

DULUTH PUBLIC UTILITIES COMMISSION
Tuesday, September 18, 2018
City Council Chambers
AGENDA

1. Roll call
2. Approval of previous meeting minutes
3. Old business:
 - 3.1 Stormwater system discussion
 - 3.2 Middle and Woodland water booster stations
 - 3.3 2019 utilities budget discussion
4. New business:
 - 4.1 Clean Water fund update
 - 4.2 18PUC-005 - RESOLUTION APPROVING AND RECOMMENDING 2019 UTILITY BUDGET.
 - 4.3 18PUC-006 - RESOLUTION ESTABLISHING FEES FOR VARIOUS UTILITY-RELATED SERVICES.
5. Updates from staff
6. Upcoming Council actions
7. Commissioner questions or comments
8. Preview of upcoming business
9. Known absences for future meetings

DULUTH PUBLIC UTILITIES COMMISSION
Meeting Minutes
August 21, 2018

Members Present: Councilor Arik Forsman, Chris McIntosh, Rob Prusak, Councilor Joel Sipress, Councilor Em Westerlund

Members Absent: Jennifer Julsrud, Carrie Ryan

Staff Present: Bob Asleson, Jim Benning, Leanna Gilbert, Howard Jacobson, Chris Kleist, Tom Pfeffer, Eric Shaffer, Glenn Strid, Kerry Venier

Call to Order: President Prusak called the meeting to order at 5:15 p.m.

Old business:

Stormwater system discussion

Tom Pfeffer provided a couple of cost estimate scenarios for stormwater system needs based on realistic life expectancy and “best case” life expectancy. He also provided a spreadsheet comparing 2014-2018 capital expenditures to those scenarios. Commissioners and staff discussed the history of stormwater expenses, the consequences of not doing preventive maintenance, and various other aspects of the stormwater system. Staff will prepare some stormwater rate scenarios and a clean water fund update for the next meeting as requested.

New business:

Middle and Woodland water booster stations

Eric Shaffer explained the condition of the booster stations, stated that the upgrades have been delayed for years, and recommended bonding for these projects. He will prepare a report of water usage and cost estimates for the next meeting. Commissioners and staff discussed PFA loan rates compared to conventional bond rates and various details about the booster stations.

2019 utilities budget discussion

Jim Benning stated that the Commission recommends the utility budgets to City Council. A final proposed budget and a resolution recommending the budget will be prepared for the September meeting. Glenn Strid gave an overview of the cash projections for the water, gas, sanitary sewer, clean water, and stormwater funds and answered questions from commissioners.

Updates from staff

Jim Benning stated that the Public Works & Utilities budget presentation to City Council is scheduled for September 24th. Eric Shaffer reported that the water portion of Superior Street is complete.

Upcoming Council actions

Jim Benning mentioned a resolution expanding the home energy loan program to include loans for private water and lateral line repair or replacement.

Commissioner questions and comments

President Prusak welcomed Arik Forsman to the Commission.

Preview of upcoming business

The next regular meeting is scheduled for Tuesday, September 18, 2018, at 5:15 p.m. in City Council Chambers. Staff will prepare rate scenarios for stormwater, a clean water fund update, a pump station study, final budget documents, and a resolution recommending the 2019 utility budgets to City Council.

Known absences for future meetings

No absences were mentioned.

Adjournment: The meeting was adjourned at 6:55 p.m.

6.60%

8/23/2018

Double Capital Spending by 2024

Stormwater Utility Proposed Revenue Increases for Capital Plan Expenses

Projected Annual Expenses

2019 - 2024 CIP \$ Total = **\$10,565,000**

	Budget						
	2019	2019	2020	2021	2022	2023	2024
Capital	\$1,265,000	\$1,265,000	\$1,300,000	\$1,500,000	\$1,900,000	\$2,200,000	\$2,400,000
Salary/Benefits	\$2,555,800	\$2,555,800	\$2,645,253	\$2,737,837	\$2,833,661	\$2,932,839	\$3,035,489
Debt Service	\$144,100	\$144,100	\$145,800	\$150,000	\$150,000	\$0	\$0
Other	\$1,849,800	\$1,849,800	\$1,886,796	\$1,924,532	\$1,963,023	\$2,002,283	\$2,042,329
Total	\$5,814,700	\$5,814,700	\$5,977,849	\$6,312,369	\$6,846,684	\$7,135,122	\$7,477,817

Expense Annual Percent Change

Capital	0.0%	2.8%	15.4%	26.7%	15.8%	9.1%
Salary/Benefits	0.0%	3.5%	3.5%	3.5%	3.5%	3.5%
Debt Service	0.0%	1.2%	2.9%	0.0%	-100.0%	na
Other	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total	0.0%	2.8%	5.6%	8.5%	4.2%	4.8%

Additional Revenue Requirement	\$207,540	\$616	-\$59,361	\$54,420	-\$105,431	-\$240,613
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Customer Revenue

Base Revenue	\$5,260,000	\$5,607,160	\$5,977,233	\$6,371,730	\$6,792,264	\$7,240,554	\$7,718,430
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Rate Increase %	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%
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Current Rate	2019	2020	2021	2022	2023	2024
6.75	7.20	7.67	8.18	8.72	9.29	9.90

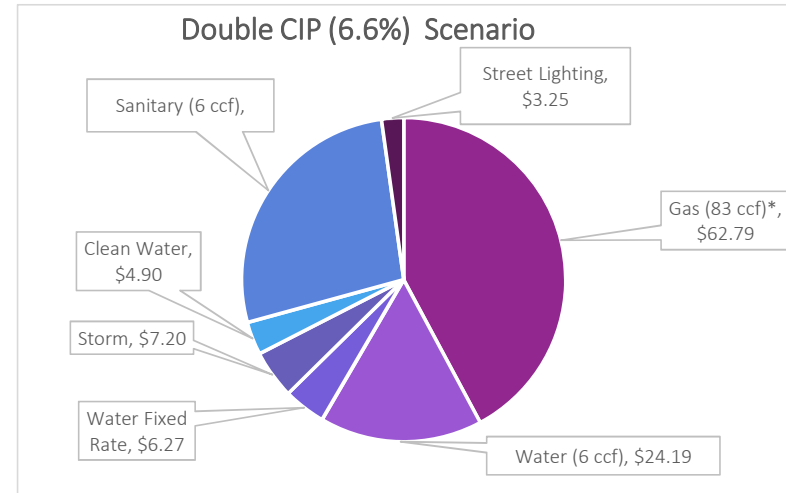
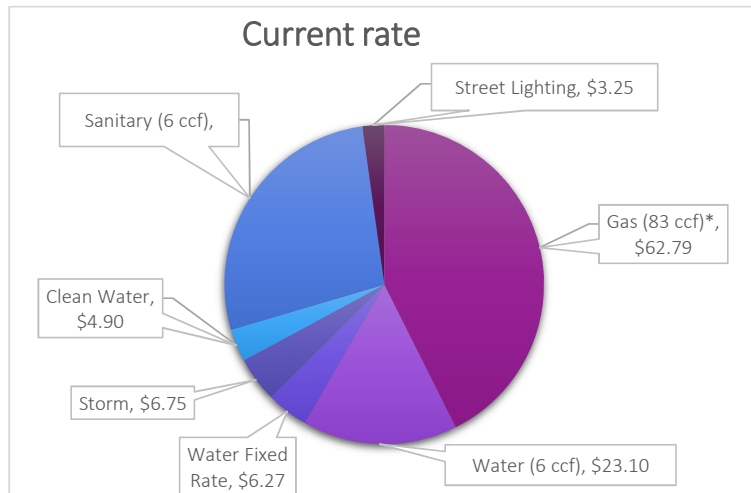
Monthly Change	\$ 0.45	\$ 0.47	\$ 0.51	\$ 0.54	\$ 0.58	\$ 0.61
Annual Change	\$ 5.35	\$ 5.70	\$ 6.07	\$ 6.48	\$ 6.90	\$ 7.36

Current Sample Residential Bill

	Water & Storm Inc
Gas (83 ccf)*	\$62.79
Water (6 ccf)	\$23.10
Water Fixed Rate	\$6.27
Storm	\$6.75
Clean Water	\$4.90
Sanitary (6 ccf)	\$40.33
Street Lighting	<u>\$3.25</u>
Total Bill	\$147.39

Sample Residential Bill w/rate change for Water & Storm

		% Change
Gas (83 ccf)*	\$62.79	0.00%
Water (6 ccf)	\$24.19	<u>4.70%</u>
Water Fixed Rate	\$6.27	0.00%
Storm	\$7.20	<u>6.67%</u>
Clean Water	\$4.90	0.00%
Sanitary (6 ccf)	\$40.33	0.00%
Street Lighting	<u>\$3.25</u>	0.00%
Total Bill	\$148.93	<u>1.04%</u>



