# CITY OF DULUTH





Public Works & Utilities Department 2019 Annual Report

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#### Front cover photos:

Left: Replacement of 6" steel gas main with 6" MDPE on Woodland Avenue, photo by Joe Leeper; Right: Lowering 16" gas main for construction of new River West Street, photos by Scott Hegg

#### OFFICERS OF THE DEPARTMENT

Mayor Chief Ad	ministrative Officer		Emily Larson  Noah Schuchman
City Cou	ncil Public Works & Utilities Committee		
	Councilor Zack Filipovich		
Duluth P	ublic Utilities Commission		
	Rob Prusak, President	Councilor Zack Filipovich	
	Carrie Ryan, Vice President	Councilor Arik Forsman	
	Howard Jacobson	Councilor Joel Sipress	
	Chris McIntosh		
DEPAR	TMENT OF PUBLIC WORKS & UTILI	TIES	

Director	Jim Benning

City Engineer Cindy Voigt

Chief Engineer, Transportation Cari Pedersen

Chief Engineer, Utilities Eric Shaffer

Manager, Customer Service \_\_\_\_\_\_John Upton

Manager, Street Maintenance Chad Bednar

Manager, Utility Operations Greg Guerrero

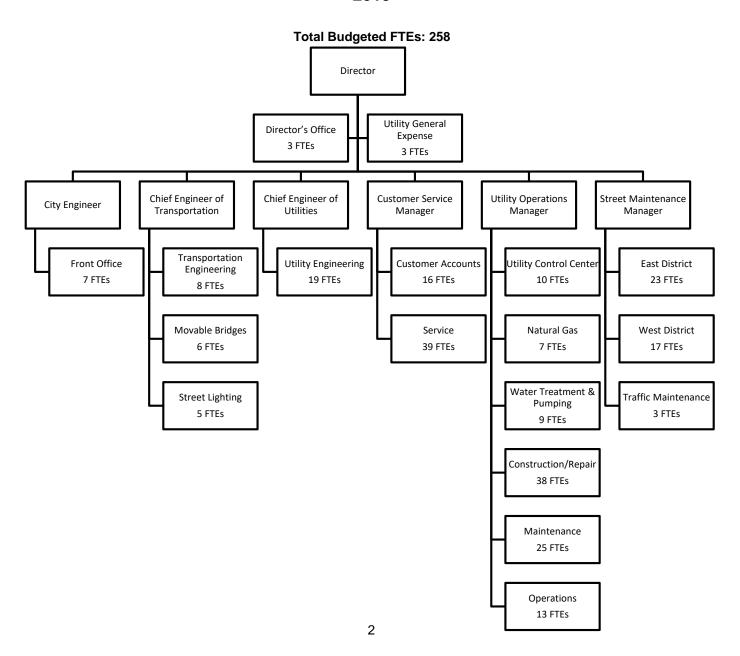
Executive Assistant Leanna Gilbert

Public Works & Utilities Analyst Glenn Strid

Budget & Operations Analyst Kerry Venier

Financial Analyst Ken Taylor

# City of Duluth Public Works & Utilities Department 2019



# WATER

# Water Utility Statement of Net Income For The Year Ended December 31, 2018 and 2019 (Unaudited)

_	2018		2019	
Operating Revenue  Metered Water Sales Other	\$ 14,743,178 181,977	_	\$ 14,971,423 171,297	_
Total Operating Revenue	\$ 14,925	,155_	\$_	15,142,720
Operating Expense Director's Office Capital Related Expenses Utility General Expense Engineering Utility Operations Water Treatment and Pumping Customer Service	82,457 2,072,886 855,698 549,264 3,184,334 3,017,617 1,311,531		85,064 1,827,854 73,922 596,376 3,838,153 2,766,612 1,493,467	
Total Operating Expense	(11,073	,787)	-	(10,681,448)
Operating Income	3,851	,368_	-	4,461,272
Other Revenue Grants Non-Capital Contributed Capital Gain or Loss on the Sale of Fixed Assets Transfer from Other Funds Administrative Billing Fee Street Lighting Intergovernmental Interest Income	0 13,266 36,379 135,000 9,300 16,919 (34,007)		11,508 11,591 8,531 135,000 9,300 16,919 47,466	
Total Other Revenue	176	,857_	<u>-</u>	240,315
Other Expenses and Transfers  Transfer to Other Funds  Non-Capital Improvements  Reimbursement for MIS Programmer  Interest on Long Term Debt	97,882 53,600 252,071		82,562 55,700 245,638	
Total Other Expenses and Transfers	(403	,553)	<u>-</u>	(383,900)
Net Income or Loss	\$ 3,624	,672	\$ <sub>=</sub>	4,317,687

# Water Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### **Assets & Deferred Outflows**

	2018				2019	
Current Assets			-			
Cash	\$ 1,988,044			\$	3,645,869	
Restricted Cash and Equivalents: Minnesota Water Connection Fees	90,136				90,380	
Construction	2,548,378				1,261,807	
Accounts Receivable (Net)	1,379,935				1,473,554	
Special Assessments	26.790				21,757	
Due from Other Funds	10,794				8,690	
Due from Other Governments	324				11,643	
Inventory	1,438,636				1,269,610	
Prepaids	0			_	1,541,549	
Total Current Assets	\$_	7,483,037			\$_	9,324,859
Utility Plant						
In Service	100,414,330				101,602,977	
Construction	4,826,830				6,722,027	
				_		
Less Accumulated Depreciation	(41,934,840)			_	(43,509,819)	
Total Utility Plant Assets	-	63,306,320			_	64,815,185
Other Assets						
Special Assessments Receivable	92,236			_	84,829	
Total Other Assets	=	92,236			_	84,829
Total Assets	_	70,881,593			_	74,224,873
Deferred Outflows						
Deferred Pension Obligation Outflows	635,588				295,630	
Deferred OPEB Outflows	671,232				0	
	<del></del>			_		
Total Deferred Outflows	_	1,306,820			_	295,630
Total Assets and Deferred Outflows	\$_	72,188,413			\$_	74,520,503

# Water Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### Liabilities & Net Assets

	2018	<b>.</b>	2019
Current Liabilities			
Accounts Payable	\$ 369,354		\$ 71,148
Contracts Payable	12,121		42,262
Notes Payable	866,000		700,000
Leases Payable	245,846		255,251
Due to Other Funds	20,047		43,253
Due to Other Governments	90,716		143,902
Due to Component Units	0		5
Accrued Interest Payable	79,395		97,154
Accrued Salaries Payable	96,316		115,518
Vacations Payable	236,462		237,620
Unearned Revenue	45,411		60,557
Customer Deposits	10,000		10,000
Bonds Payable	99,000		284,000
Total Current Liabilities (Payable from Current Assets)	\$	2,170,668	\$ 2,060,670
Long Term Liabilities			
Notes Payable	5,696,000		4,996,000
Leases Payable	1,228,023		972,773
Pension Liability	3,002,049		2,941,654
Net Other Post Employment Benefits	1,744,674		0
Bonds Payable	4,391,000		4,107,000
Less Unamortized Bond Discount or Premium	52,018		45,067
Total Long Term Liabilities		16,113,764	13,062,494
Total Liabilities		18,284,432	15,123,164
Deferred Inflows			
Deferred Pension Obligation Inflows	960,177		680,891
Deferred OPEB Inflows	0		1,454,957
Total Deferred Inflows		960,177	2,135,848
Net Assets			
Invested in Capital Assets, Net of Related Debt	53,276,811		54,716,901
Unrestricted	(333,007)		2,544,590_
Total Net Assets		52,943,804	57,261,491
Total Liabilities, Deferred Inflows, and Net Assets	\$	72,188,413	\$74,520,503_

City of Duluth Water Utility Bonds, Notes and Capital Leases Payable December 31, 2019

		Issued	Issue Date	Final Maturity	Principal Outstanding 12/31/2018		Issued		Draw Down		Retired	_	Principal Outstanding 12/31/2019
Water Utility													
Bonds  Revenue and General Obligation	\$	196,000	2/19/2009	2/1/2024	\$ 90,000	Φ.	0	\$	0	\$	14,000	\$	76,000
Revenue and General Obligation Refu	*	515,000	11/5/2015	2/1/2024	350,000	Ψ	0	Ψ	0	Ψ	85,000	Ψ	265,000
Revenue and General Obligation	ilulig	4,050,000	10/17/2018	2/1/2034	4,050,000		0		0		05,000		4,050,000
Trovolido and Conordi Congalion		1,000,000	10/11/2010	2/1/2001	1,000,000	-		_		_		_	1,000,000
Bond Total					\$ 4,490,000	\$_	0	\$_	0	\$_	99,000	\$_	4,391,000
Notes													
Public Facilities Authority	\$	1,668,813	10/28/2009	8/20/2019	\$ 174,000	\$	0	\$	0	\$	174,000	\$	0
Public Facilities Authority		1,293,200	8/31/2010	8/20/2025	624,000		0		0		86,000		538,000
Public Facilities Authority		3,344,131	8/31/2010	8/20/2025	1,673,000		0		0		231,000		1,442,000
Public Facilities Authority		1,221,631	11/18/2011	8/20/2026	654,000		0		0		78,000		576,000
Public Facilities Authority		4,778,806	3/24/2014	8/20/2029	3,437,000		0	_	0	_	297,000	_	3,140,000
Note Total					\$ 6,562,000	\$_	0	\$_	0	\$	866,000	\$_	5,696,000
Capital Leases													
AMR System	\$	3,375,986	7/12/2007	2/1/2024	\$1,473,869	\$_	0	\$_	0	\$_	245,845	\$_	1,228,024
Capital Lease Total					\$1,473,869	\$_	0	\$_	0	\$_	245,845	\$_	1,228,024
Total Water Utility Bonds, Notes and Capital Leas	es				\$ 12,525,869	\$	0	\$_	0	\$	1,210,845	\$_	11,315,024

ture Payments:			
<u>Year</u>	<u>Principal</u>	Interest	<u>Total</u>
2020	1,239,251	\$ 236,113	\$ 1,475,364
2021	1,302,018	209,488	1,511,506
2022	1,330,156	181,552	1,511,708
2023	1,264,684	154,208	1,418,892
2024	1,138,915	127,536	1,266,451
2025	995,000	109,018	1,104,018
2026	665,000	93,280	758,280
2027	592,000	81,087	673,087
2028	600,000	69,693	669,693
2029	613,000	58,042	671,042
2030	295,000	46,063	341,063
2031	305,000	36,872	341,872
2032	315,000	26,987	341,987
2033	325,000	16,588	341,588
2034	335,000	5,653	340,653
Ş	\$ 11,315,024	\$1,452,180_	\$ 12,767,204

Water Fund Schedule of Fixed Assets Year Ending December 31, 2019

	_	Balance Jan. 1, 2019	_	Additions	_	Deductions	. <u>-</u>	Balance Dec. 31, 2019	_	Accumulated Depreciation	_	Book Value
Lands and Grounds	\$	208,963	\$	0	\$	0	\$	208,963	\$	0	\$	208,963
Infrastructure		68,953,668		1,227,453		0		70,181,121		21,169,942		49,011,179
Buildings and Structures		22,338,952		0		0		22,338,952		15,370,160		6,968,792
Equipment and Tools		8,912,747		138,689		177,495		8,873,941		6,969,717		1,904,224
Work in Progress	_	4,826,830	_	3,152,732	_	1,257,535	-	6,722,027	_	0	_	6,722,027
Total	\$_	105,241,160	\$_	4,518,874	\$_	1,435,030	\$	108,325,004	\$_	43,509,819	\$_	64,815,185

