



Sewer Rate Study

Prepared for: Village of St. Joseph, IL

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Professional Consulting and Design Services

Clark>Dietz

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Executive Summary

Clark Dietz was retained by the Village of St. Joseph, IL to perform the engineering evaluation required to determine 1) projected capital improvements over the next 15 years for both the sewer collection system and the sewer treatment plant, 2) projected capital improvements over the next 15 years if the wastewater treatment plant is expanded, and 3) the required increase in sewer rate charges to keep a relatively constant balance in the Village's Sewer Fund.

In the first part of the study, Clark Dietz worked with the Village to identify equipment and processes that will near the end of their useful life within the next 15 years and will consequently need repair, replacement, or significant maintenance in that time period. The identified improvements were then prioritized, and planning-level cost estimates were assigned to each one.

For the second part of the study, Clark Dietz reviewed the budgets and audited financials of the Village. After discussions with the Village Sewer Committee, projected annual increases in revenues and expenses were made. These projected revenues and expenses were used to project the Village's budget for 2018 through 2023. Since the Sewer Fund's current debt will be a part of the future budget, that debt was also reviewed and discussed.

A brief discussion of common rate structures was included in the Plan. Local rates, rate structures, and expected household sewer charges in several regional communities were also reviewed for comparison purposes.

Chapter 1 - Identified Improvements

Clark Dietz was retained by the Village of St. Joseph, IL to perform the engineering evaluation required to determine 1) projected capital improvements over the next 15 years for both the sewer collection system and the sewer treatment plant, 2) projected capital improvements over the next 15 years if the wastewater treatment plant is expanded, and 3) the required increase in sewer rate charges to keep a relatively constant balance in the Village’s Sewer Fund.

This chapter describes the improvements that were identified at the wastewater plant, improvements that were identified in the sanitary sewer collection system, and prioritization of those projects.

1.1 Wastewater Plant Observations

A site visit was made to the Village of St. Joseph’s Wastewater Treatment Plant (WWTP) on May 21, 2018 to review existing infrastructure and compile a list of capital improvements that are anticipated for the Village. The following is a summary of the observations that were made at the WWTP.

1.1.1 Influent Lift Station

The Influent Lift Station was installed in 2008. Flow enters the plant through an influent manhole and then flows through a vertical fine influent screen with a vertical screw conveyor and screenings compactor. Two pumps downstream of the screen, wet well discharge sends flow through two 10” forcemains. These two 10” forcemains connect to a single pipe in a manhole west of the pumps. The 10” forcemain is reduced to the existing 8” forcemain after exiting the manhole. There is also a 12” bypass gravity line from the influent manhole to the pump wet well. The forcemain discharges into splitter boxes as shown in Figure 1-1.

