

DULUTH PUBLIC UTILITIES COMMISSION

Tuesday, August 21, 2018

City Council Chambers

AGENDA

1. Roll call
2. Approval of previous meeting minutes
3. Old business:
  - 3.1 Stormwater system discussion
4. New business:
  - 4.1 Middle and Woodland water booster stations
  - 4.2 2019 utilities budget discussion
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**  
**May 15, 2018**

**Members Present:** Chris McIntosh, Rob Prusak, Carrie Ryan, Councilor Joel Sipress, Councilor Em Westerlund

**Members Absent:** Councilor Noah Hobbs, Jen Julsrud

**Staff Present:** Bob Asleson, Jim Benning, Todd Carlson, Leanna Gilbert, Howard Jacobson, Tom Johnson, Glenn Strid, Kerry Venier

**Call to Order:** The meeting was called to order at 5:16 p.m. by President Prusak.

**Approval of previous meeting minutes**

**New business:**

**Updates from staff**

Jim Benning reported on projects including Superior Street reconstruction, the gas blanket contract, the meter relocation project, and the gas main relocation project along Woodland Avenue. He also mentioned that the citizen commissioner City email accounts are seldom used and had been suspended by IT. Commissioners agreed that it would be better to forward any messages to their personal email addresses.

**Upcoming Council actions**

No actions were mentioned.

**Commissioner questions or comments**

None.

**Preview of upcoming business**

The next regular meeting is scheduled for Tuesday, June 19, 2018, at 5:15 p.m. in City Council Chambers. The Commission will continue to discuss the stormwater system. Eric Shaffer and Jim Benning will both be gone in July.

**Known absences for future meetings**

Vice President McIntosh will not be able to attend the June meeting.

**Stormwater system tour**

Todd Carlson gave a brief summary of the stormwater tour locations including the 5<sup>th</sup> Avenue W sedimentation channel behind the Depot, Brewery Creek behind the Co-op, the 10<sup>th</sup> Avenue E underground sedimentation box, the down drain at 15<sup>th</sup> Avenue E & 7<sup>th</sup> Street, the Macfarlane Road structure, Locust Street ditching, the Palm Street pond, and the Chester Creek tunnel underneath Superior Street. Commissioners went on the tour after the meeting was adjourned.

**Adjournment:** The meeting was adjourned at 5:26 p.m.

**DULUTH PUBLIC UTILITIES COMMISSION**  
**Meeting Minutes**  
**June 19, 2018**

**Members Present:** Rob Prusak, Carrie Ryan, Councilor Joel Sipress, Councilor Em Westerlund

**Members Absent:** Councilor Noah Hobbs, Jennifer Julsrud, Chris McIntosh

**Staff Present:** Bob Asleson, Jim Benning, Todd Carlson, Leanna Gilbert, Tom Johnson, Tom Pfeffer, Eric Shaffer, Glenn Strid, Kerry Venier

**Call to Order:** The meeting was called to order at 5:18 p.m. by President Prusak.

**NOTE:** This was not an official meeting as there was no quorum.

**New 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. A more detailed presentation will be given at a future meeting when more commissioners are available. There was some discussion about the budget process, the stormwater rate history, funding, and various system needs.

**Updates from staff**

Jim Benning reported that over 100 letters were sent out for mandatory lateral rehabilitation primarily in lower Lakeside and Park Point. We submitted our program to WLSSD, and we are already implementing it. We will do mandatories first before volunteers. We are keeping a list of volunteers for if there is money available. We did not have any overflows during the storms over the last weekend.

**Preview of upcoming business**

The next regular meeting is scheduled for Tuesday, August 21, 2018, at 5:15 p.m. in City Council Chambers. Commissioners and staff agreed that the July meeting should be cancelled. The commission will continue to discuss the stormwater system in August.

**Adjournment:** The meeting was adjourned at 5:48 p.m.

## STORM SEWER FUND NEEDS

A REALISTIC life expectancy for the storm sewer infrastructure considers material life, exposure to physical elements, practical impact of other projects, and changes to community land-use.

For example:

- The functional life of a storm sewer catch basin is reduced when exposed to “road salt” and snow plowing impacts.
- The functional life of metal culvert pipes is reduced in highly corrosive soil conditions.
- The functional life of reinforced concrete culvert pipe sections is reduced at the exposed ends due to freeze-thaw ground movement of winter.
- The functional life of a ditch is reduced with heavy use of sand in winter and lack of routine vegetation maintenance.
- The functional life of the storm sewer system is reduced when “other” infrastructure (highways, utilities, development) projects impact existing facilities.