*Gas is net of PGA

8.70%

8/23/2018

Triple Capital Spending by 2024

Stormwater Utility Proposed Revenue Increases for Capital Plan Expenses

Projected Annual Expenses 2019 - 2024 CIP \$ Total = **\$13,815,000**

	Budget						
	2019	2019	2020	2021	2022	2023	2024
Capital	\$1,265,000	\$1,265,000	\$1,550,000	\$1,950,000	\$2,400,000	\$3,050,000	\$3,600,000
Salary/Benefits	\$2,555,800	\$2,555,800	\$2,645,253	\$2,737,837	\$2,833,661	\$2,932,839	\$3,035,489
Debt Service	\$144,100	\$144,100	\$145,800	\$150,000	\$150,000	\$0	\$0
Other	\$1,849,800	\$1,849,800	\$1,886,796	\$1,924,532	\$1,963,023	\$2,002,283	\$2,042,329
Total	\$5,814,700	\$5,814,700	\$6,227,849	\$6,762,369	\$7,346,684	\$7,985,122	\$8,677,817

Expense Annual Percent Change

Capital	0.0%	22.5%	25.8%	23.1%	27.1%	18.0%
Salary/Benefits	0.0%	3.5%	3.5%	3.5%	3.5%	3.5%
Debt Service	0.0%	1.2%	2.9%	0.0%	-100.0%	na
Other	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total	0.0%	7.1%	8.6%	8.6%	8.7%	8.7%

Additional Revenue Requirement	\$97,080	\$12,796	\$6,606	\$3,170	\$2,723	\$949
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Customer Revenue

Base Revenue	\$5,260,000	\$5,717,620	\$6,215,053	\$6,755,763	\$7,343,514	\$7,982,400	\$8,676,868
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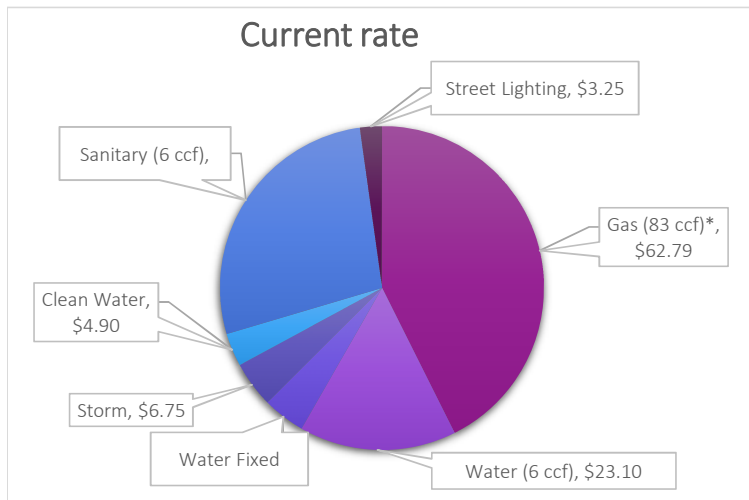
Rate Increase %	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%
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Current Rate	2019	2020	2021	2022	2023	2024
6.75	7.34	7.98	8.67	9.42	10.24	11.13

Monthly Change	\$ 0.59	\$ 0.64	\$ 0.69	\$ 0.75	\$ 0.82	\$ 0.89
Annual Change	\$ 7.05	\$ 7.66	\$ 8.33	\$ 9.05	\$ 9.84	\$ 10.69

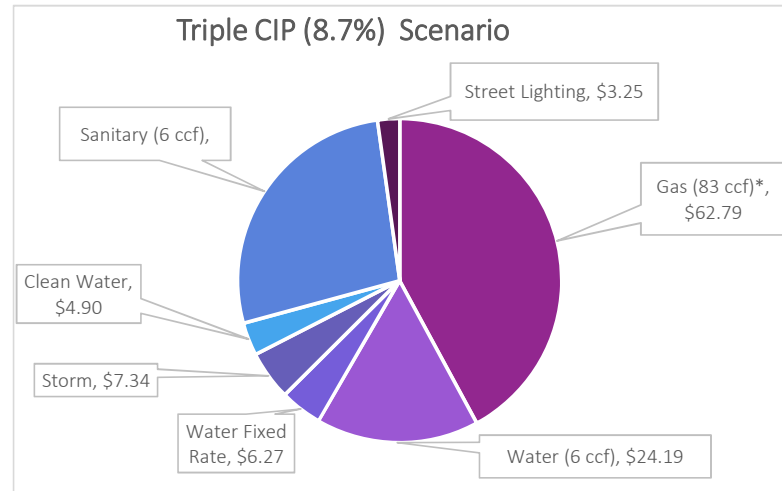
Current Sample Residential Bill

	Water & Storm Inc
Gas (83 ccf)*	\$62.79
Water (6 ccf)	\$23.10
Water Fixed Rate	\$6.27
Storm	\$6.75
Clean Water	\$4.90
Sanitary (6 ccf)	\$40.33
Street Lighting	<u>\$3.25</u>
Total Bill	\$147.39



Sample Residential Bill w/rate change for Water & Storm

		% Change
Gas (83 ccf)*	\$62.79	0.00%
Water (6 ccf)	\$24.19	<u>4.70%</u>
Water Fixed Rate	\$6.27	0.00%
Storm	\$7.34	<u>8.74%</u>
Clean Water	\$4.90	0.00%
Sanitary (6 ccf)	\$40.33	0.00%
Street Lighting	<u>\$3.25</u>	0.00%
Total Bill	\$149.07	<u>1.14%</u>



*Gas is net of PGA

11%

8/23/2018

Best Case (100 yr Capital Life Cycle)

Stormwater Utility Proposed Revenue Increases for Capital Plan Expenses

Projected Annual Expenses 2019 - 2024 CIP \$ Total = **\$17,065,000**

	Budget						
	2019	2019	2020	2021	2022	2023	2024
Capital	\$1,265,000	\$1,265,000	\$1,800,000	\$2,400,000	\$3,000,000	\$4,000,000	\$4,600,000
Salary/Benefits	\$2,555,800	\$2,555,800	\$2,645,253	\$2,737,837	\$2,833,661	\$2,932,839	\$3,035,489
Debt Service	\$144,100	\$144,100	\$145,800	\$150,000	\$150,000	\$0	\$0
Other	\$1,849,800	\$1,849,800	\$1,886,796	\$1,924,532	\$1,963,023	\$2,002,283	\$2,042,329
Total	\$5,814,700	\$5,814,700	\$6,477,849	\$7,212,369	\$7,946,684	\$8,935,122	\$9,677,817

Expense Annual Percent Change

Capital	0.0%	42.3%	33.3%	25.0%	33.3%	15.0%
Salary/Benefits	0.0%	3.5%	3.5%	3.5%	3.5%	3.5%
Debt Service	0.0%	1.2%	2.9%	0.0%	-100.0%	na
Other	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total	0.0%	11.4%	11.3%	10.2%	12.4%	8.3%

Additional Revenue Requirement	-\$23,900	-\$2,997	\$18,630	-\$38,367	\$71,716	-\$160,563
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Customer Revenue

Base Revenue	\$5,260,000	\$5,838,600	\$6,480,846	\$7,193,739	\$7,985,050	\$8,863,406	\$9,838,381
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Rate Increase %	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
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Current Rate	2019	2020	2021	2022	2023	2024
6.75	7.49	8.32	9.23	10.25	11.37	12.63

