

DEPARTMENTSEWER UTILITY
FUND 72**Program Description**

The current WPDES permit contains both a phosphorus compliance schedule and a chloride compliance schedule that needs to be met to avoid violating the permit and regulatory enforcement.

Each of these schedules requires the Village to invest time and money in addressing these issues that are above and beyond the usual day to day operation and maintenance of the Village's collection system and wastewater treatment plant (WWTP).

The following lists some of the requirements that need to be met in regards to phosphorus and chlorides. All of these actions have a physical equipment cost and an engineering study cost associated with them.

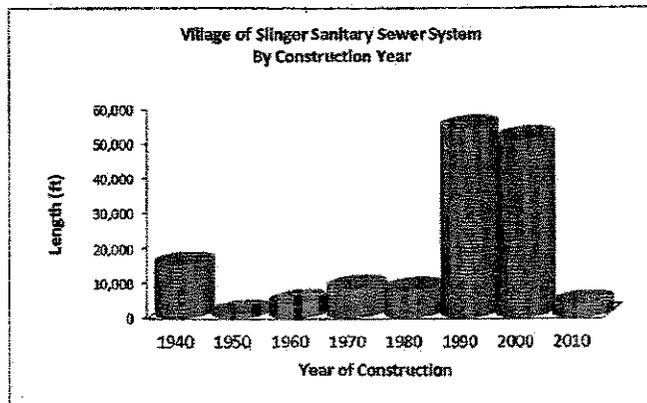
1. Optimize the oxidation ditch for biological phosphorus removal. This will include work to modify the outer ditch aeration disks and an ORP probe for monitoring and control.
2. Evaluation of rare earth chemical (sorbex). This will include a trial period of approximately 45-60 days. The current cost is \$4.85/gallon but the quantity needed has not yet been determined and may not be known until the trial is underway and results are evaluated.
3. Addition of an online phosphorus analyzer system that includes the analyzer, new chemical feed pumps, hookup of SCADA for control, etc.
4. Invest in upgrades to the Village's plow trucks to include a computer control of the salt application system that staff is able to test and calibrate along with the acquisition of brine tanks to pre-wet the salt that is applied to Village roadways. Chloride reduction will be a regulatory issue to be addressed in both the sewer utility and storm utility.
5. Updating the sewer use ordinance to further quantify pollutants.
6. Investigate, and the possible purchase of, an online chloride analyzer.

The Collection System

The existing sanitary sewer system is made up of approximately 28 miles of gravity sewers ranging in size from 6 inches to 30 inches in diameter, 1.92 miles of forcemains, 3 lift stations and 723 manholes. The age, size and material making up the sanitary sewer system are as follows:

Village of Slinger Sanitary Sewer System		
By Size		
Diameter (in)	Length (ft)	Percentage
6	730.2	0.5%
8	104,102.4	70.5%
10	10,684.1	7.2%
12	9,768.1	6.6%
15	6,130.5	4.2%
18	6,159.3	4.2%
21	2,261.8	1.5%
24	5,782.3	3.9%
30	1,952.4	1.3%
TOTAL	147,571.1	100.00%

Village of Slinger Sanitary Sewer System		
By Material		
Type	Length (ft)	Percentage
PVC	118,417.8	80.2%
CLAY	25,850.1	17.5%
RCP	3,303.2	2.2%
TOTAL	147,571.1	100.00%



The Statistics of the three Village owned lift stations are as follows:

- Hartford Road Lift Station:
 - ✓ Constructed in 1995 and serving a total of 4 properties located along Hartford Road south of the Wisconsin Southern Railroad tracks.
 - ✓ Depth of the station is 14.6 feet
 - ✓ Station discharges to a 4-inch diameter forcemain that is 2,788.3 feet long

