

DULUTH PUBLIC UTILITIES COMMISSION  
Tuesday, February 19, 2013  
City Council Chambers  
AGENDA

1. Roll call
2. Approval of previous meeting and public hearing minutes
3. Old business
  - 3.1 12PUC-010 - RESOLUTION ESTABLISHING NATURAL GAS RATES EFFECTIVE WITH METER READINGS AFTER MARCH 31, 2013; SUPERSEDING ALL PRIOR INCONSISTENT OR CONFLICTING RATES AS OF APRIL 1, 2013. (as amended)
4. New business
  - 4.1 PILOT, Cost Allocation, etc. (Dave Montgomery)
  - 4.2 13PUC-001 - RESOLUTION ADOPTING CAPITAL IMPROVEMENT PLAN FOR NATURAL GAS SUPPLY SYSTEM.
  - 4.3 Review sample bills with sewer charges breakout
  - 4.4 13PUC-002 - RESOLUTION RESCINDING RESOLUTION 11PUC-SEWERBILL REQUESTING WLSSD CHARGES BE SEPARATELY STATED ON UTILITY BILLS.
5. Updates from staff
6. Upcoming Council actions
7. Commissioner questions or comments
8. Preview of upcoming business

## DULUTH PUBLIC UTILITIES COMMISSION

### Public Hearing

January 15, 2013

**Members Present:** Councilor Patrick Boyle, Patrick Huston, Councilor Jennifer Julsrud, Robert Prusak, Linda Sellner, Councilor Jim Stauber, Jason Thorsell

**Staff Present:** Bob Asleson, Jim Benning, Alisa DeRider, Leanna Gilbert, Eric Schlacks, Eric Shaffer, Glenn Strid

**Others Present:** Verne Wagner, resident of 5120 Juniata St  
David Ross, resident of 526 W 6<sup>th</sup> St  
Lance Reasor, resident of 130 E 9<sup>th</sup> St  
William Lynch, resident of 6004 Highland St  
Wallace Newquist, resident of 3112 Exeter  
Richard Paulson, resident of 524 W Ideal St  
Horace Kahlbaugh, resident of 1404 Eklund Ave  
Tom Karas, resident of 902 S Lake Ave  
Joshua Bixby, resident of 2809 E 1<sup>st</sup> St

**Call to Order:** The hearing was called to order at 5:00 p.m. by President Huston.

Under consideration were proposed rate changes for the natural gas utility.

Eric Schlacks, Gas & Energy Coordinator for the City of Duluth, gave an overview of the natural gas cost of service and rate study and the proposed changes. A consultant was hired by the City to perform a cost of service and rate study. The three components of the natural gas rates are: a monthly fixed charge, a commodity rate per 100 cubic feet (CCF) used, and the purchased gas adjustment (PGA). The PGA reflects the difference in cost between the actual market price of gas purchased versus the cost that was projected when the commodity rate was set, which can increase or decrease the commodity cost to the customer. In 2006, the projected cost of natural gas was \$0.92 per CCF; while the projected cost in the study period of 2012-2016 was just \$0.582 per CCF. While fixed charges would increase, commodity rates would decrease. The typical residential bill would change from about \$71.28 to \$74.74 per month, an increase of approximately 4.9%.

Verne Wagner stated that timing is everything and mentioned the fiscal cliff and the debt ceiling debate, increased taxes from the school district and the City. For those on fixed incomes, things get to be very difficult. All of the small increases add up. Everyone is building better houses and trying to conserve. Gas prices are going down. The economy is expected to pick up by the end of this year or next year. He recommends reconsidering this increase or at least postponing it until the economy improves. He also suggested finding other ways to save, such as paperless billing and budgeted payments.

David Ross stated that the Duluth Area Chamber of Commerce has been an unwavering advocate of this commission and they appreciate the work that the commission is doing. They were very surprised by this proposed increase for the natural gas utility. They thought that the gas utility was in far better shape than the water delivery and recovery system and that we were doing well with gas purchasing. There are reports showing that wholesale costs of natural gas went down 31% nationwide and 34% in Chicago in 2012. He stated that every time there is an increase, the members of the Chamber of

Commerce feel this in an amplified way. They are bigger users of this product, their taxes are larger because of their appraised values, and all of these things are coming at the same time. He and Chamber members are in opposition to this increase. He also appealed for more disclosure of the reasons for the proposed rate increase.

Lance Reasor mentioned the lack of public notice for this hearing. He asked why a notice about the proposed rate increase was not put in the monthly bills. He is concerned that this raise is coming at the wrong time along with all of the other raises and that this would have a big impact on those with limited income as well as businesses. He was told by Director Benning that most of the money would go for infrastructure improvements, capital projects, and other things. He asked what dollar amount the City is looking for. Eric Shaffer summarized the key projects that would affect the rates, some of which were either mandated or strongly recommended by the state, including replacement of gas mains in poor condition, replacement of copper risers, protection or relocation of meters near roadways, and normal maintenance items such as freezing problems at regulator stations. These projects would amount to approximately \$6 million in additional work over the next 5 years. The rate increase would cover these additional capital expenses, increases in normal operating costs, as well as build up a cash reserve for easier purchase of gas. Mr. Reasor asked if any of this money would be transferred to the City's general fund. Eric Schlacks explained that the payment in lieu of taxes (PILOT) is a flat 7% of gross revenues generated by the utility, so some of it would go to the general fund. Mr. Reasor would have liked to have this information provided in the paper or in the utility bill.