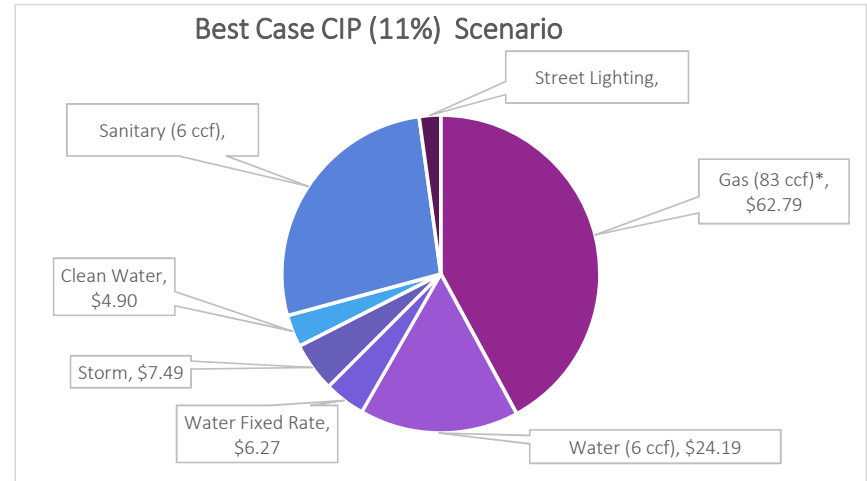
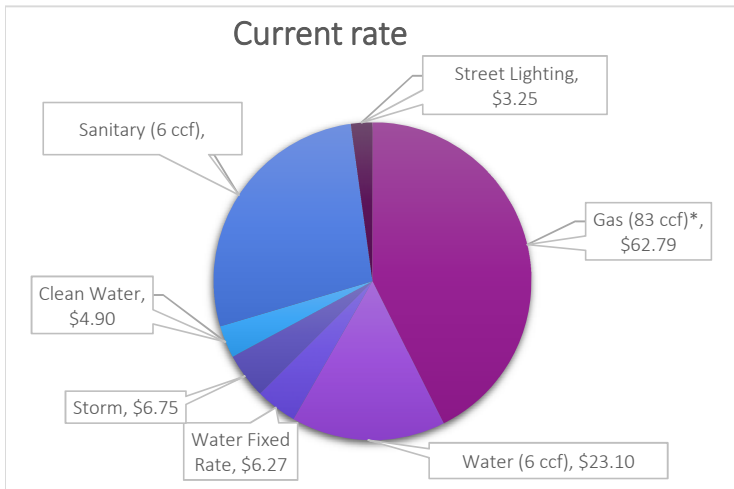
Monthly change	\$ 0.74	\$ 0.82	\$ 0.91	\$ 1.02	\$ 1.13	\$ 1.25
Annual Change	\$ 8.91	\$ 9.89	\$ 10.98	\$ 12.19	\$ 13.53	\$ 15.01

Current Sample Residential Bill

	Water & Storm Inc
Gas (83 ccf)*	\$62.79
Water (6 ccf)	\$23.10
Water Fixed Rate	\$6.27
Storm	\$6.75
Clean Water	\$4.90
Sanitary (6 ccf)	\$40.33
Street Lighting	<u>\$3.25</u>
Total Bill	<u>\$147.39</u>

Sample Residential Bill w/rate change for Water & Storm

		% Change
Gas (83 ccf)*	\$62.79	0.00%
Water (6 ccf)	\$24.19	<u>4.70%</u>
Water Fixed Rate	\$6.27	0.00%
Storm	\$7.49	<u>10.96%</u>
Clean Water	\$4.90	0.00%
Sanitary (6 ccf)	\$40.33	0.00%
Street Lighting	<u>\$3.25</u>	0.00%
Total Bill	<u>\$149.22</u>	<u>1.24%</u>



*Gas is net of PGA

18%

8/23/2018

Realistic Case (50yr Capital Life Cycle)

Stormwater Utility Proposed Revenue Increases for Capital Plan Expenses

Projected Annual Expenses 2019 - 2024 CIP \$ Total = **\$27,765,000**

	Budget						
	2019	2019	2020	2021	2022	2023	2024
Capital	\$1,265,000	\$1,265,000	\$2,700,000	\$3,800,000	\$5,200,000	\$6,500,000	\$8,300,000
Salary/Benefits	\$2,555,800	\$2,555,800	\$2,645,253	\$2,737,837	\$2,833,661	\$2,932,839	\$3,035,489
Debt Service	\$144,100	\$144,100	\$145,800	\$150,000	\$150,000	\$0	\$0
Other	\$1,849,800	\$1,849,800	\$1,886,796	\$1,924,532	\$1,963,023	\$2,002,283	\$2,042,329
Total	\$5,814,700	\$5,814,700	\$7,377,849	\$8,612,369	\$10,146,684	\$11,435,122	\$13,377,817

Expense Annual Percent Change

Capital	0.0%	113.4%	40.7%	36.8%	25.0%	27.7%
Salary/Benefits	0.0%	3.5%	3.5%	3.5%	3.5%	3.5%
Debt Service	0.0%	1.2%	2.9%	0.0%	-100.0%	na
Other	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total	0.0%	26.9%	16.7%	17.8%	12.7%	17.0%

Additional Revenue Requirement	-\$392,100	\$53,825	-\$29,980	-\$51,287	-\$598,484	-\$821,838
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Customer Revenue

Base Revenue	\$5,260,000	\$6,206,800	\$7,324,024	\$8,642,348	\$10,197,971	\$12,033,606	\$14,199,655
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Rate Increase %	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%
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Current Rate	2019	2020	2021	2022	2023	2024
6.75	7.97	9.40	11.09	13.09	15.44	18.22

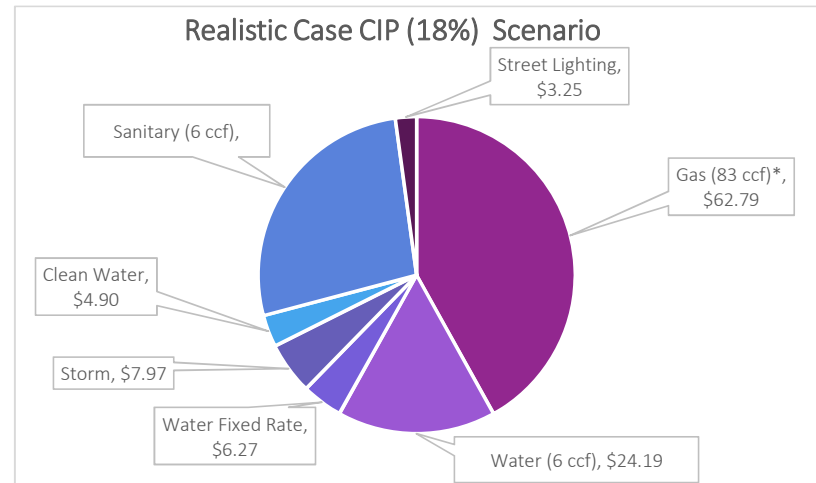
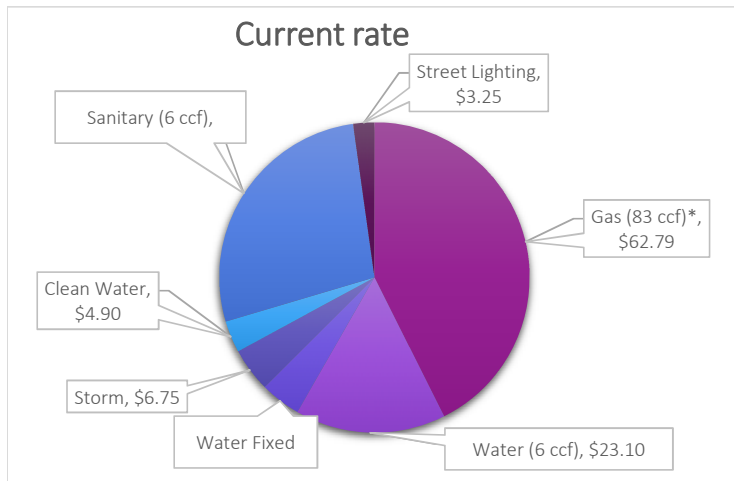
Monthly change	\$ 1.22	\$ 1.43	\$ 1.69	\$ 2.00	\$ 2.36	\$ 2.78
Annual Change	\$ 14.58	\$ 17.20	\$ 20.30	\$ 23.96	\$ 28.27	\$ 33.36

Current Sample Residential Bill

	Water & Storm Inc
Gas (83 ccf)*	\$62.79
Water (6 ccf)	\$23.10
Water Fixed Rate	\$6.27
Storm	\$6.75
Clean Water	\$4.90
Sanitary (6 ccf)	\$40.33
Street Lighting	<u>\$3.25</u>
Total Bill	\$147.39

Sample Residential Bill w/rate change for Water & Storm

		% Change
Gas (83 ccf)*	\$62.79	0.00%
Water (6 ccf)	\$24.19	<u>4.70%</u>
Water Fixed Rate	\$6.27	0.00%
Storm	\$7.97	<u>18.07%</u>
Clean Water	\$4.90	0.00%
Sanitary (6 ccf)	\$40.33	0.00%
Street Lighting	<u>\$3.25</u>	0.00%
Total Bill	\$149.70	<u>1.56%</u>



*Gas is net of PGA

Middle and Woodland Pump Station Future Capacity Review

September 2018

I. INTRODUCTION AND HISTORY

- a. Water leaves the Lakewood Water Treatment Facility and is pumped to a row of storage reservoirs feeding what is known as the Lower Zone. This water zone extends from the treatment facility to approximately 46th Avenue West. Above the Lower Zone is the Middle Zone serving the middle portion of the hillside. Water is provided to this zone by the Middle Booster Station located (at 15th Avenue East and 6th Street adjacent to the Endion Reservoir) and the Middle Storage Tank (located along Central Entrance at 14th Street).