## STORM SEWER SYSTEM CAPITAL PROJECT NEEDS

				Annual	Average	
Item	Item		"Realistic"	Replacement	Replacement	Annual
Description	Quantity	Units	Life (years)	Rate	Unit Cost	Cost
Storm Sewer Pipe - Replacement	1,584,000	feet	50	31,680.0	\$100	\$ 3,168,000
New Storm Sewer Pipe - Expansion	-----	feet	-----	1,000.0	\$130	\$ 130,000
Catch Basins - Replacement	10,903	each	50	218.1	\$7,000	\$ 1,526,420
Manholes - Replacement	5,125	each	50	102.5	\$9,000	\$ 922,500
Culverts - Replacement	2,286	each	25	91.4	\$10,000	\$ 914,400
Large Stream Culverts - Replacement	200	each	50	4.0	\$150,000	\$ 600,000
Ditches - Grading to re-establish flow line	528,000	feet	15	35,200.0	\$25	\$ 880,000
BMP WQ Treatment Structure - Replacement	85	each	50	1.7	\$20,000	\$ 34,000
New BMP WQ Structures to meet MS4 Permit	-----	each	-----	5.0	\$20,000	\$ 100,000
<b>Annual Storm Sewer Capital Project Needs =</b>						<b>\$ 8,275,320</b>
Current Annual Storm Sewer Capital Projects Budget =						\$ 1,200,000
<b>Net INCREASE to Storm Sewer Capital Projects Budget =</b>						<b>\$ 7,075,320</b>

## STORM SEWER FUND NEEDS

A BEST CASE life expectancy for the storm sewer infrastructure considers only the manufacturers estimated material life under ideal conditions.

## STORM SEWER SYSTEM CAPITAL PROJECT NEEDS

				Annual	Average	
Item	Item		"Best Case"	Replacement	Replacement	Annual
Description	Quantity	Units	Life (years)	Rate	Unit Cost	Cost
Storm Sewer Pipe - Replacement	1,584,000	feet	100	15,840.0	\$100	\$ 1,584,000
New Storm Sewer Pipe - Expansion	-----	feet	-----	1,000.0	\$125	\$ 125,000
Catch Basins - Replacement	10,903	each	75	145.4	\$7,000	\$ 1,017,613
Manholes - Replacement	5,125	each	100	51.3	\$9,000	\$ 461,250
Culverts - Replacement	2,286	each	35	65.3	\$10,000	\$ 653,143
Large Stream Culverts - Replacement	200	each	100	2.0	\$150,000	\$ 300,000
Ditches - Grading to re-establish flow line	528,000	feet	30	17,600.0	\$25	\$ 440,000
BMP WQ Treatment Structure - Replacement	85	each	100	0.9	\$20,000	\$ 17,000
New BMP WQ Structures to meet MS4 Permit	-----	each	-----	5.0	\$20,000	\$ 100,000
<b>Annual Storm Sewer Capital Project Needs =</b>						<b>\$ 4,698,006</b>
Current Annual Storm Sewer Capital Projects Budget =						\$ 1,200,000
<b>Net INCREASE to Storm Sewer Capital Projects Budget =</b>						<b>\$ 3,498,006</b>

STORM SEWER FUND EXPENDITURES  
2014 - 2018



## STORM SEWER SYSTEM CAPITAL PROJECT EXPENSES

	"REALISTIC"	"BEST CASE"	2014 - 2017 (4 yr)	2018
Item	50 yr Life	100 yr Life	Average Annual	Planned
Description	Annual Needs (\$)	Annual Needs (\$)	Expenditure (\$)	Cost
Storm Sewer Pipe - Replacement	\$3,168,000	\$1,584,000	<b>\$715,000</b>	\$595,000
New Storm Sewer Pipe - Expansion	\$130,000	\$125,000	<b>\$0</b>	\$0
Catch Basins - Replacement	\$1,526,420	\$1,017,613	<b>\$0</b>	\$530,000
Manholes - Replacement	\$922,500	\$461,250	<b>\$31,250</b>	\$50,000
Culverts - Replacement	\$914,400	\$653,143	<b>\$316,250</b>	\$15,000
Large Stream Culverts - Replacement	\$600,000	\$300,000	<b>\$117,500</b>	\$0
Ditches - Grading to re-establish flow line	\$880,000	\$440,000	<b>\$27,500</b>	\$10,000
BMP WQ Treatment Structure - Replacement	\$34,000	\$17,000	<b>\$2,500</b>	\$0
New BMP WQ Structures to meet MS4 Permit	\$100,000	\$100,000	<b>\$0</b>	\$0
	\$8,275,320	\$4,698,006	<b>\$1,210,000</b>	\$1,200,000

