1.470	5.750	5.750	5.750	1,632	2,010	2,805	3,450			
3	Proctor	Budget		0.476	0.604	2.434	2.434	2.434	520	592	631	700			
4	Hermantown	Budget		0.691	0.760	3.530	3.530	3.530	1,164	1,600	1,150	1,600			
5	Esko	Budget		0.202	0.240	1.166	1.166	1.166	255	320	280	420			
6	Scanlon	DE		0.183	0.183	0.900	0.900	0.900	305	305	305	305			
7	Carlton	Budget		0.189	0.270	1.107	1.107	1.107	130	157	160	205			
8	Rice Lake	DE		0.066	0.080	0.338	0.338	0.338	109	125	109	125			
9	Twin Lake	Budget		0.061	0.090	0.400	0.400	0.400	211	280	188	280			
10	Pike Lake	DE		0.093	0.110	0.450	0.450	0.450	156	185	156	185			
11	Knife River	DE		0.020	0.027	0.134	0.134	0.134	32	46	32	46			
12	Oliver	DE		0.021	0.024	0.108	0.108	0.108	35	41	35	41			
13	Thomson	DE		0.009	0.015	0.133	0.133	0.133	15	24	15	24			
14	Wrenshall	DE		0.032	0.042	0.161	0.161	0.161	53	69	53	69			
15	Jay Cooke	DE		0.003	0.005	0.010	0.010	0.010	4	8	4	8			
16	Midway	DE		0.003	0.004	0.007	0.007	0.007	7	8	5	8			
17	MPCA Landfill	DE		0.002	0.042	0.080	0.080	0.080	2	70	2	70			
18	Unused	DE		0.000	0.000	0.000	0.000	0.000	0	0	0	0			
19	North Shore	DE		0.052	0.075	0.398	0.398	0.398	87	125	87	125			
20	Totals-Municipalities			16.778	21.366	90.746	90.746	90.746	17,251	21,465	22,598	30,661			
Industrials:															
21	Unused	Budget		0.000	0.000	0.000	0.000	0.000	0	0	0	0			
22	SAPPI	Budget		16.202	16.250	24.000	24.000	24.000	42,660	56,000	22,448	25,000			
23	Verso Duluth Mill	Budget		3.895	5.500	9.939	9.939	9.939	15,360	28,758	1,509	2,700			
24	USG	Budget		0.538	0.580	1.349	1.349	1.349	1,346	2,000	925	2,800			
25	Specialty	Budget		0.272	0.272	0.581	0.581	0.581	7	8	510	1,400			
26	Totals-Industrials			20.907	22.602	35.869	35.869	35.869	59,373	86,766	25,392	31,900			
27	Totals-All Users			37.685	43.968	126.615	126.615	126.615	76,624	108,231	47,990	62,561			

BOD₅ and TSS strengths are computed using the District's standard domestic equivalent strengths. Formula: Flow x Strength (Mg/l) x 8.34.

2020-02-02 Standard domestic equivalent strengths for the District are: BOD=200 Mg/l, TSS=200 Mg/l.