The Woodland Zone serves the upper portion of the hillside above the Middle Zone and is supplied water from two locations. The Arlington Booster Station is adjacent to the Middle Storage Reservoir on Central Entrance and pumps water up to the Arlington Storage Tanks along Arlington Road. The Wood Booster Station is located at 34th Avenue East and 4th Street adjacent to Reservoir A and pumps water up to the Woodland Storage Tanks located on Minneapolis Avenue. The Woodland Pressure Zone also supplies water to the Highland Pressure Zone, the Orphanage Pressure Zone, Hermantown and Rice Lake.

A schematic of the water system is included in Appendix A.

- b. The Woodland and Middle System Booster Stations were most recently studied by MSA Professional Services, Inc. A report dated August 2007 recommended the replacement of each of the booster stations as well as the water transmission mains serving each of the stations. The 2007 report also recommended increasing size of the pump stations based upon water use projections prepared by the City. This 2018 report will review the flow projections based upon recent water use and update the flow projections for the future.

II. HISTORIC FLOWS RATES

- a. Data from all the Arlington, Highland, Woodland, Orphanage, Lakeside and Middle Pump Station is included in Appendix B for the period of 2013 through 2017. A summary of data is as follows:

Pump Station	Average Day (mgd)	Maximum Day (mgd)
Arlington	1.29	2.532
Highland	1.28	2.495
Woodland ¹	1.59	2.57
Orphanage	0.25	0.665
Upper Lakeside	0.17	0.320 ²
Middle	2.47	3.982
Hermantown	0.40	NA ³
Rice Lake	0.05	NA ³

- 1. Data only from December 2017 to June 26th 2018 due to meter failure.

2. Excessive peaks due to water main breaks removed.
3. Based upon 2017 average monthly flows. Daily data not available. The report assumes the new Highland and Arlington Booster Stations and the existing Orphanage Station are of adequate capacity to supply both Hermantown and Rice Lake.

Estimated flow for the actual Middle Zone may be obtained by taking the flow from the Middle Booster Station and subtracting off flows out of the Arlington pump Station.

Source	Flow (mgd)
Middle Booster Station	2.47
Arlington Booster Station	-1.29
Middle Zone	1.18

Estimated flow for the actual Woodland Zone may be obtain by taking the flow from the Woodland and Arlington Booster Stations and subtracting off flows out of the Highland and Orphanage Booster Station.

Source	Flow (mgd)
Arlington	1.29
Woodland Booster Station	1.59
Highland Booster Station	-1.28
Orphanage Booster Station	-0.25
Woodland Zone	1.35

III. PAST FLOW PROJECTIONS

- a. The 2007 report from MSA estimated average day, maximum day and peak hour demands for the Middle, Woodland, Highland and Orphanage Zones and for Hermantown. Maximum day was assumed to be twice average day and peak hour is assumed to be 4 times average day. Peak hour flows are buffered by the storage tanks and therefore will not be discussed further. Pump stations are typically designed for maximum day flows. A summary of predicted 2015 and 2025 average flow rates from the report for each system is given below.

	2015 Flow (mgd)	2025 Flow (mgd)
Middle Zone	1.87	2.04
Woodland Zone	2.2	2.51
Highland Zone	0.77	0.80
Orphanage Zone*	0.37	0.41
Hermantown	0.56	0.68

*includes Rice Lake

The City of Rice Lake formerly drew water from the Orphanage Zone using a pump station located on Calvary Road. Recently, Rice Lake started to withdraw water from the Highland Zone instead by gravity through a meter located at the intersection of Rice Lake

Road and Ridgeview Roads. Generally, the flow rate for Rice Lake is small enough it does not affect the proposed pumping rates but it will be assumed that they can draw from either location.

IV. MIDDLE BOOSTER STATION FLOW PROJECTIONS

- a. Total flows for the Middle Booster Station include the Middle Zone, Highland Zone, a portion of the Woodland Zone, Hermantown and Rice Lake. Past City experience and the 2007 MSA report determined that the Arlington Pump Station delivers approximately 38% of the flow to the Woodland Zone. In recent years, new modeling has shown that under certain conditions, the Arlington Pump Station may actually be delivering as little as 20% of the water to the Woodland Zone. For sizing of the Middle Booster pumps, the worst case of 38% will be used. Based upon the 2007 estimates, the average daily flow for the Middle Booster Station in the year 2015 is:

Source	Flow (mgd)
Middle Zone	1.87
Woodland Zone	38% x 2.2
Highland Zone	0.77
Hermantown	0.56
2015 Predicted Average Daily Flow	4.04

The maximum day flow for the Middle Booster Station in the year 2015 was estimated to be:

$$2 \times 4.04 = 8.08 \text{ mgd or } 5600 \text{ gpm (2015 predicted maximum day)}$$

Based upon the 2007 estimates, the 2025 average day flow for the Middle Booster Station is:

Source	Flow (mgd)
Middle Zone	2.04
Woodland Zone	38% x 2.51
Highland Zone	0.80
Hermantown	0.68
2015 Predicted Average Daily Flow	4.47

The maximum day flow for the Middle Booster Station in the year 2025 is:

$$2 \times 4.47 = 8.95 \text{ mgd or } 6,214 \text{ gpm. (2025 predicted maximum day)}$$

The values shown above would not include Rice Lake.

Actual flows for the Middle Booster Station from January 2013 to December 2017 are as follows:

Actual average day flow 2.47 mgd (2013 thru 2017)

Actual maximum day flow was 4.0 mgd or 2,777 gpm (2103 thru 2017)

Note that the actual maximum day is approximately half of the previously estimated maximum day flow for year 2015. It is obvious that water use has not increased as originally expected back in 2007.

- b. Estimated flow for the actual Middle Zone calculated above is 1.18 mgd. Large scale development within this zone is not expected, however there some areas available for new homes. Therefore, some growth should be included in the pump sizing. Allowing for a 20% increase in the average daily demand, the future average flow for the Middle Zone would be:

$$1.18 * 1.2 = 1.4 \text{ mgd future average day flow for the Middle Zone}$$

The actual peak factor for maximum day from the data for the Middle Booster Station is $4/2.47 = 1.6$. This is less than the maximum day factor of 2 historically used by the City.

- b. In the future, the City plans to supply water to the Upper Lakeside Zone from the Middle Zone. The 2013 to 2017 average flow in the Upper Lakeside Zone was 0.17 mgd. The current upper Lakeside Zone is fairly restricted for development within the current streets. However, there is potential for a large amount of new development in this zone if the water mains were ever extended across Seven Bridges Road and Lester Creek. These mains could provide service to the existing Lester Park Golf Course that the City has repeatedly discussed developing over the past few years. As such, 200 to 300 homes could be constructed in this zone. Using 250 gallons per day per home, the future estimated flow is shown below:

$$0.17 + 300 \text{ homes} \times 250 \text{ gpd per home} = 0.245 \text{ mgd}$$

Maximum day flows vary greatly in this zone due to loss of large amounts of water during water main breaks. Ignoring the high values during the 5-year period known to come from water main breaks, then the maximum day flow for the Upper Lakeside Zone is 0.320 mgd. This provides a maximum day factor of 1.88. This is less than the maximum day factor of 2 historically used by the City.

- d. The Arlington Booster Station has been constructed since the 2007 report. The Arlington station has a capacity of 3,000 gpm (4.32 mgd). The Middle Booster Station must have a minimum capacity equal to that of the Arlington Station and the maximum day demand of the Middle Zone and upper Lakeside Zone. This provides a demand as follows:

Item	Average Flow (mgd)	Maximum day (mgd)
Arlington Booster	4.32	4.32
Middle Zone	1.4	$1.4 \times 1.6 = 2.24$
Upper Lakeside Zone	0.245	$.245 \times 1.88 = 0.46$
total	5.97	7.02*

* 7.02 mgd = 4875 gpm

The proposed pumping rate for the Middle Booster Station is 7.02 mgd or 4875 gpm. **A rounded off rate of 5,000 gpm is recommended.** This is approximately 1200 gpm less than

was originally recommended in 2007 and 1300 gpm more than the peak day flow during the past 5 years.

