

# CITY OF DULUTH



10th Avenue East



57th Avenue West



Chester Creek Bridge



Seven Bridges Road

**Public Works & Utilities Department  
2014 Annual Report**

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Front cover photos:  
 Workzone Progress: 10th Avenue East, 57th Avenue  
 West, Chester Creek Bridge, Seven Bridges Road -  
 photos by Steve Forslund

# OFFICERS OF THE DEPARTMENT

Mayor ..... Don Ness  
Chief Administrative Officer ..... Dave Montgomery

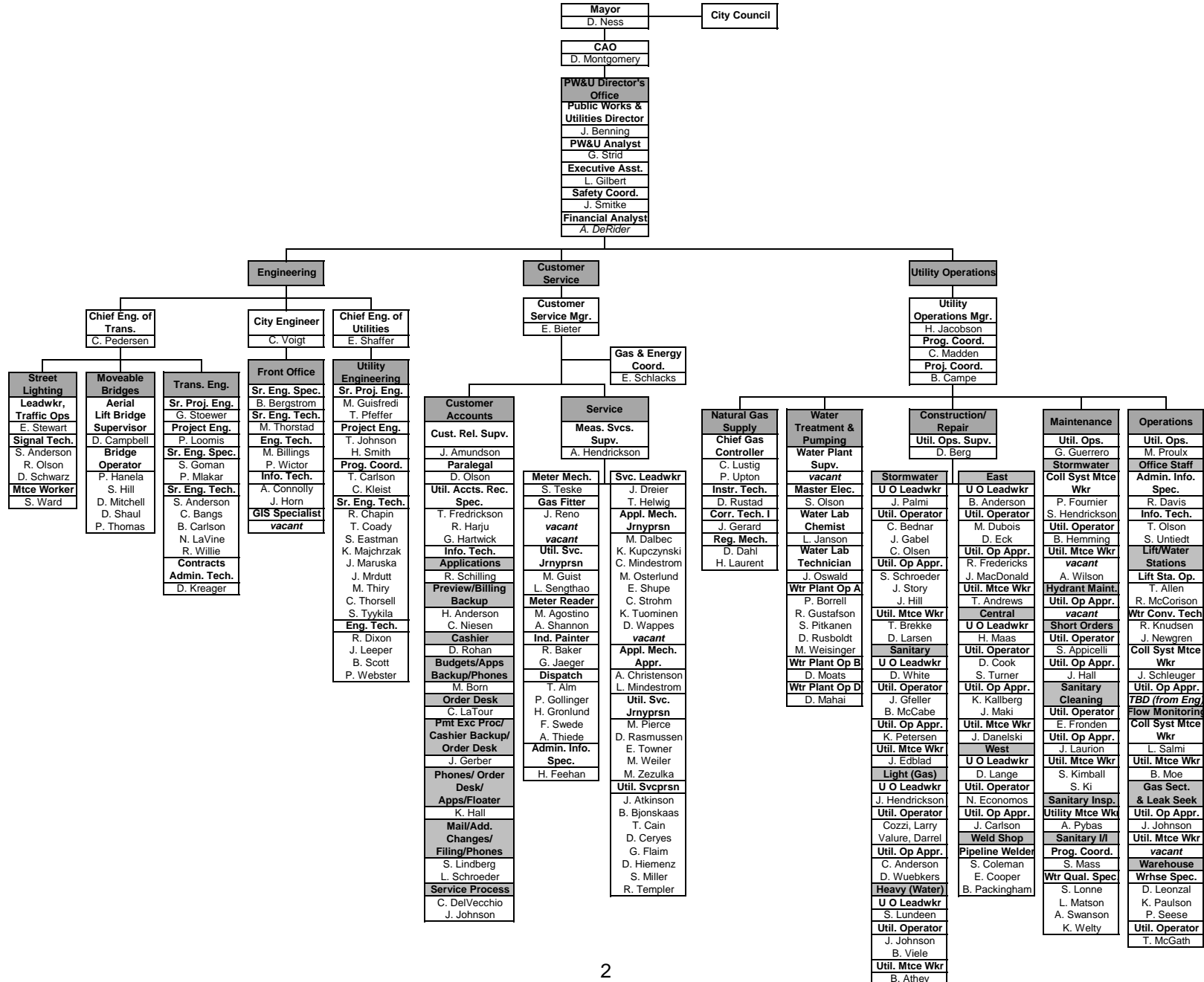
City Council Public Works & Utilities Committee  
    Councilor Zack Filipovich

Duluth Public Utilities Commission  
    Rob Prusak, President                      Councilor Zack Filipovich  
    Jim Ramnes, Vice President              Councilor Jennifer Julsrud  
    Linda Sellner                              Councilor Joel Sipress  
    Jason Thorsell

## **DEPARTMENT OF PUBLIC WORKS & UTILITIES**

Director ..... Jim Benning  
City Engineer ..... Cindy Voigt  
Chief Engineer, Transportation ..... Cari Pedersen  
Chief Engineer, Utilities ..... Eric Shaffer  
Manager, Customer Service ..... Elizabeth Bieter  
Manager, Utility Operations ..... Howard Jacobson  
Financial Analyst ..... Ken Taylor

# City of Duluth Public Works & Utilities Department 2014



**W  
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**Water Utility  
Statement of Net Income  
For The Year Ended December 31, 2013 and 2014  
(Unaudited)**

	2013	2014
<b><u>Operating Revenue</u></b>		
Metered Water Sales	\$ 14,584,794	\$ 14,217,938
Other	293,586	321,458
<b>Total Operating Revenue</b>	<b>\$ 14,878,380</b>	<b>\$ 14,539,396</b>
<b><u>Operating Expense</u></b>		
Director's Office	67,642	78,427
Capital Related Expenses	1,685,956	1,885,042
Utility General Expense	1,493,606	1,292,879
Engineering	327,559	358,196
Utility Operations	3,179,626	3,233,966
Water Treatment and Pumping	2,806,076	2,833,173
Customer Service	1,410,496	1,483,467
<b>Total Operating Expense</b>	<b>(10,970,961)</b>	<b>(11,165,150)</b>
<b>Operating Income</b>	<b>3,907,419</b>	<b>3,374,246</b>
<b><u>Other Revenue</u></b>		
Grants Non-Capital	5,252	0
Contributed Capital	55,786	30,742
Gain or Loss on the Sale of Fixed Assets	0	13,590
Transfer from Other Funds		
Administrative Billing Fee	0	5,275
Street Lighting	10,660	10,660
Intergovernmental	16,919	16,919
Interest Income	13,910	16,211
<b>Total Other Revenue</b>	<b>102,527</b>	<b>93,397</b>
<b><u>Other Expenses and Transfers</u></b>		
Transfer to Other Funds		
Investing Activities	22,826	13,182
Non-Capital Improvements	246,644	185,930
Reimbursement for MIS Programmer	0	21,700
Other Transfers	0	12,844
Interest on Long Term Debt	274,206	274,990
<b>Total Other Expenses and Transfers</b>	<b>(543,676)</b>	<b>(508,646)</b>
<b>Net Income or Loss</b>	<b>\$ 3,466,270</b>	<b>\$ 2,958,997</b>

**Water Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2013 and 2014**  
**(Unaudited)**

	<b>Assets &amp; Deferred Outflows</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Assets</u></b>		
Cash	\$ 1,021,940	\$ 500,253
Restricted Cash and Equivalents:		
Minnesota Water Connection Fees	89,202	89,278
Accounts Receivable (Net)	1,478,553	1,347,657
Special Assessments	57,129	41,125
Due from Other Funds	2,726	30,455
Due from Other Governments	52,852	205
Inventory	892,596	992,286
Prepays	31,831	0
<b>Total Current Assets</b>	<b>\$ 3,626,829</b>	<b>\$ 3,001,259</b>
<b><u>Utility Plant</u></b>		
In Service	80,661,063	83,073,059
Construction	3,766,564	9,572,083
Less Accumulated Depreciation	(33,824,461)	(35,331,173)
<b>Total Utility Plant Assets</b>	<b>50,603,166</b>	<b>57,313,969</b>
<b><u>Other Assets</u></b>		
Special Assessments Receivable	99,826	82,719
<b>Total Other Assets</b>	<b>99,826</b>	<b>82,719</b>
<b>Total Assets</b>	<b>54,329,821</b>	<b>60,397,947</b>
<b><u>Deferred Outflows</u></b>		
Deferred Loss from Debt Refunding	37,320	27,243
<b>Total Deferred Outflows</b>	<b>37,320</b>	<b>27,243</b>
<b>Total Assets and Deferred Outflows</b>	<b>\$ 54,367,141</b>	<b>\$ 60,425,190</b>

**Water Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2013 and 2014**  
**(Unaudited)**

	<b>Liabilities &amp; Net Assets</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Liabilities</u></b>		
Accounts Payable	\$ 196,826	\$ 239,587
Contracts Payable	158,293	309,411
Notes Payable	783,680	1,097,474
Leases Payable	203,767	211,563
Due to Other Funds	113,069	23,267
Due to Other Governments	136,831	137,151
Accrued Interest Payable	106,035	109,861
Accrued Salaries Payable	212,463	210,490
Vacations Payable	242,875	225,075
Unearned Revenue	113,143	87,157
Customer Deposits	10,000	10,000
Bonds Payable	433,873	451,251
<b>Total Current Liabilities (Payable from Current Assets)</b>	<b>\$ 2,710,855</b>	<b>\$ 3,112,287</b>
<b><u>Long Term Liabilities</u></b>		
Notes Payable	5,944,908	9,457,468
Vacations Payable	0	0
Leases Payable	2,369,936	2,158,374
Net Other Post Employment Benefits	406,608	266,012
Bonds Payable	2,054,671	1,603,420
Less Unamortized Bond Discount or Premium	43,744	32,213
<b>Total Long Term Liabilities</b>	<b>10,819,867</b>	<b>13,517,487</b>
<b>Total Liabilities</b>	<b>13,530,722</b>	<b>16,629,774</b>
<b><u>Net Assets</u></b>		
Invested in Capital Assets, Net of Related Debt	38,805,907	42,329,449
Unrestricted	2,030,512	1,465,967
<b>Total Net Assets</b>	<b>40,836,419</b>	<b>43,795,416</b>
<b>Total Liabilities and Net Assets</b>	<b>\$ 54,367,141</b>	<b>\$ 60,425,190</b>