**Clean Water Surcharge History**

	7/27/2008	8/1/2009	1/1/2012	1/1/2016	
	Original	57.6%	-36.6%	-12%	
Monthly Charge	\$ 5.57	\$ 8.78	\$ 5.57	\$ 4.90	\$ (0.67)

**Storm Water Utility Rate History**

Per Equivalent Residential Unit (1,708 impervious square feet)	Units	1998 Original	11/1/2006 38.7%	1/1/2008 17%	1/1/2016 11%	
ERU - Commercial/Industrial	1st ERU	\$ 3.75	\$ 5.20	\$ 6.08	\$ 6.75	\$ 0.67
	> 1 ERU	\$ 3.75	\$ 5.20	\$ 6.08	\$ 6.75	
ERU-R - Residential, Single Family Home	1st ERU	\$ 3.75	\$ 5.20	\$ 6.08	\$ 6.75	
	> 1 ERU	\$ -	\$ -	\$ -	\$ -	
ERU-R - Residential, Duplex and Triplex	1st ERU	\$ 3.75	\$ 5.20	\$ 6.08	\$ 6.75	
	> 1 ERU	\$ 3.00	\$ 4.45	\$ 5.33	\$ 6.00	
ERU-A - Multi-Family, 1-4 Floors	1st ERU	\$ 2.55	\$ 3.42	\$ 3.9480	\$ 4.35	
	> 1 ERU	\$ 1.80	\$ 2.67	\$ 3.1980	\$ 3.60	
ERU-A - Multi-Family, 5-9 Floors (No multi-family credit prior to 11/1/2006)	1st ERU	\$ 3.75	\$ 3.20	\$ 3.6815	\$ 4.05	
	> 1 ERU	\$ 3.00	\$ 2.45	\$ 2.9315	\$ 3.30	
ERU-A - Multi-Family, 10+ Floors (No multi-family credit prior to 11/1/2006)	1st ERU	\$ 3.75	\$ 2.98	\$ 3.4150	\$ 3.75	
	> 1 ERU	\$ 3.00	\$ 2.22	\$ 2.6650	\$ 3.00	

RATE trade-off

Resolution #	06-0616R	07-0735R	15PUC-008
Purpose of Additional Revenue:	Capital	Street Sweeping	Capital
	OPEB (Retiree Healthcare Liability)	Other Operating Costs	Maintenance & Operating
	Operating Costs		

## Water Capital Improvement Projects 2019 - 2023

8/6/2018 Proposed

Project	2019	2020	2021	2022	2023
24th Avenue West – 3rd to 7th Street	\$450,000				
40th Avenue West (County)				\$600,000	
Arlington Pump Station 20" main (MNDOT)					\$1,800,000
Arrowhead and Rice Lake Road (County)		\$200,000			
Cathodic Protection System on 42" steel construction	\$80,000	\$80,000	\$80,000	\$80,000	
Central Entrance feed pipe (MNDOT)					\$1,640,000
Crosley and 47th 12" main	\$15,000				
Decker Road - Piedmont to Mall Drive	\$750,000	\$750,000			
Duluth Heights Phase 1 and 2			\$907,500		
Duluth Heights Phase 3				\$1,100,000	
Electrical upgrades at Water Treatment Plant					\$150,000
Far East Superior Street water main to get off 42"			\$600,000	\$700,000	
Fascia repairs at main pump building		\$100,000			
Gogebic Creek (MNDOT)			\$200,000		
Hidden Valley Phase 2 water main replacement		\$1,250,000			
Lakewood roof replacement	\$850,000				
McCuen Street (MNDOT)	\$350,000				
Middle Pump Station		\$2,400,000			
Middle Pump Station design	\$200,000				
Middle transmission main			\$2,500,000		
Morris Thomas water main (County)			\$1,100,000		
Paint pipe at Lester Creek bridge (County)	\$100,000				
Pump station service entrance					\$75,000
Upper Lakeside Phase 1 connection on Glenwood				\$900,000	
Upper Lakeside Phase 2 connection at golf course				\$787,500	
US Steel Creek (MNDOT)			\$120,000		
Waseca Industrial Road extension construction	\$40,000				
Water main project TBD				\$400,000	\$400,000
Woodland Ave. and East Calvary main (County)	\$600,000	\$600,000			
Woodland Pump Station				\$2,400,000	
Woodland Pump Station design			\$600,000		
<b>Total</b>	<b>\$3,435,000</b>	<b>\$5,380,000</b>	<b>\$6,107,500</b>	<b>\$6,967,500</b>	<b>\$4,065,000</b>
Bond/Loan	\$200,000	\$2,400,000	\$3,100,000	\$2,400,000	
Total Revenue	\$3,235,000	\$2,980,000	\$3,007,500	\$4,567,500	\$4,065,000