V. WOODLAND BOOSTER STATION FLOW PROJECTIONS

- a. Total flows for the Woodland Booster Station include the Orphanage Zone and a portion of the Woodland Zone. Up until recently, Rice Lake was served from the Orphanage Zone but is now served from the Highland Zone. Past City experience and the 2007 MSA report determined that the Woodland Pump Station delivered approximately 62% of the flow to the Woodland Zone. Recent observations have noted that this may actually be as high as 80% during some periods of the year. 80% will be used instead of the 62% from 2007. Based upon the 2007 estimates, the average daily flow for the Woodland Booster Station in the year 2015 is:

Source	Flow (mgd)
Woodland Zone	80% x 2.20
Orphanage Zone	0.37
2015 Predicted Average Daily Flow	2.13

The maximum day flow for the Woodland Booster Station in the year 2015 is:

$$2 \times 2.13 = 4.26 \text{ mgd or } 2,958 \text{ gpm (2015 predicted maximum day)}$$

Based upon the 2007 estimates, the 2025 average day flow for the Woodland Booster Station is:

Source	Flow (mgd)
Woodland Zone	80% x 2.51
Orphanage Zone	0.41
2015 Predicted Average Daily Flow	2.42

The maximum day flow for the Woodland Booster Station in the year 2025 is:

$$2 \times 2.42 = 4.84 \text{ mgd or } 3,361 \text{ gpm. (2025 predicted maximum day)}$$

The values shown above would include Rice Lake.

- b. Estimated flow for the actual Woodland Zone may be obtained by taking the flow from the Woodland and Arlington Booster Stations and subtracting off flows out of the Highland and Orphanage Booster Station. Data for the Woodland Booster Station is only available from December 1st of 2017 to June 26th of 2018 due to a flow meter error. The average flow during this time was 1.59 mgd. The maximum day flow during this time was 2.57 mgd.

Item	Average Flow (mgd)	Maximum day (mgd)
Woodland Booster	1.59	2.57

Arlington Booster	+1.29	+2.532
Highland Booster	-1.28	-2.495
Orphanage Booster	-0.25	-0.665
total	1.35	"*1.942

* 1.942 mgd = 1,350 gpm

The actual peak factor from the data above is $1.942/1.35 = 1.44$

- c. Estimated average flow for the actual Woodland Zone is 1.35 mgd. There remain undeveloped areas in the northern parts of Duluth that could be served by either the Woodland or Orphanage Zones. Because of this, we will assume a 40% growth in the current amount of water used by both zones. Using the numbers above, the average day flows would be as follows:

$$1.35 \text{ mgd} \times 1.4 = 1.89 \text{ mgd}$$

Future maximum day flows would be as follows:

$$1.942 \times 1.4 = 2.72 \text{ mgd or } 1888 \text{ gpm.}$$

- d. The Orphanage Booster Station has a current capacity of 1100 gpm (1.58 mgd). The updated Woodland Booster Station will need to provide the capacity of the Orphanage Booster Station while also supplying the maximum day demand of 80% of the Woodland Zone.

Item	Average Flow (mgd)	Maximum day (mgd)
Orphanage Booster	1.58	1.58
Woodland Zone	1.89*80%	2.72*80%
Total	3.1	3.76

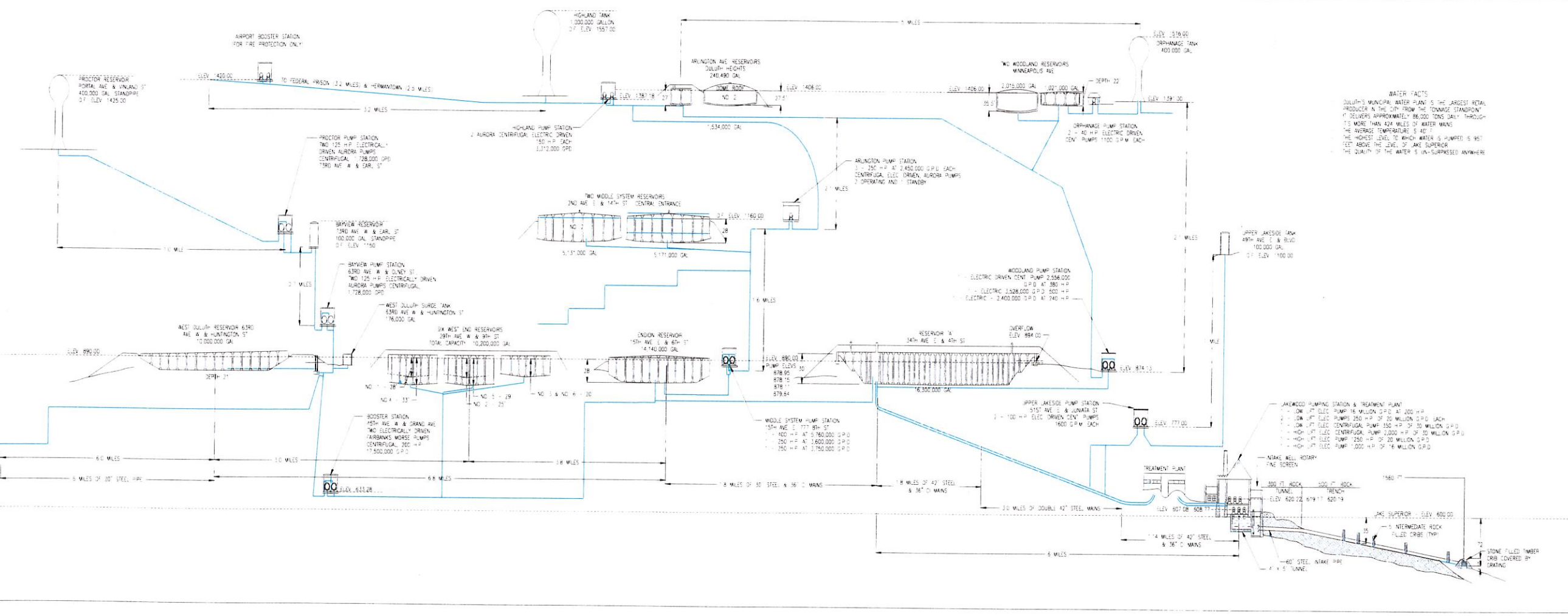
Based upon the above the discussion, **the proposed pumping rate for the Woodland Booster Station is 3.76 mgd or 2,600 gpm.** This value is about 660 gpm less than the proposed flow from 2007 and 815 gpm more than the historical peak.

DIAGRAMMATIC PROFILE
OF THE
WATER SUPPLY SYSTEM
OF THE
CITY OF DULUTH
MINNESOTA

NO SCALE MARCH 21, 1930
DATUM LAKE SUPERIOR = 600.00

REVISED

JUNE 8, 1935
MARCH 26, 1934
JULY 29, 1935
FEBRUARY 9, 1940
DECEMBER 16, 1942
JUNE 30, 1952
JUNE 12, 1953
JUNE 13, 1955
SEPTEMBER 17, 1958
FEBRUARY 1, 1962
MARCH 23, 1965
JUNE 1, 1973
APRIL 1, 1981
JANUARY 16, 1990
DECEMBER 30, 1993
SEPTEMBER 12, 1995
JUNE 15, 2004
JANUARY 14, 2009
OCTOBER 1, 2010
JUNE 1, 2011
FEBRUARY 1, 2015



WATER FACTS
DULUTH'S MUNICIPAL WATER PLANT IS THE LARGEST METAL
PRODUCER IN THE CITY FROM THE TONNAGE STANDPOINT
IT DELIVERS APPROXIMATELY 86,000 TONS DAILY THROUGH
13 MORE THAN 424 MILES OF WATER MAINS
THE AVERAGE TEMPERATURE IS 40°
THE HIGHEST LEVEL TO WHICH WATER IS PUMPED IS 987
FEET ABOVE THE LEVEL OF LAKE SUPERIOR
THE QUALITY OF THE WATER IS UN-SURPASSED ANYWHERE

LAKEWOOD PUMPING STATION & TREATMENT PLANT
- 2 - LOW PUMP 16 MILLION G.P.D. AT 200 H.P.
- 2 - LOW PUMP 250 H.P. OF 20 MILLION G.P.D. EACH
- 1 - LOW PUMP CENTRIFUGAL PUMP 150 H.P. OF 10 MILLION G.P.D.
- 1 - HIGH PUMP CENTRIFUGAL PUMP 2,000 H.P. OF 20 MILLION G.P.D.
- 1 - HIGH PUMP 250 H.P. OF 20 MILLION G.P.D.
- 1 - HIGH PUMP 1,000 H.P. OF 16 MILLION G.P.D.

