## 20-YEAR MAINTENANCE PLAN UPDATE (2026 – 2045)

# SANITARY SEWER AND STORMWATER LIFT STATIONS

Baxter, Minnesota

2025-11086

Council Approval Date: \_\_\_\_\_



#### Introduction

City of Baxter operates and maintains 26 sanitary sewer lift stations and 2 stormwater lift stations. In 2008 the City Council approved and adopted a first 20-Year Sanitary Sewer Lift Station Maintenance Plan. Lift station components wear out or become aged and are difficult to replace due to the continual changes and advancements in electronics and controls. The maintenance plan provides the City with a tool to plan, budget, and prioritize future improvements.

Implementation of the plan began in 2011. A summary of the projects completed include the following:

Lift Station No. 3: 2011 Reconstruction Lift Station No. 1: 2011 Reconstruction Lift Station No. 4: 2012 Reconstruction Lift Station No. 5: 2012 Reconstruction Lift Station No. 6: 2013 Reconstruction Lift Station No. 9: 2014 Reconstruction Lift Station No. 7: 2015 Reconstruction Lift Station No. 8: 2016 Reconstruction Lift Station No. 10: 2017 Reconstruction Lift Station No. 2: 2018 Added Generator Lift Station No. 3: 2018 Re-Route Project, Only Pumps Upgraded Lift Station No. 11: 2020 Reconstruction Lift Station No. 12: 2020 Reconstruction Lift Station No. 14: 2021 Reconstruction Lift Station No. 16: 2022 Reconstruction Lift Station No. 13: 2024 Reconstruction Lift Station No. 15: 2024 Reconstruction

The attached information represents an update to the original maintenance plan including anticipated costs from 2025 through 2045.

2025 Reconstruction

#### **Unit Costs**

Lift Station No. 17

Reconstruction costs at each lift station location will vary depending on field conditions and arrangement of components. Improvements and unit costs A through M are for sanitary sewer lift stations and A through C for storm sewer lift stations on the attached Cost Summary Worksheet were identified as work that will likely need to be addressed at lift stations over the next 20 years. Costs for each lift station can be customized by selecting appropriate improvements from the provided unit cost list.

Original unit prices associated with sanitary sewer were set based on lift station maintenance history and information provided by Quality Flow. Unit costs have since been updated to reflect historic costs from the previous reconstruction projects and maintenance activities. All costs have been updated to reflect 2025 estimated costs.

#### Maintenance Budget

The Maintenance Budget estimates maintenance and replacement costs over the next twenty-year period from 2025 to 2045. Yearly costs vary depending on planned lift station replacement and maintenance items.

Estimated sanitary sewer lift station costs for the next five-year period are as follows:

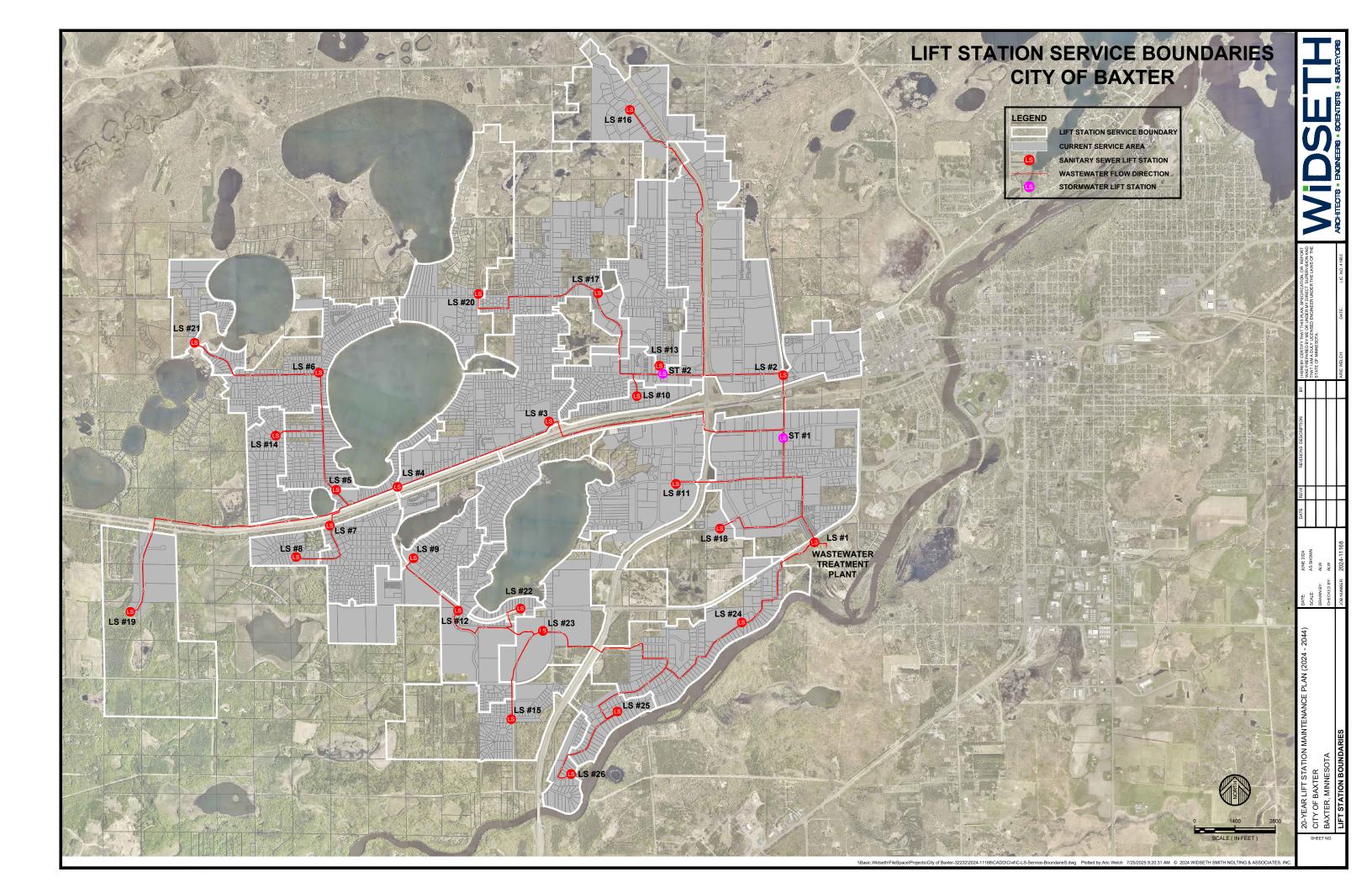
•	2026	\$302,555
•	2027	\$310,780
•	2028	\$269,030
•	2029	\$331,750
•	2030	\$320,695