### COMPARATIVE STATEMENT, OPERATING EXPENSE OF ALL STATIONS

		Daily Average Gallons Pumped,				
Station	Year	Initial Supply	Gallons Pumped	K.W.H. Consumed	E	lectricity
Labancad	2018	12,773,000	4,662,150,000	7,817,250	\$	714,047
Lakewood	2019	12,303,000	4,490,740,000	7,484,350	\$	619,212
Middle	2018	2,682,347	979,057,000	1,282,400	\$	115,822
Middle	2019	2,680,463	978,369,000	1,274,400	\$	106,998
Woodland	2018	1,625,342	593,250,000	1,328,400	\$	126,799
vvoodiand	2019	1,656,673	604,686,000	1,376,400	\$	112,598
West Duluth	2018	4,204,827	1,534,762,000	434,303	\$	45,532
west Duluth	2019	3,766,164	1,374,650,000	396,864	\$	39,365
Ornhanaga	2018	218,150	79,625,000	54,720	\$	7,248
Orphanage	2019	229,134	83,634,000	60,160	\$	7,371
Lighland	2018	1,300,589	474,715,000	403,760	\$	44,953
Highland	2019	1,366,430	498,747,000	432,192	\$	43,194
Arlington	2018	1,456,794	531,730,000	869,952	\$	104,640
Arlington	2019	1,494,509	545,496,000	888,384	\$	99,707
Lakeside	2018	176,731	64,507,000	77,040	\$	12,128
Lakeside	2019	177,704	64,862,000	75,280	\$	11,383
Ray View	2018	393,690	143,697,000	203,840	\$	25,890
Bay View	2019	457,252	166,897,000	198,400	\$	24,304
Proctor	2018	374,824	136,811,000	196,160	\$	25,272
FIOCIOI	2019	360,906	131,731,000	190,080	\$	23,742
Airport	2018	-	unmetered	15,936	\$	2,712
Allpoit	2019	-	unmetered	6,912	\$	1,031
TOTALS	2018			12,683,761	\$	1,225,043
IOIALS	2019			12,383,422	\$	1,088,905

### **WATER PLANT STATISTICS**

	2019	2018	2017	2016	2015	2014	2013
Water Pumped							
Million Cubic Feet	600.37	623.28	655.20	666.81	692.43	695.74	695.88
Water Sold							
Million Cubic Feet	527.56	561.94	568.41	565.57	589.84	591.00	605.95
General & Distribution Operating							
Costs including Maintenance (*)	\$ 8,928,974	\$ 9,255,377	\$ 9,285,999	\$ 9,008,318	\$ 8,528,252	\$ 9,529,831	\$ 9,394,544
Cost per 100 Cubic Feet	\$ 1.6925	\$ 1.6470	\$ 1.6337	\$ 1.5928	\$ 1.4459	\$ 1.6125	\$ 1.5504
Interest charges	\$ 245,638	\$ 252,071	\$ 182,025	\$ 213,800	\$ 269,225	\$ 274,990	\$ 274,206
Cost per 100 Cubic Feet	\$ 0.0466	\$ 0.0449	\$ 0.0320	\$ 0.0378	\$ 0.0456	\$ 0.0465	\$ 0.0453
Depreciation charge	\$ 1,752,474	\$ 1,818,410	\$ 1,826,882	\$ 1,776,832	\$ 1,709,522	\$ 1,635,319	\$ 1,576,417
Cost per 100 Cubic Feet	\$ 0.3322	\$ 0.3236	\$ 0.3214	\$ 0.3142	\$ 0.2898	\$ 0.2767	\$ 0.2602
Total Cost per 100 Cubic Feet	\$ 2.0712	\$ 2.0155	\$ 1.9871	\$ 1.9448	\$ 1.7813	\$ 1.9357	\$ 1.8558
Operating revenue	\$ 15,142,720	\$ 14,925,155	\$ 14,445,384	\$ 14,488,756	\$ 14,435,412	\$ 14,539,396	\$ 14,878,380
Revenue per 100 Cubic Feet Sold	\$ 2.8703	\$ 2.6560	\$ 2.5414	\$ 2.5618	\$ 2.4473	\$ 2.4601	\$ 2.4554
Water meters in service	28,324	28,957	28,329	28,253	28,208	28,131	28,069
Water main miles	429.50	429.30	428.40	428.30	433.40	430.70	428.30
Water meters per mile of main	65.95	67.45	66.13	65.97	65.09	65.31	65.54
Hydrants on system	2,738	2,716	2,708	2,699	2,688	2,659	2,671

<sup>(\*)</sup> Depreciation not included

### WATER PURIFICATION 2019 LAKEWOOD STATION

Month	Total Number of Gallons Treated (Millions)	Average Water Temperature at Treatment Bldg, Degrees F	Ammonia Lbs. Used	Chlorine Lbs. Used	Alum Gal. Used	Fluoride Gal. Used	Turbidity of Effluent NTU
January	353.41	36.0	1,673	6,489	7,926	1,270	0.029
February	327.98	32.6	1,556	6,357	7,926	1,179	0.028
March	365.99	32.7	1,768	6,790	7,926	1,325	0.029
April	337.84	34.0	1,600	6,284	7,926	1,216	0.028
May	368.33	36.7	1,744	6,761	7,926	1,294	0.029
June	374.78	40.5	1,734	6,955	7,926	1,285	0.033
July	424.59	44.5	1,923	7,728	11,889	1,431	0.037
August	441.72	43.2	2,028	8,074	11,889	1,491	0.037
September	394.35	48.2	1,811	7,254	7,926	1,323	0.027
October	393.01	48.4	1,794	8,332	11,889	1,360	0.030
November	350.49	41.3	1,658	6,595	3,963	1,241	0.030
December	358.25	37.4	1,649	6,508	7,926	1,265	0.029
TOTAL	4,490.74		20,938	84,127	103,038	15,680	
Average/Month	374.23	39.6	1,745	7,011	8,587	1,307	0.031

# 2019 LAKE SUPERIOR RAW WATER AND DULUTH FINISHED WATER (LABORATORY ANALYSES)

Milligrams per Liter (except pH, Specific Conductance, and Turbidity)

	RAW	FINISHED
	Average	Average
Dissolved Oxygen	12.8	12.8
рН	7.78	9.24
Monthly Specific Conductance, Micromhos/cm	103.8	133.8
Alkalinity	44	47
Sulfates	3.0	7.8
Fluorides	0.07	0.75
Turbidity, NTU	1.55	0.03
Chlorine	NA	1.31
Total Dissolved Solids	NA	62.7
Iron	NA	0.01
Hardness, as CaCO <sub>3</sub>	NA	43
Color, apparent, PtCo	12.3	NA
Color, true, PtCo	4.5	NA

### **BACTERIOLOGICAL DATA 2019**

	RAW WAT	ER INTAKE	TREATE	D WATER	DISTRI	BUTION
				Number		Number
	Number	Coliform	Number	Samples	Number	Samples
Average for	Samples	per 100 ml	Samples	Positive	Samples	Positive
January	16	7	178	0	90	0
February	15	2	175	0	91	0
March	16	9	193	0	91	0
April	16	14	163	0	91	0
May	17	13	180	0	92	0
June	15	11	202	0	91	0
July	17	17	210	0	90	0
August	15	15	189	0	92	0
September	15	12	202	0	93	0
October	19	18	221	0	97	0
November	13	13	149	0	91	0
December	13	12	160	0	91	0
TOTAL	187	NA	2,222	0	1,100	0
Average for Month	15.6	11.92	185	0	91.7	0.00

**LENGTH OF WATER MAINS IN FEET** 

Diameter	Cast	Ductile			Polyvinyl	High Density			
Inches	Iron	Iron	Steel	Copper	Chloride	Polyethylene	Total	Valves	Vaults
1				886			886	5	
2				2,585		10,627	13,212	32	
3	1,391					619	2,010	11	
4	10,033	2,851				239	13,123	54	
6	957,688	146,281	569		1,728	13,087	1,119,353	2,458	
8	79,948	102,238	458		293	174,692	357,629	858	5
10	153,002	51,828	5,969			35,230	246,029	438	7
12	156,791	43,758	1,939			23,929	226,417	408	11
14						2,182	2,182		
16	75,595	23,805	11,021			57	110,478	137	1
18	1,389	434				2,091	3,914	5	
20	14,237	1,796	29,251			5,995	51,279	68	4
24	8,439	6,580	53			5,952	21,024	34	1
30			2,672				2,672	2	
36	25,066	11,721	11,387				48,174	34	3
42	181		49,228				49,409	6	
48							0		
TOTALS	1,483,760	391,292	112,547	3,471	2,021	274,700	2,267,791	4,550	32
						Total Miles -	429.5		
					Chang	ge from 2018 -	0.2	21	0

Notes: Pipe and valves in hydrant branches are not included in the above table.

Air valves, valves without gates and valves inside pump stations are not included.

All Main and Hydrant information provided from Geographic Information System.

#### **HYDRANTS AND BRANCHES**

	Total	Valves on	Lineal Feet
	Hydrants	Branches	Main to Hydt.
TOTAL IN SERVICE			
12/31/2018	2,716	2,673	56,257
TOTAL IN SERVICE			
12/31/2019	2,738	2,695	56,571
Changes from 2018:	22	22	314

### DATA, RESERVOIRS AND TANKS

	Capacity	Overflow	Greatest	Dimension	
Location	(Gallons)	Elevation (Feet)	Depth (Feet)	(Feet)	Remarks
Lakeside Tank	100,000	500.00	23.75	Diameter 27	Built in 1961
34th Avenue East "Reservoir A"	16,320,000	294.00	30.00	284 x 391	Built 1898, Rebuilt 1938
Endion Reservoir	14,140,000	290.00	28.00	240 x 320	Built by G & W Company
					Rebuilt 1922
					New Roof 1966
					Lined 1988
West End Reservoirs #1-6	10,200,000	290.00	33.00	Diameter 100	Built 1953
West Duluth Reservoir	10,000,000	290.00	21.00	327.3 x 263.3	Built 1906
					Remodeled 1925
					New Roof 2014
Middle System - Reservoir #1	5,171,000	560.00	28.00	Diameter 187.38	Built 1913
					New Roof 1928
					Lined 1988
Middle System - Reservoir #2	5,131,000	560.00	25.00	Diameter 190	Built in 1951
Woodland Reservoir #1	1,021,000	806.00	22.00	Diameter 91.5	Built in 1915
					Lined 1939
					Refaced 2002
Woodland Reservoir #2	2,015,000	806.00	35.50	Diameter 100	Built in 1950
					Lined 2000
					Refaced 2002
Arlington Reservoir #1	240,490	806.00	27.00	Diameter 40	Built in 1925
Arlington Reservoir #2	1,534,000	806.00	27.50	Diameter 100	Built in 1950
Orphanage Tank #1	400,000	916.00	129.40	Diameter 51.5	Built 1994
Highland Water Tower	1,000,000	141.60	40.00	Diameter 74.8 1/4	Built 2011
Bay View Heights Steel Tank	100,000	550.00	26.00	Diameter 26	Built 1972
Proctor Tank	400,000	825.00	142.00	Diameter 51.5	Built 1989
TOTAL	67,772,490				