**City of Duluth**  
**Water Utility Bonds, Notes and Capital Leases Payable**  
**December 31, 2014**

	<u>Issued</u>	<u>Issue Date</u>	<u>Final Maturity</u>	<u>Principal Outstanding 12/31/2013</u>	<u>Issued</u>	<u>Draw Down</u>	<u>Retired</u>	<u>Principal Outstanding 12/31/2014</u>
<b>Water Utility</b>								
Bonds								
Revenue and General Obligation	1,120,000	12/19/2006	2/1/2022	750,000	0	0	70,000	680,000
Revenue and General Obligation Refunding	950,000	12/13/2007	2/1/2016	395,000	0	0	125,000	270,000
Revenue and General Obligation	196,000	2/19/2009	2/1/2024	152,000	0	0	12,000	140,000
Revenue and General Obligation Refunding	1,625,000	11/23/2010	2/1/2018	1,191,544	0	0	226,873	964,671
Bond Total				\$ 2,488,544	\$ 0	\$ 0	\$ 433,873	\$ 2,054,671
Notes								
Public Facilities Authority	\$ 870,000	8/25/2003	8/20/2018	\$ 336,340	\$ 0	\$ 0	\$ 63,680	\$ 272,660
Public Facilities Authority	1,971,532	7/2/2004	8/20/2018	752,000	0	0	143,000	609,000
Public Facilities Authority	1,668,813	10/28/2009	8/20/2019	1,016,000	0	0	165,000	851,000
Public Facilities Authority	1,371,653	8/31/2010	8/20/2025	933,914	0	105,633	81,547	958,000
Public Facilities Authority	3,344,131	8/31/2010	8/20/2025	2,793,000	0	0	219,000	2,574,000
Public Facilities Authority	1,605,655	11/18/2011	8/20/2026	897,334	0	24,786	106,000	816,120
Public Facilities Authority	5,108,910	3/24/2014	8/20/2029	0	0	4,635,072	160,910	4,474,162
Note Total				\$ 6,728,588	\$ 0	\$ 4,765,491	\$ 939,137	\$ 10,554,942
Capital Leases								
AMR System	\$ 3,443,490	7/12/2007	2/1/2024	\$ 2,573,703	\$ 0	\$ 0	\$ 203,767	\$ 2,369,936
Capital Lease Total				\$ 2,573,703	\$ 0	\$ 0	\$ 203,767	\$ 2,369,936
<b>Total Water Utility Bonds, Notes and Capital Leases</b>				<b>\$ 11,790,835</b>	<b>\$ 0</b>	<b>\$ 4,765,491</b>	<b>\$ 1,576,777</b>	<b>\$ 14,979,549</b>

<b>Future Payments:</b>			
<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 1,760,288	\$ 276,438	\$ 2,036,726
2016	1,794,020	249,992	2,044,012
2017	1,691,597	214,087	1,905,684
2018	1,728,493	178,697	1,907,190
2019	1,268,846	146,143	1,414,989
2020	1,117,251	122,681	1,239,932
2021	1,141,017	100,358	1,241,375
2022	1,160,157	77,385	1,237,542
2023	1,084,683	55,843	1,140,526
2024	953,915	35,765	989,680
2025	801,000	24,066	825,066
2026	461,000	15,360	476,360
2027	346,000	10,490	356,490
2028	350,000	7,030	357,030
2029	353,000	3,530	356,530
	\$ 16,011,267	\$ 1,517,865	\$ 17,529,132

**Water Fund**  
**Schedule of Fixed Assets**  
**Year Ending December 31, 2014**

	<u>Balance Dec.</u> <u>31, 2013</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance Dec.</u> <u>31, 2014</u>	<u>Accumulated</u> <u>Depreciation</u>	<u>Book Value</u>
Lands and Grounds	\$ 203,700	\$ 0	\$ 0	\$ 203,700	\$ 0	\$ 203,700
Infrastructure	50,192,464	2,235,564	0	52,428,028	16,941,045	35,486,983
Buildings and Structures	22,338,952	0	0	22,338,952	13,223,545	9,115,407
Equipment and Tools	7,925,947	367,286	190,854	8,102,379	5,166,583	2,935,796
Work in Progress	<u>3,766,564</u>	<u>8,084,560</u>	<u>2,279,041</u>	<u>9,572,083</u>	<u>0</u>	<u>9,572,083</u>
Total	<u>\$ 84,427,627</u>	<u>\$ 10,687,410</u>	<u>\$ 2,469,895</u>	<u>\$ 92,645,142</u>	<u>\$ 35,331,173</u>	<u>\$ 57,313,969</u>

**COMPARATIVE STATEMENT, OPERATING EXPENSE OF ALL STATIONS, YEARS 2013 AND 2014**

<b>Station</b>	<b>Year</b>	<b>Daily Average Gallons Pumped, Initial Supply</b>	<b>Gallons Pumped</b>	<b>K.W.H. Consumed</b>	<b>Electricity</b>
Lakewood	2014	14,257,863	5,204,120,000	8,407,350	\$ 660,196
	2013	14,261,753	5,205,540,000	8,484,000	\$ 635,861
Middle	2014	2,477,893	904,431,000	1,242,400	\$ 109,865
	2013	2,438,490	890,049,000	1,194,800	\$ 103,905
Woodland	2014	1,355,232	494,660,000	2,863,200	\$ 144,053
	2013	1,416,082	516,870,000	1,606,200	\$ 140,246
West Duluth	2014	6,352,756	2,318,756,000	558,720	\$ 50,467
	2013	6,328,605	2,309,941,000	491,328	\$ 45,156
Orphanage	2014	272,786	99,567,000	70,400	\$ 7,853
	2013	314,569	114,818,000	78,400	\$ 8,502
Highland	2014	1,322,232	482,615,000	518,400	\$ 46,202
	2013	1,258,980	459,528,000	464,256	\$ 43,763
Arlington	2014	1,323,898	483,223,000	722,304	\$ 66,413
	2013	1,254,260	457,805,000	693,120	\$ 64,644
Lakeside	2014	104,778	38,244,000	70,240	\$ 10,327
	2013	120,816	44,098,000	68,160	\$ 10,191
Bay View	2014	493,000	179,945,000	262,080	\$ 27,949
	2013	419,347	153,062,000	229,760	\$ 25,455
Proctor	2014	459,421	176,689,000	247,760	\$ 27,305
	2013	403,920	147,431,000	215,040	\$ 24,902
Airport	2014	-	unmetered	3,840	\$ 856
	2013	-	unmetered	2,304	\$ 1,133
<b>TOTALS</b>	<b>2014</b>	<b>28,419,859</b>	<b>10,382,250,000</b>	<b>14,962,854</b>	<b>\$ 1,151,486</b>
	<b>2013</b>	<b>28,216,822</b>	<b>10,299,142,000</b>	<b>13,527,368</b>	<b>\$ 1,103,758</b>

## WATER PLANT STATISTICS

	2014	2013	2012	2011	2010	2009	2008
Water Pumped							
Million Cubic Feet	695.74	695.88	751.10	739.80	773.20	829.10	826.00
Water Sold							
Million Cubic Feet	591.00	605.95	644.40	592.60	665.70	658.00	601.00
General & Distribution Operating							
Costs including Maintenance (*)	\$ 9,529,831	\$ 9,394,544	\$ 8,897,762	\$ 9,395,019	\$ 9,275,099	\$ 9,250,685	\$ 9,930,687
Cost per 100 Cubic Feet	\$ 1.6125	\$ 1.5504	\$ 1.3808	\$ 1.5854	\$ 1.3933	\$ 1.4059	\$ 1.6524
Interest charges	\$ 274,990	\$ 274,206	\$ 296,162	\$ 297,135	\$ 304,164	\$ 297,249	\$ 240,761
Cost per 100 Cubic Feet	\$ 0.0465	\$ 0.0453	\$ 0.0460	\$ 0.0501	\$ 0.0457	\$ 0.0452	\$ 0.0401
Depreciation charge	\$ 1,635,319	\$ 1,576,417	\$ 1,487,132	\$ 1,414,602	\$ 1,414,807	\$ 1,252,343	\$ 1,157,899
Cost per 100 Cubic Feet	\$ 0.2767	\$ 0.2602	\$ 0.2308	\$ 0.2387	\$ 0.2125	\$ 0.1903	\$ 0.1927
Total Cost per 100 Cubic Feet	\$ 1.9357	\$ 1.8558	\$ 1.6575	\$ 1.8742	\$ 1.6515	\$ 1.6414	\$ 1.8851
Operating revenue	\$ 14,539,396	\$ 14,878,380	\$ 13,911,617	\$ 11,743,510	\$ 12,006,506	\$ 11,944,996	\$ 11,353,762
Revenue per 100 Cubic Feet Sold	\$ 2.4601	\$ 2.4554	\$ 2.1588	\$ 1.9817	\$ 1.8036	\$ 1.8153	\$ 1.8891
Water meters in service	28,131	28,069	28,050	29,069	30,317	27,950	28,016
Water main miles	430.70	428.3	426.7	427.5	427.3	425.2	424.4
Water meters per mile of main	65.31	65.54	65.74	68.00	70.95	65.73	66.01
Hydrants on system	2,659	2,671	2,594	2,577	2,535	2,506	2,500

(\*) Depreciation not included

## WATER PURIFICATION 2014 LAKEWOOD STATION

<b>Month</b>	<b>Total Number of Gallons Treated</b>	<b>Average Water Temperature at Treatment Bldg Degree F</b>	<b>Ammonia Lbs. Used</b>	<b>Chlorine Lbs. Used</b>
January	395,050,000	35.7	1,818	5,990
February	377,520,000	34.8	1,723	6,002
March	442,090,000	33.0	2,004	6,842
April	408,760,000	32.6	1,853	6,535
May	415,270,000	34.9	1,908	7,200
June	415,520,000	38.7	1,864	6,985
July	478,640,000	42.1	2,103	8,478
August	522,020,000	54.3	2,243	8,760
September	460,950,000	50.9	2,025	8,707
October	437,680,000	45.7	1,907	7,758
November	430,660,000	40.7	1,945	7,364
December	419,960,000	36.9	1,940	6,891
<b>TOTAL</b>	5,204,120,000		23,333	87,512
<b>Average/Month</b>	433,676,667	40.0	1,944	7,293

**2014**  
**LAKE SUPERIOR RAW WATER**  
**AND DULUTH FINISHED WATER (LABORATORY ANALYSES)**

Milligrams per Liter, Except pH, Turbidity and Specific Conductance

	<b>RAW</b>	<b>FINISHED</b>
	Average	Average
Dissolved Oxygen	12.03	12.17
pH	7.76	8.99
Monthly Specific Conductance Micromhos/cm	101.5	126.2
Alkalinity	42.5	45.1
Sulfates	2.72	7.24
Fluorides	0.06	0.87
Turbidity NTU	0.69	0.008
Chlorine	0.00	1.31
Temperature	40°F	

## WATER TREATMENT 2014

<b>Month</b>	<b>Alum Used Gal.</b>	<b>Fluoride Used Gal.</b>	<b>Turbidity of Effluent NTU</b>
January	8,000	1,457	0.009
February	8,000	1,303	0.006
March	8,000	1,951	0.008
April	8,000	1,760	0.010
May	12,000	1,874	0.010
June	8,000	1,906	0.007
July	16,000	1,940	0.008
August	12,000	1,907	0.006
September	8,000	1,676	0.009
October	12,000	1,927	0.006
November	8,000	1,779	0.007
December	8,000	1,830	0.007
<b>Average/Month</b>	9,667	1,776	0.008