2018 Review of Clean Water Fund 532 Annual Cash Projection

8/28/2018

Estimated Grants (2019+) 100
 Average Grant Award \$4,000

Line Item	Actual	Projected	Budget	Projected								6 mos
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Number of laterals installed	12	8	100	100	100	100	100	100	100	100	100	100
Surcharge amount	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90
Estimated Beginning Balance	\$542,808	\$759,616	\$1,002,816	\$878,016	\$754,016	\$629,232	\$595,187	\$634,509	\$670,624	\$985,628	\$2,202,028	\$3,418,428
Clean Water Fee	\$1,617,158	\$1,620,000	\$1,620,000	\$1,622,000	\$1,622,000	\$1,622,000	\$1,622,000	\$1,622,000	\$1,622,000	\$1,622,000	\$1,622,000	\$811,000
Misc. Revenue	\$8,332	\$12,000	\$12,000	\$12,000	\$10,000	\$8,000	\$6,000	\$3,000	\$2,000	\$2,000	\$2,000	\$2,000
WIF Replacement Charge	(\$70,265)	(\$70,300)	(\$70,300)	(\$70,300)	(\$70,265)	(36,516)	(11,300)	(11,300)	(8,300)	0	0	0
Misc charges	(\$15,681)	(\$6,000)	(\$7,600)	(\$7,600)	(\$7,600)	(\$7,600)	(\$7,600)	(\$7,600)	(\$7,600)	(\$7,600)	(\$7,600)	(\$7,600)
Grants given out	(\$48,000)	(\$32,000)	(\$400,000)	(\$400,000)	(\$400,000)	(\$400,000)	(\$400,000)	(\$400,000)	(\$400,000)	(\$400,000)	(\$400,000)	(\$400,000)
Debt Service (Principal and Interest)	(1,274,736)	(1,280,500)	(1,278,900)	(1,280,100)	(1,278,919)	(1,219,929)	(1,169,778)	(1,169,986)	(893,096)	0	0	0
Estimated Year End Cash Balance	\$759,616	\$1,002,816	\$878,016	\$754,016	\$629,232	\$595,187	\$634,509	\$670,624	\$985,628	\$2,202,028	\$3,418,428	\$3,823,828

RESOLUTION NO. 18PUC-005

**RESOLUTION APPROVING AND RECOMMENDING 2019
UTILITY BUDGET.**

WHEREAS, pursuant to 2-186 (d) of the Duluth City Code, 1959, as amended, the Duluth Public Utilities Commission (the "DPUC") is charged with approving and recommending to the Duluth City Council the annual budget for the City's water utility, natural gas utility, sanitary sewer utility, clean water utility, and stormwater utility; and

WHEREAS, the DPUC has reviewed the attached budget for said utilities for the year 2019 and determined that it is reasonable and appropriate to meet the needs of the respective utilities, of the City and of the customers of the utilities.

RESOLVED, that the DPUC hereby approves and recommends to the City Council that it approve the attached budget for the City's water utility, natural gas utility, sanitary sewer utility, clean water utility, and stormwater utility for the budget year 2019.

Approved by the DPUC:

(date)

Submitted to City Council:
(where appropriate)

(date)

ATTEST:

Director
Public Works and Utilities
City of Duluth

STATEMENT OF PURPOSE:

The purpose of this resolution is to approve and recommend to the City Council the attached 2019 budget for the City's water utility, natural gas utility, sanitary sewer utility, clean water utility, and stormwater utility.

**WATER FUND
CASH PROJECTION - DRAFT BUDGET
PROJECTED 2018 THRU 2020**

08/17/18

	Actual 2017	Budget 2018	Projected 2018	Budget 2019	Projected 2020
Unrestricted Cash (including Debt Serv. Res.)	0	552,600	-	2,256,416	2,645,716
Revenues:					
Metered Water Sales (4810)	10,768,788	11,502,000	11,450,000	12,000,000	12,630,000
Water Sales for Resale (4811)	1,115,311	1,315,000	1,050,000	1,035,000	1,095,000
Fixed Rate Charges (4831)	2,408,826	2,403,000	2,403,000	2,403,000	2,405,000
Misc. Operating Revenue	152,458	135,000	130,000	133,000	133,000
Non-Operating Revenues	208,780	165,600	220,200	173,200	173,200
Total Revenues	14,654,164	15,520,600	15,253,200	15,744,200	16,436,200
Other Sources of Cash:					
Due from Other Funds	135,400	-	21,296	-	-
Special Assessment Principal	125,140	-	119,969	-	-
Loans Received from Other Funds	376,543	-	-	-	-
Accrual Cash Flow Adjustments	-	-	-	-	-
Total Additions to Cash	15,291,247	15,520,600	15,394,465	15,744,200	16,436,200
Expenses:					
Salaries	3,712,633	3,881,100	3,737,500	3,998,100	4,078,000
Benefits	1,539,579	1,651,900	1,609,700	1,751,700	1,867,500
Retiree Insurance & OPEB - Benefits (5135)	557,862	607,800	557,900	576,300	633,900
Retiree Insurance & OPEB - Transfers (5700-60)	-	-	-	-	-
Supplies	1,281,962	1,359,200	1,300,900	1,324,800	1,324,800
Other Services and Charges	1,169,756	1,238,500	1,156,700	1,291,300	1,291,300
Utilities	1,276,123	1,322,800	1,328,000	1,351,900	1,351,900
Transfers	127,984	219,600	219,600	221,700	221,700
Improvements Non-Capital (5535)	17,716	22,500	180,000	55,000	-
Debt Service - Interest Expense (5611)	118,399	204,700	103,200	82,000	70,000
Fiscal Fees	515	500	500	500	500
AMRS Lease Interest Payment (5614)	67,767	62,600	62,600	53,600	44,100
Total Expenses	9,870,294	10,571,200	10,256,600	10,706,900	10,883,700
Capital Related Costs:					
Capital Improvements from Current Revenues (5533)	2,297,168	970,000	450,000	3,180,000	2,980,000
Capital Equipment Purchases (5580)	311,591	385,800	364,300	257,200	344,800
Total Expenses and Capital	12,479,053	11,927,000	11,070,900	14,144,100	14,208,500
Other Uses of Cash:					
Due to Other Funds	29,780	-	19,106	-	-
Loans Repaid to Other Fund	855,033	-	376,543	-	-
Budget Carry-Over for Encumbrances	-	-	-	-	-
Net Project Timing Adjustments	-	-	-	-	-
Bond Principal Payments	1,406,535	1,434,700	1,434,700	965,000	799,000
AMRS Lease Principal Payments	228,061	236,800	236,800	245,800	255,300
Accrual Cash Flow Adjustments	292,784	-	-	-	-
Total Deductions to Cash	15,291,247	13,598,500	13,138,049	15,354,900	15,262,800
Current Year Surplus / (Deficit)	0	1,922,100	2,256,416	389,300	1,173,400
Estimated Year End Cash Balance	0	2,474,700	2,256,416	2,645,716	3,819,116
Budget Reduction Needed		-	-	-	-
Estimated Cash After Budget Reduction	0	2,474,700	2,256,416	2,645,716	3,819,116
Total Reserve Needed (February Debt Payment Due)		290,200	255,200	254,100	258,600

**GAS FUND
CASH PROJECTION - DRAFT BUDGET
PROJECTED 2018 THRU 2020**

08/20/18

	Actual 2017	Budget 2018	Projected 2018	Budget 2019	Projected 2020
Unrestricted Cash (including Debt Serv. Res.)	3,107,463	2,283,977	331,866	2,097,450	959,750
Revenues:					
Metered Gas Revenues:					
Variable Rate	30,362,196	32,885,900	32,707,100	33,272,800	33,105,900
Fixed Rate	3,966,911	3,924,000	4,010,000	4,020,000	4,025,000
Misc. Operating Revenue	1,791,084	1,349,500	1,556,000	1,410,500	1,410,500
Non-Operating Revenues	145,890	115,300	134,300	118,300	118,300
Reimbursement of Capital Improvements	345,994	-	-	-	-
Total Revenues	36,612,074	38,274,700	38,407,400	38,821,600	38,659,700
Other Sources of Cash:					
Due from Other Funds	-	-	6,720	-	-
Loans Repaid by Other Funds	1,222,050	-	1,495,783	-	-
Energy Fund Loan Repayment	150,000	150,000	150,000	150,000	150,000
Special Assessment Principal	7,242	-	6,304	-	-
Accrual Cash Flow Adjustments	-	-	-	-	-
Total Additions to Cash	37,991,366	38,424,700	40,066,207	38,971,600	38,809,700
Expenses:					
Salaries	5,027,310	5,298,500	5,262,600	5,513,900	5,624,200
Benefits	2,032,304	2,224,900	2,234,600	2,408,300	2,566,300
Retiree Insurance & OPEB - Benefits (5135)	898,890	963,300	931,600	1,000,000	1,100,000
Retiree Insurance & OPEB - Transfers (5700-60)	-	-	-	-	-
Supplies	1,215,757	1,098,700	1,005,800	1,141,200	1,141,200
Natural Gas Purchases	18,991,411	21,483,900	20,183,600	20,906,700	20,748,700
Other Services and Charges	1,665,292	1,758,400	1,724,000	1,741,100	1,741,100
In Lieu of Tax	2,184,557	2,406,800	2,528,400	2,670,600	2,709,200
Utilities	43,548	39,000	42,000	40,600	40,600
Transfers	98,909	157,400	157,400	159,500	159,500
Improvements Non-Capital (5535)	53,616	80,000	85,000	29,000	15,000
Debt Service - Interest Expense (5611)	42,164	29,800	29,800	10,100	-
Fiscal Fees	633	600	600	600	600
AMRS Lease Interest Payment (5614)	62,119	57,400	57,400	49,100	40,500
Total Expenses	32,316,511	35,598,700	34,242,800	35,670,700	35,886,900
Capital Related Costs:					
Capital Improvements from Current Revenues (5533)	3,151,981	2,810,000	2,890,000	3,180,000	2,630,000
Capital Improvements that have been Reimbursed	345,994	-	-	-	-
Capital Equipment Purchases (5580)	344,943	466,800	451,400	528,200	444,600
Total Expenses and Capital	36,159,429	38,875,500	37,584,200	39,378,900	38,961,500
Other Uses of Cash:					
Due to Other Funds	14,136	-	19,323	-	-
Loans Advanced to Other Funds	1,495,783	-	-	-	-
Budget Carry-Over for Encumbrances	-	-	-	-	-
Net Project Timing Adjustments	-	-	-	-	-
Bond Principal Payments	902,931	480,000	480,000	505,000	-
AMRS Lease Principal Payments	209,056	217,100	217,100	225,400	234,000
Debt Called	-	-	-	-	-
Accrual Cash Flow Adjustments	1,985,629	-	-	-	-
Total Deductions to Cash	40,766,963	39,572,600	38,300,623	40,109,300	39,195,500
Current Year Surplus / (Deficit)	(2,775,597)	(1,147,900)	1,765,584	(1,137,700)	(385,800)
Estimated Year End Cash Balance	331,866	1,136,077	2,097,450	959,750	573,950
Budget Reduction Needed		-	-	-	-
Estimated Cash After Budget Reduction	331,866	1,136,077	2,097,450	959,750	573,950
Total Reserve Needed (February Debt Payment Due)		652,300	652,300	137,200	137,200