- ✓ The station has a design pumping rate of 160 gallons per minute provided by two 11.3 HP pumps
- Cedar Bluffs Way Lift Station:
 - ✓ Constructed in 2005
 - ✓ Service area includes the entire Cedar Bluffs Subdivision, the Cedar Bluffs Way area and a sizable expansion area immediately to the east of these areas (immediate service area = 71 acres, Maximum future service area = 254 acres)
 - ✓ Depth of the station is 23.9 feet
 - ✓ Station discharges to a 6-inch diameter forcemain that is 1,234.3 feet long that discharges to the American Eagle Drive Lift Station
 - ✓ The station has an existing design pumping rate of 355 gallons per minute provided by two 27 HP pumps. The station is expandable up to 570 gallons per minute
 - ✓ Reserve power is provided by a natural gas powered backup generator
- American Eagle Drive Lift Station:
 - ✓ Upgraded in 2015 with new controls and control building. Constructed in 2003
 - ✓ Service area includes the entire American Eagle Drive area and all of the service area and future expansion area tributary to the Cedar Bluffs Way Lift Station (total service area = 256 acres + 254 acres ultimate service area from Cedar Bluffs Way Lift Station = 510 acres)
 - ✓ Depth of the station is 21.5 feet
 - ✓ Station discharges to an 8-inch diameter forcemain that is 6,088.4 feet long that discharges to the gravity sewer along Lovers Lane
 - ✓ The station has an existing design pumping rate of 500 gallons per minute provided by two 34 HP pumps.
 - ✓ Reserve power is provided by a natural gas powered backup generator

The Sewer Utility also provides service to the Hilldale Sanitary District located along Hilldale Drive along the west side of Slinger. Hilldale Sanitary District is comprised of approximately 200 single family homes. All sewage from the district flows by gravity to a main lift station that is then discharged to the Slinger Treatment Plant through a 6-inch forcemain (4,122.8 feet long). Billing is based on the metered flows recorded at the main lift station.

2015 Accomplishments

- Finished improvements at the American Eagle Drive Lift Station.
- Completed a phosphorus removal pilot study that utilized dual filter technology.
- Continued the annual system cleaning.
- Populated data web based GIS system.

- Continued with a multi-year manhole inspection program while doing more repairs in house.
- Rehabilitated a failing manhole upstream of the headworks facility on the WWTP grounds utilizing a no-dig, permanent manhole lining process.

2016 Objectives

- Optimize the oxidation ditch for biological phosphorus removal. This will include work to modify the outer ditch aeration disks and an ORP probe for monitoring and control.
- Evaluation of rare earth chemical (sorbex). This will include a trial period of approximately 45-60 days. The current cost of this product is \$4.85/gallon but the quantity required for the trial may not be known until results are evaluated. Staff will present results of this trial to the Village Board as this project proceeds.
- Addition of an online phosphorus analyzer system that includes the analyzer, new chemical feed pumps, hookup of SCADA for control, etc.
- Draft the new CMOM policy that will be required by the DNR in 2016.
- Continue populating mapping data for GIS mapping.
- Continue with annual system cleaning.
- Continue studying wastewater treatment operations to determine phosphorous reductions available within the current treatment facility.
- Upgrade the Villages plow truck fleet to include measurable computer controls for the salting equipment along with the acquisition of brine tanks to pre-wet the salt that is applied to Village roadways. Chloride reduction will be a regulatory issue to be addressed in both the sewer utility and storm utility.

Staffing

Position	FTE (Full-Time Equivalent)
Utility Operator	2

Salary and Wage Distributions

The two utility operators' wages range from \$45,116 to \$51,210 annually. This amount is located under "Operations Labor", in addition to the amounts projected for overtime and on-call pay.

In addition to the staff assigned to this department, the Sewer Utility pays 20% of the Administrator's salary, 20% of the Engineer's salary, and 30% of the Utilities/Public Works Superintendent's salary under "Admin & General Salaries". The department also funds 10% of the Deputy Treasurer's wages under "Accounting & Collect Labor".

Account Detail

42410-635 – Sewer Impact Fees: This account was created in 2010 to more accurately track the amount of impact fees paid for connections to the sanitary sewer system. The money received in this account is transferred to the Sewer Utility's Debt Retirement Fund to support debt repayment for system upgrades and expansions.

46410-449 – Other System Sales: This represents the service provided to the Hilldale Sanitary District.