The average yearly sanitary sewer lift station maintenance cost over the next twenty-year period is estimated at \$203,914. The maximum and minimum estimated yearly costs are \$331,750 (2029) and \$104,275 (2043), respectively.

Estimated storm water lift station costs for the next five-year period includes the \$1,785 per year general maintenance cost and \$72,335 in 2028 for. The average yearly maintenance cost over the next twenty-year period is estimated at \$14,000. The maximum and minimum estimated yearly costs are \$177,575 (2038) and \$1,785, respectively.

#### **Attachments:**

- 1. Lift Station Service Boundary Location and Map
- 2. Lift Station Cost Code Summary Worksheet
- 3. Lift Station 20-Year Maintenance Budget



### LIFT STATION COST CODE SUMMARY (2024 ESTIMATED COSTS)

Sanitary S	Sewer Lift Stations		
<u>Item</u> A	Description  Base Lift Station Upgrade  Stainless Steel control panel with LC 150 controller with pressure transducer and flo 5HP KSB 80-200 pumps with Type F impeller  Pump rail and base elbow replacement  By-pass pumping, mobilization, clean-up  Wet well water blast, vacuum, spot repairs  Precast cover replacement with aluminum hatch  Discharge piping replacement  Total - Item A	ats	\$168,045.00
В	Base Lift Station Upgrade Stainless Steel control panel with LC 150 controller with pressure transducer and flo 20HP KSB 80-251 pumps with Type F impeller Pump rail and base elbow replacement By-pass pumping, mobilization, clean-up Wet well water blast, vacuum, spot repairs Precast cover replacement with aluminum hatch Discharge piping replacement Total - Item A	ats	\$176,270.00
С	Base Valve Vault Upgrade Replace piping, check valves, valves and fittings Precast cover replacement with aluminum hatch Total - Item A		\$82,855.00
D	Complete valve vault replacement with by-pass piping system		\$99,725.00
Е	Replacement of low flow pumps (2 pumps) (LS 2)		\$18,355.00
F	Replacement of high flow pumps (2 pumps) (LS 1, LS 2 and LS 3)		\$33,735.00
G	Duplex pump replacement (2 pumps)		\$18,140.00
Н	Duplex pump replacement (2 pumps) (LS 1)		\$46,465.00
İ	Control Panel Replacement		\$52,620.00
J	LS 2 Generator Replacement		\$123,170.00
K	LS 2 Generator Maintenance		\$1,100.00
L	Portable Generator Replacement		\$42,755.00
M	Portable Generator Maintenance		\$4,540.00
		Unit #2206 Unit #2230 Unit #2231 Unit #2232	\$1,135.00 \$1,135.00 \$1,135.00 \$1,135.00
Storm Sev Item	wer Lift Stations  Description		
A	Duplex 15 HP pump replacement (2 pumps)		\$39,520.00
В	Duplex 7.5 HP pump replacement (2 pumps)		\$31,030.00
С	Control Panel Replacement		\$52,620.00