Line No.	Class of Service	Budget Basis	Operating Expenses, based on Actual Flows and Loads				Debt Svc - based on Allocated Flows and Loads				TOTAL			
			Flow	Excess Fl	BOD	TSS	TOTAL	FLOW	PEAK FLOW	BOD		TSS		
Municipalities: Duluth-														
1	Duluth	Budget	\$2,735,864	\$581,965	\$845,013	\$1,786,043	\$5,948,885	\$1,259,623	\$987,257	\$2,246,880	\$433,998	\$645,300	\$3,326,177	\$9,275,062
2	Cloquet	Budget	\$242,016	\$44,088	\$110,026	\$302,144	\$698,274	\$98,201	\$73,262	\$171,463	\$43,579	\$71,111	\$286,154	\$984,427
3	Proctor	Budget	\$96,571	\$18,946	\$35,057	\$67,969	\$218,543	\$42,703	\$30,140	\$72,843	\$13,338	\$18,076	\$104,257	\$322,799
4	Hermantown	Budget	\$140,089	\$27,471	\$78,474	\$123,874	\$369,908	\$42,170	\$27,630	\$69,800	\$22,697	\$30,869	\$123,366	\$493,274
5	Esko	Budget	\$40,901	\$9,327	\$17,192	\$30,161	\$97,580	\$14,924	\$10,572	\$25,496	\$6,302	\$8,832	\$40,629	\$138,209
6	Scanlon	DE	\$37,147	\$6,937	\$20,562	\$32,853	\$97,500	\$9,710	\$7,489	\$17,200	\$4,275	\$7,333	\$26,207	\$123,707
7	Carlton	Budget	\$38,324	\$8,886	\$8,764	\$17,235	\$73,209	\$20,660	\$14,875	\$35,535	\$3,316	\$4,726	\$43,577	\$116,786
8	Rice Lake	DE	\$13,289	\$2,639	\$7,349	\$11,741	\$35,017	\$6,494	\$4,752	\$11,246	\$2,688	\$3,372	\$17,306	\$52,323
9	Twin Lake	Budget	\$12,376	\$3,280	\$14,225	\$20,251	\$50,131	\$6,145	\$4,600	\$10,745	\$5,168	\$20,532	\$70,663	\$70,663
10	Pike Lake	DE	\$18,929	\$3,451	\$10,517	\$16,804	\$49,701	\$6,875	\$4,912	\$11,787	\$2,754	\$3,216	\$17,757	\$67,458
11	Knife River	DE	\$3,956	\$1,108	\$2,157	\$3,447	\$10,668	\$1,477	\$2,051	\$3,528	\$735	\$5,194	\$15,862	\$15,862
12	Oliver	DE	\$4,200	\$847	\$2,360	\$3,770	\$11,176	\$1,766	\$1,317	\$3,083	\$1,115	\$1,424	\$5,622	\$16,798
13	Thomson	DE	\$1,826	\$1,195	\$1,011	\$1,616	\$5,648	\$1,181	\$1,057	\$2,238	\$523	\$595	\$3,356	\$9,004
14	Wrenshall	DE	\$6,411	\$1,255	\$3,573	\$5,709	\$16,948	\$2,410	\$1,603	\$4,013	\$1,142	\$1,270	\$6,424	\$23,372
15	Jay Cooke	DE	\$527	\$72	\$270	\$431	\$1,300	\$583	\$400	\$983	\$559	\$707	\$2,250	\$3,549
16	Midway	DE	\$629	\$42	\$472	\$539	\$1,681	\$1,360	\$776	\$2,136	\$331	\$450	\$2,917	\$4,598
17	MPCA Landfill	DE	\$304	\$759	\$135	\$215	\$1,414	\$3,616	\$1,974	\$5,591	\$2,084	\$1,260	\$8,935	\$10,349
18	Unused	DE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
19	North Shore	DE	\$10,570	\$3,344	\$5,865	\$9,371	\$29,150	\$5,225	\$5,002	\$10,227	\$2,291	\$2,881	\$15,399	\$44,549
21	Totals-Municipalities		\$3,403,929	\$715,610	\$1,163,022	\$2,434,171	\$7,716,732	\$1,525,123	\$1,179,670	\$2,704,793	\$546,345	\$804,922	\$4,056,060	\$11,772,792
Industrials-														
22	Georgia Pacific		\$0	\$0	\$0	\$0	\$0	\$10,977	\$4,997	\$15,974	\$40,142	\$10,667	\$66,784	\$66,784
23	SAPPI		\$3,287,049	\$75,443	\$2,876,037	\$2,418,014	\$8,656,544	\$1,073,565	\$424,454	\$1,498,019	\$1,204,423	\$514,961	\$3,217,403	\$11,873,947
24	VERSO		\$790,240	\$58,472	\$1,035,535	\$162,544	\$2,046,791	\$354,420	\$139,849	\$494,268	\$701,099	\$210,162	\$1,315,529	\$3,362,320
25	USG		\$109,150	\$7,847	\$90,744	\$99,638	\$307,378	\$39,907	\$23,725	\$63,632	\$78,467	\$90,420	\$232,519	\$539,897
27	Specialty Minerals		\$55,224	\$2,983	\$472	\$54,935	\$113,614	\$22,836	\$9,768	\$32,604	\$283	\$78,819	\$111,706	\$225,320
28	Totals-Industrials		\$4,241,663	\$144,745	\$4,002,788	\$2,735,131	\$11,124,327	\$1,501,705	\$602,792	\$2,104,497	\$2,024,414			