### **PUMPING STATIONS - WATER PUMPING EQUIPMENT**

Station	Source of Supply	Reservoirs Discharged Into	No. Units and Year Installed	Make of Pump	Type of Pump	Unit	Pumps Driven By	R.P.M.	Average Capacity G.P.M. Each Unit
Lakewood Low Lift	Lake Superior	Lakewood	1 1992	Patterson	Single Stage Centrifugal	2	1 Unit direct connected to 300 hp, 2300 volt, 60 cycle, GE Induction motor	900	17,400
			1 1949	DeLaval		4	1 Unit direct connected to 350 hp, 2300 volt, 60 cycle, GE Induction motor	440	20,800
			1 1981	Worthington	Single Stage	1	1 Unit direct connected to 200 hp, 2300 volt, 60 cycle, GE Induction motor	500	11,389
Lakewood High Lift	Lakewood (Detention Basin)	Reservoir A Endion, West End, & West Duluth	1 1992	Patterson	Single Stage Centrifugal	2	2 Unit direct connected to 1500 hp, 2300 volt, 60 cycle GE Induction motor with VFD and fixed controller	1,200	17,400
			1 1949	DeLaval	Two Stage Centrifugal	4	2 Unit direct connected to 2000 hp, 2300 volt, 60 cycle, GE synchronous motor, with direct exciter	720	20,800
			1 1981	Worthington	Single Stage	1	1 Unit direct connected to 1000 hp, 2300 volt, 60 cycle GE capacitor induction motor	1,185	11,389
Middle	Reservoir A and Endion	Middle Service	1 1950	Allis-Chalmers	Single Stage, Two Unit, Centrifugal	3	Direct connected to 400 hp, 2300 volt, 60 cycle, Allis-Chalmers synchronous motor, with direct connected exciter	1,800	4,000
			1 1969	Aurora	Single Stage, One Unit, Centrifugal	4	Direct connected to 250 hp, 2300 volt, 60 cycle, 3-phase Louis Allis Induction motor	1,750	2,500
			1 1986	Fairbanks- Morse	Single Stage, One Unit, Centrifugal	5	Direct connected to 250 hp, 2300 volt, 60 cycle, 3-phase Siemens- Allis motor	1,785	2,600
Woodland	Reservoir A	Woodland & Arlington Reservoir	1 1950	Allis-Chalmers	All Units Single Stage, Two Unit, Centrifugal	3	Direct connected to 500 hp, 2300 volt, 60 cycle, Allis-Chalmers synchronous motor, with direct connected exciter	1,800	2,050
			1 1986	Fairbanks Morse Co.		4	Direct connected to 300 hp, 2300 volt, 60 cycle, Siemens-Allis Induction motor	1,775	1,720
			1 1975	Aurora #421	Two Stage, Centrifugal	5	Direct connected to 240 hp, 2300 volt, 60 cycle, 3-phase Marathon Induction motor	1,750	1,250

### **PUMPING STATIONS - WATER PUMPING EQUIPMENT**

Station	Source of Supply	Reservoirs Discharged Into	No. Units and Year Installed	Make of Pump	Type of Pump	Unit No.	Pumps Driven By	R.P.M.	Average Capacity G.P.M. Each Unit
West Duluth	Reservoir A, Endion & West	West Duluth Reservoir & West Duluth System	2 2009	Fairbanks- Morse	All Units Single Stage	2	200 hp, 460 volt, 60 cycle 3-phase WEG NEMA Premium Induction motor, with VFD drive	1,200	6,000
Orphanage	Woodland Reservoirs	Orphanage Tanks	1 1961	Worthington Type L-2	Single Stage Centrifugal	5	Direct connected to 40 hp, 440 volt, 60 cycle, U.S. Induction motor	1,750	1,000
			1 1961		Single Stage Centrifugal		Direct connected to 40 hp, 440 volt, 60 cycle, U.S. Induction motor	1,750	1,000
Highland	Arlington Reservoirs	Highland Tanks	2 2012	Aurora	Single Stage, Single Suction Centrifugal	3	2-Unit Direct connected to 150 hp, 460 volt, 60 HZ, 3-phase Marathon Electric XRI high efficiency motor	1,800	1,200
Arlington	Middle Reservoirs	Arlington Reservoirs	3 2010	Aurora Type 411 BF Size 6x8x20	Single Stage Centrifugal	3	250 hp, 460 volt, 60 cycle 3-phase Baldor Induction motor with VFD drive	1,750	1,700
Lakeside	Two 10" Mains	Lakeside Tank	2 1961	Worthington Type L-3	Single Stage Centrifugal	1 2	Each unit direct connected to 100 hp, 440 volt, 60 cycle, 3-phase U.S. Induction motor	1,750	1,000
Bay View	West Duluth Reservoir	Bay View Tank	2 1973 2 2002	Aurora	Single Stage Centrifugal	1 2	Each unit direct connected to 125 hp, 440 volt, 60 cycle, 3-phase U.S. Induction motor	3,500	1,200
Proctor	Bay View Tank	Proctor Standpipe	2 1973	Aurora	Single Stage Centrifugal	1 2	Each unit direct connected to 125 hp, 440 volt, 60 cycle, 3-phase Louis Allis motor	3,500	1,200

### **WATER UTILITY ACTIVITIES 2019**

### **UTILITY OPERATIONS**

ACTIVITY	WORK COMPLETED
Repair of water services	75
Repair of valves	90
Repair of main breaks	114
Install services	35
Fire Hydrants	
Replaced hydrants	24
Repaired hydrants	161
New hydrants	3
Inspection	All fire hydrants in the City are inspected by the Fire Department and
	Utility Operations as part of a preventative maintenance program.

### **CUSTOMER SERVICE**

ACTIVITY	WORK COMPLETED
Meter Truck	
Gauge water service	64
Applications (water & gas)	9,877
Delinquent account service shut off/restore (water & gas)	2,060
Emergency (water & gas)	1,081
General (water & gas)	2,269
Meter Shop	
Water meters repaired	494
Water meters tested	312
Plumbing truck orders (water & gas)	1,081

# Gas Utility Statement of Net Income For The Year Ended December 31, 2018 and 2019 (Unaudited)

	2018	}	2019	
Operating Revenue				
	\$ 24,218,534		\$ 24,082,930	
Commercial & Industrial - Firm	9,445,680		9,665,552	
Commercial & Industrial - Interruptible	3,763,715		4,385,370	
Servicing Appliances	956,165		1,017,883	
Other	720,312		547,086	
Total Operating Revenue	\$_	39,104,406	\$	39,698,821
Operating Expense				
Director's Office	212,780		118,121	
Capital Related Expenses	1,592,283		1,539,320	
Utility General Expense	1,395,389		124,291	
Engineering	929,461		1,081,928	
Utility Operations	2,574,980		2,390,518	
Natural Gas	21,380,929		20,690,943	
Customer Service	4,725,397		5,579,869	
Total Operating Expense	-	(32,811,219)	_	(31,524,990)
Operating Income	-	6,293,187	_	8,173,831
Other Revenue				
Grants Non-Capital	0		19,474	
Contributed Assets	87,700		100,479	
Gain or Loss on Sale of Fixed Assets	27,917		13,808	
Transfer from Other Funds				
Street Lighting	14,900		14,900	
Intergovernmental	23,365		23,365	
Interest Income	(22,494)		79,380	
Total Other Revenue	<del>-</del>	131,388	_	251,406
Other Expenses and Transfers				
Interest Expense	58,802		46,251	
Transfers to Other Funds	,		-, -	
Payment to City in Lieu of Taxes	2,528,413		2,728,817	
Non-Capital Improvements	61,176		51,601	
Reimbursement for MIS Programme	r 53,600		55,700	
Total Other Expenses and Transfers	-	(2,701,991)	_	(2,882,369)
Net Income or Loss	\$ <sub>_</sub>	3,722,584	\$	5,542,868

# Gas Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### **Assets & Deferred Outflows**

	2018		2019	
Current Assets			_	
Cash	\$ 1,886,098		\$ 4,015,206	
Restricted Cash and Equivalents:				
Customer Deposits	2,754,100		2,767,131	
Accounts Receivable (Net)	5,570,111		5,383,978	
Special Assessments	1,454		556	
Due from Other Funds	8,942		13,975	
Interfund Loan Receivable	2,597,498		2,510,937	
Advances to Other Funds	600,000		450,000	
Due from Other Governments	108		19,519	
Inventory	1,287,082		1,231,122	
Prepaid Expenses	0		270,823	
Prepaid Gas	489,328		292,945	
Total Current Assets	\$_	15,194,721	\$_	16,956,192
Utility Plant				
In Service	80,220,988		83,276,987	
Construction	4,918,403		4,537,418	
Less Accumulated Depreciation	(28,449,046)		(29,692,290)	
Total Utility Plant Assets	_	56,690,345	_	58,122,115
Other Assets				
Special Assessments Receivable	5,604		6,272	
Total Other Assets	<u>-</u>	5,604	_	6,272
Total Assets	_	71,890,670	-	75,084,579
Deferred Outflows				
Deferred Loss from Debt Refunding	1,375		0	
Deferred Pension Obligation Outflows	874,541		406,969	
Deferred OPEB Outflows	860,316		0	
Total Deferred Outflows		1,736,232	_	406,969
Total Assets and Deferred Outflows	\$_	73,626,902	\$_	75,491,548

# Gas Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### **Liabilities & Net Assets**

		2018				2019	
Current Liabilities							
Accounts Payable	\$	2,588,379			\$	2,489,085	
Contracts Payable		297,850				122,462	
Leases Payable		225,358				233,980	
Due to Other Funds		21,328				55,024	
Due to Other Governments		106,424				90,967	
Accrued Interest Payable		29,493				17,622	
Accrued Salaries Payable		136,054				166,442	
Accrued Vacations Payable		356,372				365,245	
Unearned Revenue		712,590				752,208	
Customer Deposits		2,754,100				2,767,131	
Bonds Payable	_	505,000				0	
Total Current Liabilities (Payable from Current Assets)		\$_	7,732,948			\$_	7,060,166
Long Term Liabilities							
Leases Payable		1,125,688				891,708	
Pension Liability		4,130,684				4,049,519	
Net Other Post Employment Benefits		4,379,221				0	
Less Unamortized Bond Discount	_	2,919			_	0	
Total Long Term Liabilities		_	9,638,512			_	4,941,227
Total Liabilities		_	17,371,460			_	12,001,393
Deferred Inflows							
Deferred Pension Obligation Inflows		1,321,160				937,323	
Deferred OPEB Inflows		0				2,075,682	
2010.1104 01 22 111110110	_					2,0.0,002	
Total Deferred Inflows		_	1,321,160			_	3,013,005
Net Assets							
Invested in Capital Assets, Net of Related Debt		54,832,755				56,996,427	
Unrestricted		101,527				3,480,723	
Total Net Assets			54,934,282				60,477,150
Total Liabilities, Deferred Inflows, and Net Assets		\$_	73,626,902			\$_	75,491,548