## LIFT STATION 20-YEAR MAINTENANCE BUDGET BAXTER, MINNESOTA WIDSETH 2024-11188 09290/24

SANITARY SEWER

SANITA	RY SEWER	I	1		1									-						1		-					-					- 1					<del></del>				
Lift Station	Location	Original Construction /	Pump #1 Install /	Pump #2 Install /	Pump HP	Control Panel Install / Refit	20		2026	202		2028		2029	2030		2031	2032		2033		134	2035		036	203		2038		039	20-		2041	204		204		2044		2045	20 YEAR TOTAL
		Purchase Date	result	rebuild		motem? rem	Cost Code	Cost Co	ost ode Cost	Cost Code	Cost C	ost Cos	t Cost	Cost	Cost Code	st Cost	Cost	Cost Code	st Cost	Cost	Cost Code	Cost	Cost Code Cost	Cost Code	Cost	Cost Code	Cost	Cost Code Cost	Cost Code	Cost	Cost Code	Cost Code	Cost	Cost Code	Cost	Cost Code	Cost	Cost Code Cost	Cost Code	Cost	COST
SS-1	CSAH #48 near treatment plant	1980	2011	2011	15	2011										I	\$52,620				Н	\$46,465																H \$46,465			\$145,550
SS-2	Excelsior Road & Cypress Drive	1980	2018	2018	5, 15	2018						F \$33,7	35 E	\$18,355														F,I \$86,35	E	\$18,355											\$156,800
	Lift Station 2 Generator						к	\$1,100	K \$1,100	к	\$1,100	K \$1,1	00 K	\$1,100	K \$1,	100 K	\$1,100	K \$1,	100 K	\$1,100	к	\$1,100	K \$1,100	к	\$1,100	к	\$1,100	J \$123,17	к	\$1,100	к	\$1,100 K	\$1,100	к	\$1,100	к	\$1,100	K \$1,100	К	\$1,100	\$145,170
	Lift Station 1 & 2 General Maintenance							\$3,200	\$3,200		\$3,200	\$3,2	00	\$3,200	\$3,	200	\$3,200	\$3,	200	\$3,200		\$3,200	\$3,200		\$3,200		\$3,200	\$3,20	)	\$3,200		\$3,200	\$3,200		\$3,200	i	\$3,200	\$3,200		\$3,200	\$67,200
SS-3	Inglewood Drive & Fairview Road	1989	2018	2018	15	2011						\$33,7	35			1	\$52,620											F \$33,73	i					4 V						1 I	\$120,090
SS-4	Fairview Road and Maplewood Drive	1989	2012	2012	5	2012												G,I \$70,	760															G	\$18,140						\$88,900
SS-5	Memorywood Drive north of City Hall	1989	2012	2012	5	2012										G,I	\$70,760															G	\$18,140								\$88,900
SS-6	Memorywood Drive and Cedar Scenic Road	1989	2009	2009	5	2013							G	\$18,140					1	\$52,620									G	\$18,140											\$88,900
SS-7	West end of Cedardale Lane	1991	2015	2015	5	2015	G	\$18,140															G,I \$70,760																G	\$18,140	\$107,040
SS-8	Brentwood Drive and Briarwood Lane	1991	2016	2016	5	2016			G \$18,140															G,I	\$70,760																\$88,900
SS-9	Mountain Ash Drive near Treatment Plant #2	1992	2014	2014	5	2014															G,I	\$70,760																G \$18,140			\$88,900
SS-10	Flintwood Drive	1998	2017	2017	5	2017				G	\$18,140															G,I	\$70,760														\$88,900
SS-11	Glory Road and Elder Drive	1998	2020	2020	5	2020							G	\$18,140															G,I	\$70,760											\$88,900
SS-12	Knollwood Drive and CSAH #48	2001	2020	2020	5	2020									G \$18,	140															G,I	\$70,760									\$88,900
SS-13	Forest Drive	2001	2024	2024	5	2024													G	\$18,140																G,I	\$70,760				\$88,900
SS-14	Meredith Drive	2003	2021	2021	3.4	2021										G	\$18,140															G,I	\$70,760						$\Box$		\$88,900
SS-15	Jasperwood Drive and Marble Road	2003	2024	2024	3.4	2024															G	\$18,140																G,I \$70,760			\$88,900
SS-16	Edgewood Drive and Lake Forest Road	2004	2022	2022	20	2022												G \$18,	140															G,I	\$70,760						\$88,900
SS-17	Grand Oaks Drive and Clearwater Road	2004	2004	2004	5	2004	A,C	\$250,900															G \$18,140																G,I	\$70,760	\$339,800
SS-18	Hastings Road	2005	2005	2005	5	2005		А	,C \$250,900															G	\$18,140																\$269,040
SS-19	Timberwood Drive	2006	2006	2006	15	2006				B,C \$	\$259,125															G	\$18,140														\$277,265
SS-20	Clearwater Road and Kimberlee Drive	2006	2006	2006	5	2006					А	,C \$168,0	45															G \$18,14	)												\$186,185
SS-21	Cedar Scenic Road west of Olivewood Drive	2007	2007	2007	5	2007							A,C	\$243,600															G	\$18,140											\$261,740
SS-22	CSAH #48 between Knollwood Drive and Ironwood Drive	2008	2008	2008	5	2008									A,C \$250,	900															G	\$18,140									\$269,040
SS-23	Mapleton Road and Crow Wing Power Substation	2015	2015	2015	5	2015	G	\$18,140															G,I \$70,760																G	\$18,140	\$107,040
SS-24	Camwood Trail	2020	2020	2020	20	2020									G \$18,	140															G,I	\$70,760									\$88,900
SS-25	River Vista Drive	2024	2024	2024	5	2024															G	\$18,140																G,I \$70,760			\$88,900
SS-26	Riverwood Road	2024	2024	2024	5	2024															G	\$18,140																G,I \$70,760			\$88,900
	Portable Generators	2005					М	\$4,540	M \$4,540	М	\$4,540	M \$4,5	40 M	\$4,540	M \$4,	540 M	\$4,540	M \$4,	540 M	\$4,540	М	\$4,540	M \$4,540	М	\$4,540	м	\$4,540	M \$4,54	М (	\$4,540	М	\$4,540 M	\$4,540	М	\$4,540	М	\$4,540	M \$4,540	) м	\$4,540	\$95,340
	Lift Station 3-22 General Maintenance							\$24,675	\$24,675		\$24,675	\$24,6	75	\$24,675	\$24,	875	\$24,675	\$24,	675	\$24,675		\$24,675	\$24,675		\$24,675		\$24,675	\$24,67	5	\$24,675		\$24,675	\$24,675		\$24,675		\$24,675	\$24,675	, —	\$24,675	\$518,175
L	Control Maintenance	1		1		ANNUAL COST:		\$320,695	\$302,555	\$	310,780	\$269,0	30	\$331,750	\$320,	695	\$227,655	\$122,	415	\$104,275	l.	\$205,160	\$193,175		\$122,415	\$	122,415	\$293,81	;	\$158,910		\$193,175	\$122,415		\$122,415	5	\$104,275	\$310,400		\$140,555	\$4,398,975
																																		RAGE YEAR							\$203,914