## BACTERIOLOGICAL DATA 2014

	RAW WATER INTAKE				TREATED WATER		DISTRIBUTION	
	Average for	Total Bacteria per ml 48 Hours 35 degree C	Coliform per 100 ml	Fecal Coliform per 100 ml	Number Samples	Number Samples Positive	Number Samples	Number Samples Positive
January	35	1.40	0.34	0.02	198	0	92	0
February	34	0.56	0.03	0.00	196	0	91	0
March	39	0.74	0.05	0.00	226	0	93	0
April	40	6.88	1.03	0.08	224	0	94	0
May	36	11.28	2.17	0.27	211	0	92	0
June	39	9.72	1.67	0.38	224	0	92	0
July	40	1.98	0.60	0.03	222	0	93	0
August	32	5.66	1.28	0.35	184	0	92	0
September	39	11.33	1.23	0.47	224	0	94	0
October	40	2.95	0.98	0.11	226	0	94	0
November	29	2.17	1.41	0.38	168	0	91	0
December	33	1.61	0.88	0.09	193	0	92	0
<b>TOTAL</b>	436	N/A	N/A	N/A	2,496	0	1,110	0
<b>Average for Month</b>	36.3	4.69	0.97	0.18	208	0	92.5	0.00



## LENGTH OF WATER MAINS IN FEET 2014

Diameter Inches	Cast Iron	Ductile Iron	Steel	Copper	Polyvinyl Chloride	High Density Polyethylene	Total	Valves	Vaults
1				842			842	6	
2	33			2,031		9,539	11,603	30	
3	1,390					619	2,009	14	
4	10,376	2,397				7	12,780	63	
6	991,422	155,324	1,128		1,727	9,812	1,159,413	2,674	2
8	80,950	94,873	458		304	155,595	332,180	703	5
10	153,339	55,886	6,915			31,756	247,896	466	6
12	159,904	43,159	1,884			17,034	221,981	373	7
14						1,848	1,848	2	
16	83,564	24,117	10,363				118,044	139	2
18	1,388	10				2,090	3,488	2	
20	13,975	1,507	29,939			175	45,596	33	4
24	8,624	2,091	55			5,530	16,300	11	
30			2,670				2,670	2	
36	25,475	11,184	11,374				48,033	31	13
42	181		49,208				49,389	7	
48							0		
<b>TOTALS</b>	<b>1,530,621</b>	<b>390,548</b>	<b>113,994</b>	<b>2,873</b>	<b>2,031</b>	<b>234,005</b>	<b>2,274,072</b>	<b>4,556</b>	<b>39</b>
<b>Total Miles -</b>							<b>430.7</b>		
<b>Change from 2013 -</b>							<b>2.4</b>	<b>408</b>	<b>0</b>

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 FINAL REPORT 2014

	Mueller	4"	Mathews		Michigan	Unknown	Waterous	Iowa		Stockholm	Total	Valves on	Lineal Feet
	5"		4 1/2"	5"				5"	4"				
<b>TOTAL IN SERVICE 12/31/2013</b>	140	0	501	0	3	361	1,662	0	2	2	2,671	2,536	54,054
<b>TOTAL IN SERVICE 12/31/2014</b>	133	0	459	0	3	353	1,709	0	2	0	2,659	2,580	55,340

Number of Hydrants added in 2014 -       -12        
 Number of Hydrant Valves added in 2014 -       44        
 Lineal feet of Hydrant branch main added in 2014 -       1,286

**2014  
DATA, RESERVOIRS AND TANKS**

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

## 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
<b>Lakewood Low Lift</b>	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
<b>Lakewood High Lift</b>	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
<b>Middle</b>	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
<b>Woodland</b>	Reservoir A	Woodland & Arlington Reservoir	1 -- 1950	Allis-Chalmers	All Units Single State, 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	6	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	Aurora	Single Stage Centrifugal	1	Each unit direct connected to 125 hp, 440 volt, 60 cycle, 3-phase U.S. Induction motor	3,500	1,200
			2-- 2002			2			
Proctor	Bay View Tank	Proctor Standpipe	2 -- 1973	Aurora	Single Stage Centrifugal	1	Each unit direct connected to 125 hp, 440 volt, 60 cycle, 3-phase Louis Allis motor	3,500	1,200
						2			

## WATER UTILITY ACTIVITIES 2014

ACTIVITY	WORK COMPLETED
Repair of water services and mains	289 mains
Repair of valves	42
Repair of main breaks	247
Cut off services	59
Install services	39
Steam requests (hydrants/services)	186
Water leak checks	350
Miscellaneous Customer Service requests	343
Fire hydrants:	
Replace and repair hydrants	798
Steaming	13
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 DIVISION WATER ACTIVITIES 2014

ACTIVITY	WORK COMPLETED
<b>Meter Truck:</b> Gauge water service Applications (water & gas) Credit (water & gas) Emergency (water & gas) General (water & gas)	90 9,544 2,349 1,018 2,262
<b>Meter Shop:</b> Water meters repaired Water meters tested Plumbing truck orders (water & gas)	145 405 338

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**Gas Utility**  
**Statement of Net Income**  
**For The Year Ended December 31, 2013 and 2014**  
**(Unaudited)**

	<b>2013</b>	<b>2014</b>
<b><u>Operating Revenue</u></b>		
Residential Sales	\$ 25,823,547	\$ 36,202,605
Commercial & Industrial - Firm	9,805,774	15,307,779
Commercial & Industrial - Interruptible	3,432,563	4,572,716
Servicing Appliances	771,567	823,680
Other	627,914	1,383,628
<b>Total Operating Revenue</b>	<b>\$ 40,461,365</b>	<b>\$ 58,290,408</b>
<b><u>Operating Expense</u></b>		
Director's Office	86,521	87,678
Capital Related Expenses	1,368,395	1,459,680
Utility General Expense	1,933,823	1,743,153
Engineering	645,138	588,872
Utility Operations	2,069,500	1,934,100
Natural Gas	24,716,475	38,847,866
Customer Service	4,132,512	4,328,999
<b>Total Operating Expense</b>	<b>(34,952,364)</b>	<b>(48,990,348)</b>
<b>Operating Income</b>	<b>5,509,001</b>	<b>9,300,060</b>
<b><u>Other Revenue</u></b>		
Contributed Assets	49,557	46,333
Gain or Loss on Sale of Fixed Assets	(4,983)	153
Transfer from Other Funds		
Administrative Billing Fee	0	5,275
Street Lighting	15,990	15,990
Intergovernmental	23,365	23,365
Interest Income	30,203	144,716
<b>Total Other Revenue</b>	<b>114,132</b>	<b>235,832</b>
<b><u>Other Expenses and Transfers</u></b>		
Interest Expense	246,635	215,201
Transfers to Other Funds		
Payment to City in Lieu of Taxes	2,375,793	5,664,592
Investing Activities	73,362	95,975
Non-Capital Improvements	17,663	541
Reimbursement for MIS Programmer	0	21,700
Other Transfers	6,843	16,499
<b>Total Other Expenses and Transfers</b>	<b>(2,720,296)</b>	<b>(6,014,508)</b>
<b>Net Income or Loss</b>	<b>\$ 2,902,837</b>	<b>\$ 3,521,384</b>

**Gas Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2013 and 2014**  
**(Unaudited)**

	<b>Assets &amp; Deferred Outflows</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Assets</u></b>		
Cash	\$ 3,597,280	\$ 6,035,675
Restricted Cash and Equivalents:		
Customer Deposit	1,590,549	1,816,033
Accounts Receivable (Net)	7,014,469	6,076,447
Special Assessments	11,107	7,244
Due from Other Funds	10,450	42,199
Due from Other Governments	126	68
Inventory	868,490	991,584
Prepaid gas	1,700,297	2,201,166
	<u>\$ 14,792,768</u>	<u>\$ 17,170,416</u>
<b>Total Current Assets</b>		
<b><u>Utility Plant</u></b>		
In Service	65,601,301	68,073,476
Construction	2,684,132	3,715,026
	<u>68,285,433</u>	<u>71,788,502</u>
Less Accumulated Depreciation	(22,407,898)	(23,539,351)
	<u>45,877,535</u>	<u>48,249,151</u>
<b>Total Utility Plant Assets</b>		
<b><u>Other Assets</u></b>		
Special Assessments Receivable	12,728	7,450
Advance to Other Funds	1,350,000	1,200,000
	<u>1,362,728</u>	<u>1,207,450</u>
<b>Total Other Assets</b>		
<b>Total Assets</b>	<u>62,033,031</u>	<u>66,627,017</u>
<b><u>Deferred Outflows</u></b>		
Deferred Loss from Debt Refunding	98,479	76,772
	<u>98,479</u>	<u>76,772</u>
<b>Total Deferred Outflows</b>		
<b>Total Assets and Deferred Outflows</b>	<u>\$ 62,131,510</u>	<u>\$ 66,703,789</u>

**Gas Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2013 and 2014**  
**(Unaudited)**

	<b>Liabilities &amp; Net Assets</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Liabilities</u></b>		
Accounts Payable	\$ 4,035,086	\$ 3,051,009
Contracts Payable	145,364	140,353
Leases Payable	186,786	193,933
Due to Other Funds	28,972	45,724
Due to Other Governments	96,718	99,354
Accrued Interest Payable	109,002	95,620
Accrued Salaries Payable	257,925	262,289
Accrued Vacations Payable	354,032	324,424
Unearned Revenue	572,816	785,810
Customer Deposits	1,590,549	1,816,034
Bonds Payable	896,020	922,972
<b>Total Current Liabilities (Payable from Current Assets)</b>	<b>\$ 8,273,270</b>	<b>\$ 7,737,522</b>
<b><u>Long Term Liabilities</u></b>		
Accrued Vacations Payable	0	0
Leases Payable	2,172,442	1,978,509
Net Other Post Employment Benefits	85,524	0
Bonds Payable	4,325,858	3,402,886
Less Unamortized Bond Discount	200,881	157,657
<b>Total Long Term Liabilities</b>	<b>6,784,705</b>	<b>5,539,052</b>
<b>Total Liabilities</b>	<b>15,057,975</b>	<b>13,276,574</b>
<b><u>Net Assets</u></b>		
Invested in Capital Assets, Net of Related Debt	38,194,027	41,669,966
Unrestricted	8,879,508	11,757,249
<b>Total Net Assets</b>	<b>47,073,535</b>	<b>53,427,215</b>
<b>Total Liabilities and Net Assets</b>	<b>\$ 62,131,510</b>	<b>\$ 66,703,789</b>