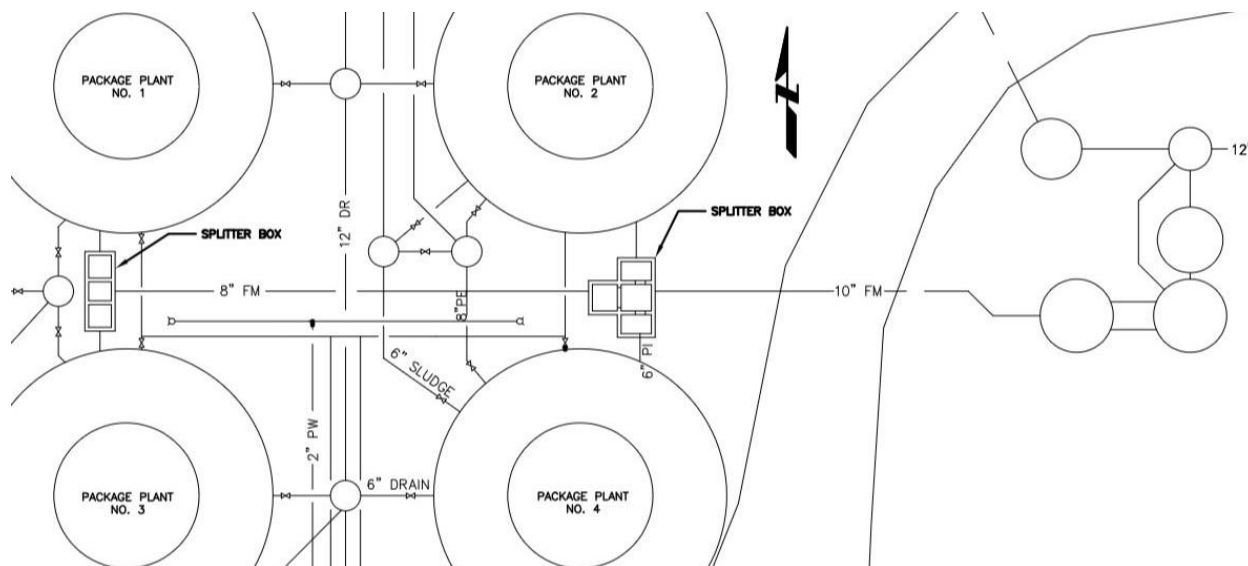


Figure 1-1 Splitter Box Layout

The lift station pumps, screen, and ancillary equipment have a 20 to 30-year design life. Therefore, within the next 10 to 20 years significant rehabilitation or replacement will be required.

Other improvements at the influent lift station required to improve operations or meet IEPA requirements include an updated influent flow meter, vault, electrical components, and bypass pumping during construction.

1.1.2 Package Plants

The WWTP contains four package plants. Design information for each of the plants is shown in Table 1-1.

Table 1-1 Package Plants

Plant	Location	Installation Year	Last Rehabilitated	Design Flow	Peak Flow
1	North West	1973	2014	0.14	0.35
2	North East	1994	-	0.14	0.35
3	South West	1973	-	0.14	0.35
4	South East	2009	-	0.14	0.35

Rehabilitation of each plant is required approximately once every 20 years. The Village should therefore plan to rehabilitate one plant every five years. Rehabilitation may include replacement of diffusers, gearbox, motor, valves, airlift pumps, structural repairs, and painting.

1.1.3 Blowers

The Blower Building currently houses three (3) blowers used to aerate the package plants on site. Blower information is summarized in Table 1-2.

Table 1-2 Blower Information

Blower	Type	Installation Year	Rated Flow (cfm)	Rated Pressure (psig)	Rated Power (hp)
1	Turbo	2011	1836	7.0	75
2	Positive Displacement	Before 1990	900	7.0	60
3	Positive Displacement	1995	900	7.0	60

The two existing positive displacement blowers are near the end of their service life and replacement and electrical upgrades will be required within the next 10 years.

Air is distributed from the blowers to the package plants through one 10” ductile iron buried air header. There is a section of the air piping that is leaking and will need to be repaired or replaced.

Clark Dietz has evaluated a dissolved oxygen control system for this plant. This would require a centralized control system, automated control valves, air flow meters, and dissolved oxygen control probes for each of the four package plants. Given the complexity of this system relative to the plant size and the relatively minimal energy savings that could be obtained, we feel that a dissolved oxygen control system would not provide significant benefits.

1.1.4 Chemical Addition

The chlorination system includes two 260-gallon poly tanks for storing liquid hypochlorite, and one peristaltic Watson Marlow pump. Dechlorination is achieved using sodium bisulfate fed prior to discharge to the Salt Fork. Sodium bisulfite is stored in one 260-gallon poly tank. Peristaltic pumps and feed tubing are used to convey the liquid to the discharge point. The chlorine disinfection process occurs before the effluent flume.

This system was installed in 2009 and the buildings are still in relatively good shape with major maintenance likely not required soon. No significant upgrades are foreseen to the chemical systems or building; however, the design life of the component parts are approximately 20 years. After this time period, pumps, tanks, and ancillary equipment will need to be replaced.

1.1.5 New Chemical Phosphorus Removal

Clark Dietz is working with the Village to install an alum system that will chemically remove phosphorous and satisfy their new NPDES permit requirements. This will likely be completed late 2019 and will include a building large enough to contain the storage tanks and pumps as well as a storage/garage facility. Once completed this system will likely not require significant maintenance for 20 years.