	I OKIWI SEWEK																																
Lif	ft Station	Original Pump #1 Install / Pump #2 Install /		Control Panel	2025		2026	202	27 2028		2029		030	2031		032	2033	2033 2034		2035 2036		2037	2	038 2039	2040	2041	2042	2043	2044	2045	20 YEAR TOTAL		
	ID Location	Construction Date	Rebuild	Rebuild		Refit	Cost Code	cost Code		Cost Code	Cost Code Co	st Cos	st de Cost	Cost Code		Cost Code Cost	Cost Code	Cost	Cost Code Cost	Cost Code Cost	Cost Code		Cost code Cost	Cost Code Cost	Cost Code	Cost Code C	ost Code Co	st Cost Code	ost Cost Cost	Cost Code Cost	Cost Code Cost	Cost Code Cost	COST
	ST-1 Cypress Drive	2018	2018	2018	15						A \$39	520													A,C	\$92,140							\$131,660
	ST-2 Excelsior Road	2018	2018	2018	7.5						В \$31	030													B,C	\$83,650							\$114,680
	Lift Station General I	Maintenance					\$1	,700	\$1,700		\$1,700 \$1	700	\$1,700		\$1,700	\$1,700		\$1,700	\$1,700	\$1,70	0	\$1,700	\$1,700	\$1,700		\$1,700 \$	,700 \$1,	700 \$	1,700 \$1,700	\$1,700	\$1,700	\$1,700	\$34,000
		•				ANNULAL COOT	**	700	64 700		64 700 672	250	64 700		64 700	64 700		64 700	64 700	64.70	•	64 700	64 700	64 700		£477.400 £	700 64		700 £4 700	64 700	£4 700	£4 700	2000 040

\$282,040 \$14,017 \$177,490 \$1,700 AVERAGE YEARLY COST: MAXIMUM YEARLY COST: MINIMUM YEARLY COST:

MAXIMUM YEARLY COST: MINIMUM YEARLY COST:

\$331,750 \$104,275