**City of Duluth  
Gas Utility Bonds and Capital Leases Payable  
December 31, 2014**

	<u>Issued</u>	<u>Issue Date</u>	<u>Final Maturity</u>	<u>Principal Outstanding 12/31/2013</u>	<u>Issued</u>	<u>Draw Down</u>	<u>Retired</u>	<u>Principal Outstanding 12/31/2014</u>
<b>Gas Utility</b>								
Bonds								
Revenue and General Obligation	\$ 1,190,000	12/19/2006	2/1/2022	\$ 800,000	\$ 0	\$ 0	\$ 75,000	\$ 725,000
Revenue and General Obligation Refunding	2,846,814	12/17/2009	2/1/2017	1,676,877	0	0	406,019	1,270,858
Revenue and General Obligation Refunding	3,125,000	11/29/2011	2/1/2019	2,745,000	0	0	415,000	2,330,000
Bond Total				\$ 5,221,877	\$ 0	\$ 0	\$ 896,019	\$ 4,325,858
Capital Leases								
AMR System	\$ 3,156,533	7/12/2007	2/1/2024	\$ 2,359,228	\$ 0	\$ 0	\$ 186,786	\$ 2,172,442
Capital Lease Total				\$ 2,359,228	\$ 0	\$ 0	\$ 186,786	\$ 2,172,442
<b>Total Gas Utility Bonds and Capital Leases</b>				\$ 7,581,105	\$ 0	\$ 0	\$ 1,082,805	\$ 6,498,300

<b>Future Payments:</b>			
<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 1,116,905	\$ 216,619	\$ 1,333,524
2016	1,151,308	181,608	1,332,916
2017	1,196,987	141,866	1,338,853
2018	787,054	105,004	892,058
2019	820,358	73,444	893,802
2020	328,981	50,975	379,956
2021	342,932	38,001	380,933
2022	357,227	24,426	381,653
2023	261,876	12,571	274,447
2024	134,672	2,552	137,224
	\$ 6,498,300	\$ 847,066	\$ 7,345,366

**Gas Fund**  
**Schedule of Fixed Assets**  
**Year Ending December 31, 2014**

	<u>Balance Jan.</u> <u>1, 2014</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance Dec.</u> <u>31, 2014</u>	<u>Accumulated</u> <u>Depreciation</u>	<u>Book Value</u>
Lands and Grounds	\$ 420,815	\$ 0	\$ 0	\$ 420,815	\$ 0	\$ 420,815
Infrastructure	54,502,014	2,404,702	0	56,906,716	17,707,612	39,199,104
Buildings and Structures	2,592,124	0	0	2,592,124	827,403	1,764,721
Equipment and Tools	8,086,348	300,041	232,568	8,153,821	5,004,336	3,149,485
Work in Progress	<u>2,684,132</u>	<u>3,488,883</u>	<u>2,457,989</u>	<u>3,715,026</u>	<u>0</u>	<u>3,715,026</u>
<b>Total</b>	<u>\$ 68,285,433</u>	<u>\$ 6,193,626</u>	<u>\$ 2,690,557</u>	<u>\$ 71,788,502</u>	<u>\$ 23,539,351</u>	<u>\$ 48,249,151</u>

## GAS STATISTICS

	2014	2013	2012	2011	2010	2009	2008
Gas sold MMBTU	5,354,836	5,355,988	4,191,481	4,864,262	4,617,923	4,804,897	5,169,299
Cost of gas sold	\$ 38,271,381	\$ 24,132,568	\$ 19,376,845	\$ 25,207,873	\$ 25,014,748	\$ 27,647,451	\$ 42,819,209
Cost per MMBTU sold	\$ 7.1471	\$ 4.5057	\$ 4.6229	\$ 5.1823	\$ 5.4169	\$ 5.7540	\$ 8.2834
Other operating costs, including maintenance(*)	\$ 9,364,188	\$ 9,506,116	\$ 9,314,644	\$ 9,168,387	\$ 9,238,887	\$ 9,243,290	\$ 10,106,846
Cost per MMBTU sold	\$ 1.7487	\$ 1.7749	\$ 2.2223	\$ 1.8848	\$ 2.0007	\$ 1.9237	\$ 1.9552
Interest charges	\$ 215,201	\$ 246,635	\$ 274,210	\$ 295,311	\$ 503,288	\$ 554,975	\$ 505,728
Cost per MMBTU sold	\$ 0.0402	\$ 0.0460	\$ 0.0654	\$ 0.0607	\$ 0.1090	\$ 0.1155	\$ 0.0978
Depreciation charge(**)	\$ 1,354,779	\$ 1,313,680	\$ 1,272,122	\$ 1,240,613	\$ 1,219,538	\$ 1,056,585	\$ 1,088,666
Cost per MMBTU sold	\$ 0.2530	\$ 0.2453	\$ 0.3035	\$ 0.2550	\$ 0.2641	\$ 0.2199	\$ 0.2106
Total cost per MMBTU sold	\$ 9.1890	\$ 6.5719	\$ 7.2141	\$ 7.3829	\$ 7.7906	\$ 8.0131	\$ 10.5470
Operating revenue per MMBTU	\$ 10.8856	\$ 7.5544	\$ 8.0977	\$ 8.4867	\$ 8.5967	\$ 9.6227	\$ 11.3061
Gas meters in service	27,682	27,435	27,075	26,592	26,668	26,148	25,983
Gas main miles	534.9	527.1	520	510.1	512.4	506	510.2
Gas transmission miles	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Gas meters per mile of main	51.75	52.05	52.07	52.13	52.05	51.68	50.93

(\*) Does not include depreciation for the cost of natural gas

(\*\*) Does not include depreciation due to change in Capital Policy

## GAS ANALYSIS 2014

Month	Gas Purchased MMBTU	Storage Gas	MMBTU Transport	Consumption w/o Transport MMBTU	Total Transport BTU's	Number of Transport Customers
<b>Beginning Balance</b>		<b>488,174</b>				
January	1,021,960	-214,800	52,200	969,760	1,021	1
February	848,164	-131,600	36,400	811,764	1,012	1
March	703,157	-85,800	35,650	667,507	1,024	1
April	467,093	-55,974	24,000	443,093	1,029	1
May	239,394	45,198	18,631	220,763	1,037	1
June	154,321	160,770	19,400	134,921	1,026	1
July	119,200	143,082	17,100	102,100	1,012	1
August	104,521	156,953	26,300	78,221	1,019	1
September	153,701	135,390	19,470	134,231	1,015	1
October	306,714	113,598	19,375	287,339	1,026	1
November	663,403	-92,000	12,475	650,928	1,033	1
December	737,319	-158,472	25,493	711,826	1,036	1
<b>Storage Balance</b>		<b>504,519</b>				
<b>Totals</b>	<b>5,518,947</b>		<b>306,494</b>	<b>5,212,453</b>	<b>1,024</b>	

- withdraw, + inject

## LENGTH OF GAS MAINS IN FEET 2014

Diameter - Inches	Polyethylene	Steel	Total	Valves	Vaults
1	50,147		50,147	65	
1 1/4		3,609	3,609	28	
2	1,796,416	31,521	1,827,937	870	
3	386,027	8,257	394,284	256	
4	564	49,725	50,289	57	
6	49,956	80,036	129,992	95	
8	20,019	146,209	166,228	71	
10		93,346	93,346	34	
12	1,383	11,026	12,409	12	
14		4,118	4,118		
16		91,676	91,676	9	
<b>Totals</b>	<b>2,304,512</b>	<b>519,523</b>	<b>2,824,035</b>	<b>1,497</b>	<b>0</b>

<b>Total Miles Gas Main</b>	<b>534.9</b>
<b>Added in 2014</b>	<b>7.8</b>
<b>Pressure Regulators</b>	<b>23</b>
<b>Gas Valves added in 2014</b>	<b>14</b>

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 2014

ACTIVITY	WORK COMPLETED
SERVICES AND MAINS	
Installations	13
Cutoffs	87
Repaired services and mains (not considered hits)	62
Rerouted/replaced	40
Lowered gas services/mains	37
Valves inspected and operated	394
Hits	43

## CUSTOMER SERVICE DIVISION GAS ACTIVITIES 2014

ACTIVITY	WORK COMPLETED
<b>Service Workorders Completed:</b>	
Appliance service	4,251
Furnace cleaning	2,977
Tin shop	308
<b>Meter Truck:</b>	
Applications (water & gas)	9,544
Credit (water & gas)	2,349
Emergency (water & gas)	1,018
General (water & gas)	2,262
<b>Meter Shop:</b>	
Gas meters repaired	342
Gas meters tested	698
Plumbing truck orders (water & gas)	338
<b>Other:</b>	
Gas leak detection surveys	10,131
Inspect and paint gas meters and risers	338
Skips/Previewers	907

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**Sewer Utility  
Statement of Net Income  
For The Year Ended December 31, 2013 and 2014  
(Unaudited)**

	<b>2013</b>	<b>2014</b>
<b><u>Operating Revenue</u></b>		
General Sewage Revenue	\$ 18,498,879	\$ 17,575,118
Other	<u>238,080</u>	<u>86,154</u>
<b>Total Operating Revenue</b>	<b>\$ 18,736,959</b>	<b>\$ 17,661,272</b>
<b><u>Operating Expense</u></b>		
Director's Office	62,795	69,612
Capital Related Expenses	1,455,137	1,368,794
Utility General Expense	915,762	878,317
Engineering	488,269	538,660
Utility Operations	2,125,207	2,068,326
Wastewater Treatment	8,829,722	8,447,300
Inflow and Infiltration	1,712,733	1,425,362
Customer Service	<u>430,949</u>	<u>477,154</u>
<b>Total Operating Expense</b>	<b>(16,020,574)</b>	<b>(15,273,525)</b>
<b>Operating Income</b>	<b><u>2,716,385</u></b>	<b><u>2,387,747</u></b>
<b><u>Other Revenue</u></b>		
Contributed Assets	563,791	568,854
Gain or Loss on Sale of Fixed Assets	0	4,731
Transfer from Other Funds		
Administrative Billing Fee	0	5,275
Street Lighting	9,430	9,430
Intergovernmental	8,283	8,283
Interest Income	<u>(9,050)</u>	<u>37,680</u>
<b>Total Other Revenue</b>	<b><u>572,454</u></b>	<b><u>634,253</u></b>
<b><u>Other Expenses and Transfers</u></b>		
Transfer to Other Funds		
Investing Activities	11,076	20,760
Non-Capital Improvements	3,044	21,563
Reimbursement for MIS Programmer	0	21,600
Other Transfers	0	7,809
Interest on Long Term Debt	<u>406,315</u>	<u>403,443</u>
<b>Total Other Expenses and Transfers</b>	<b>(420,435)</b>	<b>(475,175)</b>
<b>Net Income or Loss</b>	<b>\$ <u>2,868,404</u></b>	<b>\$ <u>2,546,825</u></b>