William Lynch asked why there are reduced rates for major users when there is global warming. It seems like we are promoting higher usage. He said he did not understand why the utility is making the payment in lieu of taxes when the customers pay taxes as part of their bill. Eric Schlacks mentioned that the City is concerned with the carbon footprint of its customers and has a series of conservation programs that help customers find ways to reduce generation of greenhouse gases. He also explained each rate class has a different cost of service, which is the reason for the difference in rates for each class of customer.

Wallace Newquist stated that he is on social security and every time a new rate comes out, he has less and less to live on. He has switched to burning wood. This increase would affect both him and local businesses. He wants commissioners to vote against the resolution.

Richard Paulson is concerned with all of the monthly fees that continue to increase. He does not understand why the gas rate is being increased when the costs are down. He asked about the markup above the cost. He also mentioned transfers out of the gas fund in the last few years. He thinks the commission should review this and share that information with the public. He is concerned that these increases will drive seniors out of their homes.

Horace Kahlbaugh stated that the cost of gas has fallen in the last year, and is curious if the money from the rate increase would go to other City functions. Eric Schlacks reiterated that the utility is required to pay 7% of gross revenues to the City's general fund. The utility also pays for services provided such as fleet and legal services. Mr. Kahlbaugh asked if the information about the components of the rates and their functions could be printed in the paper before this goes to Council.

Tom Karas stated that he has worked with many utilities around the country. He observed that municipal utilities have different responsibilities than other utilities. He recommended that the commission let people know if rates will be going up and give long-term projections into the future. Communication seems to be the issue today.

Joshua Bixby said that supporting documentation for the proposed increase should be more readily available so that the public could determine whether it is indeed necessary. He read through the rate study and is concerned about the integrity of tracking financial information. He thinks these issues should be addressed before proposing a rate increase. He also said that it would be impossible to determine whether the objectives of the increase were successful without information tracking capabilities.

The Duluth Public Utilities Commission planned to continue discussing the natural gas rate resolution at the regular meeting following the public hearing.

**Adjournment:** The hearing was adjourned at 5:44 p.m.

A recording of this hearing is available upon request.

## **DULUTH PUBLIC UTILITIES COMMISSION**

### **Meeting Minutes**

**January 15, 2013**

**Members Present:** Patrick Huston, Councilor Jennifer Julsrud, Robert Prusak, Linda Sellner, Councilor Jim Stauber, Jason Thorsell, Councilor Patrick Boyle

**Staff Present:** Bob Asleson, Jim Benning, Alisa DeRider, Leanna Gilbert, Eric Schlacks, Eric Shaffer, Glenn Strid

**Call to Order:** The meeting was called to order at 5:44 p.m. by President Huston.

#### **Approval of previous meeting minutes**

Commissioner Julsrud abstained as she was not present at the previous meeting.

#### **Natural gas rate resolution**

12PUC-010 – RESOLUTION ESTABLISHING NATURAL GAS RATES EFFECTIVE WITH METER READINGS AFTER MARCH 31, 2013; SUPERSEDING ALL PRIOR INCONSISTENT OR CONFLICTING RATES AS OF APRIL 1, 2013. After some discussion, the commissioners voted unanimously to table the resolution. The commission will discuss the cost of service study in further detail at the February meeting. They would also like to have the Chief Financial Officer attend a meeting and explain costs such as the PILOT and other transfers to the general fund. Public meetings will be arranged to educate customers about the components of the natural gas rates and the reasons for the proposed adjustments.

#### **New business:**

##### **WLSSD operations overview (Marianne Bohren)**

Marianne Bohren, Executive Director of WLSSD, gave an overview of the history and operations of WLSSD. She explained the components of the 2013 budget and their long-term plan. She also noted that Duluth's end-of-year adjustment for 2012 actual loadings would be different than what was stated in the letter previously sent to the City. The City will have a credit of \$252,973, which will be subtracted from the 2013 monthly payments. 2013 monthly payments are estimated at \$716,924. WLSSD will hold a strategic plan meeting for 2014 budget development on June 3, 2013. Notice of this meeting will be sent to Director Benning and the president of this commission. Executive Director Bohren mentioned effects of the flood on the system and the budget and then answered questions from commissioners.

#### **Old business:**

##### **Election of officers**

Commissioner Sellner was elected as President. Commissioner Prusak was elected as Vice President.

##### **2013 meeting schedule**

Commissioners reviewed the proposed dates provided by staff. Commissioner Boyle suggested not holding a meeting in July, which would coincide with the City Council's summer break. The commission approved the 2013 meeting schedule with the exclusion of the July 16<sup>th</sup> meeting.

The commission would like to hold public meetings for the east and west sides of Duluth as well as one for the Chamber of Commerce. All public meetings will be held after the regular February meeting. Staff will prepare a presentation and arrange the meetings.

*It is the mission of the Duluth Public Utilities Commission to ensure safe, reliable, efficient utilities services at reasonable rates.*

**Updates from staff**

Jim Benning mentioned that the 1% increase in WLSSD rates for 2013 would result in an automatic increase of approximately 0.5% for Duluth's sewer rates, since the commission previously passed a resolution making these charges a pass-through to customers.