1.1.6 Effluent Flume

Effluent flow from the package plants is collected in a 12" main. The flow is then disinfected and exits the plant through an effluent flume. The effluent flume is undersized and needs to be replaced with a larger flume to provide accurate metering during high flows.

1.1.7 Generator

There is an emergency generator for backup power at the plant. The generator should be sufficient in capacity and design life for at least the next 20 years unless significant additional electrical loads are added. The generator's standby duty service ratings are shown below in Table 1-3.

Table 1-3 Generator Service Ratings

Volts	Phase	PF	KW	KVA	Amps
120/240Z	1	1	201	201	838
277/480Y	3	0.8	280	350	421
120/208Y	3	0.8	280	350	421
120/240D	3	0.8	280	350	842

1.1.8 Other Observations

In addition, there are some general maintenance items that need to be addressed at the plant. If general maintenance is completed, staff will be keeping capital costs lower by extending the life of existing equipment. These items may include building roof replacement, painting, MCC upgrades, HVAC addition, and lab equipment upgrades. Additionally, the sludge storage pond will require minor improvements and rehabilitation to keep the pond functional.

1.2 Wastewater Plant Capacity

As described above, the WWTP currently contains four activated sludge package plants with a design average flow (DAF) of 0.56 mgd and design maximum flow (DMF) of 1.40 mgd. The plants discharge to the Salt Fork in accordance with a permit from the Illinois Environmental Protection Agency (IEPA) NPDES Permit No. IL0023086. Flow rates from previous years are shown below in Table 1-4.

Table 1-4 WWTP Flow Rates

	2014	2015	2016	2017	2018
Average Flow, mgd	0.50	.58	0.50	0.43	0.56
Maximum Flow, mgd	1.63	2.23	1.13	2.10	2.10
3 month low-flow, mgd	0.38	0.40	0.26	0.24	-

Notes:

1. Data for 2018 is through May 31, 2018.

The Village has experienced sanitary sewer overflows (SSO) near the intersection of N. Elm Street and W. Warren Street during some wet weather events.¹ Several solutions are being investigated to eliminate this including adding an interceptor sewer to bypass the flow or target inflow and infiltration (I/I) of storm water in the sanitary sewer. If the interceptor is installed, maximum flows seen at the plant would increase. This would exceed the plant's existing DMF and require expansion of the treatment system. However, the DMF has already been exceeded four of the past five years as shown above.

In general, facilities begin planning for treatment system expansion when the flow rate through the facility reaches 80% of the rated design capacity. For the St. Joseph WWTP, this would be when the average flow is around 0.45 mgd.²

1.3 Sewer Collection System Operations

1.3.1 Lift Stations

The sanitary collection system in St. Joe is composed of four lift stations and 1,200 feet of force main sanitary sewer. Three of the four lift stations have a 4-inch discharge and the fourth has a 6-inch discharge. The four lift stations have all been rehabilitated within the last 18 years. While the lift stations are currently fully operational at this time, some of the lift stations will need to be rehabilitated during this 15-year planning period to prevent major disruptions to the sanitary sewer system.

Clark Dietz recommends that the Village develop a program to perform preventative maintenance on the lift stations and rehabilitate them as necessary. This plan could include rehabilitating one lift station every 5 years for the next 20 years, which would distribute the cost of maintaining the stations. Another cost to consider for the lift stations is upgrading the controls. As controls are updated at the treatment plant, changes and upgrades to the controls at the lift stations may also be needed.

1.3.2 Sanitary Sewers

The Village of St. Joseph maintains approximately 97,500 feet of sanitary sewer with sizes ranging from 8" to 12" as shown in Table 1-5. Repairs to the system are made on an as-needed basis, and there is currently no plan in place to perform regular maintenance to the sewers.

Table 1-5 Gravity Sewer Summary

Gravity Sewer Diameter, inches	Sewer Length, feet
8	84,000
10	11,000
12	2,500

¹ A summary of the existing SSOs and related flow monitoring is in Clark Dietz's October 10, 2017 Technical Memo to the Village.