**SANITARY SEWER FUND
CASH PROJECTION - DRAFT BUDGET
PROJECTED 2018 THRU 2020**

08/17/18

	Actual 2017	Budget 2018	Projected 2018	Budget 2019	Projected 2020
Unrestricted Cash (including Debt Serv. Res.)	1,571,255	2,460,996	279,605	1,323,410	1,297,310
Revenues:					
Metered Revenue:					
Variable Revenue	15,772,666	16,342,100	16,155,700	16,409,300	16,409,300
Fixed Revenue	1,940,283	1,932,800	1,934,700	1,936,300	1,938,000
Misc. Operating Revenue	210,977	212,900	240,800	234,800	234,800
Non-Operating Revenues (excluding Capital Grants)	222,642	19,300	26,300	11,300	11,300
Transfer from Clean Water to cover their portion of the Infra System Replacement Fund	70,265	70,300	70,300	70,300	70,300
Other Transfers In	7,450	7,400	7,400	7,400	7,400
Total Revenues	18,224,283	18,584,800	18,435,200	18,669,400	18,671,100
Other Sources of Cash:					
Due from Other Funds	12,844	-	15,662		
Loans Repaid by Other Funds	-		1,495,782		
Special Assessment Principal	203,729	-	163,231		
Accrual Cash Flow Adjustments	-	-			
Total Additions to Cash	18,440,856	18,584,800	20,109,875	18,669,400	18,671,100
Expenses:					
Salaries	2,142,866	2,270,400	2,327,600	2,253,700	2,298,800
Benefits	920,247	1,022,900	1,052,900	1,034,200	1,102,500
Retiree Insurance & OPEB - Benefits (5135)	148,756	153,100	152,000	164,700	181,200
Retiree Insurance & OPEB - Transfers (5700-60)	-	-	-	-	-
Supplies	272,272	351,000	309,300	349,200	349,200
Other Services and Charges	713,040	797,900	724,500	757,200	757,200
WLSSD Treatment Charges (5484)	8,986,192	9,046,900	9,187,400	9,254,200	9,254,200
WLSSD Testing (5485)	216,697	217,000	216,900	217,000	217,000
SSO Grants and Improvements	212,765	280,000	175,000	300,000	300,000
Utilities	168,332	124,800	168,800	128,400	128,400
Transfers	98,909	157,300	157,300	159,300	159,300
Improvements Non-Capital (5535)	19,440	50,000	60,000	80,000	50,000
Debt Service - Interest Expense (5611)	160,317	144,100	140,000	111,200	80,800
Fiscal Fees	1,900	1,900	1,900	1,900	1,900
AMRS Lease Interest Payment (5614)	58,355	53,900	53,900	46,100	38,000
Total Expenses	14,120,089	14,671,200	14,727,500	14,857,100	14,918,500
Capital Related Costs:					
Capital Improvements from Current Revenues (5533)	478,410	1,950,000	1,990,000	1,800,000	1,950,000
Capital Equipment Purchases (5580)	144,769	334,100	330,300	414,800	227,400
Total Expenses and Capital	14,743,267	16,955,300	17,047,800	17,071,900	17,095,900
Other Uses of Cash:					
Due to Other Funds	16,103	-	15,169		
Loans Advanced to Other Funds	1,495,782		-		
Budget Carry-Over for Encumbrances	-	-	-		
Net Project Timing Adjustments	-	-	-		
Infrastructure System Replacement Fund	119,989	119,900	119,900	119,900	119,900
Bond Principal Payments	1,742,977	1,679,300	1,679,300	1,292,000	1,329,300
AMRS Lease Principal Payments	196,386	203,900	203,900	211,700	219,800
Accrual Cash Flow Adjustments	1,418,000	-			
Total Deductions to Cash	19,732,505	18,958,400	19,066,069	18,695,500	18,764,900
Current Year Surplus / (Deficit)	(1,291,650)	(373,600)	1,043,805	(26,100)	(93,800)
Estimated Year End Cash Balance	279,605	2,087,396	1,323,410	1,297,310	1,203,510
Budget Reduction Needed					
Estimated Cash After Budget Reduction	279,605	2,087,396	1,323,410	1,297,310	1,203,510
Total Reserve Needed (February Debt Payment Due)		1,177,900	1,170,100	1,191,600	845,600

**CLEAN WATER FUND
CASH PROJECTION - DRAFT BUDGET
PROJECTED 2018 THRU 2020**

08/17/18

	Actual 2017	Budget 2018	Projected 2018	Budget 2019	Projected 2020
Unrestricted Cash (including Debt Serv. Res.)	542,808	777,608	759,616	1,002,816	878,016
Revenues:					
Clean Water Surcharge	1,617,158	1,615,000	1,620,000	1,620,000	1,622,000
Misc. Operating Revenue	8,572	10,000	12,000	12,000	12,000
Non-Operating Revenues (excluding Captital Grants)	(240)	-	-	-	-
Total Revenues	1,625,490	1,625,000	1,632,000	1,632,000	1,634,000
Other Sources of Cash:					
Accrual Cash Flow Adjustments					
Total Additions to Cash	1,625,490	1,625,000	1,632,000	1,632,000	1,634,000
Expenses:					
Supplies	-	-	-	-	-
Other Services and Charges	9,252	5,600	6,000	7,600	7,600
Grants & Awards	48,000	160,000	32,000	400,000	400,000
Improvements Non-Capital (5535)	-	-	-	-	-
Debt Service - Interest Expense (5611)	137,301	127,100	127,100	110,900	94,400
Transfer to Sewer Fund for Infrastructure System Replacement Fund	70,265	70,300	70,300	70,300	70,300
Other Transfers to Other Funds	-	-	-	-	-
Total Expenses	264,818	363,000	235,400	588,800	572,300
Capital Related Costs:					
Capital Improvements from Current Revenues (5533)	-	-	-	-	-
Capital Equipment Purchases (5580)	-	-	-	-	-
Total Expenses and Capital	264,818	363,000	235,400	588,800	572,300
Other Uses of Cash:					
Budget Carry-Over for Encumbrances	-	-	-	-	-
Bond Principal Payments	1,137,435	1,153,400	1,153,400	1,168,000	1,185,700
Accrual Cash Flow Adjustments	6,430	-	-	-	-
Total Deductions to Cash	1,408,683	1,516,400	1,388,800	1,756,800	1,758,000
Current Year Surplus / (Deficit)	216,808	108,600	243,200	(124,800)	(124,000)
Estimated Year End Cash Balance	759,616	886,208	1,002,816	878,016	754,016
Budget Reduction Needed		-	-	-	-
Estimated Cash After Budget Reduction	759,616	886,208	1,002,816	878,016	754,016
Total Reserve Needed (February Debt Payment Due)		69,600	15,700	16,100	16,400