Eric Shaffer mentioned obtaining WIF grants for projects. Additional sanitary sewer lining would be done in late fall if we get the grant. The project funding would be 80% grant, 20% PFA loan paid from the clean water fund.

West Duluth Reservoir designs are moving forward. Councilors should expect to see something regarding design and construction in 2013.

**Upcoming Council actions**

No actions were discussed.

**Commissioner questions or comments**

Vice President Sellner asked if there had been any feedback on splitting the sewer charges on the utility bills and whether a credit would be passed through. Jim Benning has not received any comments on the bills yet. The resolution creating the pass-through did not provide for credit amounts.

Commissioner Prusak asked if staff was done raising pressure for the new water tower. Eric Shaffer said that it is about 85% full with no breaks due to the increase so far. Commissioner Prusak also asked whether the Superior Street pipe had to be replaced. Jim Benning said that about 20 feet of pipe was replaced. Eric Shaffer mentioned that he would like to replace it with a 20" HDPE main if the brick project proceeds, since most of the joints leak. Jim Benning stated that the brick project is scheduled for preliminary design in 2013, further design in 2014, and construction starting in 2015 if there is funding for it. This project would replace the entire brick portion of Superior Street.

Commissioner Stauber inquired whether gas would be extended to Midway Township. Jim Benning said that this would depend on housing density and interest as well as practicality.

Commissioner Boyle stated that he would be resigning from the commission since he has been elected as Council president. He will nominate Councilor Gardner as his replacement.

Commissioner Julsrud thanked Eric Shaffer for all of his recent media appearances.

**Preview of upcoming business**

The next regular meeting is scheduled for Tuesday, February 19, 2013, at 5:15 p.m. in City Council Chambers. The commission will continue to discuss the natural gas cost of service study at the February meeting. Public meetings will be arranged to present information about the natural gas utility and the proposed rate adjustments. Jim Benning will ask the Chief Financial Officer to attend a meeting and explain the PILOT and other transfers to the general fund.

**Adjournment:** The meeting was adjourned at 7:54 p.m.

A recording of this meeting is available upon request.

**RESOLUTION NO. 12PUC-010**

**RESOLUTION ESTABLISHING NATURAL GAS RATES  
EFFECTIVE WITH METER READINGS AFTER MARCH  
31, 2013; SUPERSEDING ALL PRIOR INCONSISTENT OR  
CONFLICTING RATES AS OF APRIL 1, 2013.**

RESOLVED by the Duluth Public Utilities Commission (the "Commission") that the Commission hereby makes the following Finds of Fact:

- 1.) The City's natural gas system is a key part of the utility infrastructure of the city, providing an economical source of energy for residential, commercial and industrial users for both commercial/industrial and residential purposes.
- 2.) The provision of natural gas is a highly regulated industry, which requires the implementation of stringent safety measures and costly system maintenance in order to insure the safe and reliable provision of product to users.
- 3.) Natural gas is a product which must be purchased on the open market making it susceptible to unpredictable market conditions.
- 4.) In order to protect all of its customers from dramatic fluctuations in market price of natural gas it is critical that the City be able to establish and maintain reserve funds which will allow it to smooth out such fluctuations for the benefit of all of its customers.
- 5.) The City's costs of operating its natural gas system have increased dramatically in recent years but the City has not increased its natural gas rates to meet these costs since 2006.
- 6.) Based on a rate study of the City's natural gas rate structure performed by SAIC, it is necessary and appropriate for the long-term maintenance of the City's natural gas distribution system that the rate structure be modified as hereinafter provided for.

FURTHER RESOLVED, that effective with the natural gas meter readings after March 31, 2013, all customers of the natural gas utility of the city of Duluth shall be charged for such natural gas in accordance with the schedule of rates established by this resolution as follows:

<b>CUSTOMER RATE SCHEDULE BASED UPON MONTHLY METERED VOLUME</b>					
		<b>Fixed monthly charge</b>		<b>Per 100 cubic feet("CCF")</b>	
		<b>Effective April 1, 2013, rate</b>	<b>Effective November 1, 2006, rate</b>	<b>Effective April 1, 2013, rate</b>	<b>Effective November 1, 2006 rate</b>
Firm sales service	Residential small volume	\$7.75	\$7.50	\$0.914	\$1.241
	Residential large volume	\$208.00	\$200.00	\$0.808	\$1.140
	Commercial/industrial small volume	\$42.00	\$40.00	\$0.825	\$1.157
	Commercial/industrial large volume	\$208.00	\$200.00	\$0.794	\$1.127
Interruptible sales service	Commercial/industrial large volume	\$470.00	\$450.00	\$0.666	\$1.005
Firm transport service	Commercial/industrial small volume	N/A	\$40.00	N/A	\$0.100
	Commercial/industrial large volume	N/A	\$200.00	N/A	\$0.080
Purchased gas adjustment (PGA)	If the wholesale price of gas purchased by the city of Duluth is increased or decreased as compared to the 2013 base gas cost rate of \$0.582 <del>\$0.920</del> per CCF, and any such change results in an average unit cost of gas in excess, or less than the 2013 <del>2006</del> base gas costs, the unit commodity charge (\$ per CCF) for gas sold under the applicable rate schedule shall be increased or decreased on the customer's monthly bill in the same amount as the unit cost of gas has been increased or decreased. The PGA will include a proportional charge or credit for the payment in lieu of taxes (PILOT) transfer.				