#### City of Duluth Gas Utility Bonds and Capital Leases Payable December 31, 2019

	Issued	Issue Date	Final Maturity	Principal Outstanding 12/31/2018		Issued		Draw Down		Retired	,	Principal Outstanding 12/31/2019
Gas Utility Bonds					_		_		_		_	
Revenue and General Obligation Refunding	\$ 3,125,000	11/29/2011	2/1/2019	\$ 505,000	\$_	0	\$_	0	\$_	505,000	\$_	0
Bond Total				\$ 505,000	\$_	0	\$_	0	\$_	505,000	\$_	0
Capital Leases AMR System	\$ 3,094,654	7/12/2007	2/1/2024	\$1,351,047_	\$_	0	\$_	0	\$_	225,359	\$_	1,125,688
Capital Lease Total				\$1,351,047_	\$_	0	\$_	0	\$_	225,359	\$_	1,125,688
Total Gas Utility Bonds and Capital Leases				\$ 1,856,047	\$_	0	\$_	0	\$_	730,359	\$_	1,125,688

Future Payments:						
Year		<u>Principal</u>		Interest		<u>Total</u>
2020	\$	233,980	\$	40,467	\$	274,447
2021		242,933		31,516		274,449
2022		252,227		22,221		274,448
2023		261,876		12,571		274,447
2024		134,672		2,552		137,224
	\$_	1,125,688	\$_	109,327	\$_	1,235,015

Gas Fund Schedule of Fixed Assets Year Ending December 31, 2019

	_	Balance Jan. 1, 2019	. <u>-</u>	Additions	. <u>-</u>	Deductions	_	Balance Dec. 31, 2019	_	Accumulated Depreciation	_	Book Value
Lands and Grounds	\$	426,078	\$	0	\$	0	\$	426,078	\$	0	\$	426,078
Infrastructure		68,485,090		3,069,836		0		71,554,926		21,849,602		49,705,324
Buildings and Structures		2,592,124		0		0		2,592,124		1,057,843		1,534,281
Equipment and Tools		8,717,696		258,522		272,359		8,703,859		6,784,845		1,919,014
Work in Progress	_	4,918,403	_	2,710,024		3,091,009	-	4,537,418	-	0	_	4,537,418
Total	\$_	85,139,391	\$_	6,038,382	\$	3,363,368	\$_	87,814,405	\$_	29,692,290	\$_	58,122,115

### **GAS STATISTICS**

		2019		2018		2017		2016	2015		2014		2013
Gas sold MCF		5,984,783		5,603,857		5,218,978		4,770,804	4,766,168		5,224,178		5,225,302
Cost of gas sold	\$ 2	20,067,111	\$ 2	20,731,398	\$	18,991,411	\$	15,794,076	\$ 18,713,748	\$	38,271,381	\$ :	24,132,568
Cost per MCF sold	\$	3.3530	\$	3.6995	\$	3.6389	\$	3.3106	\$ 3.9264	\$	7.3258	\$	4.6184
Other operating costs,													
including maintenance(*)	\$	9,942,276	\$	10,587,922	\$	10,528,802	\$	9,409,848	\$ 9,543,411	\$	9,364,188	\$	9,506,116
Cost per MCF sold	\$	1.6613	\$	1.8894	\$	2.0174	\$	1.9724	\$ 2.0023	\$	1.7925	\$	1.8192
Interest charges	\$	46,251	\$	58,802	\$	86,980	\$	122,540	\$ 179,433	\$	215,201	\$	246,635
Cost per MCF sold	\$	0.0077	\$	0.0105	\$	0.0167	\$	0.0257	\$ 0.0376	\$	0.0412	\$	0.0472
Depreciation charge(**)	\$	1,515,603	\$	1,491,899	\$	1,409,755	\$	1,376,239	\$ 1,374,853	\$	1,354,779	\$	1,313,680
Cost per MCF sold	\$	0.2532	\$	0.2662	\$	0.2701	\$	0.2885	\$ 0.2885	\$	0.2593	\$	0.2514
Total cost per MCF sold	\$	5.2753	\$	5.8656	\$	5.9431	\$	5.5971	\$ 6.2548	\$	9.4188	\$	6.7363
Operating revenue	\$ :	39,698,821	\$ :	39,104,406	\$ :	36,120,190	\$ :	31,207,959	\$ 35,494,037	\$	58,290,408	\$ 4	40,461,365
per MCF	\$	5.6713	\$	6.9781	\$	6.9209	\$	6.5414	\$ 7.4471	\$	11.1578	\$	7.7434
Gas meters in service		29,101		28,505		28,617		28,313	27,873		27,682		27,435
Gas main miles		556.60		553.40		549.40		543.80	539.40		534.90		527.10
Gas transmission miles		5.30		5.30		5.30		5.30	5.30		5.30		5.30
Gas meters per mile of main		52.28		51.51		52.09		52.07	51.67		51.75		52.05

<sup>(\*)</sup> Does not include depreciation for the cost of natural gas

<sup>(\*\*)</sup> Does not include depreciation due to change in Capital Policy

### **LENGTH OF GAS MAINS IN FEET**

Diameter - Inches	Polyethylene	Steel	Total	Valves
1/2	2,391		2,391	
1	51,338		51,338	80
1 1/4		3,376	3,376	30
2	1,872,959	19,396	1,892,355	988
3	389,230	4,653	393,883	268
4	2,753	38,268	41,021	69
6	74,895	62,152	137,047	114
8	37,048	139,321	176,369	90
10	5	120,402	120,407	42
12	16,576	10,464	27,040	21
14		1,349	1,349	
16		92,117	92,117	8
Totals	2,447,195	491,498	2,938,693	1,710

Total Miles Gas Main 556.6
Added in 2019 3.2
Pressure Regulators 41
Gas Valves added in 2019 52

Note: Valves used only as plugs on end of mains are not included in the above table. Gas main quantities are derived from Geographic Information System.

### **GAS UTILITY ACTIVITIES 2019**

### **UTILITY OPERATIONS**

ACTIVITY	WORK COMPLETED
Services and Mains	
Installations	19
Cutoffs	30
Valves inspected and operated	445
Hits	33

### **CUSTOMER SERVICE**

ACTIVITY	WORK COMPLETED
Service Workorders Completed	
New furnace inspections	800
Appliance service	4,530
Furnace cleaning	3,785
Tin shop/venting	466
Meter Truck	
Applications (water & gas)	9,877
Delinquent account service shut off/restore (water & gas)	2,060
Emergency (water & gas)	1,081
General (water & gas)	2,269
Meter Shop	
Gas meters repaired	821
Gas meters tested	666
Plumbing truck orders (water & gas)	1,081
Other	
Gas leak detection surveys	22,220
Inspect and paint gas meters and risers	3,045

# S E W E R

# Sewer Utility Statement of Net Income For The Year Ended December 31, 2018 and 2019 (Unaudited)

	2018	3	2019	<u> </u>
Operating Revenue	Ф 47.040.000			
General Sewage Revenue Other	\$ 17,819,329 262,142		\$ 17,726,420 247,189	
Guioi	202,142			
Total Operating Revenue	\$ <sub>_</sub>	18,081,471	\$ <sub>_</sub>	17,973,609
Operating Expense				
Director's Office	78,127		80,673	
Capital Related Expenses	1,466,389		1,497,485	
Utility General Expense	583,063		95,549	
Engineering	549,582		629,558	
Utility Operations	2,335,695		2,122,630	
Wastewater Treatment	9,451,122		9,239,851	
Inflow and Infiltration	844,848		989,015	
Customer Service	384,139		473,173	
Total Operating Expense		(15,692,965)	_	(15,127,934)
Operating Income		2,388,506	_	2,845,675
Other Revenue				
Contributed Assets	(704)		328,688	
Gain or Loss on Sale of Fixed Assets	17,572		0	
Transfer from Clean Water Fund to	,		•	
Cover Restricted Cash	70,265		70,265	
Transfer from Other Funds	-,		-,	
Street Lighting	7,450		7,450	
Intergovernmental	8,283		8,283	
Interest Income	(2,494)		26,580	
Total Other Revenue		100,372		441,266
0.1 5 17 (				
Other Expenses and Transfers				
Transfer to Other Funds	61 470		E4 CO4	
Non-Capital Improvements Reimbursement for MIS Programmer	61,176 53,600		51,601 55,700	
Interest on Long Term Debt	182,110		144,831	
interest on Long Term Debt	102,110		144,831	
Total Other Expenses and Transfers		(296,886)	-	(252,132)
Net Income or Loss	\$	2,191,992	\$_	3,034,809

# Sewer Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### **Assets & Deferred Outflows**

	2018		_	2019	
Current Assets Cash Restricted Cash and Equivalents: Construction Accounts Receivable (Net) Special Assessments Due from Other Funds Due from Other Governments Inventory Prepaids	\$ 1,836,814 608,514 1,855,343 24,460 5,302 731 105,992 1,279,453		•	\$ 2,509,334 716,899 1,787,711 17,733 167 342,551 89,017 2,927,649	
Total Current Assets	\$_	5,716,609		\$_	8,391,061
Utility Plant In Service Construction Less Accumulated Depreciation  Total Utility Plant Assets  Other Assets Special Assessments Receivable	78,124,717 2,637,800 (21,181,068)	59,581,449		80,854,579 1,338,745 (22,596,031)	59,597,293
Total Other Assets	_	100,277		_	94,760
Total Assets	<u>-</u>	65,398,335		<u>-</u>	68,083,114
Deferred Outflows  Deferred Loss from Debt Refunding Deferred Pension Obligation Outflows Deferred OPEB Outflows	52,092 378,718 457,219			17,673 174,478 0	
Total Deferred Outflows	-	888,029		-	192,151
Total Assets and Deferred Outflows	\$ <sub>=</sub>	66,286,364		\$ <sub>=</sub>	68,275,265

## Sewer Utility Statement of Net Assets

### For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### Liabilities & Net Assets

	201	8		2019	)
Current Liabilities					
Accounts Payable	\$ 31,550			\$ 28,667	
Contracts Payable	126,918			78,663	
Notes Payable	250,000			252,000	
Leases Payable	211,700			219,800	
Due to Other Funds	22,875			33,003	
Due to Other Governments	808,420			791,488	
Interest Payable	69,047			54,176	
Accrued Salaries Payable	56,898			68,388	
Vacations Payable	145,446			156,744	
Unearned Revenue	49,122			51,376	
				•	
Bonds Payable	987,011	-		1,021,318	
Total Current Liabilities (Payable from Current Assets)	\$	2,758,987		\$_	2,755,623
Long Term Liabilities					
Notes Payable	889,000			637,000	
Leases Payable	1,057,465			837,665	
Pension Liability	1,788,787			1,736,140	
Bonds Payable	2,696,576			1,675,258	
Less Unamortized Bond Discount or Premium	89,886			59,348	
Less offamonized Bond Discount of Fremium		-			
Total Long Term Liabilities		6,521,714		-	4,945,411
Total Liabilities		9,280,701		<u>-</u>	7,701,034
Deferred Inflows					
Deferred Pension Obligation Inflows	572,127			401,856	
Deferred OPEB Inflows	072,127			704,030	
Deletted Of EB lilliows		-		704,030	
Total Deferred Inflows		572,127		-	1,105,886
Net Assets					
Invested in Capital Assets, Net of Related Debt	53,451,903			54,912,577	
Legal Restricted Assets	608,514			716,899	
Unrestricted	2,373,119			3,838,869	
Ciriotaliotea	2,070,110	-			
Total Net Assets		56,433,536		-	59,468,345
Total Liabilities, Deferred Inflows, and Net Assets	\$	66,286,364		\$_	68,275,265