² A discussion of the Wastewater Plant Capacity and the impact of development is Clark Dietz's December 2, 2016 letter to the Village.

Clark Dietz recommends that the Village develop a program to perform annual preventative maintenance and infiltration and inflow (I/I) repairs on the collection system.

1.4 Priority Projects

Sewer rates were determined by identifying needed projects at the wastewater plant and in the collection system. Planning level costs were assigned to each identified improvement. Each project was also assigned an approximate time for implementation. This section summarizes the identified projects, planning level costs, and time frame at the plant (with and without an expansion project) and in the collection system.

1.4.1 Wastewater Plant Projects

Priority projects or upgrades and maintenance at the wastewater treatment plant are identified in Table 1-6. These are projects separate from the ongoing routine maintenance, labor, chemical, sludge hauling, and other routine costs for expenses at the wastewater plant. Project selection was based on discussion with the Village and a walk-through of the treatment system.

Table 1-6 Priority Projects – No Plant Expansion

Project	Approximate Time Frame	Planning Level Costs, 2018 ¹
Headworks: Pump and Screen Rehabilitation, each	Year 5, 10, and 15	\$60,000
Headworks: Influent Flow Meter	Year 1	\$35,000
Package Plant Rehabilitation, each	Year 3, 8, and 13	\$125,000
Blower: New Turbo Blower Addition	Year 4	\$300,000
Blower: Air Line Replacement	Year 1	\$10,000
Chemical: Chlorine system rehab	Year 14	\$30,000
Chemical: Sodium bisulfate rehab	Year 14	\$30,000
Chemical: Phosphorous System	Year 1	\$60,000
Effluent Flume Replacement	Year 1	\$25,000
Sludge Storage Pond Improvements	Year 12	\$50,000
Building Roof Replacement	Year 5	\$25,000
Electrical MCC Upgrades	Year 11	\$100,000
Lab Upgrades	Year 7	\$25,000
Electrical Generator Upgrades	Year 15	\$150,000

Notes:

1. This column includes planning level costs. Factors that may affect the actual cost of each project include the scope of each project, the year it is performed, and additional deficiencies that may be found when each project is being performed. Most projects identified here will require preliminary engineering to produce a more accurate cost estimate.

It is assumed that all treatment systems will continue to have regular maintenance. Over the course of the next 15 years, additional projects may come up that are not on this list but are necessary because of unanticipated equipment failure, regulatory changes, or other causes.

If the wastewater plant is expanded then most, but not all, of the upgrades listed in Table 1-6 will be required. The cost of a plant expansion, based on previous estimates performed for the Village, is assumed to be \$6,200,000 in 2018 dollars. Performing a plant expansion will change the priority projects as shown in Table 1-7.

Table 1-7 Priority Projects – No Plant Expansion

Project	Approximate Time Frame	Planning Level Costs, 2018 ¹
Headworks: Pump and Screen Rehabilitation, each	Year 5, 10, and 15	\$60,000
Headworks: Influent Flow Meter	Year 1	\$35,000
New Treatment Plant	Year 3	\$6,200,000
Chemical: Chlorine system rehab	Year 14	\$30,000
Chemical: Sodium bisulfate rehab	Year 14	\$30,000
Chemical: Phosphorous System	Year 1	\$60,000
Effluent Flume Replacement	Year 1	\$25,000
Sludge Storage Pond Improvements	Year 12	\$50,000
Building Roof Replacement	Year 5	\$25,000
Lab Upgrades	Year 7	\$25,000
Electrical Generator Upgrades	Year 15	\$150,000

Notes:

1. See note in Table 1-6.

1.4.2 Collection System Projects

The sewage collection system includes gravity sewers, lift stations, and forcemain. The mechanical equipment in the collection system is limited to the four lift stations. In addition to planning for upgrades to the lift stations, it is recommended that the Village included an annual budget for gravity sewer maintenance to limit the impact of inflow and infiltration (I&I) of stormwater into the collection system. This routine maintenance would include televising the lines to identify breaks, illegal connections, and root intrusion, smoke testing, and lining and repairs. The timeline for collection system priority projects is summarized in Table 1-8.