RESOLVED FURTHER, that from April 1, 2013 the rate for interruptible commodity transportation of natural gas shall be \$470 per month plus \$0.1742~~\$0.1661~~/CCF during the first year of service and the interruptible commodity transportation rate for natural gas shall be \$470 per month plus \$0.149/CCF after the first year of such service.

RESOLVED FURTHER, any prior rates inconsistent or conflicting with this resolution are superseded as of April 1, 2013.

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 implement a new rate structure for natural gas supplied or transported by the City through its natural gas distribution system. Current interruptible transportation rates were established in 2009. This is the first rate modification since 2006 for all other classes of users.

The changes include a small increase in the fixed monthly charges to all class of users, which reflect less than the City's actual increase in costs of operation since 2006 in providing service to its customers, to decrease the volumetric charges per 100 cubic feet ("CCF") of gas provided and to also reduce the amount of the Purchased Gas Adjustment ("PGA") based on the City's experience with the PGA so that the volumetric rates more accurately reflect the cost of the gas sold. The new structure will be effective as of April 1, 2013. The net result of these changes will be an increase in revenue to the Department of approximately 4.9% per year.

This increase is needed to cover the City's increased costs of operating the natural gas distribution system which have occurred since 2006 and also to fund a prudent reserve to protect customers against significant fluctuations in the nation-wide market for natural gas.

**RESOLUTION NO. 13PUC-001**

**RESOLUTION ADOPTING CAPITAL IMPROVEMENT PLAN  
FOR NATURAL GAS SUPPLY SYSTEM.**

RESOLVED by the Duluth Public Utilities Commission (the "Commission") that the Commission does hereby adopt and approve the attached "City of Duluth Natural Gas Supply System Capital Improvement Plan" dated January 2013.

Approved by the DPUC:

\_\_\_\_\_  
(date)

Submitted to City Council:  
(where appropriate)

\_\_\_\_\_  
(date)

ATTEST:

\_\_\_\_\_  
Director  
Public Works and Utilities  
City of Duluth

**STATEMENT OF PURPOSE:**

PURPOSE: The purpose of this resolution is to adopt the "City of Duluth Natural Gas Supply System Capital Improvement Plan" dated January 2013 as the program for the improvement of the City's natural gas supply infrastructure for the next five year period.

The City of Duluth Natural Gas System includes approximately 510 miles of gas main ranging in size from 1-inch to 16-inch diameter, 16 pressure regulators, and 4 Town Border Stations. The City sells approximately 5,000,000 MMBTU of natural gas per year. The facilities range in age from new to over 53 years old.

Pursuant to Section 2-186 (d) of the City Code, one of the responsibilities of the DPUC is:

To develop and recommend to the city council a municipal utility plan for the future development and extension of the water utility, the natural gas utility, the sanitary sewer utility, and the stormwater utility. (emphasis added)

The purpose of this resolution is to adopt such a plan for the future redevelopment of the natural gas utility. It is anticipated that this plan will be reviewed and updated as necessary on an annual basis.

**City of Duluth**

**Natural Gas Supply System**

**Capital Improvement Plan**

January 2013

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## I. Introduction

The City of Duluth Natural Gas System includes approximately 510 miles of gas main ranging in size from 1-inch to 16-inch diameter, 16 pressure regulators, and 4 Town Border Stations. The City sells approximately 5,000,000 MMBTU of natural gas per year.

The facilities range in age from new to over 53 years old. In 1959 and 1960, the City installed approximately 9 miles of 6, 10, 12, 14, and 16-inch steel pipe as the start of the conversion from low pressure manufactured gas to high pressure natural gas. Ultimately, this conversion required the replacement of all natural gas pipes in the City to occur. This huge endeavor by the gas utility at that time resulted in the reliable system that we have today.

The purpose of this report is to identify and summarize known major deficiencies in the system that should be corrected in the near future and to list the proposed remedy and estimated costs. This report covers only capital construction projects and does not address operation and maintenance costs or issues.

## II. Gas Main Replacements and Upgrades

Overall, the City's natural gas system is in excellent condition. There are, however, gas main segments that are in need of attention. Of the 510 miles of gas mains, approximately 100 miles are steel mains and 410 miles are medium density polyethylene. Annually, City Engineering staff identifies steel mains that have a known leak history or corrosion issue and schedules them for replacement. Most of these replacements are relatively small with a total annual dollar amount of less than \$100,000. These smaller projects are incorporated into City annual miscellaneous gas construction projects. It is critical that we continue to replace older steel pipe annually to keep up with the aging system and eliminate the potential for corrosion related leaks. At this time, there are also some larger pipe replacement projects and a system upgrade project that has been identified and should be addressed in the very near future.