**Sewer Utility  
Statement of Net Assets  
For The Year Ending December 31, 2013 and 2014  
(Unaudited)**

	<b>Assets &amp; Deferred Outflows</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Assets</u></b>		
Cash	\$ 2,319,393	\$ 2,762,772
Restricted Cash and Equivalents:		
Construction	51,797	76,761
Accounts Receivable (Net)	1,816,529	1,637,195
Special Assessments	40,667	49,444
Due from Other Funds	77,861	30,741
Due from Other Governments	28,015	402,996
Inventory	67,240	68,354
Prepays	57,682	140,264
<b>Total Current Assets</b>	<b>\$ 4,459,184</b>	<b>\$ 5,168,527</b>
<b><u>Utility Plant</u></b>		
In Service	64,594,046	64,979,605
Construction	1,598,572	2,905,029
Less Accumulated Depreciation	(15,205,434)	(16,426,593)
<b>Total Utility Plant Assets</b>	<b>50,987,184</b>	<b>51,458,041</b>
<b><u>Other Assets</u></b>		
Special Assessments Receivable	165,664	223,184
<b>Total Other Assets</b>	<b>165,664</b>	<b>223,184</b>
<b>Total Assets</b>	<b>55,612,032</b>	<b>56,849,752</b>
<b><u>Deferred Outflows</u></b>		
Deferred Loss from Debt Refunding	276,333	227,326
<b>Total Deferred Outflows</b>	<b>276,333</b>	<b>227,326</b>
<b>Total Assets and Deferred Outflows</b>	<b>\$ 55,888,365</b>	<b>\$ 57,077,078</b>

**Sewer Utility  
Statement of Net Assets  
For The Year Ending December 31, 2013 and 2014  
(Unaudited)**

	<b>Liabilities &amp; Net Assets</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Liabilities</u></b>		
Accounts Payable	\$ 117,159	\$ 200,103
Contracts Payable	7,854	447,321
Notes Payable	276,320	379,990
Leases Payable	175,466	182,179
Due to Other Funds	52,853	24,032
Due to Other Governments	724,321	685,216
Interest Payable	171,374	151,733
Accrued Salaries Payable	110,466	117,628
Vacations Payable	144,378	140,928
Unearned Revenue	45,798	50,697
Bonds Payable	1,442,511	1,494,752
<b>Total Current Liabilities (Payable from Current Assets)</b>	<b>\$ 3,268,500</b>	<b>\$ 3,874,579</b>
<b><u>Long Term Liabilities</u></b>		
Notes Payable	1,655,702	1,407,875
Vacations Payable	2,585	0
Leases Payable	2,040,779	1,858,599
Bonds Payable	9,297,919	7,803,166
Less Unamortized Bond Discount or Premium	208,891	172,045
<b>Total Long Term Liabilities</b>	<b>13,205,876</b>	<b>11,241,685</b>
<b>Total Liabilities</b>	<b>16,474,376</b>	<b>15,116,264</b>
<b><u>Net Assets</u></b>		
Invested in Capital Assets, Net of Related Debt	36,165,929	38,386,761
Legal Restricted Assets	51,797	76,761
Unrestricted	3,196,263	3,497,292
<b>Total Net Assets</b>	<b>39,413,989</b>	<b>41,960,814</b>
<b>Total Liabilities and Net Assets</b>	<b>\$ 55,888,365</b>	<b>\$ 57,077,078</b>

**City of Duluth**  
**Sewer Utility Bonds, Notes and Capital Leases Payable**  
**December 31, 2014**

	<u>Issued</u>	<u>Issue Date</u>	<u>Final Maturity</u>	<u>Principal Outstanding 12/31/2013</u>	<u>Issued</u>	<u>Draw Down</u>	<u>Retired</u>	<u>Principal Outstanding 12/31/2014</u>
<b>Sewer Utility Bonds</b>								
Revenue and General Obligation	\$ 1,011,831	12/19/2005	2/1/2021	\$ 66,208	\$ 0	\$ 0	\$ 66,208	\$ 0
Revenue and General Obligation	2,503,169	12/19/2005	2/1/2021	163,792	0	0	163,792	0
Revenue and General Obligation	765,450	12/19/2006	2/1/2022	510,300	0	0	48,600	461,700
Revenue and General Obligation	179,550	12/19/2006	2/1/2022	119,700	0	0	11,400	108,300
Revenue and General Obligation	2,120,000	12/13/2007	2/1/2023	1,550,000	0	0	130,000	1,420,000
Revenue and General Obligation Refunding	1,325,000	12/13/2007	2/1/2016	455,000	0	0	200,000	255,000
Revenue and General Obligation	1,244,000	2/19/2009	2/1/2024	967,460	0	0	75,812	891,648
Revenue and General Obligation Refunding	713,186	12/17/2009	2/1/2017	418,123	0	0	103,981	314,142
Revenue and General Obligation	905,000	12/17/2009	2/1/2025	760,000	0	0	55,000	705,000
Revenue and General Obligation Refunding	2,025,000	11/23/2010	2/1/2018	1,484,847	0	0	282,718	1,202,129
Revenue and General Obligation Refunding	2,265,000	11/29/2011	2/1/2020	2,245,000	0	0	305,000	1,940,000
Revenue and General Obligation Refunding	2,000,000	11/27/2012	2/1/2021	2,000,000	0	0	0	2,000,000
<b>Bond Total</b>				<b>\$ 10,740,430</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 1,442,511</b>	<b>\$ 9,297,919</b>
<b>Notes</b>								
Public Facilities Authority	\$ 100,000	8/25/2003	8/20/2018	\$ 38,660	\$ 0	\$ 0	\$ 7,320	\$ 31,340
Public Facilities Authority	1,179,115	10/17/2003	8/20/2018	453,000	0	0	88,000	365,000
Public Facilities Authority (Note 1)	1,973,033	7/12/2007	8/20/2022	1,348,000	0	0	143,000	1,205,000
Public Facilities Authority (Note 3)	354,551	11/18/2011	8/20/2021	92,361	0	82,163	38,000	136,524
Public Facilities Authority	1,255,464	9/4/2014	8/20/2024	0	0	50,000	0	50,000
<b>Note Total</b>				<b>\$ 1,932,021</b>	<b>\$ 0</b>	<b>\$ 132,163</b>	<b>\$ 276,320</b>	<b>\$ 1,787,864</b>
<b>Capital Leases</b>								
AMR System	\$ 2,965,228	7/12/2007	2/1/2024	\$ 2,216,245	\$ 0	\$ 0	\$ 175,466	\$ 2,040,779
<b>Capital Lease Total</b>				<b>\$ 2,216,245</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 175,466</b>	<b>\$ 2,040,779</b>
<b>Total Sewer Utility Bonds, Notes, and Capital Leases</b>				<b>\$ 14,888,696</b>	<b>\$ 0</b>	<b>\$ 132,163</b>	<b>\$ 1,894,297</b>	<b>\$ 13,126,562</b>

<b>Future Payments:</b>			
<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 2,056,921	\$ 351,293	\$ 2,408,214
2016	1,964,257	314,764	2,279,021
2017	1,967,363	267,400	2,234,763
2018	1,911,208	219,168	2,130,376
2019	1,531,712	173,579	1,705,291
2020	1,582,118	130,833	1,712,951
2021	1,266,974	91,795	1,358,769
2022	944,705	59,863	1,004,568
2023	731,216	31,856	763,072
2024	437,028	10,277	447,305
2025	75,000	1,500	76,500
	<b>\$ 14,468,502</b>	<b>\$ 1,652,328</b>	<b>\$ 16,120,830</b>

**Sewer Fund  
Schedule of Fixed Assets  
Year Ending December 31, 2014**

	<u>Balance Jan. 1, 2014</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance Dec. 31, 2014</u>	<u>Accumulated Depreciation</u>	<u>Book Value</u>
Lands and Grounds	\$ 156,349	\$ 0	\$ 0	\$ 156,349	\$ 0	\$ 156,349
Infrastructure	51,079,309	320,178	0	51,399,487	9,495,131	41,904,356
Buildings and Structures	7,101,150	0	0	7,101,150	2,955,463	4,145,687
Equipment and Tools	6,257,238	158,185	92,804	6,322,619	3,975,999	2,346,620
Work in Progress	1,598,572	1,688,840	382,383	2,905,029	0	2,905,029
<b>Total</b>	<b>\$ 66,192,618</b>	<b>\$ 2,167,203</b>	<b>\$ 475,187</b>	<b>\$ 67,884,634</b>	<b>\$ 16,426,593</b>	<b>\$ 51,458,041</b>



## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2014

	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.
1	PS0880001	Triplex Submersible 6/16/2006	305,280 gal. 1	301,397 gal.	1 - 1700 2 - 1700 3 - 1700	KSB	1 - 83 hp 2 - 83 hp 3 - 83 hp	480 3	105	10"	SA0880119	Permanent Onsite 2779-150kW
2	PS0880002	Duplex Submersible 3/18/2009	2,160 gal. 1	927.6 gal.	23 23	Barnes	1 - 2 hp 2 - 2 hp	230 3	1 - 8 2 - 8	3"	SA0880117	All 60 Amp
3	PD0830003	Triplex Submersible 10/19/1999	397,872 gal. 4	N/A	1 - 265 2 - 1200 3 - 1200	KSB	1 - 10 hp 2 - 34 hp 3 - 34 hp	480 3	1 - 15.1 2 - 47.5 3 - 47.5	16"	SD1210001	Permanent Onsite 125kW
4	PS043004	Duplex Submersible 1/20/2006	3,024 gal. 6	927.52 gal.	1 - 100 2 - 100	KSB	1 - 5 hp 2 - 5 hp	208 3	1 - 15.4 2 - 15.4	4"	SW0430011	All 60 Amp
5	PS043005	Simplex Submersible 1970	720 gal. 6	97.3 gal.	1 - 67.42	Myers	1.9 hp	230 1	5.3	3"	SW0430012	
6	PS04100613	Duplex Submersible 8/12/2012	1,106,064 gal. 16	9,313.8 gal.	1 - 3000 2 - 3000 3 - 3000	RJB	50 hp 50 hp 50 hp C/G 5 hp	480 3	1 - 66.7 2 - 66.7 3 - 66.7 6	24"	CH0460269	Permanent
6SF	PS0410049	Duplex Submersible		8 mg		KSB	1 - 50 hp 2 - 50 hp	480 3	69.4 69.4	24"		Permanent
7	PS1090007	Duplex Submersible 2006	78,048 gal. 16	N/A	1 - 400 2 - 400	KSB	6.5 hp 6.5 hp	208 3	23 23	6"	SA1090003	All 60 Amp
8	PS1090008	Wet well Dry well 1983 & 1987 new pumps & motors	228,960 gal. 15	8,863.8 gal.	1 - 808 2 - 808	Fairbank Morse	30 hp	480 3	37.7	8"	SA109003	2765 2767 200 Amp
9	PS1090009	Duplex Submersible New motors 2011	165,888 gal. 15	3,941 gal.	1 - 850 2 - 850	KSB Grinder	1 - 7.5 hp 2 - 7.5 hp	208 3	26.3 26.3 17	10"	SA1090015	All 60 Amp
10	PS1100010	Duplex Submersible 1996	N/A 15	N/A	1 - 208 2 - 247.1	KSB	1 - 2.4 hp 2 - 2.4 hp	208 3	8.7	4'	SA0009	All 60 Amp