Table 1-8 Priority Projects – Collection System

Project	Approximate Time Frame	Planning Level Costs, 2018 ¹
Annual Sewer Improvements	Annually	\$75,000
Lift Station 1 Upgrades	Year 5	\$100,000
Lift Station 2, 3, 4 Upgrades	Year 7, 11, 14	\$75,000

Notes:

1. See note in Table 1-6.

Chapter 2 - Budget Information and Financial Projections

Village audits from 2015, 2016, and 2017 were used to determine the sewer fund revenues and expenditures. Extracts of these audits are included in Appendix A, for reference. This historic information was used determine historical trends for expenses and revenues. With the baseline historical information, we projected annual operating and maintenance expenses.

2.1 Sewer Fund Revenues

During the period of 2015 through 2017, the primary revenue of the sewer fund was service charges. These revenues are summarized below in Table 2-1.

Table 2-1 Sewer Fund Revenues

Category	2015	2016	2017	Annual Increase Assumed
Service Charges	\$464,691	\$458,948	\$454,726	0%
Other Revenue	\$38,770	\$39,097	\$32,846	3%
Total Operation Revenue	\$503,461	\$498,045	\$487,572	-

When projecting budgets 15 years into the future, it was assumed that “Other Revenue” will increase by 3% annually. Service charge increases were adjusted, as discussed later in this report, to create a balanced budget in the various scenarios that were evaluated.

2.2 Sewer Fund Expenses

During the period of 2015 through 2017, the expenses of the sewer fund are divided into the following four categories: salaries and wages, fringe benefits, commodities, and depreciation. A summary of these expenses over time is included below in Table 2-2.

Table 2-2 Sewer Fund Expenses

Category	2015	2016	2017	Annual Increase Assumed
Salaries and Wages	\$108,143	\$106,307	\$106,670	3%
Fringe Benefits	\$26,058	\$28,030	\$30,357	10%
Commodities	\$144,225	\$201,247	\$220,348	3%
Depreciation	\$87,112	\$82,844	\$87,299	1%
Total Operation Expenses	\$365,538	\$418,428	\$444,674	-
Operating Income (loss)	\$137,923	\$79,617	\$42,898	-

The assumed annual increases were discussed with the Village.

2.3 Current Debt

General obligation (GO) alternate revenue bonds were issued on November 25, 2009 to finance the acquisition, construction, and installation of sewer system improvements. The GO sewerage bonds were issued at \$1,550,000 by UMB Bank, N.A. They mature annually with interest rates ranging from 3.30% to 6.0% through their maturity on October 15, 2029. This repayment schedule is shown below in Table 2-3.

Table 2-3 Existing Loan Repayment Schedule

	Principal	Interest	Total
2018	\$70,000	\$61,100	\$131,100
2019	\$70,000	\$57,775	\$127,775
2020	\$75,000	\$54,331	\$129,331
2021	\$75,000	\$50,448	\$125,488
2022	\$80,000	\$46,225	\$126,225
2023-2027	\$440,000	\$160,638	\$600,638
2028-2039	\$315,000	\$28,950	\$343,950
Total	\$1,125,000	\$459,507	\$1,584,507

Chapter 3 - Rate Structures

Charging users the actual cost of wastewater conveyance and treatment services will guarantee the Village that the revenue needed to cover the costs of collection, operation, and treatment and will provide funds for future investments. Charging users sufficiently to recover the costs of running the collection and treatment system, will allow the Village to:

- Ensure rates are a sufficient and stable source of funds
- Ensure the system's financial health enabling the Village to safely collect and treat wastewater
- Send a signal to water customers about the value of the service that is being provided.

3.1 Common Rate Structures

Common types of rate structures include flat rates, uniform rates, and block rates.