### a. West First Street/East Third Street

The 8-inch steel gas main stretching from 16<sup>th</sup> Avenue West in 1<sup>st</sup> Street, up Mesaba Avenue to 3<sup>rd</sup> Street and then East to 5<sup>th</sup> Avenue East was installed within an abandoned 16-inch cast iron gas main in 1967. In recent years, this steel gas main has suffered from occasional leaks. Field investigations have shown that the condition of the coating on this main is questionable and that future leaks should be expected. Because the pipe was "inserted" into the abandoned cast iron main, finding a leak can be extremely difficult as leaking gas migrates within the annular space between the two pipes. Also, the accumulation of gas within the annular space can lead to a potential explosive situation if an ignition source is available at the correct air-to-gas mixture. The

Minnesota Office of Pipeline Safety has strongly recommended we replace the entire section and avoid any future “steel in steel insertions”.

Replacement of this pipe began in 2010 with a segment of new 8-inch polyethylene on 1st Street and a new main on 6<sup>th</sup> Avenue West and Mesaba. The next phase of this project is scheduled for 2013 with a new main to be installed from Mesaba Avenue to 16<sup>th</sup> Avenue West. In 2014, the remaining main on 3<sup>rd</sup> Street from Mesaba to Lake Avenue will be replaced. In 2015, the final connection on the West end at 16<sup>th</sup> Avenue West will be completed. The estimated cost to complete the remaining portion of this project is \$2,000,000. Replacement of this “steel in steel insertion” is considered a safety issue and is therefore a high priority for the gas utility.

b. Michigan Street between 1<sup>st</sup> and 3rd Avenue East

During construction of the sanitary sewer overflow piping from 2<sup>nd</sup> Avenue East to 1<sup>st</sup> Avenue East in 2011, it was found that the coating on the 10-inch steel gas main in Michigan Street had failed. Approximately 1,100 feet of steel gas main was installed in 1985. It appears the coating failure is limited to this stretch of pipe. Without a protective coating, the pipe is extremely vulnerable to corrosion. Inspection of the exposed portions of the pipe showed that no major corrosion had occurred at that time; however, this pipe must be replaced and this should be done as soon as possible. Tentative plans are to have City Utility Operations crews replace this pipe in 2013 at an estimated cost of \$120,000.

c. 58<sup>th</sup> Avenue West and London Road 14-inch mains

The City’s Utility Operations Division carries an extensive amount of repair parts on inventory to enable them to repair any leaking or damaged gas main within the City. However, there are two 14-inch diameter pipes within the City system that we do not carry any materials for. 14-inch pipe is an uncommon size. In 1960, the City installed two segments of 14-inch pipe. Since these pipes are relatively old and cannot currently be repaired, they have been prioritized for replacement. The estimated cost to replace both sections of pipe is \$500,000.

d. Woodland Avenue “Dresser” Couplings

“Dresser” style couplings are commonly used on water systems for connecting pipes and were, for a short period of time, also used on natural gas systems. Due to an excessive number of leaks, their use has been completely stopped and removal of them within the gas system was made a priority. The Minnesota Office of Pipeline Safety has mandated that all gas utilities remove any known Dresser couplings within their systems. Until recently, the City believed all Dresser couplings had been removed. However, it has been determined that numerous Dresser style couplings are still in use on a 6-inch steel main located within Woodland Avenue. Removal of these couplings is necessary and should be completed as soon as possible to eliminate the possibility of natural gas leaks.

The 6-inch steel main will be replaced with polyethylene at an approximate cost of \$500,000. This project is currently scheduled for 2016.

e. SDR 21 PE Pipe

At various locations within the City, SDR 21 PE pipe was utilized for gas main instead of the City standard of SDR 11.5. This pipe does not have the pressure rating of our standard plastic pipe. It is also harder to maintain and connect services to this pipe as we do not have the ability to “squeeze” the pipe off to stop gas flow. Replacement of this pipe is not included in the current list of capital projects; however, this pipe should be replaced as funds become available or when street projects are performed in the area. This pipe is found in the following locations:

- In 48<sup>th</sup> Avenue East – 3,700 feet
- In 3<sup>rd</sup> Street from Chestnut to Vernon, down Vernon to 2<sup>nd</sup> Street alley, down 2<sup>nd</sup> Street alley to 28<sup>th</sup> Avenue East – 2,000 feet
- In 18<sup>th</sup> Avenue East from 3<sup>rd</sup> Street to 8<sup>th</sup> Street – 2,000 feet
- In 20<sup>th</sup> Avenue West from 1<sup>st</sup> Street alley to 1<sup>st</sup> Street, then west to 23<sup>rd</sup>, then up 23<sup>rd</sup> to 9<sup>th</sup> Street, then again on 10<sup>th</sup> from 23<sup>rd</sup> to 24<sup>th</sup>, then up 24<sup>th</sup> to 11<sup>th</sup> Street – 5,500 feet

f. I-35 crossing at 26<sup>th</sup> Avenue West

During the recent construction of Interstate 35, an existing steel gas line was in conflict with the new bridge piers. While installing a replacement for this pipe, a second gas main was also installed under the interstate at 26<sup>th</sup> Avenue West as a future replacement to an existing steel line. This pipe is currently not in use and will need to be connected at each end in the future. Once connected, approximately 1,500 feet of steel pipe will be removed from service. The estimated cost for this project is \$30,000.