City of Duluth Sewer Utility Bonds, Notes and Capital Leases Payable December 31, 2019

		Issued	Issue Date	Final Maturity	Principal Outstanding 12/31/2018	I .	Issued		Draw Down		Retired	_	Principal Outstanding 12/31/2019
Sewer Utility													
Bonds													
Revenue and General Obligation	\$	1,244,000	2/19/2009	2/1/2024			0	\$	0	\$	87,011	\$	481,576
Revenue and General Obligation		905,000	12/17/2009	2/1/2025	480,000		0		0		60,000		420,000
Revenue and General Obligation Refunding		2,265,000	11/29/2011	2/1/2020	680,000		0		0		335,000		345,000
Revenue and General Obligation Refunding		2,000,000	11/27/2012	2/1/2021	895,000		0		0		290,000		605,000
Revenue and General Obligation Refunding		1,110,000	11/5/2015	2/1/2023	820,000		0		0		155,000		665,000
Revenue and General Obligation Refunding		350,000	11/5/2015	2/1/2022	240,000	<u> </u>	0	_	0	_	60,000	_	180,000
Bond Total					\$ 3,683,587	_ \$	0	\$_	0	\$_	987,011	\$_	2,696,576
Notes													
Public Facilities Authority (Note 1)	\$	1,973,033	7/12/2007	8/20/2022	\$ 616,000	\$	0	\$	0	\$	151,000	\$	465,000
Public Facilities Authority (Note 3)	•	279,117	11/18/2011	8/20/2021	82.000		0	•	0		27,000	·	55,000
Public Facilities Authority		1,255,464	9/4/2014	8/20/2024	441,000	<u> </u>	0	_	0		72,000	_	369,000
Note Total					<b>A</b> 4400 000			•	0	•	050.000	•	000 000
Note Total					\$ 1,139,000	_ \$_	0	\$_	0	\$_	250,000	\$_	889,000
Capital Leases													
AMR System	\$	2,907,099	7/12/2007	2/1/2024	\$ 1,269,165	\$	0	\$	0	\$	211,700	\$_	1,057,465
								. –		. –	_	_	
Capital Lease Total					\$ 1,269,165	<u> </u> \$ _	0	\$_	0	\$_	211,700	\$_	1,057,465
Total Sewer Utility Bonds, Notes, and Capital Leases					\$ 6,091,752	<u> </u>	0	\$_	0	\$_	1,448,711	\$_	4,643,041

Future Payments:			
Year	Principal	Interest	Total
2020	\$ 1,493,118	\$ 115,925	\$ 1,609,043
2021	1,173,974	81,010	1,254,984
2022	857,705	53,551	911,256
2023	664,216	29,399	693,615
2024	379,028	9,698	388,726
2025	75,000	1,500	76,500
	\$ 4,643,041	\$ 291,083	\$ 4,934,124

Sewer Fund Schedule of Fixed Assets Year Ending December 31, 2019

	_	Balance Jan. 1, 2019	_	Additions	_	Deductions	_	Balance Dec. 31, 2019		Accumulated Depreciation	· <del>-</del>	Book Value
Lands and Grounds	\$	161,612	\$	0	\$	0	\$	161,612	\$	0	\$	161,612
Infrastructure		64,316,882		2,579,370		0		66,896,252		13,632,555		53,263,697
Buildings and Structures		7,101,150		0		0		7,101,150		3,821,947		3,279,203
Equipment and Tools		6,545,073		204,911		54,419		6,695,565		5,141,529		1,554,036
Work in Progress	_	2,637,800	_	1,281,367	_	2,580,422	_	1,338,745	_	0	_	1,338,745
Total	\$_	80,762,517	\$_	4,065,648	\$_	2,634,841	\$_	82,193,324	\$_	22,596,031	\$	59,597,293

### **PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT**

				Pump Cap.			Motor		Force	Force Main	1	
	Station	Station Type -	Daily Flow -	Wet Well	GPM .	Pump Mfg.	Motor HP	Voltage -	Motor	Main	Discharge	Aux. Power
	<b>GIS Location</b>	Year Updated	Basin No.	Capacity	each unit			Phase	F.L.A.	Size	GIS Location	Gen. Set No.
1	PS0880001	Triplex	305,280 gal.	301,397 gal.		KSB	1 - 83 hp	480	105	10"	SA0880119	Permanent
		Submersible			2 - 1700		2 - 83 hp					Onsite
					3 - 1700		3 - 83 hp					
	D0000000	6/16/2006	1	007.0	4 00		4 01	3	4 0	0.11	0.1.0000.1.17	2779-150kW
2	PS0880002	Duplex	2,160 gal.	927.6 gal.	1 - 23 2 - 23	Barnes	1 - 2 hp 2 - 2 hp	230	1 - 8 2 - 8	3"	SA0880117	All 60 Amp
		Submersible			1 & 2 - 25		2 - 2 np		2-0			
		3/18/2009	1		1 & 2 - 33			3				
3	PD0830003	Triplex	397,872 gal.	N/A	1 - 265	KSB	1 - 10 hp	480	1 - 15.1	16"	SD1210001	Permanent
	. =	Submersible	] , g		2 - 1200		2 - 34 hp		2 - 47.5			
					3 - 1200		3 - 34 hp		3 - 47.5			
		10/19/1999	4					3				Onsite 125kW
4	PS043004	Duplex	3,024 gal.	927.52 gal.	1 - 100	KSB	1 - 5 hp	208	1 - 15.4	4"	SW0430011	All 60 Amp
		Submersible			2 - 100		2 - 5 hp		2 - 15.4			
		4/00/0000										
5	PS043005	1/20/2006 Simplex	6 720 gal.	97.3 gal.	1 - 67.42	Myers	1.9 hp	3 230	5.3	3"	SW0430012	
3	F 3043003	Submersible	720 gai.	97.3 yai.	1 - 07.42	iviyers	1.911þ	230	5.5	3	3770430012	
		Capiticionic										
		1970	6					1				
6	PS0410006	Duplex	1,106,064 gal	9,313.8 gal.	1 - 3000	RJB	50 hp	480	1 - 66.7	24"	CH0460269	Permanent
		Submersible			2 - 3000		50 hp		2 - 66.7			#2772 gen set
					3 - 3000		50 hp		3 - 66.7			
205	D00440040	8/12/2012	16			1400	C/G 5 hp	3	6	0.41		<u> </u>
6SF	PS0410049	Duplex Submersible		8 mg		KSB	1 - 50 hp	480	69.4 69.4	24"		Permanent
		Submersible					2 - 50 hp	3	69.4			
7	PS1090007	Duplex	78,048 gal.	N/A	1 - 400	KSB	6.5 hp	208	23	6"	SA1090003	All 60 Amp
'	1 0 1000001	Submersible	70,010 gai.		2 - 400	ROB	6.5 hp	200	23		<b>6</b> /11000000	7 111 00 7 1111
		2006	16					3				
8	PS1090008	Triplex	228,960 gal.	8,863.8 gal.	1 - 808	KSB	83 hp	480	105	8"	SA109003	Permanent
		Submersible			2 - 808		83 hp		105			SG 250kW
		0040	45				83 hp		105			
9	PS1090009	2016 Duplex	15 165,888 gal.	3,941 gal.	1 - 800	KSB	1 - 7.5 hp	3 208	26.3	10"	SA1090015	All 60 Amp
9	F31090009	Submersible	100,000 gal.	3,941 yal.	2 - 800	NOD.	2 - 7.5 hp	200	26.3 26.3	10	3A 1090013	All 60 Allip
		New motors			3 - 800	Grinder	2 - 7.5 πρ		20.3 17			
		2011	15			O.m.do/		3	.,			
10	PS1100010	Duplex	N/A	N/A	1 - 208	KSB	1 - 2.4 hp	208	8.7	4"	SA0009	All 60 Amp
		Submersible			2 - 247.1		2 - 2.4 hp					
		1996	15					3				

	Station	Station Type -	Daily Flow -	Wet Well	Pump Cap. GPM	Pump Mfg.	Motor HP	Motor Voltage -	Motor	Force Main	Force Main Discharge	Aux. Power
	<b>GIS Location</b>	Year Updated	Basin No.	Capacity	each unit			Phase	F.L.A.	Size	GIS Location	Gen. Set No.
11	PS1110011	Duplex Submersible	N/A	N/A	1 - 164.4 2 - 161.4	KSB	1 - 2.4 hp 2 - 2.4 hp	208	1 - 8.4 2 - 8.4	4"	SA1110002	All 60 Amp
		1996	15					3				
12	PS1110012	Duplex Submersible	80,640 gal.		1 - 170 2 - 170 (approx.)	KSB	1 - 2.4 hp 2 - 2.4 hp	208	1 - 6.9 2 - 6.9	4"	SA1110013	All 60 Amp
		1996	15					3				
13	PS0400013	Duplex Submersible	N/A	N/A	1 - 650 2 - 650 1 & 2 - 710	KSB	1 - 12.8 hp 2 - 12.8 hp	480	1 - 29 2 - 29	12"	SW0400031	2765 2767 200 Amp
		1995	16					3				
14	PS0320014	Duplex Submersible	50,976 gal.	1,008 gal.	1 - 230 2 - 230	Flygt	1 - 10 hp 2 - 10 hp	208	1 - 9.5 2 - 18.5	8"	SA0310022	2766 2770
		2013	18					3				2110
15	PS0310015	Triplex Wet well Dry well	248,688 gal.	N/A	1 - 2400 2 - 2400 3 - 2400	Chicago	1 - 40 hp 2 - 40 hp 3 - 40 hp	480	54	10"	SW0310030	2765 2767 200 Amp
		~1975	18					3				
16	PS0300016	Duplex Submersible			1 - 1400 2 - 1400 1 & 2 - 2300	KSB	32 hp 32 hp	480	38.9 38.9	10"	SW0300016	2765 2766 200 Amp
		2013	23					3				·
17	PS0290017	Duplex Submersible ~1975	243,072 gal.	N/A	1 - 1000 2 - 1000 1 & 2 - 1500	KSB	1 - 10 hp 2 - 10 hp	240	1 - 32.5 2 - 32.5	8"	SW0290038	2767 2765
		2001	23					3				200 Amp
18	PS0180018	Duplex Submersible	N/A	N/A	1 - 58.56 2 - 54.92 1 & 2 - 85	KSB	1 - 1.75 hp 2 - 1.75 hp	208	1 - 6.9 2 - 6.9	6"	SA0180041	All 60 Amp
		1996	26					3				
19	PS1230019	Duplex Submersible	2,880 gal.	409 gal.	1 - 124 2 - 104 1 & 2 - 169	Meyers	1 - 2 hp 2 - 2 hp	240	1 - 9.0 2 - 9.0	4"	SW1230034	All 60 Amp
		2012	28					3				
20	PS0090020	Duplex Submersible			1 - 360 2 - 360 1 & 2 - 540	KSB	1 - 5 hp 2 - 5 hp	208	1 - 17.7		SA0090036	2765 2767 200 Amp
		2004						30				
21	PS0020021	Duplex Submersible	3,600 gal.	480 gal.	1 - 125 2 - 125	KSB	1 - 10 hp 2 - 10 hp	208	1 - 33.4 2 - 30.1	4"	SA0030035	All 60 Amp
		2007	30					3				