46410-465 – Outside Haulers Sales: This account tracks the charges paid by private sewage and septic companies to deposit waste at the WWTP.

46411-450 – Forfeited Discounts: This item is comprised of late fees charged to utility customers.

46411-456 – Other Operating Income: This account monitors a fee that was created in 2014 based on recommendations made during the 2007 Sewer Utility system study.

46412-420 – Special Fund Income: This account records the interest earned on the Sewer Utility's Debt Retirement and Replacement Funds.

53610-820 – Operations Labor: This account now contains all regularly scheduled labor costs associated with WWTP staff. Previously, portions of this cost were located within the various maintenance accounts.

53610-827 – Operations Supplies & Expense: This account pays such costs as lab supplies, permit testing costs, filters, small tools and equipment and miscellaneous supplies.

53610-828 – Central Equipment Expense: This amount includes the fee paid by the Sewer Utility to the Central Equipment fund for the use of municipally owned vehicles and equipment.

53611-831 – Maintenance of Collection System: This item covers the expenses associated with the upkeep of the systems lift stations, manholes and mains. This account also pays any costs related to Diggers Hotline locations.

53611-833 – Maintenance of Treatment Equipment: This amount is for the upkeep of equipment items located at the WWTP.

53611-834 – Maintenance of General Plant: This category includes costs associated with the actual plant, including the generator and grounds maintenance.

53612-843 – Customer Account Expense: This item covers uncollectible accounts as determined by court action. The utility does not normally budget a specific amount for this item due to the fact that most unpaid balances are collected and court actions on this matter are rare.

53613-851 – Central Services & Building: This account pays the utility's fee to the Central Services account for administrative support services.

53613-852 – Outside Services: This item includes the utility's annual audit and mapping expenses. The large increase shown in this account is due to the costs expected for evaluation of the utility's options for addressing the EPA and DNR phosphorus regulations.

53613-855 – Regulatory Expense: This category is for costs associated with obtaining necessary permits from the Department of Natural Resources (DNR).

53613-857 – Rent of Meters: This amount is paid to the Water Utility for the use of its metering system.

**2016 PROPOSED BUDGET
SEWER UTILITY**

	2014 ACTUAL 12/31/2014	2015 ACTUAL 7/31/2015	2015 PROJECTED YEAR-END	2015 AMENDED BUDGET	2016 PROPOSED BUDGET	%CHANGE BUDGET
720-42410-000-635 SEWER IMPACT FEES	184,192.00	30,080.00	174,560.00	72,240.00	72,240.00	0.00%
720-46410-000-440 RESIDENTIAL SALES	590,693.50	309,175.86	618,351.72	624,750.00	656,250.00	5.04%
720-46410-000-441 MULTI-FAMILY SALES	8,688.55	8,777.48	17,554.96	5,250.00	25,200.00	380.00%
720-46410-000-442 COMMERCIAL SALES	193,985.55	107,003.23	214,006.46	241,500.00	252,000.00	4.35%
720-46410-000-443 INDUSTRIAL SALES	21,957.37	12,671.08	25,342.16	24,150.00	27,300.00	13.04%
720-46410-000-449 OTHER SYSTEM SALES	143,611.49	75,002.55	150,005.10	157,500.00	157,500.00	0.00%
720-46410-000-464 PUBLIC AUTHORITY SALES	53,182.47	24,349.58	48,699.16	57,750.00	52,500.00	-9.09%
720-46410-000-465 OUTSIDE HAULERS SALES	115,307.84	47,138.95	110,000.00	110,000.00	110,000.00	0.00%
720-46411-000-450 FORFEITED DISCOUNTS	3,884.33	1,700.97	3,401.94	4,200.00	4,200.00	0.00%
720-46411-000-456 OTHER OPERATING INCOME	612.73	1,381.50	2,368.29	2,500.00	2,500.00	0.00%
720-46412-000-419 SEWER INTEREST INCOME	27,867.35	4,428.93	7,592.45	7,500.00	7,500.00	0.00%
720-46412-000-420 SEWER SPECIAL FUND INTEREST	2,799.47	1,470.54	2,520.93	3,000.00	3,000.00	0.00%
720-46412-000-421 CONTRIBUTED CAPITAL	-	-	-	-	-	n/a
Total Revenues	1,346,782.65	623,180.67	1,374,403.16	1,310,340.00	1,370,190.00	4.57%