### III. Regulator Stations

The City’s gas regulator stations are used to reduce feed pressure to that of the distribution system and provide over-pressure protection. The distribution system operates at 22 or 66 psi. Overall, the regulator stations are in excellent shape. Planned improvements will increase capacity where necessary and provide additional system control.

a. Gary Regulator Station Number 215

The Gary Regulator Station feeds gas from the Great Lakes Town Border Station during periods of high demand or during periods of maintenance on the Stora Enso Regulator Station. Currently this station has a 2-inch regulator installed. The regulator is not of sufficient size to feed the western portion of the City

when the Stora Enso regulator is removed from service for maintenance. A new 6-inch regulator, flow meter, and feed and discharge piping will be installed in 2013. This work will be performed by Utility Operations crews at an estimated cost of \$50,000. Materials for this project have already been purchased and shop fabrication of the regulator station is underway.

b. Airpark, Stora Enso, and Riveness Flow Meters

The City's System Control and Data Acquisition (SCADA) system allows operation of the natural gas system from the gas control room located at Comfort Systems at 520 Garfield Avenue. The use of a SCADA system is mandated under federal law to provide continuous monitoring of the entire system. The City has recently completed installation of a new SCADA system for gas, water, and sanitary sewer. The upgraded SCADA system now allows the gas control staff to monitor system flows and pressures substantially better than previously. This new system control allows for better gas purchasing. To further enhance the system, control flows, monitor pressures, and evaluate future system upgrades, additional flow metering stations should be installed. It is recommended that new flow meters be installed in the existing regulator stations at Airpark, Riveness, and Stora Enso. This work will be performed by Utility Operations crews at an estimated cost of \$50,000 per station for a total of \$150,000 in 2014.

c. Regulator Station Enclosures

While the City has numerous regulator stations, there are several more significant stations that control much of the flow of natural gas around the City. These stations are critical for metering and controlling gas flows and pressure. If any of these stations are out of service during cold weather, gas supply could be affected to thousands of customers. There are three key stations where enclosures should be installed: Great Lakes Town Border Station, Stora Enso Regulator Station, and Riveness Regulator Station.

The Great Lakes Town Border Station is the main entry for natural gas into the City's distribution system. This station was upgraded in 2011 to increase its capacity and reduce regulator maintenance that results in the station being off line. Since the upgrade, City staff has installed a canvas cover over a portion of the station in an attempt to protect pilot lines and keep them from freezing during the coldest days of the year. While this covering has been effective, it is not a long-term solution to the frozen pipe issue. It is recommended that a permanent enclosure be constructed at this location to protect the regulators and the pilot lines.

The Stora Enso Regulator Station is located near the former Stora Enso paper mill. All the gas flow from the Great Lakes Town Border Station flows through a 16-inch main at 125 psi to this regulator station for distribution. Due to the close proximity of this station to Interstate 35, it is continually coated with spray from

the roadway during the winter months. This snow/water/salt combination is not only bad for the protective coatings on the gas pipes but also adds to freezing of the regulators and pilot lines. Currently, a portion of the piping is wrapped with plastic and duct tape to protect it from this condition. It is recommended that a permanent enclosure be constructed at this location to protect the regulators and the pilot lines.

The Riveness Regulator Station is located at the intersection of Riveness and Morris Thomas Road. This station receives natural gas from TBS-1 at 125 psi and reduces pressure for distribution. During certain natural gas flows, the regulators at this station make a substantial amount of noise. While noise is present at all of the City regulator stations, it is excessively loud at this location. In addition, the station is located directly adjacent to residential dwellings. These residents have consistently complained about the noise. Attempts to change pressure regulators or settings have not alleviated the noise. It is recommended that a permanent enclosure be constructed at this location to reduce the noise heard by adjacent residents.

#### IV. Distribution System Capacity and Reliability

Generally, the City's natural gas system has adequate capacity and is reliable. Other recommended capital improvements will help to increase overall system reliability and capacity. Specific areas where additional capacity and reliability review should be performed are listed below.

##### a. The North Shore

Natural gas was extended from Lakeside up Superior Street to the Lakewood water treatment facility in 2006. SCADA monitoring of this extension was not installed until 2012. During recent cold weather, the monitoring shows pressure on this system dropping from the maximum absolute operating pressure of 22 psi to as low as 16 psi. While this pressure is still more than adequate to provide residential heating loads, any future extensions further north should be reviewed to ensure there is adequate capacity. Any review should also include determining the feasibility of upgrading this portion of the system to 66 psi. Changing the design to this higher pressure would greatly increase the amount of gas available for use in this neighborhood as well as increasing the capacity within the Lakeside neighborhood where this supply originates. The budget does not currently contain any funds for increased system capacity in this area.

##### b. Town Border Station Operations

The City is served by four Town Border Stations where natural gas enters our system. TBS-1, TBS-1A, and TBS-1B supply gas from Northern Natural Gas. The Great Lakes Regulator Station supplies gas from the Great Lakes transmission

main in Wisconsin. The Great Lakes Regulator Station was installed in 2002 to provide additional system capacity and reliability. By providing a second source for natural gas supply, the reliability of our overall operation is greatly enhanced. In addition, our ability to purchase natural gas at better rates was enhanced when a source from a second supplier became available. During warmer months, gas is solely supplied through the Great Lakes Regulator Station. This gas has consistently been less costly than gas purchased from Northern Natural Gas and the supply is generally easier to control.