	Station	Station Type -	Daily Flow -	Wet Well	Pump Cap. GPM	Pump Mfg.	Motor HP	Motor Voltage -	Motor	Force Main	Force Main Discharge	Aux. Power
	GIS Location	Year Updated	Basin No.	Capacity	each unit	pg.		Phase	F.L.A.	Size	GIS Location	Gen. Set No.
22	PS0730022	Duplex	43,344 gal.	. ,	1 - 180	KSB	1 - 10 hp	240	1 - 29.2	4"	SA0730023	2765
		Submersible			2 - 135.3		2 - 3.4 hp		2 - 10.1			2767 200 Amp
		2002	33		1-2:337.6			3				
23	PS0960023	Duplex	3,168 gal.	295.5 gal.	1 - 100	KSB	1 - 5 hp	240	15.4	4"	SA0960002	All 60 Amp
		Submersible			2 - 100 1 & 2 - 118		2 - 5 hp		15.4			
		2014	11					1				
24	NEW PIER B	Duplex			1 - 150	KSB	1 - 5 hp	208	17.7		SA0400052	60 Amp
		Submersible			2 - 150 1 & 2 - 165		2 - 5 hp		17.7			
		2016			1 & 2 - 103			3				
25	PS1030025	Duplex	8,352 gal.		1 - 200	KSB	1 - 15 hp	240	1 - 52		SA1000001	2767
		Submersible			2 - 200		2 - 15 hp		2 - 52			2765
		2001	11		1 & 2 - 300			3				200 Amp
26	PS0920026	Duplex	49,680 gal.		1 - 200	KSB	1 - 16.5	240	1 - 52	4"	SA0860115	2767
		Submersible			2 - 200		2 - 16.5		2 - 52			
		1000	_		1 & 2 - 300							2765
27	PS0420027	1999 Duplex	5 4,320 gal.	145.9 gal.	1 - 46.8	Myers	1 - 2 hp	3 240	1 - 7.5	3"	SA0420086	All 60 Amp
	1 00420021	Submersible	4,520 gai.	145.5 gai.	2 - 49.4	Wiyers	2 - 2 hp	240	2 - 7.5	3	OA0420000	All OO Allip
					1 & 2 - 73							
	D04470000	1984	13	N1/A	4 450	1405	4 0 4 1	3	4 40.0	4"	0.1.1.70000	A II 00 A
28	PS1170028	Duplex Submersible	17,136 gal.	N/A	1 - 159 2 - 159	KSB	1 - 3.4 hp 2 - 3.4 hp	240	1 - 10.2 2 - 10.2	4"	SA1170006	All 60 Amp
		Odbincisible			2 100		2 - 0.4 Hp		2 10.2			
		1998	22			_		3				
29	PS0470029	Duplex	5,184 gal.	456.3 gal.	1 - 159	Barnes	1 - 2 hp	240	1 - 9	1.25"	SA0470148	All 60 Amp
		Submersible			2 - 159 1 & 2 - 238		2 - 2 hp		2 - 9			
		2008	13					3				
30	PS0580030	Duplex	14,112 gal.	377.8 gal.	1 - 120.6	Flygt	1 - 5 hp	208	1 - 9.2	6"	SA0580129	All 60 Amp
		Submersible			2 - 124.6	CD2402	2 - 5 hp		2 - 9.2			
		1989	20		1 & 2 - 200	CP3102		3				
31	PS0600031	Duplex	13,104 gal.	658.3 gal.	1 - 200.5	Flygt	1 - 5 hp	240	1 - 13	6"	SA0600032	All 60 Amp
		Submersible			2 - 154.3		2 - 5 hp		2 - 13			
		4000	04		1 & 2 - 300	CP3102						
32	PS0600032	1989 Duplex	21 5,472 gal.	613.4 gal.	1 - 139	Flygt	1 - 5 hp	3 240	1 - 13	4"	SA0600093	All 60 Amp
02	. 00000002	Submersible	0,472 gai.	J 10.∓ gai.	2 - 155	, ,,9,	2 - 5 hp	2-10	2 - 13	<b>T</b>	3/1000000	/ 00 / ip
					1 & 2 - 300	CP3102						
		1989	21					3				

	Station	Station Type -	Daily Flow -	Wet Well	Pump Cap. GPM	Pump Mfg.	Motor HP	Motor Voltage -	Motor	Force Main	Force Main Discharge	Aux. Power
	<b>GIS Location</b>	Year Updated	Basin No.	Capacity	each unit			Phase	F.L.A.	Size	GIS Location	Gen. Set No.
33	PS1280033	Duplex	NA	420 gal.	1 - 140	KSB	1 - 3.25 hp	208	1 - 9.8	4"	SA0030061	All 60 Amp
		Submersible			2 - 140		2 - 3.25 hp		2 - 9.8			
		4005			1 & 2 - 210							
34	PS0560034	1995 Duplex	NA	433.9 gal.	1 - 166	Flygt	1 - 10 hp	480	1 - 13	4"	SA0560093	2767
34	1 30300034	Submersible	INA	433.9 gai.	2 - 156	riygt	2 - 10 hp	400	1 - 13	7	3A0300093	2765
					1 & 2 - 249	CP3127	,					200 Amp
		1993	20					3				•
35	PS0630035	Duplex			1 - 200	KSB	1 - 7.5	208	1 - 26.7	4"	SA0610012	All 60 Amp
		Submersible			2 - 200		2 - 7.5		2 - 26.7			
		2007			1 & 2 - 300			3				
36	PS0900036	Duplex	1,152 gal.	980 gal.	1 - 195.4	Flygt	1 - 10 hp	240	1 - 26	Twin 4"	SA0900005	2767
		Submersible	, ,		2 - 196.7	, ,	2 - 10 hp		2 - 26			
						CP3127X						2765
07	D0040007	1992	11	444.4	4 400.5	·	4 01	3	4 40	40	0.4.0.400.000	200 Amp
37	PS0420037	Duplex Submersible	3,888 gal.	441.4 gal.	1 - 186.5 2 - 191.9	Flygt	1 - 3 hp 2 - 3 hp	208	1 - 10 2 - 10	4"	SA0420080	All 60 Amp
		Submersible			2 - 191.9	CP3085	2 - 3 lip		2 - 10			
		1984	13			0. 0000		3				
38	PS1120038	Duplex	Operated by	Facilities Mar	agement							
		Submersible										
39	PS0150039	Duplex	20,880 gal.	643.2 gal	1 - 282	KSB	1 - 5 hp	208	1 - 17.7	6"	SA0180001	All 60 Amp
	. 30.0000	Submersible	ga	0 .o ga.	2 - 280		2 - 5 hp		2 - 17.7		<b>5</b> 7 10 10000 1	, oo ,p
					1 & 2 - 359							
10	200000010	2013	23					3			0.1.0000000	
40	PS0330040	Steel shell dry well with 6'	36,864 gal.	534.9 gal.	1 - 286.6 2 - 281.5	Fairbanks	1 - 7.5 hp	240	1 - 22.6	8"	SA0320008	All 60 Amp
		concrete			2 - 201.5	Morse	2 - 7.5 hp		2 - 22.6			
		wet well	18					3				
41	PS0680041	Duplex	8,928 gal.		1 - 400	KSB	1 - 15 hp	240	1 - 43.5	6"	SA0680029	2767
		Submersible			2 - 400		2 - 15 hp		2 - 43.5			
		0000	00									2765
42	PS1320042	2002 Duplex	22 NA	NA	NA	KSB	1 - 5 hp	3 480	1 - 7.8	4"	SD1180032	200 Amp 2767
42	1 31320042	Submersible	INA	INA	INA	KOD	2 - 5 hp	400	2 - 7.8	6"	3D1100032	2101
							p					2765
		1996	22					3				200 Amp
43	PS1280143	Duplex			1 - 187	KSB	1 - 15 hp	240	1 - 43.5	6"	SA1280001	2767
		Submersible			2 - 189		2 - 15 hp		2 - 43.5			2765
		2000			3 - 200			3				2765 200 Amp
oxdot		2000	I	i .	I	l	I	J				Zoo Amp

	Station GIS Location	Station Type - Year Updated	Daily Flow - Basin No.	Wet Well Capacity	Pump Cap. GPM each unit	Pump Mfg.	Motor HP	Motor Voltage - Phase	Motor F.L.A.	Force Main Size	Force Main Discharge GIS Location	Aux. Power Gen. Set No.
44	PS0010144	Duplex Submersible			1 - 179 2 - 173	KSB	1 - 10 hp 2 - 10 hp	208	29 29	6"	PS1280143	2767
		2000			3 - 200			3				2765 200 Amp
45	PS0880045	Triplex Submersible 2012		2 MG	1 - 2200 2 - 2200 3 - 2200	KSB	1 - 50 hp 2 - 50 hp 3 - 50 hp	480 3	69 69 69	12"	SW0830136	Permanent on site 2778 100kW
46	PS0090046	Duplex Submersible Grinder ~2005				Barnes	1 - 2 hp 2 - 2 hp	240	16 16	1.25"	SA0090132	100101
47	PS0090047	(in Bethany Crisis Shelter) ~2005				Barnes	1 - 1 hp 2 - 1 hp	240	9.2 9.2	1.25"	SA0090083	
48	PS0080048	~2005				Barnes	1 - 2 hp 2 - 2 hp	208 3	9.2 9.2		SW0080024	60 Amp
49	PS0410049	Duplex Submersible		8 MG		KSB	1 - 50 hp 2 - 50 hp	480	69.4 69.4	24"		Permanent 2772
50	PW042001	Storage Basin 2007		1 MG	No Pumps	Gravity In Gravity Out						
51	PS0430001	Storage Basin Oct. 2010		3 MG		KSB	1 - 10 hp 2 - 10 hp	208	32.7 32.7		SA0930190	Permanent on site 2777
53	PS0060001	Duplex Submersible 2012			1 - 525 2 - 525 1 & 2 - 1100	KSB	1 - 10 hp 2 - 10 hp	208	23.2 23.2	6"	SW00800024	2765 2767