**STORMWATER FUND
CASH PROJECTION - DRAFT BUDGET
PROJECTED 2018 THRU 2020**

08/17/18

	Actual 2017	Budget 2018	Projected 2018	Budget 2019	Projected 2020
Unrestricted Cash (including Debt Serv. Res.)	94,781	496,262	889,030	883,861	367,761
Revenues:					
Stormwater Revenue	5,254,972	5,255,000	5,255,000	5,260,000	5,260,000
Misc. Operating Revenue	43,300	33,000	33,000	33,000	33,000
Non-Operating Revenues (excluding Capital Grants)	388	5,600	5,600	5,600	5,600
Total Revenues	5,298,660	5,293,600	5,293,600	5,298,600	5,298,600
Other Sources of Cash:					
Due from Other Funds	9,628	-	12,325		
Special Assessment Principal	1,298	-	2,308		
Accrual Cash Flow Adjustments	-	-			
Total Additions to Cash	5,309,587	5,293,600	5,308,233	5,298,600	5,298,600
Expenses:					
Salaries	1,528,038	1,669,600	1,545,500	1,764,700	1,800,100
Benefits	651,632	696,800	668,800	761,100	811,400
Retiree Insurance & OPEB - Benefits (5135)	25,151	27,500	27,400	30,000	33,000
Retiree Insurance & OPEB - Transfers (5700-60)	-	-	-	-	-
Supplies	249,112	291,200	253,100	290,600	290,600
Other Services and Charges	566,454	662,300	604,600	614,100	614,100
Utilities	21,601	26,500	24,900	25,600	25,600
Transfers	519,833	545,100	545,100	547,100	547,100
Improvements Non-Capital (5535)	69,634	175,000	175,000	135,000	245,000
Debt Service - Interest Expense (5611)	21,661	18,200	18,200	13,900	10,600
Fiscal Fees	218	300	200	200	200
Total Expenses	3,653,334	4,112,500	3,862,800	4,182,300	4,377,700
Capital Related Costs:					
Capital Improvements from Current Revenues (5533)	305,128	1,025,000	990,000	1,265,000	1,155,000
Capital Equipment Purchases (5580)	158,162	186,800	198,500	237,400	148,300
Total Expenses and Capital	4,116,624	5,324,300	5,051,300	5,684,700	5,681,000
Other Uses of Cash:					
Due to Other Funds	14,847	-	20,602		
Budget Carry-Over for Encumbrances	-	-			
Net Project Timing Adjustments	-	-			
Bond Principal Payments	228,121	241,500	241,500	130,000	135,000
Accrual Cash Flow Adjustments	155,746	-			
Total Deductions to Cash	4,515,338	5,565,800	5,313,402	5,814,700	5,816,000
Current Year Surplus / (Deficit)	794,249	(272,200)	(5,169)	(516,100)	(517,400)
Estimated Year End Cash Balance	889,030	224,062	883,861	367,761	(149,639)
Budget Reduction Needed		-	-	-	293,939
Estimated Cash After Budget Reduction	889,030	224,062	883,861	367,761	144,300
Total Reserve Needed (February Debt Payment Due)		137,600	137,600	141,300	144,300

RESOLUTION NO. 18PUC-006

**RESOLUTION ESTABLISHING FEES FOR VARIOUS
UTILITY-RELATED SERVICES.**

RESOLVED by the Duluth Public Utilities Commission (the “Commission”) that, pursuant to the authority contained in Section 2-186 (c) of the Duluth City Code, 1959, as amended, the Commission hereby establishes fees for the services described in Exhibit A attached hereto and made a part hereof (the “Services”) in the amounts as set forth in said Exhibit A, said fees to be effective for services provided after January 1, 2019.

RESOLVED FURTHER, that to the extent that any fee approved by an earlier resolution has been amended by any later resolution, the prior inconsistent or conflicting fee shall be deemed to have been superseded.

Approved by the DPUC:

(date)

Submitted to City Council:
(where appropriate)

(date)

ATTEST:

Director
Public Works and Utilities
City of Duluth

STATEMENT OF PURPOSE:

The purpose of this resolution is for the DPUC to set fees for various services provided by the City in conjunction with the provision of utility services as authorized by Section 2-186 (c) of the City code.

Fees Set by DPUC	2018 Fee	2019 Fee	Reason for Change
FOG Program - Failure to Maintain Records - per day	\$100.00	\$100.00	
FOG Program - Noncompliance - Maximum Penalty - per month	\$1,000.00	\$1,000.00	
Gas Furnace Comfort Policy Fee - DCC - annual	\$225.00	\$225.00	
Gas Furnace Comfort Policy Fee - Electronic Ignition - Annual	\$200.00	\$200.00	
Gas Furnace Comfort Policy Fee - Standing Pilot - Annual	\$190.00	\$190.00	
Gas Furnace/Appliance Service - Weekdays - Midnight to 8:00 a.m. - 1st 1/2 hour OR No show fee	\$175.00	\$175.00	
Gas Furnace/Appliance Service - Weekdays - Midnight to 8:00 a.m. - Each additional 15 minutes	\$87.50	\$87.50	
Gas Furnace/Appliance Service - Weekdays - 4:30 p.m. to Midnight - 1st 1/2 hour OR no show fee	\$120.00	\$120.00	
Gas Furnace/Appliance Service - Weekdays - 4:30 p.m. to Midnight - Each additional 15 minutes	\$60.00	\$60.00	
Gas Furnace/Appliance Service - Weekdays - 8:00 a.m. to 4:30 p.m. - 1st 1/2 hour OR no show fee	\$60.00	\$60.00	
Gas Furnace/Appliance Service - Weekdays - 8:00 a.m. to 4:30 p.m. - Each additional 15 minutes	\$30.00	\$30.00	
Gas Furnace/Appliance Service - Weekends and Holidays - 4:00 p.m. to Midnight - 1st 1/2 hour OR No Show Fee	\$150.00	\$150.00	
Gas Furnace/Appliance Service - Weekends and Holidays - 4:00 p.m. to Midnight - Each additional 15 minutes	\$75.00	\$75.00	
Gas Furnace/Appliance Service - Weekends and Holidays - 8:00 a.m. to 4:00 p.m. - 1st 1/2 hour OR No Show Fee	\$120.00	\$120.00	
Gas Furnace/Appliance Service - Weekends and Holidays - 8:00 a.m. to 4:00 p.m. - Each additional 15 minutes	\$60.00	\$60.00	
Gas Furnace/Appliance Service - Weekends and Holidays - Midnight to 8:00 a.m. - 1st 1/2 hour OR no show fee	\$180.00	\$180.00	
Gas Furnace/Appliance Service - Weekends and Holidays - Midnight to 8:00 a.m. - Each additional 15 minutes	\$90.00	\$90.00	
I&I Noninspection/noncompliance Surcharge - per month	\$250.00	\$250.00	
Meter Data Fee Monthly Charge	\$10.00	\$10.00	
Point of Sale - Inspection Fee - Sump Pump Already in Place or Not Required	\$105.00	\$105.00	
Point of Sale - Inspection Fee - Sump Pump Installation Required	\$205.00	\$205.00	
Point of Sale - Noncompliance surcharge - per month	\$250.00	\$250.00	
Unauthorized Gas Reconnection – 1 st violation	\$100.00	\$100.00	

Unauthorized Gas Reconnection – 2 nd violation	\$200.00	\$200.00	
Unauthorized Gas Reconnection – 3 rd and subsequent violations	\$400.00	\$400.00	
Unauthorized Water Reconnection – 1 st violation	\$100.00	\$100.00	
Unauthorized Water Reconnection – 2 nd violation	\$200.00	\$200.00	
Unauthorized Water Reconnection – 3 rd and subsequent violations	\$400.00	\$400.00	
Violations/Noncompliance/Credit Service Charge - Dispatch of Service Vehicle	\$60.00	\$60.00	
Violations/Noncompliance/Credit Service Charge - Restoration of Service - Weekdays between 12:00 a.m.-8:00 a.m.	\$175.00	\$175.00	
Violations/Noncompliance/Credit Service Charge - Restoration of Service - Weekdays between 4:30 p.m.-12:00 a.m.	\$120.00	\$120.00	
Violations/Noncompliance/Credit Service Charge - Restoration of Service - Weekdays between 8:00 a.m.-4:30 p.m.	\$60.00	\$60.00	
Violations/Noncompliance/Credit Service Charge - Restoration of Service - Weekends and Holidays	\$180.00	\$180.00	
Water and Gas - Shut Off or Turn On - Minimum Charge	\$60.00	\$60.00	
Water Hydrant, Use of	\$215.00	\$215.00	
Water Service - Tapping Fee (1" or less)	\$400.00	\$400.00	
Water Service - Thawing - Equipment Fee - per water service	\$62.00	\$60.00	Adjusted to match minimum truck fee
Water Service - Thawing - Minimum Fee - per water service	\$575.00	\$575.00	