During winter months, it is necessary for the City to flow gas at multiple locations to supply all of the heating demand. At any one time, a minimum of two border stations must be operating to keep up with system demand. Due to system configurations, TBS-1B must be one of the operating border stations and must be on line and operating at all times. Without this station in operation, there will not be adequate pressure to the entire City. This situation provides a very large reliability issue that should be addressed in the near future. Preliminary investigations have indicated that a large diameter main extending from the airport to Morris Thomas Road would probably supply enough capacity to allow TBS-1B to be off line during cold periods. There are currently no funds allocated for this project and additional study is required so that a budget can be determined.

#### V. Services and Meter Sets

Most services within the City are PE pipe and are in good condition. Steel services are regularly replaced as part of annual miscellaneous gas construction projects. The riser is the portion of the service that connects the underground PE gas service to the above-ground meter set. During the 1970's, copper risers were commonly used on house services. These copper risers are known for leaking and so the Minnesota Office of Pipeline Safety has mandated that they all be replaced. The City has been replacing them as they encounter them during service replacement or maintenance or when they are identified as leaking. Approximately 70 were identified as leaking in 2012. In addition, Utility Operations replaced approximately 100 copper risers in 2012 as the start of an effort to replace all of them. With approximately 5,000 copper risers in the system, there is a need to increase the speed at which these services are replaced. \$1.5 million has been budgeted to replace the risers over the next two years. The first phase of this project will be bid in March of 2013. While it has been budgeted as a 2-year project, it is likely that the work will extend into a third or fourth year.

## VI. Capital Plan

The attached table shows a proposed capital improvement plan for construction projects through 2017. The plan includes the name of the proposed projects, their estimated cost, and the budget year. The plan should be updated on an annual basis to reflect the current status of the natural gas utility and add or remove projects based upon the need at that time.

## VII. Cash Reserves

While not actually a capital project, the gas utility is also planning to increase its cash reserve. A year-end target cash reserve of \$5 million is proposed to (a) allow for sufficient funds to pay peak month January purchased gas expenses of \$3.5 to \$4.5 million, (b) fund the necessary capital improvements to natural gas infrastructure, and (c) maintain a reserve for unexpected repairs that currently can only be paid for by eliminating or delaying other budgeted capital improvements.

This reserve could also serve to offset other operating expense increases that are neither forecasted nor predictable, thereby assuring a certain degree of rate stability during the next several years.

## VIII. Conclusions

The natural gas system serving the City of Duluth is generally in excellent condition. However, continued maintenance is required to keep the system at this level. Annual maintenance and replacement of pipes with safety concerns or a high potential for leaks should continue.



Appendix: Natural Gas System Capital Improvement Plan

5-year natural gas capital projects

Project	2013	2014	2015	2016	2017	
Annual Gas Main and Service Contract	\$700,000	\$700,000	\$500,000	\$500,000	\$500,000	Annual contract or replace old mains and install services to new customers
Annual bollard contract	\$50,000	\$50,000	\$50,000	\$50,000		Project mandated by MN Office of Pipeline Safety - safety issue
Riverside	\$200,000					
Copper Risers	\$750,000	\$750,000				Project mandated by MN Office of Pipeline Safety - safety issue
1st Street - 8 inch steel replacement - phase 1	\$500,000					Steel in steel pipe insertion suffering from accelerated corrosion - being replaced with plastic - safety issue
1st Street - 8 inch steel replacement - phase 2	\$500,000					Steel in steel pipe insertion suffering from accelerated corrosion - being replaced with plastic - safety issue
Third Street - Mesaba to Lake 8" steel replacement		\$500,000				Steel in steel pipe insertion suffering from accelerated corrosion - being replaced with plastic - safety issue
1st Street - 14th West to 16th West			\$500,000			Steel in steel pipe insertion suffering from accelerated corrosion - being replaced with plastic - safety issue
Michigan Street - 10-inch - installed by Garfield	\$120,000					Protective coating severely deteriorated - 2 blocks of pipe to be replaced
58th Ave West - 14-in replacement with 3-inch				\$200,000		Replacement of steel pipe with leak history (odd size, no repair parts available)
London Road - 14-inch replacement				\$300,000		Replacement of steel pipe (odd size, no repair parts available)
Gary regulator station	\$50,000					Increase capacity from 2-inch reg to a 6-inch reg
Airpark flow meter		\$50,000				Enhanced system control
Stora Enso flow meter		\$50,000				Enhanced system control
Riveness flow meter		\$50,000				Enhanced system control
Building shell at Stora Enso, Great Lakes and Riveness			\$200,000			Building project to protect equipment and reduce winter time outages
Woodland Ave. 6-inch steel Dressers - 2 miles				\$500,000		Project mandated by MN Office of Pipeline Safety - safety issue
Steel pipe replacement					\$500,000	Continued system upgrades
System control project					\$200,000	Continued system upgrades
I-35 crossing 26th 6-inch PE		\$30,000				Remove steel pipe
	\$2,870,000	\$2,180,000	\$1,250,000	\$1,550,000	\$1,200,000	\$9,050,000



