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Western Lake Superior Sanitary District
February 1, 2021

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

Subject: 2020 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 2020, the WLSSD Board has approved total wastewater charges of \$27,532,368 as shown in the attached comparison of billed (budget) to required charges (actual) for 2020. 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 2021.

Attached is a table summarizing the 2020 billing as compared to the 2020 required actual. For Duluth, the total year-end adjustment for 2020 is a charge of \$83,369. This will be included as a \$6,947/month charge on your 2021 monthly billing.

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

Sincerely,

Marianne Bohren
Executive Director

xc: Eric Schaffer

Attachment

2020 Year End Adjustment

	BILLED 2020	REQUIRED 2020	YEAR-END ADJUSTMENT
DULUTH	9,373,756	9,457,125	\$83,369
CLOQUET	992,915	866,857	(\$126,058)
PROCTOR	322,476	309,294	(\$13,183)
HERMANTOWN	477,916	458,868	(\$19,048)
ESKO	141,678	144,175	\$2,497
SCANLON	114,198	105,459	(\$8,739)
CARLTON	114,545	121,298	\$6,752
RICE LAKE	51,698	47,609	(\$4,089)
TWIN LAKE	89,385	42,950	(\$46,435)
PIKE LAKE	72,346	61,114	(\$11,232)
KNIFE RIVER	\$18,730	16,021	(\$2,709)
OLIVER	17,738	16,677	(\$1,061)
THOMSON	9,025	7,989	(\$1,036)
WRENSHALL	21,185	22,013	\$827
JAY COOKE	3,447	4,626	\$1,179
MIDWAY	4,737	4,845	\$108
MPCA LANDFILL	11,318	10,672	(\$645)
UNUSED	-	-	\$0
DULUTH/NORTH SHORE	46,005	43,245	(\$2,760)
MUNICIPALITIES SUBTOTAL	11,883,098	11,740,836	(\$142,262)
SAPPI	12,208,905	12,305,970	\$97,065
GEORGIA PACIFIC	55,628	55,628	\$0
USG	586,374	574,893	(\$11,481)
VERSO DULUTH MILL	2,604,149	2,665,631	\$61,482
SPECIALTY MINERALS	194,214	189,411	(\$4,803)
INDUSTRIES SUBTOTAL	15,649,270	\$15,791,532	\$142,262
TOTAL DISTRICT	\$27,532,368	\$27,532,368	\$0

**2020 Year End Adjustment
Wastewater Unit Costs**

	BUDGET 2020	REQUIRED 2020	% CHANGE
<u>VOLUME</u>			
FLOW (MGD)	36.23	33.09	-8.66%
BOD (LBS/DAY)	77,799	70,066	-9.94%
SUSPENDED SOLIDS (LBS/DAY)	38,201	48,360	26.59%
<u>O & M UNIT COSTS</u>			
FLOW (COST/1000 GAL)	\$0.5768	\$0.6232	8.04%
PEAK FLOW	\$0.0426	\$0.0251	-41.00%
BOD (COST/LB)	\$0.1721	\$0.1987	15.42%
SUSPENDED SOLIDS (COST/LB)	\$0.3502	\$0.2884	-17.66%
<u>O & M + DEBT SERVICE UNIT COSTS</u>			
FLOW (COST/1000 GAL)	\$0.7691	\$0.8155	6.03%
PEAK FLOW	\$0.0982	\$0.0776	-20.96%
BOD (COST/LB)	\$0.2374	\$0.2640	11.18%
SUSPENDED SOLIDS (COST/LB)	\$0.4319	\$0.3700	-14.32%
DOMESTIC EQUIV (COST/1000GAL)	\$1.9836	\$1.9505	-1.67%