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2014

	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.
11	PS1110011	Duplex Submersible 1996	N/A 15	N/A	1 - 164.4 2 - 161.4	KSB	1 - 2.4 hp 2 - 2.4 hp	208 3	1 - 8.4 2 - 8.4	4"	SA1110002	All 60 Amp
12	PS1110012	Duplex Submersible 1996	80,640 gal. 15		1 - 170 2 - 170 (approx.)	KSB	1 - 2.4 hp 2 - 2.4 hp	208 3	1 - 6.9 2 - 6.9	4"	SA1110013	All 60 Amp
13	PS0400013	Duplex Submersible 1995	N/A 16	N/A	1 - 650 2 - 650 1&2 - 710	KSB	1 - 12.8 hp 2 - 12.8 hp	480 3	1 - 29 2 - 29	12"	SW0400031	2765 2767 200 Amp
14	PS0320014	Duplex Submersible 2013	50,976 gal. 18	1,008 gal.	1 - 230 2 - 230	Flygt	1 - 10 hp 2 - 10 hp	208 3	1 - 9.5 2 - 18.5	8"	SA0310022	2766 2770
15	PS0310015	Triplex Wet well Dry well ~1975	248,688 gal. 18	N/A	1 - 2400 2 - 2400 3 - 2400	Chicago	1 - 40 hp 2 - 40 hp 3 - 40 hp	480 3	54	10"	SW0310030	2765 2767 200 Amp
16	PS0300016	Duplex Submersible	23		1 - 1400 2 - 1400 1&2 - 2300	KSB		480 3				2765 2766 200 Amp
17	PS0290017	Duplex Submersible ~1975 2001	243,072 gal. 23	N/A	1 - 1000 2 - 1000 1&2 - 1500	KSB	1 - 10 hp 2 - 10 hp	240 3	1 - 32.5 2 - 32.5	8"	SW0290038	2767 2765 200 Amp
18	PS0180018	Duplex Submersible 1996	N/A 26	N/A	1 - 58.56 2 - 54.92 1&2 - 85	KSB	1 - 1.75 hp 2 - 1.75 hp	208 3	1 - 6.9 2 - 6.9	6"	SA0180041	All 60 Amp
19	PS1230019	Duplex Submersible 1984	2,880 gal. 28	409 gal.	1 - 73.7 2 - 79.2	Meyers	1 - 2 hp 2 - 2 hp	240	1 - 9.0 2 - 39.0	4"	SW1230034	All 60 Amp
20	PS0090001	Duplex Submersible 2004			1 - 360 2 - 360 1&2 - 540	KSB	1 - 5 hp 2 - 5 hp	208 30	1 - 17.7		SA0090036	2765 2767 200 Amp

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2014

	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.
21	PS0020021	Duplex Submersible  2007	3,600 gal.  30	480 gal.	1 - 125 2 - 96.0	Chicago	1 - 10 hp 2 - 10 hp	208  3	1 - 33.4 2 - 30.1	4"	SA0030035	All 60 Amp
22	PS0730022	Duplex Submersible  2002	43,344 gal.  33		1 - 180 2 - 135.3  1-2:337.6	KSB	1 - 10 hp 2 - 3.4 hp	240  3	1 - 29.2 2 - 10.1	4"	SA0730023	2765 2767 200 Amp
23	PS0960023	Duplex steel shell Submersible ~1975	3,168 gal.  11	295.5 gal.	1 - 120.6 2 - 131.3	Flygt	1 - 3.8 hp 2 - 3.8 hp	240  1	14	4"	SA0960002	All 60 Amp
24	Removed											
25	PS1030025	Duplex Submersible 2001	8,352 gal.  11		1 - 200 2 - 200 1&2 - 300	KSB	1 - 15 hp 2 - 15 hp	240  3	1 - 52 2 - 52		SA1000001	2767 2765 200 Amp
26	PS0920026	Duplex Submersible 1999	49,680 gal.  5		1 - 200 2 - 200 1&2 - 300	KSB	1 - 16.5 2 - 16.5	240  3	1 - 52 2 - 52	4"	SA0860115	2767  2765
27	PS0420027	Duplex Submersible 1984	4,320 gal.  13	145.9 gal.	1 - 46.8 2 - 49.4 1&2 - 73	Myers	1 - 2 hp 2 - 2 hp	240  3	1 - 7.5 2 - 7.5	3"	SA0420086	All 60 Amp
28	PS1170028	Duplex Submersible 1998	17,136 gal.  22	N/A	1 - 159 2 - 159	KSB	1 - 3.4 hp 2 - 3.4 hp	240  3	1 - 10.2 2 - 10.2	4"	SA1170006	All 60 Amp
29	PS0470029	Duplex Submersible 1984	5,184 gal.  13	456.3 gal.	1 - 159 2 - 159 1&2 - 238	Barnes	1 - 3 hp 2 - 3 hp	240  3	1 - 9 2 - 9	4"	SA0470148	All 60 Amp
30	PS0580030	Duplex Submersible 1989	14,112 gal.  20	377.8 gal.	1 - 120.6 2 - 124.6 1&2 - 200	Flygt  CP3102	1 - 5 hp 2 - 5 hp	240  3	1 - 13 2 - 13	6"		All 60 Amp

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2014

	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.	
31	PS0600031	Duplex Submersible 1989	13,104 gal. 21	658.3 gal.	1 - 200.5 2 - 154.3 1&2 - 300	Flygt CP3102	1 - 5 hp 2 - 5 hp	240 3	1 - 13 2 - 13	6"		All 60 Amp	
32	PS0600032	Duplex Submersible 1989	5,472 gal. 21	613.4 gal.	1 - 139 2 - 155 1&2 - 300	Flygt CP3102	1 - 5 hp 2 - 5 hp	240 3	1 - 13 2 - 13	4"	SA0600093	All 60 Amp	
33	PS1280033	Duplex Submersible 1995	NA	420 gal.	1 - 140 2 - 140 1&2 - 210	KSB	1 - 3 hp 2 - 3 hp	208	1 - 9.8 2 - 9.8	4"	SA0030061	All 60 Amp	
34	PS0560034	Duplex Submersible 1993	NA 20	433.9 gal.	1 - 166 2 - 156 1&2 - 249	Flygt CP3127	1 - 10 hp 2 - 10 hp	480 3	1 - 13 1 - 13	4"	SA0560093	2767 2765 200 Amp	
35	PS0630001	Duplex Submersible 2007			1 - 200 2 - 200 1&2 - 300	KSB	1 - 7.5 2 - 7.5	208 3	1 - 25 2 - 25	4"		All 60 Amp	
36	PS0900036	Duplex Submersible 1992	1,152 gal. 11	980 gal.	1 - 195.4 2 - 196.7	Flygt CP3127X	1 - 10 hp 2 - 10 hp	240 3	1 - 26 2 - 26	Twin 4"	SA0900005	2767 2765 200 Amp	
37	PS0420037	Duplex Submersible 1984	3,888 gal. 13	441.4 gal.	1 - 186.5 2 - 191.9	Flygt CP3085	1 - 3 hp 2 - 3 hp	208 3	1 - 10 2 - 10	4"	SA0420080	All 60 Amp	
38	PS1120038	Duplex Submersible	Operated by Facilities Management										
39	PS0150039	Duplex Submersible 1988	20,880 gal. 23	643.2 gal.	1 - 306.3 2 - 313.8	Flygt	1 - 5 hp 2 - 5 hp	240 3	1 - 13 2 - 13	6"		All 60 Amp	
40	PS0330040	Steel shell dry well with 6' concrete wet well	36,864 gal. 18	534.9 gal.	1 - 286.6 2 - 281.5	Fairbanks Morse	1 - 7.5 hp 2 - 7.5 hp	240 3	1 - 22.6 2 - 22.6	8"	SA0320008	All 60 Amp	

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2014

	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.
41	PS0680041	Duplex Submersible	8,928 gal.  22		1 - 400 2 - 400	KSB	1 - 15 hp 2 - 15 hp	240  3	1 - 43.5 2 - 43.5	6"	SA0680029	2767  2765 200 Amp
42	PS1320042	Duplex Submersible 1996	NA  22	NA	NA	KSB	1 - 5 hp 2 - 5 hp	480  3	1 - 7.8 2 - 7.8	4" 6"	SD1180032	2767  2765 200 Amp
43	PS1280143	Duplex Submersible 2000			1 - 100 2 - 100 3 - 150	KSB	1 - 15 hp 2 - 15 hp	240  3	1 - 43.5 2 - 43.5		SA1280001	2767  2765 200 Amp
44	PS0010144	Duplex Submersible 2000			1 - 180 2 - 180 3 - 200	KSB	1 - 10 hp 2 - 10 hp	208  3	29 29	6"		2767  2765 200 Amp
45	PS0880016	Triplex Submersible 2005		2 MG	1 - 2000 2 - 2000 3 - 2000	KSB	1 - 50 hp 2 - 50 hp 3 - 50 hp	480  3	39	12"	SW0830136	Permanent on site 2778 100kW
46	PS0090046	Duplex Submersible Grinder ~2005				Barnes	1 - 2 hp 2 - 2 hp	208  3	9.2 9.2	1.25"		
47	PS0090047	(in Bethany Crisis Shelter) ~2005				Barnes						
48	PS0080001	(9) 723-3870 ~2005				Barnes						
49		Private  724-4053										
50		Storage Basin 2007		1 MG	No Pumps	Gravity In Gravity Out						
51	PS0430001	Storage Basin Oct. 2010		3 MG		KSB						Permanent on site

# LENGTH OF SANITARY SEWER PIPE IN FEET 2014

## PIPE MATERIAL

Dia. Inches	Force Main	ABS	ACP	BRA	CBR	CI/DI	CIPP	CMP	HDPE	PVC	RCP	STL	UNK	VCP	Totals
1	113														113
1 1/4	97														97
1 1/2	1,578														1,578
2	1,616									651					2,267
3	16,204														16,204
4	24,740														24,740
6	15,550						55			1,247			176	6,869	23,897
8	24,199		7,027			11,831	117,399		1,120	457,988	305		1,941	909,590	1,531,400
9							3,913							23,197	27,110
10	17,562		14,970			3,607	12,934		153	33,169	3,299		637	69,875	156,206
12	11,253		2,123			1,297	7,655		513	18,975	43,994			47,648	133,458
14						163									163
15							3,371			11,057	32,835			30,291	77,554
16	5,309					362			999		48				6,718
18				1,286		79	6,813	1,056			13,253			19,801	42,288
20				118		12					466			2,154	2,750
21				439		111				1,094	6,500		21	654	8,819
22				2,571										1,224	3,795
24	8,460			1,006		747	911			693	12,521			3,167	27,505
26				622							983				1,605
27				454							720			530	1,704
28				1,386											1,386
30				499		119	1,284				3,998				5,900
32				1,403			482				403				2,288
34				496			65								561
36				1,425		3,057				105	2,038				6,625
42					466				387					122	975
45				7	460										467
48	9,565			191	157	35			1,166		703				11,817
54	940														940
55					80										80
UNK	361									345			359	342	1,407
<b>Total</b>	<b>137,547</b>	<b>0</b>	<b>24,120</b>	<b>11,903</b>	<b>1,163</b>	<b>21,420</b>	<b>154,882</b>	<b>1,056</b>	<b>4,338</b>	<b>525,324</b>	<b>122,066</b>	<b>0</b>	<b>3,134</b>	<b>1,115,464</b>	<b>2,122,417</b>

Notes: The City of Duluth Sanitary Sewer system includes **8,599** manholes.

