



City of Grand Forks Staff Report



Committee of the Whole – February 25, 2019
City Council – March 4, 2019

Agenda Item: Plans and Specifications for City Project No. 7909 – Upgrade Lift Station No. 7

Submitted by: Engineering Department, Mark S. Walker, PE (Assistant City Engineer)

Staff Recommended Action: Approve Plans and Specifications for City Project No. 7909 – Upgrade Lift Station No. 7

Committee Recommended Action: Refer to City Council with recommendation to approve.

Council Action:

BACKGROUND:

This project is intended to renew Lift Station No. 7 so that it can provide efficient and reliable service for the next 15 to 20 years. Lift Station No. 7 is located at 3010 Gateway Drive, just east of the English Coulee and on the North side of Gateway Drive. This station provides sanitary sewage service for an area generally northward of 10th Ave N and west of Columbia Road and some properties along the north side of Gateway Drive. Properties served by this station include The Ralph and the new UND Medical Science Facility. This station was placed in operation in 1962 and was last rehabilitated in 1997. Many of the station components are at the end of their useful life. During the rehabilitation project in 1997, the elevation of the lift station and adjacent manholes were raised to protect the station from flooding as it is located adjacent to the English Coulee.

The City of Grand Forks owns and operates 42 Sanitary Sewage Lift Stations throughout the City. Two of these stations are master stations that boost the pressure inside of the forcemain and the remainder are individual lift stations. Sanitary sewage from within the City is collected at the individual lift stations where the sewage is then pumped into a force main network approximately 50 miles in total length. Most of the sewage then passes through one of the two master lift stations and is ultimately delivered to the City Wastewater Treatment Facility. Periodically, these lift stations require rehabilitation to upgrade pumps, valves, piping, controls, electrical systems, ventilation systems, building structure, safety features, and other

appurtenances. To avoid the need to rehabilitate a large number of these stations during a single fiscal year and cause a strain on the yearly budget, stations are prioritized and the station(s) most in need of repairs and upgrades are rehabilitated. Current City policy is to rehabilitate a sanitary lift station every 15 to 20 years.

ANALYSIS AND FINDINGS OF FACT:

- This project will replace pumps, valves, piping, and controls and upgrade various equipment and appurtenances at the station.
- The equipment and appurtenances proposed to be replaced during this project are near their life expectancy, worn out, in need of safety improvements, or otherwise unreliable.
- Since the permanent flood protection project is in place, the station no longer needs to be elevated and the station and adjacent manholes will be lowered during this project which will allow for easier maintenance, improve safety, and improve aesthetics of the site.
- A preliminary Engineer's Estimate for this project is \$300k
- Funding for this project will come from the Wastewater Fund 5200.100.5225.650.0010 Work in Progress.

SUPPORT MATERIALS:

- Page 371 of the 2019 City Budget indicating funding source for this project (1 page)



Wastewater - Pumping

Budget Year 2019

G/L Account	Account Description	2016 Amended Budget	2016 Actual Amount	2017 Amended Budget	2017 Actual Amount	2018 Adopted Budget	2019 Adopted Budget
Fund 5200 - Wastewater							
	<i>Maintenance Structures Totals</i>	\$33,445.00	\$32,102.37	\$30,000.00	\$28,811.65	\$33,000.00	\$33,000.00
	<i>Maintenance Equipment</i>						
5200.100.5225 450.0020	Mtce Installed Mech Equip	45,734.00	43,812.39	58,000.00	27,804.51	65,000.00	65,000.00
5200.100.5225 450.0030	Mtce Communication & Elec	23,945.00	23,871.95	30,000.00	29,996.90	30,000.00	30,000.00
5200.100.5225 450.0090	Mtce Shop Equipment	2,117.00	1,865.93	1,000.00	1,038.08	3,000.00	3,000.00
5200.100.5225 450.0160	Mtce Vehicles/Motor Eq.	5,700.00	5,575.19	2,000.00	1,690.93	6,000.00	6,000.00
	<i>Maintenance Equipment Totals</i>	\$77,496.00	\$75,125.46	\$91,000.00	\$60,530.42	\$104,000.00	\$104,000.00
	<i>Other Operating Expenses</i>						
5200.100.5225 460.0050	Education & Training	87.00	40.00	1,500.00	1,155.00	3,000.00	3,000.00
	Budget Transactions						
	<i>Level</i>	<i>Transaction</i>			<i>Number of Units</i>	<i>Cost Per Unit</i>	<i>Total Amount</i>
	Adopted Budget	For Electricians - from 450.0030			1.0000	3,000.00	3,000.00
					Adopted Budget Totals		\$3,000.00
	<i>Other Operating Expenses Totals</i>	\$87.00	\$40.00	\$1,500.00	\$1,155.00	\$3,000.00	\$3,000.00
	<i>Capital Outlay</i>						
5200.100.5225 650.0010	Work In Progress	329,427.00	329,479.10	642,269.00	202,804.68	750,000.00	375,000.00
	Budget Transactions						
	<i>Level</i>	<i>Transaction</i>			<i>Number of Units</i>	<i>Cost Per Unit</i>	<i>Total Amount</i>
	Adopted Budget	Lift Station #7 Rehab			1.0000	375,000.00	375,000.00
					Adopted Budget Totals		\$375,000.00
5200.100.5225 700.0120	Trucks & Mounted Equipmt	.00	.00	.00	.00	.00	25,000.00
	Comments						
	<i>Level</i>	<i>Comment</i>					
	Department Requested	Tool Cat / Half of cost/ sharing with Stormwater Dept.					
	<i>Capital Outlay Totals</i>	\$329,427.00	\$329,479.10	\$642,269.00	\$202,804.68	\$750,000.00	\$400,000.00
Sub Department	5225 - Pumping Totals	\$1,155,374.00	\$1,094,156.10	\$1,461,983.00	\$968,164.62	\$1,573,602.00	\$1,305,352.00