### **LENGTH OF SANITARY SEWER PIPE IN FEET**

PIPE MATERIAL

Dia.	Force													
Inches	Main	ABS	ACP	BRA	CBR	CI/DI	CIPP	CMP	HDPE	PVC	RCP	UNK	VCP	Totals
1	113													113
1 1/4	330													330
1 1/2	1,575													1,575
2	29,054									651				29,705
3	14,526													14,526
4	25,074					271								25,345
6	12,950		83				55			1,299		176	5,595	20,158
8	9,604	7,045	5,777			11,718	214,020		1,387	468,192	305	1,886	798,851	1,518,785
9							5,625						20,618	26,243
10	5,452		7,873			3,605	24,506		45	33,900	3,300	637	65,269	144,587
12	4,187		1,501			1,491	14,182		513	20,968	43,888		40,433	127,163
14						163								163
15							7,173			11,899	32,536		25,071	76,679
16	5,971					355			999		48			7,373
18				348		79	10,145	1,064		987	12,910		18,514	44,047
20				118		12	1,113				465		2,111	3,819
21						111	438			1,094	6,521	7	654	8,825
22				1,233			1,339						1,223	3,795
24	703			851		1,294	2,479			693	10,269		4,079	20,368
26				598							983			1,581
27							455				720		529	1,704
28				1,386										1,386
30				499		119	1,284				2,875			4,777
32							1,884				403			2,287
34							562							562
36				1,425		3,060			222	105	1,759			6,349
42				466					386					852
45				467		25			4.400		700			467
48				348		35			1,166		706			2,255
54 55				70					-		-			79
	F 200	+	-	79					-	245		250	240	
UNK	5,239	7.045	45.004	7.040	0	00.040	205 200	1.004	4 400	345	447.000	352	342	6,278
Total	114,778	7,045	15,234	7,818	0		285,260	1,064	4,496	540,133	117,688	3,058	983,289	2,102,176 <b>398.1</b>
Note: The	e city of D	uluth Sani	ıary sewel	system in	iciuaes 8,6	337 manho	ies.					willes	of Pipe-	<b>398.</b> 1

ABS - Acryonite Butadiene Styrene CI/DI - Cast or Ductile Iron

ACP - Asbestos Cement Pipe CIPP - Cured in Place Pipe RCP - Reinforced Concrete Pipe

BRA - Brick Arch CMP - Corrugated Metal Pipe UNK - Unknown

HDPE - High Density Polyethylene CBR - Circular Brick Pipe VCP - Vitrified Clay Pipe

Note: Pipe quantities are derived from Geographic Information System.

PVC - Polyvinyl Chloride

# **SANITARY SEWER ACTIVITIES 2019**

ACTIVITY	WORK COMPLETED
Sewer calls	214
Cleaning sanitary sewer pipe	470,142 ft
Televising sanitary sewer pipe	303,429 ft
I & I inspections (Inflow and Infiltration Grant Program)	
Homes inspected	1,861
Point of Sale certificates	1,396
Point of Sale waivers	19
Laterals rehabilitated	106
Inspections for connections and disconnections	
Connections	75 services
Disconnections	30 services

# LEAN WATER

# Clean Water Utility Statement of Net Income For The Year Ended December 31, 2018 and 2019 (Unaudited)

	2018		2019	
Operating Revenue Charges for Services	\$1,637,196	_	\$1,641,800_	
Total Operating Revenue	\$_	1,637,196	\$_	1,641,800
Operating Expense Clean Water Expense	813,332		879,610_	
Total Operating Expense	_	(813,332)	_	(879,610)
Operating Income	_	823,864	_	762,190
Other Revenue Interest Income	(783)		8,596_	
Total Other Revenue	_	(783)	_	8,596
Other Expenses and Transfers  Transfer to Sewer Fund to  Cover Restricted Cash Interest on Long Term Debt	70,265 121,252		70,265 0_	
Total Other Expenses and Transfers	_	(191,517)	_	(70,265)
Net Income or Loss	\$ <u></u>	631,564	\$_	700,521

# Clean Water Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### **Assets**

	2018	2019
Current Assets Cash Accounts Receivable (Net)	\$ 805,442 159,422	\$ 804,268 152,919
Total Current Assets	\$964,864_	\$ <u>957,187</u>
Utility Plant In Service	40,378,099	40,378,099
Less Accumulated Depreciation	(3,432,174)	(3,999,045)
Total Utility Plant Assets	36,945,925	36,379,054
Total Assets	\$37,910,789_	\$37,336,241_

# Clean Water Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### **Liabilities & Net Assets**

	2018		2019	<u> </u>
Current Liabilities				
Accounts Payable	\$ 5,000		\$ 9,000	
Notes Payable	1,154,000		1,171,000	
Interest Payable	40,345		34,370	
Unearned Revenue	3,944		3,766	
Bonds Payable	13,989		14,681	
Total Current Liabilities (Payable from Current Assets)	\$_	1,217,278	\$_	1,232,817
Long Term Liabilities			- 440 000	
Notes Payable	6,619,000		5,448,000	
Bonds Payable	77,424		62,742	
Total Long Term Liabilities		6,696,424		5,510,742
	-	2,223, 123	-	
Total Liabilities		7,913,702		6,743,559
	-		-	
Net Assets				
Invested in Capital Assets, Net of Related Debt	29,081,512		29,682,631	
Unrestricted	915,575		910,051	
Total Net Assets	_	29,997,087	-	30,592,682
Total Liabilities and Net Assets	\$_	37,910,789	\$_	37,336,241

City of Duluth Clean Water Utility Bonds and Notes Payable December 31, 2019

		_	Issued	Issue Date	Final Maturity	_	Principal Outstanding 12/31/2018	_	Issued	Draw Down	Retired	_	Principal Outstanding 12/31/2019
Clean Water Utility Bonds	<i>,</i>												
Bondo	Revenue and General Obligation	\$	200,000	2/19/2009	2/1/2024	\$_	91,413	\$_	0 \$	S0	\$ 13,989	\$_	77,424
Bond To	otal					\$_	91,413	\$_	0 \$	S0	\$ 13,989	\$_	77,424
Notes													
	Public Facilities Authority	\$	796,835	6/17/2009	8/20/2024	\$	354,000	\$	0 \$	0	\$ ,	\$	298,000
	Public Facilities Authority		2,414,150	12/10/2009	8/20/2024		1,106,000		0	0	175,000		931,000
	Public Facilities Authority		3,753,059	8/31/2010	8/20/2025		1,840,000		0	0	253,000		1,587,000
	Public Facilities Authority		8,504,224	8/31/2010	8/20/2025		4,105,000		0	0	565,000		3,540,000
	Public Facilities Authority		278,149	11/18/2011	8/20/2021		91,000		0	0	30,000		61,000
	Public Facilities Authority		265,418	11/30/2011	8/20/2021		85,000		0	0	28,000		57,000
	Public Facilities Authority		476,537	9/10/2012	8/20/2022	_	192,000	_	0	0	47,000	_	145,000
Note To	tal					\$_	7,773,000	\$_	0 \$	S0	\$ 1,154,000	\$_	6,619,000
Total Clean Water	Utility Bonds and Notes					\$	7,864,413	\$_	0 \$	S0	\$ 1,154,000	\$_	6,696,424

Future Payments:				
Year	Principal		Interest	<u>Total</u>
2020	\$ 1,185,681	\$	94,426 \$	1,280,107
2021	1,201,236		77,683	1,278,919
2022	1,159,235		60,694	1,219,929
2023	1,125,790		43,988	1,169,778
2024	1,142,482		27,504	1,169,986
2025	882,000		11,096	893,096
	\$ 6,696,424	\$_	315,391 \$	7,011,815

#### Clean Water Fund Schedule of Fixed Assets Year Ending December 31, 2019

	_	Balance Jan. 1, 2019	_	Additions	Deductions	_	Balance Dec. 31, 2019		Accumulated Depreciation	_	Book Value	
Lands and Grounds Infrastructure	\$	525,000 39,680,981	\$	0	\$	0	\$	525,000 39,680,981	\$	0 3,826,927	\$	525,000 35,854,054
Equipment and Tools Work in Progress	_	172,118 0	_	264	-	264	_	172,118 0	-	172,118 0	_	0
Total	\$_	40,378,099	\$_	264	\$	264	\$_	40,378,099	\$	3,999,045	\$_	36,379,054

# Stormwater Utility Statement of Net Income For The Year Ended December 31, 2018 and 2019 (Unaudited)

_	2018		2019	
Operating Revenue Stormwater Charges	\$ 5,245,031		\$ 5,255,575	
Other	40,764		40,263	
Total Operating Revenue	\$_	5,285,795	\$	5,295,838
Operating Expense				
Director's Office	(94,210)		141,416	
Capital Related Expenses	556,170		517,101	
Utility General Expense	358,969		183,473	
Engineering	727,393		719,255	
Utility Operations	1,599,699		1,717,131	
Customer Service	255,476		327,968	
Total Operating Expense	_	(3,403,497)	_	(3,606,344)
Operating Income	_	1,882,298	_	1,689,494
Other Revenue				
Grants Non-Capital	0		29,645	
Gain or Loss on Sale of Fixed Assets	0		4,623	
Transfer from Other Funds	-		.,	
Street Lighting	5,600		5,600	
Interest Income	(4,817)		14,030	
Total Other Revenue	_	783	_	53,898
Other Expenses and Transfers				
Bond Interest	9,291		6,363	
Transfer to Other Funds	-,		]	
Non-Capital Improvements	24,470		20,641	
Street Sweeping	450,000		450,000	
Reimbursement for MIS Programm			55,600	
Total Other Expenses and Transfers	_	(537,361)	_	(532,604)
Net Income or Loss	\$_	1,345,720	\$	1,210,788

# Stormwater Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### Assets & Deferred Outflows

	2018	2019
Current Assets Cash Accounts Receivable Special Assessments Due from Other Funds Inventory Prepaids	\$ 1,509,374 519,192 25,369 5,456 107,871 1,240,819	\$ 1,131,961 510,466 26,931 4,978 94,458 2,006,596
Total Current Assets	\$ 3,408,081	\$ 3,775,390
Utility Plant In Service Construction Less Accumulated Depreciation	21,610,518 1,253,594 (4,990,327)	22,293,881 1,970,301 (5,224,911)
Total Utility Plant Assets	17,873,785	19,039,271
Other Assets Special Assessments Receivable	0	578_
Total Other Assets	0_	578
Total Assets	21,281,866	22,815,239
Deferred Outflows  Deferred Pension Obligation Outflows Deferred OPEB Outflows	253,518 256,905	123,292 0
Total Deferred Outflows	510,423	123,292
Total Assets and Deferred Outflows	\$21,792,289	\$ 22,938,531

# Stormwater Utility Statement of Net Assets For The Year Ending December 31, 2018 and 2019 (Unaudited)

#### **Liabilities & Net Assets**

		2018				2019	
Current Liabilities							
Accounts Payable	\$	88,880			\$	21,126	
Contracts Payable		189,946				19,097	
Due to Other Funds		8,526				23,042	
Due to Other Governments		843				521	
Accrued Interest Payable		6,278				5,204	
Accrued Salaries Payable		40,012				49,178	
Vacations Payable		112,099				121,906	
Unearned Revenue		11,574				11,774	
Bonds Payable	_	130,000			_	135,000	
Total Current Liabilities (Payable from Current Assets)		\$_	588,158			\$_	386,848
Long Term Liabilities							
Pension Liability		1,197,432				1,226,815	
Bonds Payable		420,000				285,000	
Less Unamortized Bond Discount or Premium		20,153			_	13,631	
Total Long Term Liabilities		_	1,637,585			_	1,525,446
Total Liabilities		_	2,225,743				1,912,294
Deferred Inflows							
Deferred Pension Obligation Inflows		382,987				283,965	
Deferred OPEB Inflows		0				349,925	
Total Deferred Inflows		_	382,987			_	633,890
Net Assets							
Invested in Capital Assets, Net of Related Debt		17,303,632				18,605,640	
Unrestricted		1,879,927			_	1,786,707	
Total Net Assets		_	19,183,559				20,392,347
Total Liabilities, Deferred Inflows, and Net Assets		\$_	21,792,289			\$_	22,938,531