3.1.1 Flat Rates

For flat rates, all customers pay the same amount regardless of how much water they use. These types of rate structures typically only make sense for very small systems whose customers all use about the same amount of water. These structures are generally used in communities that are not currently metered and where the cost of installing meters outweighs the benefits of having them in place. In this rate structure there is no incentive for customers to conserve.

3.1.2 Uniform Rate Structure

This rate structure is based on a customer's water consumption and requires meters. In this structure customers are charged a uniform rate per unit of water regardless of the amount of water that is used. This rate structure can also include a fixed service charge and is the type of rate structure that St. Joseph and most area communities currently have.

3.1.3 Increasing Block Rates

Increasing block rates are similar to uniform rate structures but customers are charged higher rates for successive blocks (fixed volumes). These rate structures are used to send a signal to customers about the value of the service being provided and offering a strong incentive for customers to conserve water. Decreasing block rates are also sometimes used, and instead of providing an incentive for conservation, they provide a discount for high volume use.

3.1.4 St. Joseph Rate Structure

Sewer use rates are defined in the Village's Ordinance section 7-2-2 as modified in 2006. The Village of St. Joseph uses a combination of Flat Rates and Uniform Rates. Billing periods are every two months, or six times per year. There are separate rates for inside the Village and outside the Village and for users with water meters and those without. For the most common user, those within the Village and who have metered water the rates are:

- \$25 for the first 4 units of water where each unit of water is 100 cubic feet, therefore \$25 for 2,992 gallons.
- \$3.75 for each unit or part therefore for additional water used (\$3.75 per 748 gallons).

According to the Village, a typical bill is \$45 to \$50 during each bi-monthly period. Therefore, the average house uses approximately 100 gallons of water per day.

3.2 Local Sewer Rates

As discussed above, the most common form of rate structure and the structure currently used by both St. Joseph and the surrounding communities, is the uniform rate structure. A brief comparison was made between St. Joseph and the surrounding communities as shown in Table 3-1 and associated notes.

Table 3-1 Rate Structures of St. Joseph and Surrounding Communities

Community	Fixed Fees, 2018	Gallons covered by flat rate	Volume Charge, 2018 (\$/100 cf)	Automatic Increases by Ordinance
Champaign ⁸	\$2.00	0	2.84	Yes, through 2020
Mahomet ³	\$5.00	0	7.70	Yes
Monticello ⁴	\$3.50	0	5.50	Yes, through 2025
Paxton ⁶	\$17.38	0	2.92	No
Rantoul ⁷	\$6.10	0	3.60	Yes, through 2017
St. Joeseph ⁹	\$25.00	2,992	3.75	No
Thomasboro ¹	\$32.00	0	3.18	No
Tolono ⁵	\$8.30	2,000	2.47	No
Villa Grove ²	\$21.16	1,000	5.16	Yes, through 2018

Notes:

1. Source: Thomasboro Municipal Code of Ordinances Section 4.1.4(a) for residential customers. Non-metered residential customers are charged \$57.52 per month. Commercial users are billed at the same rate unless BOD and suspended solids concentrations are high. Then, surcharges are applied to those users whose wastewater exceeds normal domestic concentrations. Rates are not increased annually by ordinance.
2. Source: Villa Grove Municipal Code of Ordinances Section 53.01. Rate increases are set by ordinance from 2015 through 2018.
3. Source: Mahomet Municipal Code of Ordinances Section 54.010. Additional charges are applied to customers who are outside of the Village's corporate limit and users who produce high-strength wastewater. Pretreatment for qualifying industrial users is required. City Ordinance requires rates to be set by dividing expenses amongst users, rates are reviewed by the Village Treasurer annually.
4. Source: Monticello Municipal Code of Ordinances Section 53.051. Additional charges are applied to customers with high concentrations of BOD or suspended solids. The Ordinance sets rate increases annually from 2016 through 2025. The rate per 100 cf unit increases from \$3.50 in 2016 to \$12.50 in 2025.
5. Source: Tolono Municipal Ordinance No. 2010-O-10. Water and sewer rates are combined for the Village of Tolono. There are additional surcharges for BOD above 200 mg/l.
6. Source: Paxton Municipal Code of Ordinances Section 51.66. Users are billed every two months. Users who obtain water from other sources may install their own meter and are billed at a rate of \$3.15/1,000 gallons. Paxton bills water and sewer in a combined bill. We assumed that half of this charge would be for sewer service so took Paxton's rates and divided them by half for this comparison.
7. Source: Rantoul Municipal Ordinance 2346. For commercial users, the fixed fee is \$51.00. Surcharges are applied for BOD above 200 mg/l, suspended solids about 200 mg/l, and phosphorous above 5 mg/l.
8. Source: Urbana & Champaign Sanitary District Ordinance No 702. Rates shown are for domestic users. Bill contains both a charge from the Sanitary District and a charge for each individual