SERVING THE CITY OF DULUTH

Account No.	Service Address	Billing Date
[REDACTED]	[REDACTED]	01/18/2013

Service Period	Meter Readings
12/06/2012 - 01/04/2013	

Previous Balance	Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Unit of Measure
244.39	S2883513	12/05/2012-01/04/2013	29	7865	8037	1.241	172	CCFG
	PGA							
Penalties	Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Measure
0.00	S2883513	12/05/2012-01/04/2013	29	7865	8037	-0.443	172	CCFG
	11-5/8 R1 WATER RESIDENTIAL 5/8 R1							
Adjustments	Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Measure
0.00	B97808448	12/05/2012-01/04/2013	29	628	641	3.31	13	CCFW
	01 CLASS I SANITARY SEWER							
Payments Received	Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Measure
(244.39)	B97808448	12/05/2012-01/04/2013	29	628	641	2.51	13	CCFW
	01 CLASS I SANITARY SEWER							
Balance At Billing	Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Measure
0.00	B97808448	12/05/2012-01/04/2013	29	628	641	2.51	13	CCFW

Current Billing

Charge Code	Amount
GAS	213.45
PGA	(76.20)
GAS FIXED CHG	7.50
WATER	43.03
WATER FIXED CHG	6.27
SEWER CITY	32.63
SEWER WLSSD	32.63
SEWER FIXED CHG	5.89
CLEAN WATER	5.57
STORM	6.08
STREET LIGHTS	5.00

New water rates approved by the Public Utilities Commission are effective January 1, 2013

Current Charges 281.85

Balance Due 281.85

Due Date	Amount Due
02/04/2013	281.85

Account No.	Due Date	Amount Due	Amount Paid
[REDACTED]	02/04/2013	281.85	

Service Address [REDACTED]

DULUTH, MN 55812

Mailing Address [REDACTED]

Please include this stub with your payment

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DULUTH MN 55812-1524

CITY OF DULUTH COMFORTSYSTEMS PO BOX 169008 DULUTH, MN 55816-9008

[REDACTED] 0000028185 00



SERVING THE CITY OF DULUTH

Account No.	Service Address	Billing Date
[REDACTED]	[REDACTED]	01/24/2013

Service Period	Meter Readings
12/20/2012 - 01/22/2013	11-5/8 R1 WATER RESIDENTIAL 5/8 R1

Previous Balance	63.37
Penalties	0.00
Adjustments	0.00
Payments Received	(63.37)
Balance At Billing	0.00
Current Billing	

Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Unit of Measure
B94175204	12/19/2012-01/22/2013	33	325	327	3.31	2	CCFW
01 SEWER CITY / SEWER WLSSD							
Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Measure
B94175204	12/19/2012-01/22/2013	33	325	327	2.45	2	CCFW
01 SEWER CITY / SEWER WLSSD							
Meter No.	Read Dates	Days	Previous	Current	Rate	Usage	Measure
B94175204	12/19/2012-01/22/2013	33	325	327	2.65	2	CCFW

Charge Code	Amount
WATER	6.62
WATER FIXED CHG	6.27
SEWER CITY	4.90
SEWER WLSSD	5.30
SEWER FIXED CHG	5.89
CLEAN WATER	5.57
STORM	6.08
STREET LIGHTS	5.00

New water rates approved by the Public Utilities Commission are effective January 1, 2013

Current Charges	45.63
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Balance Due	45.63
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Due Date	Amount Due
02/19/2013	45.63

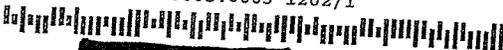
Account No.	Due Date	Amount Due	Amount Paid
[REDACTED]	02/19/2013	45.63	

Service Address	[REDACTED]
DULUTH, MN 55810	

Mailing Address	[REDACTED]
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Please include this stub with your payment

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7000001202 01.0005.0003 1202/1



CITY OF DULUTH COMFORTSYSTEMS  
PO BOX 169008  
DULUTH, MN 55816-9008



[REDACTED] 0000004563 00

**RESOLUTION NO. 13PUC-002**

**RESOLUTION RESCINDING RESOLUTION 11PUC-SEWERBILL  
REQUESTING WLSSD CHARGES BE SEPARATELY STATED  
ON UTILITY BILLS.**

RESOLVED by the Duluth Public Utilities Commission (the "Commission") that Resolution 11PUC-Sewerbill which requested that the City's utility bill format be modified to separately state the amount charged to each customer to cover their share of the amount the City pays WLSSD for treating the City's sanitary sewage, and which was approved by the Commission on December 14, 2011, is hereby rescinded in its entirety.

Approved by the DPUC:

\_\_\_\_\_  
(date)

Submitted to City Council  
(where appropriate)

\_\_\_\_\_  
(date)

ATTEST:

\_\_\_\_\_  
Director  
Public Works and Utilities  
City of Duluth

**STATEMENT OF PURPOSE:**

Resolution 11PUC-Sewerbill approved by the Duluth Public Utilities Commission on December 14, 2011, requested that the City's utility bill format be modified to separately state the amount charged to each customer to cover their share of amount the City pays WLSSD for treating the City's sanitary sewage. The Public Works and Utilities Department reviewed implementing this change on utility bills and, due to technical complications, expense and the potential for resulting confusion to customers, it has been determined that such a change would not be feasible at this time.