2020 Year End Adjustment

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 FI	BOD	TSS	TOTAL	FLOW	PEAK FLOW	TOTAL FLOW		BOD	TSS	TOTAL
Municipalities: Duluth-														
1	Duluth	Budget	\$2,509,402	\$603,565	\$1,022,774	\$1,977,421	\$6,113,163	\$1,261,234	\$1,001,546	\$2,262,780	\$434,752	\$646,430	\$3,343,962	\$9,457,125
2	Cloquet	Budget	\$224,796	\$25,904	\$106,962	\$228,180	\$585,843	\$98,323	\$67,827	\$166,150	\$43,650	\$71,214	\$281,014	\$866,857
3	Proctor	Budget	\$90,915	\$16,171	\$34,518	\$63,991	\$205,595	\$42,752	\$29,480	\$72,232	\$13,360	\$18,106	\$103,698	\$309,294
4	Hermantown	Budget	\$140,933	\$13,623	\$73,677	\$111,248	\$339,481	\$42,206	\$23,558	\$65,764	\$22,720	\$30,903	\$119,387	\$458,868
5	Esko	Budget	\$43,194	\$9,045	\$19,072	\$32,101	\$103,412	\$14,940	\$10,671	\$25,611	\$6,310	\$8,843	\$40,763	\$144,175
6	Scanlon	DE	\$32,890	\$4,808	\$17,477	\$25,365	\$80,540	\$9,378	\$6,849	\$16,227	\$4,128	\$4,563	\$24,919	\$105,459
7	Carlton	Budget	\$38,850	\$8,055	\$11,603	\$19,261	\$77,768	\$20,689	\$14,775	\$35,464	\$3,332	\$4,734	\$13,529	\$121,298
8	Rice Lake	DE	\$12,578	\$1,642	\$6,672	\$9,683	\$30,575	\$6,502	\$4,462	\$10,965	\$2,691	\$3,378	\$17,034	\$47,609
9	Twin Lake	Budget	\$5,345	\$1,410	\$6,962	\$9,157	\$22,874	\$6,151	\$4,124	\$10,275	\$4,626	\$5,176	\$20,077	\$42,950
10	Pike Lake	DE	\$18,060	\$2,045	\$9,645	\$13,998	\$43,748	\$6,884	\$4,499	\$11,383	\$2,760	\$3,223	\$17,366	\$61,114
11	Knife River	DE	\$3,912	\$1,580	\$2,103	\$3,052	\$10,647	\$1,479	\$2,226	\$3,705	\$736	\$933	\$5,374	\$16,021
12	Oliver	DE	\$3,867	\$1,863	\$2,030	\$2,947	\$10,708	\$1,768	\$1,659	\$3,427	\$1,116	\$1,426	\$5,970	\$16,677
13	Thomson	DE	\$2,002	\$210	\$1,088	\$1,579	\$4,878	\$1,182	\$809	\$1,992	\$524	\$596	\$3,111	\$7,989
14	Wrenshall	DE	\$6,141	\$1,378	\$3,266	\$4,740	\$15,525	\$2,412	\$1,660	\$4,073	\$1,143	\$1,271	\$6,487	\$22,013
15	Jay Cooke	DE	\$500	\$892	\$290	\$421	\$2,104	\$584	\$669	\$1,253	\$560	\$709	\$2,522	\$4,626
16	Midway	DE	\$751	\$38	\$508	\$631	\$1,927	\$1,360	\$777	\$2,136	\$331	\$450	\$2,918	\$4,845
17	MPCA Landfill	DE	\$341	\$767	\$242	\$351	\$1,701	\$3,622	\$1,998	\$5,620	\$2,090	\$1,261	\$8,971	\$10,672
18	Unused	DE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
19	North Shore	DE	\$10,554	\$3,476	\$5,584	\$8,104	\$27,718	\$5,233	\$5,110	\$10,344	\$2,295	\$2,887	\$15,527	\$43,245
21	Totals-Municipalities		\$3,145,032	\$696,474	\$1,324,471	\$2,512,231	\$7,678,207	\$1,526,700	\$1,182,699	\$2,709,399	\$547,127	\$806,104	\$4,062,629	\$11,740,836
Industrials-														
Georgia Pacific														
22	Suppl		\$0	\$0	\$0	\$0	\$0	\$9,734	\$4,313	\$14,047	\$33,091	\$8,489	\$55,628	\$55,628
23	VERSO		\$3,663,612	\$69,795	\$3,095,300	\$2,254,332	\$9,083,039	\$1,074,778	\$426,133	\$1,500,911	\$1,206,354	\$515,666	\$3,222,931	\$12,305,970
24	USG		\$556,861	\$59,413	\$559,103	\$175,345	\$1,350,723	\$354,830	\$137,434	\$492,264	\$702,250	\$120,394	\$1,314,908	\$2,665,631
25	Specialty Minerals		\$109,453	\$7,129	\$101,668	\$123,984	\$342,233	\$39,947	\$23,546	\$63,493	\$78,621	\$90,546	\$232,659	\$574,893
27			\$52,565	\$1,169	\$435	\$23,997	\$78,166	\$22,384	\$9,568	\$31,953	\$284	\$79,009	\$111,245	\$189,411
Totals-Industrials														
28			\$4,382,491	\$137,506	\$3,756,506	\$2,577,657	\$10,854,161	\$1,501,674	\$600,994	\$2,102,667	\$2,020,600	\$814,103	\$4,937,371	\$15,791,532
Totals-All Users														
30			\$7,527,523	\$833,980	\$5,080,977	\$5,089,888	\$18,532,368	\$3,028,373	\$1,783,693	\$4,812,066	\$2,567,727	\$1,620,207	\$9,000,000	\$27,532,368