community for sewer use. A fixed billing charge is applied. Increases are set by ordinance from 2017 through 2020.

9. Source: St. Joe Municipal Ordinance No. 2011-1. Outside Village limits, the flat rate is \$35.00 and \$5.50/100 cu. ft. There are additional surcharges for industrial and other nondomestic strength users.

We took the rates shown in Table 3-1 and applied them to the volume associated with the average sewer bill at St. Joseph, which is approximately 1,000 cubic feet. The comparison is shown in Figure 3-1. This chart accounts for the fact that St. Joe sends out sewer bills every other month, while several of the other communities bill every month. It should also be noted that while Champaign’s bill is the lowest for sanitary sewer charges, but Champaign and Urbana have a separate storm water utility fee that is added to the sanitary fee. The fee shown here is only for the sanitary sewer portion of the fee.

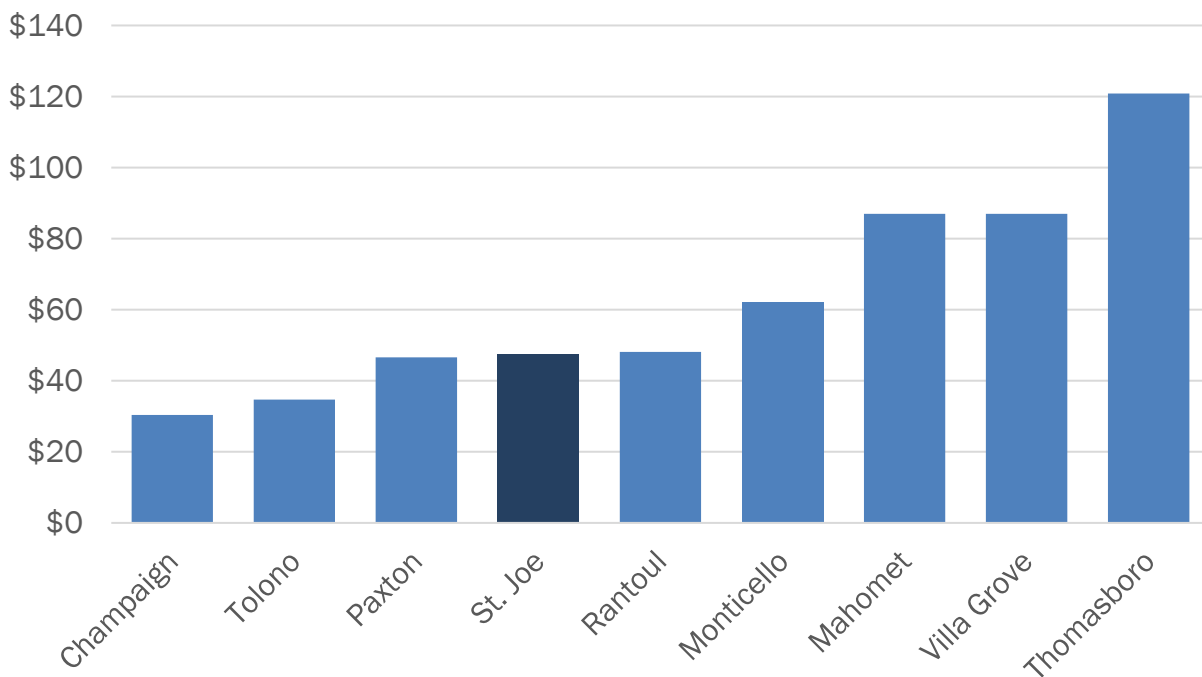


Figure 3-1 Monthly Sewer Charge Based on 1,000 cubic feet

3.3 Sewer Connection Fees

Another source of revenue for the sewer fund, and a way to help the Village recapture the costs of adding additional flow to the collection system and wastewater plant are through sewer connection fees. The table below shows a comparison between the connection fees of St. Joseph and the surrounding communities. Based on this table, the current local sewer connection fees seem appropriate for the Village.

Figure 3-2 Local Sewer Connection Fees

Community	Sewer Connection Fees, 2018
Villa Grove ²	\$ 100
Thomasboro ¹	\$ 250
Paxton ⁶	\$ 350
Rantoul ⁷	\$ 400
Tolono ⁵	\$ 450
Monticello ⁴	\$ 750
Mahomet ³	\$ 775
St. Joeseph ⁹	\$ 1,500
Champaign ⁸	\$ 2,611

Notes:

1. Source: Thomosboro Municipal Code of Ordinances Chapter 10, Section 4.D.(1) A permit and inspection fee of \$10.00 for a residential or commercial building sewer permit shall be paid to the Village at the time the application is filed.
2. Source: Villa Grove Municipal Code Ordinances Section 53.03.A.(1)
3. Source: Mahomet Municipal Code of Ordinances Section 55.004 (A). The connection fee shall be determined by the fee schedule set forth in Section 55.004 (A). For ¾ ID to 1 inch ID service, connection fee of \$775.00 is applied.
4. Source: Monticello Municipal Code of Ordinances Section 53.017 (C)