## Natural Gas Capital Improvement Projects 2019 - 2023

8/6/2018 Proposed

<b>Project</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
20 <sup>th</sup> Avenue West, 23 <sup>rd</sup> Avenue West, 10 <sup>th</sup> Street					\$500,000
3 <sup>rd</sup> Street, Vernon, 2 <sup>nd</sup> Street Alley				\$200,000	
58th Ave West 14" replacement with 3"		\$200,000			
Decker Road - Piedmont to Mall Drive 6"	\$500,000				
Fairmont, Spirit Valley, Denfeld, Irving and Cody uprating	\$20,000				
Gas main extensions and services blanket project	\$1,350,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Great Lakes Interconnect gas heater	\$150,000				
Gogebic culverts (MNDOT)			\$100,000		
Meter relocations/bollards	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Michigan Street 10" installed by Garfield				\$120,000	
Misc. steel replacement		\$500,000	\$250,000	\$500,000	\$500,000
Morris Thomas 12" gas main			\$500,000		
Peidmont uprating			\$10,000		
Rice Lake and Arrowhead (County)	\$200,000				
Stora Enso building shell			\$140,000		
Stora Enso flow meter		\$150,000			
Superior Street reconstruction	\$30,000	\$30,000	\$0	\$0	\$0
Upper Woodland uprating		\$15,000			
Waseca Industrial Road extension construction	\$9,000				
Woodland Avenue 6" steel Dressers - 2 miles	\$700,000				
<b>Total</b>	<b>\$3,209,000</b>	<b>\$2,645,000</b>	<b>\$2,750,000</b>	<b>\$2,570,000</b>	<b>\$2,750,000</b>

## Sanitary Sewer Capital Improvement Projects 2019 - 2023

8/6/2018 Proposed

<b>Project</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Arrowhead and Rice Lake Road (County)		\$150,000			
Citywide sanitary sewer rehabilitation/lining			\$2,000,000	\$2,000,000	\$2,000,000
Citywide manhole adjustment project	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Decker Road - Piedmont to Mall Drive	\$200,000				
Lift station rehabilitation	\$900,000	\$450,000	\$450,000	\$450,000	\$450,000
Park Point lining	\$1,400,000	\$1,850,000			
Superior Street laterals	\$50,000	\$50,000			
Waseca Industrial Road extension construction	\$30,000				
Woodland Avenue and East Calvary (County)	\$400,000				
<b>Total</b>	<b>\$3,030,000</b>	<b>\$2,550,000</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>

## Stormwater Capital Improvement Projects 2019 - 2023

8/6/2018 Proposed

<b>Project</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Annual Transportation SIP projects	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Block-long culvert and ditch system improvements					\$250,000
Brewery Creek tuck pointing			\$190,000		
Chester Creek (Kenwood Avenue) box culvert fish passage				\$40,000	\$300,000
Citywide catch basin and storm sewer blanket improvements	\$125,000	\$560,000	\$100,000		\$250,000
Citywide driveway culvert project		\$50,000	\$50,000	\$55,000	\$55,000
Citywide manhole adjustment project		\$50,000	\$50,000	\$50,000	\$50,000
Citywide pipe repairs and steep slope "down drains"			\$350,000	\$310,000	\$250,000
Clarkhouse Creek		\$50,000	\$100,000		
East Chester Creek (Norton Road & Thurber Road)		\$45,000	\$15,000	\$500,000	
Gary-New Duluth system improvements			\$50,000		
Greys Creek		\$50,000	\$100,000		
Lower Coffee Creek		\$50,000	\$100,000	\$100,000	
Non-capital storm projects	\$135,000	\$145,000	\$145,000	\$145,000	\$145,000
Piedmont Heights system improvements			\$50,000		
Superior Street reconstruction	\$300,000	\$300,000			
Superior Street culvert extensions - Lakewood to McQuade Rd.				\$100,000	
TH39 McCuen Street in Gary (MNDOT)	\$200,000				
Woodland/Calvary reconstruction (County)	\$540,000				
<b>Total</b>	<b>\$1,400,000</b>	<b>\$1,400,000</b>	<b>\$1,400,000</b>	<b>\$1,400,000</b>	<b>\$1,400,000</b>