Table 5

USER'S WASTEWATER FLOW AND STRENGTH CHARACTERISTICS

Flow and Strength Characteristics

Western Lake Superior Sanitary District

2020 Year End Adjustment

Line No.	Class of Service	Billing Basis	Notes	Base Flow		Peak Flow		BOD		TSS	
				Actual (Mgd)	Allocated (Mgd)	Actual (Mgd)	Allocated (Mgd)	Actual (Lbs./Day)	Allocated (Lbs./Day)	Actual (Lbs./Day)	Allocated (Lbs./Day)
Municipalities:											
1	Duluth	Budget		11.032	17.325	76.782	76.782	14,104	15,500	18,788	23,000
2	Cloquet	Budget		0.988	1.470	3.810	3.810	1,475	2,010	2,168	3,450
3	Proctor	Budget		0.400	0.604	2.161	2.161	476	592	608	700
4	Hermantown	Budget		0.620	0.760	2.104	2.104	1,016	1,600	1,057	1,600
5	Esko	Budget		0.190	0.240	1.175	1.175	263	320	305	420
6	Scanlon	DE		0.145	0.160	0.668	0.668	241	262	241	262
7	Carlton	Budget		0.171	0.270	1.048	1.048	160	160	183	205
8	Rice Lake	DE		0.055	0.080	0.234	0.234	92	125	92	125
9	Twin Lake	Budget		0.024	0.090	0.177	0.177	96	280	87	280
10	Pike Lake	DE		0.079	0.110	0.302	0.302	133	185	133	185
11	Knife River	DE		0.017	0.027	0.189	0.189	29	46	29	46
12	Oliver	DE		0.017	0.024	0.220	0.220	28	41	28	41
13	Thomson	DE		0.009	0.015	0.032	0.032	15	24	15	24
14	Wrenshall	DE		0.027	0.042	0.177	0.177	45	69	45	69
15	Jay Cooke	DE		0.002	0.005	0.099	0.099	4	8	4	8
16	Midway	DE		0.003	0.004	0.007	0.007	7	8	6	8
17	MPCA Landfill	DE		0.002	0.042	0.085	0.085	3	70	3	70
18	Unused	DE		0.000	0.000	0.000	0.000	0	0	0	0
19	North Shore	DE		0.046	0.075	0.425	0.425	77	125	77	125
20	Totals-Municipalities			13.827	21.343	89.698	89.769	18,264	21,425	23,869	30,618
Industrials:											
21	Unused	Budget		0.000	0.000	0.000	0.000	0	0	0	0
22	SAPPI	Budget		16.107	16.250	23.710	24.000	42,684	56,000	21,419	25,000
23	Verso Duluth Mill	Budget		2.448	5.500	8.920	8.920	7,710	28,758	1,666	2,700
24	USG	Budget		0.481	0.580	1.258	1.258	1,402	2,000	1,178	2,800
25	Specialty	Budget		0.231	0.240	0.358	0.500	6	8	228	1,400
26	Totals-Industrials			19.267	22.570	34.247	34.678	51,802	86,766	24,491	31,900
27	Totals-All Users			33.094	43.913	123.944	124.447	70,066	108,191	48,360	62,518

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

2021-01-26 Standard domestic equivalent strengths for the District are: BOD=200 Mg/A155,200, TSS=200 Mg/l.