ABS - Acrylonitrile Butadiene Styrene  
 ACP - Asbestos Cement Pipe  
 BRA - Brick Arch  
 CBR - Circular Brick Pipe

CI/DI - Cast or Ductile Iron  
 CIPP - Cured in Place Pipe  
 CMP - Corrugated Metal Pipe  
 HDPE - High Density Polyethylene

PVC - Polyvinyl Chloride  
 RCA - Reinforced Concrete Arch  
 RCP - Reinforced Concrete Pipe  
 VCP - Vitrified Clay Pipe

**Miles - 402.0**

Note: Pipe quantities are derived from Geographic Information System.

## SANITARY SEWER ACTIVITIES 2014

ACTIVITY	WORK COMPLETED
Cleaning sanitary sewer pipe	192,924 ft
Televising sanitary sewer pipe	51,464
I & I inspections (Inflow and Infiltration Grant Program)	
Homes inspected	836
Sump pumps installed	514
Public informational meetings	2
Contractor meetings	1
Laterals rehabilitated	217
Inspections for connections and disconnections	126
Dye testing	7 lines
Field sampling	Street sweepings
Flow monitoring	Ongoing

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**Clean Water Utility  
Statement of Net Income  
For The Year Ended December 31, 2013 and 2014  
(Unaudited)**

	<b>2013</b>		<b>2014</b>
<b><u>Operating Revenue</u></b>			
Charges for Services	\$ <u>1,806,788</u>		\$ <u>1,842,153</u>
<b>Total Operating Revenue</b>	\$ <u>1,806,788</u>		\$ <u>1,842,153</u>
<b><u>Operating Expense</u></b>			
Clean Water Expense	<u>1,657,641</u>		<u>1,257,604</u>
<b>Total Operating Expense</b>	<u>(1,657,641)</u>		<u>(1,257,604)</u>
<b>Operating Income</b>	<u>149,147</u>		<u>584,549</u>
<b><u>Other Revenue</u></b>			
Contributed Assets	1,634,691		125,900
Interest Income	<u>6,664</u>		<u>3,925</u>
<b>Total Other Revenue</b>	<u>1,641,355</u>		<u>129,825</u>
<b><u>Other Expenses and Transfers</u></b>			
Transfers to Other Funds			
Investing Activities	9,607		3,407
Interest on Long Term Debt	<u>190,247</u>		<u>177,857</u>
<b>Total Other Expenses and Transfers</b>	<u>(199,854)</u>		<u>(181,264)</u>
<b>Net Income or Loss</b>	<u>\$ <u>1,590,648</u></u>		<u>\$ <u>533,110</u></u>

**Clean Water Utility  
Statement of Net Assets  
For The Year Ending December 31, 2013 and 2014  
(Unaudited)**

	<b>Assets</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Assets</u></b>		
Cash	\$ 369,715	\$ 50,874
Accounts Receivable (Net)	192,241	185,549
Due from Other Governments	0	0
<b>Total Current Assets</b>	<b>\$ 561,956</b>	<b>\$ 236,423</b>
<b><u>Utility Plant</u></b>		
In Service	35,853,559	39,685,143
Construction	4,348,924	573,339
Less Accumulated Depreciation	(616,450)	(1,180,477)
<b>Total Utility Plant Assets</b>	<b>39,586,033</b>	<b>39,078,005</b>
<b>Total Assets</b>	<b>\$ 40,147,989</b>	<b>\$ 39,314,428</b>

**Clean Water Utility  
Statement of Net Assets  
For The Year Ending December 31, 2013 and 2014  
(Unaudited)**

	<b>Liabilities &amp; Net Assets</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Liabilities</u></b>		
Accounts Payable	\$ 150,390	\$ 6,590
Contracts Payable	177,423	0
Notes Payable	1,142,000	1,093,160
Due to Other Governments	23,000	0
Interest Payable	67,535	63,198
Unearned Revenue	6,775	6,339
Bonds Payable	12,188	12,188
<b>Total Current Liabilities (Payable from Current Assets)</b>	<b>\$ 1,579,311</b>	<b>\$ 1,181,475</b>
<b><u>Long Term Liabilities</u></b>		
Bonds Payable	12,101,646	11,145,000
Notes Payable	143,352	131,163
<b>Total Long Term Liabilities</b>	<b>12,244,998</b>	<b>11,276,163</b>
<b>Total Liabilities</b>	<b>13,824,309</b>	<b>12,457,638</b>
<b><u>Net Assets</u></b>		
Invested in Capital Assets, Net of Related Debt	26,186,847	26,696,494
Unrestricted	136,833	160,296
<b>Total Net Assets</b>	<b>26,323,680</b>	<b>26,856,790</b>
<b>Total Liabilities and Net Assets</b>	<b>\$ 40,147,989</b>	<b>\$ 39,314,428</b>

**City of Duluth  
Clean Water Utility Bonds and Notes Payable  
December 31, 2014**

		<u>Issued</u>	<u>Issue Date</u>	<u>Final Maturity</u>	<u>Principal Outstanding 12/31/2013</u>	<u>Issued</u>	<u>Draw Down</u>	<u>Retired</u>	<u>Principal Outstanding 12/31/2014</u>
<b>Clean Water Utility</b>									
Bonds									
	Revenue and General Obligation	\$ 200,000	2/19/2009	2/1/2024	\$ 155,540	\$ 0	\$ 0	\$ 12,188	\$ 143,352
Bond Total					\$ 155,540	\$ 0	\$ 0	\$ 12,188	\$ 143,352
Notes									
	Public Facilities Authority	\$ 796,835	6/17/2009	8/20/2024	\$ 619,000	\$ 0	\$ 0	\$ 51,000	\$ 568,000
	Public Facilities Authority	2,414,150	12/10/2009	8/20/2024	1,932,000	0	0	159,000	1,773,000
	Public Facilities Authority	9,087,385	8/31/2010	8/20/2025	6,825,839	0	0	530,839	6,295,000
	Public Facilities Authority	3,753,059	8/31/2010	8/20/2025	3,060,000	0	0	238,000	2,822,000
	Public Facilities Authority	278,149	11/18/2011	8/20/2021	238,000	0	0	29,000	209,000
	Public Facilities Authority	282,620	11/30/2011	8/20/2021	160,829	0	62,969	29,000	194,798
	Public Facilities Authority	600,175	9/10/2012	8/20/2022	407,978	0	28,384	60,000	376,362
Note Total					\$ 13,243,646	\$ 0	\$ 91,353	\$ 1,096,839	\$ 12,238,160
<b>Total Clean Water Utility Bonds and Notes</b>					\$ 13,399,186	\$ 0	\$ 91,353	\$ 1,096,839	\$ 12,381,512

<b>Future Payments:</b>			
<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 1,105,348	\$ 174,107	\$ 1,279,455
2016	1,120,881	158,780	1,279,661
2017	1,137,435	143,081	1,280,516
2018	1,153,435	127,130	1,280,565
2019	1,167,989	110,901	1,278,890
2020	1,185,682	94,426	1,280,108
2021	1,201,235	77,683	1,278,918
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	11,095	893,095
	\$ 12,381,512	\$ 1,029,389	\$ 13,410,901

**Clean Water Fund  
Schedule of Fixed Assets  
Year Ending December 31, 2014**

	<u>Balance Jan. 1, 2014</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance Dec. 31, 2014</u>	<u>Accumulated Depreciation</u>	<u>Book Value</u>
Lands and Grounds	\$ 525,000	\$ 0	\$ 0	\$ 525,000	\$ 0	\$ 525,000
Infrastructure	35,156,441	3,831,584	0	38,988,025	1,025,571	37,962,454
Equipment and Tools	172,118	0	0	172,118	154,906	17,212
Work in Progress	<u>4,348,924</u>	<u>56,000</u>	<u>3,831,585</u>	<u>573,339</u>	<u>0</u>	<u>573,339</u>
<b>Total</b>	<u><u>\$ 40,202,483</u></u>	<u><u>\$ 3,887,584</u></u>	<u><u>\$ 3,831,585</u></u>	<u><u>\$ 40,258,482</u></u>	<u><u>\$ 1,180,477</u></u>	<u><u>\$ 39,078,005</u></u>

# **STORMWATER**

**Stormwater Utility**  
**Statement of Net Income**  
**For The Year Ended December 31, 2013 and 2014**  
**(Unaudited)**

	2013	2014
<b><u>Operating Revenue</u></b>		
Stormwater Charges	\$ 4,704,073	\$ 4,583,257
Other	49,810	44,575
<b>Total Operating Revenue</b>	<b>\$ 4,753,883</b>	<b>\$ 4,627,832</b>
<b><u>Operating Expense</u></b>		
Director's Office	59,900	60,507
Capital Related Expenses	628,366	587,310
Utility General Expense	418,301	438,717
Engineering	633,054	727,612
Utility Operations	1,607,717	1,684,425
Customer Service	199,059	202,678
<b>Total Operating Expense</b>	<b>(3,546,397)</b>	<b>(3,701,249)</b>
<b>Operating Income</b>	<b>1,207,486</b>	<b>926,583</b>
<b><u>Other Revenue</u></b>		
Grants Non-Capital	10,000	0
Capital Contributions	21,951	(1,397)
Gain or Loss on Sale of Fixed Assets	0	40,500
Transfer from Other Funds		
Administrative Billing Fee	0	1,758
Street Lighting	4,920	4,920
Interest Income	1,881	42,242
<b>Total Other Revenue</b>	<b>38,752</b>	<b>88,023</b>
<b><u>Other Expenses and Transfers</u></b>		
Bond Interest	59,043	53,208
Transfers to Other Funds		
Investing Activities	23,031	28,907
Non-Capital Improvements	11,073	49,635
Street Sweeping	402,348	464,885
Reimbursement for MIS Programmer	0	21,600
Other Transfers	0	5,575
<b>Total Other Expenses and Transfers</b>	<b>(495,495)</b>	<b>(623,810)</b>
<b>Net Income or Loss</b>	<b>\$ 750,743</b>	<b>\$ 390,796</b>