**2016 PROPOSED BUDGET
SEWER UTILITY**

	2014 ACTUAL 12/31/2014	2015 ACTUAL 7/31/2015	2015 PROJECTED YEAR-END	2015 AMENDED BUDGET	2016 PROPOSED BUDGET	%CHANGE BUDGET
720-53610-000-820 OPERATIONS LABOR	118,217.71	72,208.07	123,785.26	104,056.88	96,429.00	-7.33%
720-53610-000-821 POWER FOR PUMPING	132,113.14	57,061.82	97,820.26	90,000.00	98,000.00	8.89%
720-53610-000-825 SLUDGE HAULING & EXP	26,041.85	468.55	36,000.00	36,000.00	36,000.00	0.00%
720-53610-000-826 CHEMICALS	40,685.10	18,892.61	32,387.33	40,000.00	60,000.00	50.00%
720-53610-000-827 OPERATIONS SUPPLIES & EXP	37,901.73	28,060.24	48,103.27	29,500.00	44,768.00	51.76%
720-53610-000-828 CENTRAL EQUIPMENT EXPENSE	44,946.00	25,170.00	51,040.00	51,040.00	63,352.00	24.12%
720-53611-000-831 MAINT OF COLL SYSTEM	37,742.84	7,388.06	35,000.00	35,000.00	35,000.00	0.00%
720-53611-000-833 MAINT OF TREATMENT EQUIP	43,739.56	33,218.76	48,946.45	19,000.00	40,000.00	110.53%
720-53611-000-834 MAINT OF GEN PLANT	5,520.83	9,326.20	10,000.00	9,000.00	10,000.00	11.11%
720-53612-000-840 ACCT & COLLECTION LABOR	-	-	6,216.00	6,216.00	4,071.00	-34.51%
720-53612-000-843 UNCOLLECTIBLE ACCTS	-	550.78	550.78	-	-	n/a
720-53613-000-850 ADMIN & GEN SALARIES	54,532.18	32,793.89	50,343.38	50,343.38	53,436.00	6.14%
720-53613-000-851 CENTRAL SERVICES & BUILDING	46,967.00	23,790.00	40,782.86	47,580.00	47,580.00	0.00%
720-53613-000-852 OUTSIDE SERVICES	15,756.43	11,160.14	35,000.00	36,000.00	20,000.00	-44.44%
720-53613-000-853 INSURANCE EXP	11,376.00	-	12,172.00	12,172.00	13,389.00	10.00%
720-53613-000-854 EMPLOYEE PEN & BENEFITS	78,272.88	37,475.96	64,244.50	41,820.21	44,747.00	7.00%
720-53613-000-855 REGULATORY EXP	3,646.72	-	5,500.00	5,500.00	5,000.00	-9.09%
720-53613-000-856 TRAINING & MEETINGS	2,810.84	495.46	849.36	1,500.00	2,000.00	33.33%
720-53613-000-857 RENT OF METERS	5,214.42	-	7,500.00	7,500.00	7,500.00	0.00%
720-53614-000-403 DEPRECIATION EXPENSE	525,665.01	516,403.00	516,403.00	516,135.00	516,403.00	0.05%
720-53614-000-408 TAXES	14,984.39	7,530.28	11,678.00	12,098.41	11,777.00	-2.66%
720-53614-000-427 INTEREST EXPENSE	173,454.58	55,556.30	162,745.00	162,745.00	153,547.00	-5.65%
Total Expenses	1,419,589.21	937,550.12	1,397,067.46	1,313,206.88	1,362,999.00	3.79%
Excess Revenues over Expenses	(109,249.21)	(314,369.45)	(22,664.29)	(2,866.88)	7,191.00	