#### City of Duluth Stormwater Utility Bonds Payable December 31, 2019

	Issued	Issue Date	Final Maturity	Principal Outstanding 12/31/2018		Issued		Retired		Principal Outstanding 12/31/2019
Stormwater Utility Bonds					_					
Revenue and General Obligation Refunding \$	790,000	11/5/2015	2/1/2022	\$ 550,000	\$_	0	\$_	130,000	\$_	420,000
Bond Total				\$ 550,000	\$_	0	\$_	130,000	\$_	420,000
Total Stormwater Utility Bonds				\$ 550,000	\$_	0	\$	130,000	\$_	420,000

Future Payments:			
<u>Year</u>	<u>Principal</u>	Interest	<u>Total</u>
2020	\$ 135,000	\$ 10,575	\$ 145,575
2021	140,000	6,450	146,450
2022	145,000	2,175	147,175
	\$ 420,000	\$ 19,200	\$ 439,200

### Stormwater Fund Schedule of Fixed Assets Year Ending December 31, 2019

	_	Balance Jan. 1, 2019	_	Additions	Deductions	_	Balance Dec. 31, 2019	 Accumulated Depreciation	_	Book Value
Lands and Grounds	\$	13,743	\$	0	\$ 0	\$	13,743	\$ 0	\$	13,743
Infrastructure		17,192,605		679,662	0		17,872,267	2,373,381		15,498,886
Buildings and Structures		1,401,897		0	0		1,401,897	434,588		967,309
Equipment and Tools		3,002,273		206,879	203,178		3,005,974	2,416,942		589,032
Work in Progress	_	1,253,594	_	1,397,477	680,770	-	1,970,301	 0	_	1,970,301
Total	\$_	22,864,112	\$_	2,284,018	\$ 883,948	\$_	24,264,182	\$ 5,224,911	\$_	19,039,271

	Station Location	Station Type - Year Updated	Pump G.P.M.	Pump Mfg.	Motor HP	Motor Voltage - Phase	Motor F.L.A.	Force Main Size	Discharge Location
1	1801 Minnesota Ave.	Simplex Submersible 1980	760	Flygt CP-3101	5	230	13.4	6"	AP1100004
2	13th St. S & St. Louis Ave.	Simplex Submersible 1984	750	Hydromatic S6L	3	230	14	6"	AP1090017

# LENGTH OF STORM SEWERS IN FEET

Dia.															
Inch.	BR	CMP	CPD	CI/DI	HDPE	NCP	PPC	PVC	RCP	STN	TMP	TP	VCP	UNK	Totals
3					4			5				840			849
4			33,340					508,588	1,033			237		135,639	678,837
6		2,860		171	12			19,940	76			245	3,121	17,755	44,180
8		262	50	151	33	48		15,104	583			117	800	4,812	21,960
10		1,924	21	277	47		64	4,362	12,505				3,078	16,829	39,107
12		41,682	13,230	1,622	29,954	779		23,811	393,410				1,981	58,479	564,948
13									46						46
14				38					232					300	570
15		6,356	476	25	8,999	169		2,678	169,168				1,870	33,505	223,246
16		89		688	589				212					781	2,359
17														91	91
18		7,033	838		4,909	50		2,587	106,964				1,250	23,565	147,196
20		50		90	198				1,079					3,115	4,532
21		337		83				49	37,083				1,719	3,586	42,857
22								206	747						953
24	276	2,999	46	184	2,524			612	75,474	160			462	14,561	97,298
26	2,171				160			47	3,865					11,462	17,705
27	75	50			28		84		14,573					929	15,739
28	662	119							3,531					2,089	6,401
29									335						335
30	154	965	50		2,481				37,697		143			5,294	46,784
31									320						320
32	371				23				2,731					387	3,512
33									711						711
34							45		665					288	998
36		1,744	231		1,129	459	475		31,925					7,966	43,929
38							42		85						127
40									627	659				56	1,342
42	198	134		304	46		243		10,745				84	180	11,934
44		138			46				3,640					385	4,209
45							110		331						441
46														72	72
48	68	1,237		99	265		731	21	17,540	948	78			3,557	24,544
50	239								283					36	558

### **LENGTH OF STORM SEWERS IN FEET**

Dia.															
Inch.	BR	CMP	CPD	CI/DI	HDPE	NCP	PPC	PVC	RCP	STN	TMP	TP	VCP	UNK	Totals
51									996						996
52									393						393
54	94						116		10,446					2,791	13,447
56							84		89	57				65	295
58									54						54
60	36	745				27	361		4,136	366				1,900	7,571
62									112					57	169
66		109							631	69				264	1,073
72		517					483		2,287	1,523				400	5,210
73														79	79
78									398						398
84	203	484					111	138	658	1,540					3,134
88									128						128
96		106							754	128				223	1,211
108									608						608
120									748	368				258	1,374
122									54						54
128	105	57							63	726				551	1,502
132									170						170
144									127						127
156			·												0
192			·						49						49
UNK	725	314	82		152		1,352	2,158	6,545	192			21	91,759	103,300
Totals	5,377	70,311	48,364	3,732	51,599	1,532	4,301	580,306	957,662	6,736	221	1,439	14,386	444,066	2,190,032

Note: The Storm Sewer system also includes 10,991 catch basins and 5,158 manholes.

Miles of Pipe 415

Pipe quantities are derived from Geographic Information System.

BR - Brick

CMP - Corrugated Metal

CPD - Corrugated Polyethylene Drainage Pipe

CI/DI - Cast or Ductile Iron

HDPE - High Density Polyethylene

NCP - Non-Reinforced Concrete Perforated Pipe

PPC - Pour-in-Place Concrete

PVC - Polyvinyl Chloride

RCP - Reinforced Concrete

STN - Stone

TMP - Timber Pipe TP - Thermoplastic

VCP - Vitrified Clay Pipe

UNK - Unknown

# **DULUTH CREEKS AND STREAMS**

Creek or Stream	Drainage Area (square miles)
Amity	16.60
58th Ave E	0.59
50th Ave E	0.63
47th Ave E	0.36
43rd Ave E	0.59
40th Ave E	0.45
38th Ave E	0.03
37th Ave E	0.13
34th Ave E	0.53
Tischer	7.30
Chester	7.30
Oregon	0.85
Brewery	1.66
Greys	0.63
Clarkhouse	1.00
Buckingham	1.10
Miller	9.70
Coffee	1.76
Merritt	2.30
32nd Ave W	0.73
41st Ave W	0.36
Keene	6.40

Creek or Stream	Drainage Area (square miles)
44th Ave W	0.78
49th Ave W	0.80
62nd Ave W	0.90
Kingsbury	8.60
68th Ave W	0.15
79th Ave W	0.14
82nd Ave W	0.26
Knowlton	1.56
84th Ave W	0.23
86th Ave W	0.08
Gogebic Street	0.34
Lenroot Street	0.61
Stewart Street	1.97
Morgan Park	1.31
U. S. Steel	2.70
Gary Street	0.33
Bowser Street	0.08
Heard Street	0.06
Sargent	3.30
Fond du Lac	0.58
Mission	10.30
Lester River	35.60

# **MPCA MS4 CREEK DATA**

MS4 Discharge Waterbodies	Water Quality Status	Cause of Impairment	TMDL Development Status	Other
Lake Superior	ORVW Impaired	Mercury (fish tissue)	Not started	Restricted Discharge Area
		PCB (fish tissue)		
St Louis River	Impaired	Mercury (fish tissue and water column)	TMDL Approved	Area of Concern &
		PCB (fish tissue and water column)		Protected Water
		DDT		
		Dieldrin		
		Dioxin		
		Toxaphene		
		Fecal Coliform		
		Aquatic Macroinvertebrate Bioassessments		
Amity Creek	Impaired	Turbidity	Draft TMDL	Trout stream
E Br Amity	Impaired	Turbidity	Draft TMDL	Trout stream
Lester River	Impaired	Mercury (water column)	Not started	Trout stream
		Turbidity	Draft TMDL	
Twin Ponds-	Impaired	PCB (fish tissue)- Upper Twin	Not started	Trout stream
Buckingham Creek	(Upper Twin Ponds)	Mercury (fish tissue)- South Twin	Not started	
Miller Creek	Impaired	Temperature	TMDL Approved	Trout stream
		Lack of coldwater assemblage	TMDL Approved	
		Aquatic Macroinvertebrates	Draft TMDL	
		E. coli	Draft TMDL	
		Chloride	Not started	
Chester Creek	Impaired	Mercury	Not started	Trout stream
		E. coli	Draft TMDL	
Keene Creek	Impaired	E. coli	Draft TMDL	Trout stream
Kingsbury Creek		Fish Bioassessment Aquatic Macroinvertebrates	Not started	Trout stream
		Turbidity	Draft TMDL	
Mission Creek				Trout stream
Sergeant Creek	Impaired	E. coli	Draft TMDL	Trout stream
Stewart Creek	Impaired	E. coli	Draft TMDL	Trout stream
Tischer Creek	Impaired	E. coli	Draft TMDL	Trout stream
58th Ave E				
50th Ave E				

### **MPCA MS4 CREEK DATA**

MS4 Discharge Waterbodies	Water Quality Status	Cause of Impairment	TMDL Development Status	Other
47th Ave E	Giaido	Cades of impairment		- Cuioi
43rd Ave E				
38th Ave E				
37th Ave E				
34th Ave E				
Oregon				
Brewery				
Greys				
Clarkhouse				
Coffee				Trout stream
Merritt	Impaired	E. coli	Draft TMDL	Trout stream
32nd Ave W				
41st Ave W				
44th Ave W				
49th Ave W				
62nd Ave W				
68th Ave W				
79th Ave W				
82nd Ave W				
Knowlton				Trout stream
84th Ave W				
85th Ave W				
Gogebic St				
Lenroot St				
Morgan Park				
U.S. Steel				
Gary St				
Bowser				
Heard St				

<sup>\*</sup>Not listed as underway in the MPCA status file:

http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/impaired-waters-list.html

# **STORMWATER UTILITY ACTIVITIES 2019**

ACTIVITY	WORK COMPLETED
Catch basin repair or rehab	140
Culverts repaired or replaced	31
Ditch line (dug or repaired and seeded or sodded)	3,063 ft
Illicit discharges detected and removed	7
Line flushing/cleaning	41,506 ft
Manhole repair or rehab	51
Outfalls inspected	8
Sediment trap cleaning	3,715 cubic yd
Stream restoration	0 project sites
Structural sedimentation basins inspected	35%
Televising storm sewer pipe	41,091 ft
Presentations	73
Radio, television, and newspaper articles	164