**Stormwater Utility  
Statement of Net Assets  
For The Year Ending December 31, 2013 and 2014  
(Unaudited)**

	<b>Assets &amp; Deferred Outflows</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Assets</u></b>		
Cash	\$ 2,524,850	\$ 2,083,144
Accounts Receivable	467,584	443,117
Special Assessments	25,636	21,845
Due from Other Funds	171,236	68,866
Due from Other Governments	10,257	0
Inventory	72,388	70,721
<b>Total Current Assets</b>	<b>\$ 3,271,951</b>	<b>\$ 2,687,693</b>
<b><u>Utility Plant</u></b>		
In Service	16,762,596	16,888,488
Construction	579,075	1,311,598
Less Accumulated Depreciation	(3,472,239)	(3,625,930)
<b>Total Utility Plant Assets</b>	<b>13,869,432</b>	<b>14,574,156</b>
<b>Total Assets</b>	<b>17,141,383</b>	<b>17,261,849</b>
<b><u>Deferred Outflows</u></b>		
Deferred Loss from Debt Refunding	14,650	11,069
<b>Total Deferred Outflows</b>	<b>14,650</b>	<b>11,069</b>
<b>Total Assets and Deferred Outflows</b>	<b>\$ 17,156,033</b>	<b>\$ 17,272,918</b>



**Stormwater Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2013 and 2014**  
**(Unaudited)**

	<b>Liabilities &amp; Net Assets</b>	
	<b>2013</b>	<b>2014</b>
<b><u>Current Liabilities</u></b>		
Accounts Payable	\$ 24,218	\$ 28,576
Contracts Payable	96,105	47,696
Due to Other Funds	30,963	19,430
Due to Component Units	18,000	0
Due to Other Governments	7,926	12,453
Accrued Interest Payable	24,477	21,879
Accrued Salaries Payable	79,334	93,095
Vacations Payable	91,415	105,126
Unearned Revenue	13,135	15,603
Bonds Payable	210,409	218,837
<b>Total Current Liabilities (Payable from Current Assets)</b>	<b>\$ 595,982</b>	<b>\$ 562,695</b>
<b><u>Long Term Liabilities</u></b>		
Vacations Payable	2,748	0
Net Other Post Employment Benefits	44,928	30,216
Bonds Payable	1,493,201	1,274,364
Less Unamortized Bond Discount or Premium	19,499	15,172
<b>Total Long Term Liabilities</b>	<b>1,560,376</b>	<b>1,319,752</b>
<b>Total Liabilities</b>	<b>2,156,358</b>	<b>1,882,447</b>
<b><u>Net Assets</u></b>		
Invested in Capital Assets, Net of Related Debt	12,160,973	13,076,852
Unrestricted	2,838,702	2,313,619
<b>Total Net Assets</b>	<b>14,999,675</b>	<b>15,390,471</b>
<b>Total Liabilities and Net Assets</b>	<b>\$ 17,156,033</b>	<b>\$ 17,272,918</b>

**City of Duluth  
Stormwater Utility Bonds Payable  
December 31, 2014**

	<u>Issued</u>	<u>Issue Date</u>	<u>Final Maturity</u>	<u>Principal Outstanding 12/31/2013</u>	<u>Issued</u>	<u>Retired</u>	<u>Principal Outstanding 12/31/2014</u>
<b>Stormwater Utility Bonds</b>							
Revenue and General Obligation	\$ 1,705,000	9/7/2006	2/1/2022	\$ 1,150,000	\$ 0	\$ 105,000	\$ 1,045,000
Revenue and General Obligation Refunding	755,000	11/23/2010	2/1/2018	553,610	0	105,409	448,201
<b>Bond Total</b>				<u>\$ 1,703,610</u>	<u>\$ 0</u>	<u>\$ 210,409</u>	<u>\$ 1,493,201</u>
<b>Total Stormwater Utility Bonds</b>				<u>\$ 1,703,610</u>	<u>\$ 0</u>	<u>\$ 210,409</u>	<u>\$ 1,493,201</u>

<b>Future Payments:</b>			
<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 218,837	\$ 49,690	\$ 268,527
2016	224,693	43,022	267,715
2017	233,122	35,551	268,673
2018	241,549	27,234	268,783
2019	135,000	20,300	155,300
2020	140,000	14,800	154,800
2021	145,000	9,100	154,100
2022	155,000	3,100	158,100
	<u>\$ 1,493,201</u>	<u>\$ 202,797</u>	<u>\$ 1,695,998</u>

**Stormwater Fund  
Schedule of Fixed Assets  
Year Ending December 31, 2014**

	<u>Balance Jan. 1, 2014</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance Dec. 31, 2014</u>	<u>Accumulated Depreciation</u>	<u>Book Value</u>
Lands and Grounds	\$ 8,481	\$ 0	\$ 0	\$ 8,481	\$ 0	\$ 8,481
Infrastructure	12,624,866	254,217	0	12,879,083	1,288,975	11,590,108
Buildings and Structures	1,401,897	0	0	1,401,897	294,398	1,107,499
Equipment and Tools	2,727,352	170,279	298,604	2,599,027	2,042,557	556,470
Work in Progress	<u>579,075</u>	<u>1,013,125</u>	<u>280,602</u>	<u>1,311,598</u>	<u>0</u>	<u>1,311,598</u>
Total	<u>\$ 17,341,671</u>	<u>\$ 1,437,621</u>	<u>\$ 579,206</u>	<u>\$ 18,200,086</u>	<u>\$ 3,625,930</u>	<u>\$ 14,574,156</u>

## LENGTH OF STORM SEWERS IN FEET 2014

Dia. Inch.	BR	CMP	CPD	CI/DI	HDPE	NCP	PPC	PVC	RCP	STN	STL	TP	VCP	UNK	Totals
3					840				56						896
4					33,150			507,421	1,021		13			128,971	670,576
6		2,822		137	245			19,304	61					17,646	40,215
8		90		150	200	48		14,338	459				469	4,977	20,731
10		2,144		303	39			2,690	9,063				1,870	22,105	38,214
12		40,355	5,761	1,469	24,681	780		22,272	380,902		65		1,066	62,792	540,143
13									47						47
14		59		38					232					301	630
15		3,000		25	3,746	169	52	2,189	163,254				736	38,412	211,583
16		89		803	432				212					781	2,317
17														91	91
18		7,027	181		4,158	50		1,971	108,450				616	25,602	148,055
20		50		90					1,079		235			3,664	5,118
21		1,268		63				5	35,622				571	5,376	42,905
22									747					282	1,029
23														38	38
24	277	4,281		184	1,086			620	64,314	160	67		396	18,158	89,543
26	1,733				160			48	3,874					12,759	18,574
27					28		44		13,208					1,096	14,376
28	662	160							3,530					2,122	6,474
29									335						335
30		1,102			1,957				32,607			143		6,133	41,942
31									133						133
32	372	67			24				2,520					753	3,736
33									711						711
34														326	326
36		1,158				460	67		25,046					9,769	36,500
38							14								14
40					42				627	659				210	1,538
42	204	64		304	46			188	8,188					1,524	10,518
44		158							3,402					345	3,905
45									320					455	775
46														77	77
48	228	545			56		52		13,371	762		78		6,303	21,395
50	238								284					36	558

## LENGTH OF STORM SEWERS IN FEET 2014

Dia. Inch.	BR	CMP	CPD	CI/DI	HDPE	NCP	PPC	PVC	RCP	STN	STL	TP	VCP	UNK	Totals
51									976						976
52									417						417
54									10,503					3,217	13,720
56									89					65	154
58		1,373							630						2,003
59															0
60	36	432				28	365		2,231	44				2,957	6,093
62									109					58	167
66									492	37				265	794
72		155					185		1,539	10				1,715	3,604
73														79	79
78		42							398						440
84	468	172						138	303	365				1,449	2,895
88	104								226						330
96									236					212	448
108														115	115
120									982					600	1,582
122									54						54
128									63	790				626	1,479
132									170					153	323
144									113						113
156									101						101
192									49						49
UNK	646	75			109			2,080	5,704					90,466	99,080
	4,968	66,688	5,942	3,566	70,999	1,535	779	573,264	899,060	2,827	380	221	5,724	473,081	2,109,034

Note: The Storm Sewer system also includes **10,509** catch basins and **4,962** manholes.

Pipe quantities are derived from Geographic Information System.

Jurisdictional changes have reduced pipe, manhole and catch basin totals from 2013 to 2014.

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

STL - Steel

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) PCB (fish tissue)	Not started	Restricted Discharge Area
St Louis River	Impaired	Mercury (fish tissue and water column) PCB (fish tissue and water column) DDT Dieldrin Dioxin Toxaphene Fecal Coliform Aquatic Macroinvertebrate Bioassessments	Not started*	Area of Concern & Protected Water
Amity Creek	Impaired	Turbidity	Underway	Trout stream
E Br Amity	Impaired	Turbidity	Underway	Trout stream
Lester River	Impaired	Turbidity & Mercury (water column)	Underway (Turbidity)	Trout stream
Twin Ponds- Buckingham Creek	Impaired (Upper Twin Ponds)	PCB (fish tissue)- Upper Twin Mercury (fish tissue)- South Twin	Not started	Trout stream
Miller Creek	Impaired	Temperature Lack of coldwater assemblage Aquatic Macroinvertebrates E. coli Chloride	Study started for temp. and Lack of coldwater assemblage TMDL started	Trout stream
Chester Creek		Mercury		Trout stream
E Br Chester		E. coli		Trout stream
Keene Creek		E. coli		Trout stream
Kingsbury Creek		Fish Bioassessment Aquatic Macroinvertebrates		Trout stream
Mission Creek	No impairments			Trout stream
Sergeant Creek		E. coli		Trout stream
Stewart Creek		E. coli		Trout stream
Tischer Creek		E. coli		Trout stream
58th Ave E				
50th Ave E				
47th Ave E				

## MPCA MS4 CREEK DATA

MS4 Discharge Waterbodies	Water Quality Status	Cause of Impairment	TMDL Development Status	Other
43rd Ave E				
38th Ave E				
37th Ave E				
34th Ave E				
Oregon				
Brewery				
Greys				
Clarkhouse				
Coffee				Trout stream
Merritt				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				

\*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 2014

ACTIVITY	WORK COMPLETED
Cleaning creeks	3,000 ft
Televising storm sewer pipe	528 ft
Line flushing	3 lines
Manhole/catch basin repairs	193
Ditch line (dug or repaired and seeded or sodded)	10,599 ft
Culverts repaired	102
Steaming:	
Steamed culverts and ditches blocked with ice	96
Sediment trap cleaning	4 basins cleaned, 100% inspected
Sewer calls	350
Presentations:	
Public	10
Staff	3
School presentations, school group, children's groups	5
Radio, television and newspaper articles	4
Regional conferences	5