5. Source: Tolono Municipal Ordinance No. 1997-09 Section 13.20.830 for single residence. Multiple family dwelling are charged at \$450.00 plus \$100.00 per residential unit for a multiple family dwelling. Commercial users are charged at \$700.00 per connection. Rates have not been updated since 1997.
6. Source: Paxton Municipal Code of Ordinances Section 51.23 for residential user. Commercial/Industrial/Institutional users at charged at \$ 450.00 (Section 51.25)
7. Source: Rantoul Municipal Ordinance 2346. This includes a \$300 connection fee plus a \$100 fee for residential units. Commercial and industrial users have additional requirement and fee calculations.
8. Source: Urbana & Champaign Ordinance No 698. The connection fee is implemented per population equivalent (PE) and a single family residence is 3.5 PE. UCSD fees include a connection fee (\$441/PE), an interceptor cost recovery fee (\$335/PE). Fees are set to automatically increase every year.
9. Source: St. Joseph, Illinois Village Code: Section 7-2-2 (D) for residential users. Commercial and industrial users at charged at \$ 607.00 per PE.

Chapter 4 - Rate Increase Scenarios

To analyze potential sewer charge rate increases needed for the Village of St. Joseph Sewer Fund, four scenarios were evaluated. These scenarios are:

- Scenario 1: Do Nothing – No Rate Increase, No Upgrades
- Scenario 2: No Upgrades – Increase rates to maintain the same approximate Net Position End of Year as is currently in the Sewer Fund
- Scenario 3: Maintain the Existing Plant – Increase rates to maintain a functional sewer plant and maintain the same approximate Net Position End of Year as is currently in the Sewer Fund
- Scenario 4: Expand the Plant – Increase Rates to expand the capacity of the wastewater treatment plant and maintain the same approximate Net Position End of Year as is currently in the Sewer Fund.

4.1 Scenario 1

For Scenario 1 revenue is flat as there is no increase in Charges for Service. Expenses increase as the cost of salaries, fringe benefits, and commodities all increase over time. The only capital project is the addition of a chemical phosphorous removal system, required by the wastewater plant permit. Therefore, the net position of the Sewer Fund at the end of the year decreases annually. The financial model for this scenario is summarized in Figure 4-1, the detailed spreadsheets are included in Appendix B.

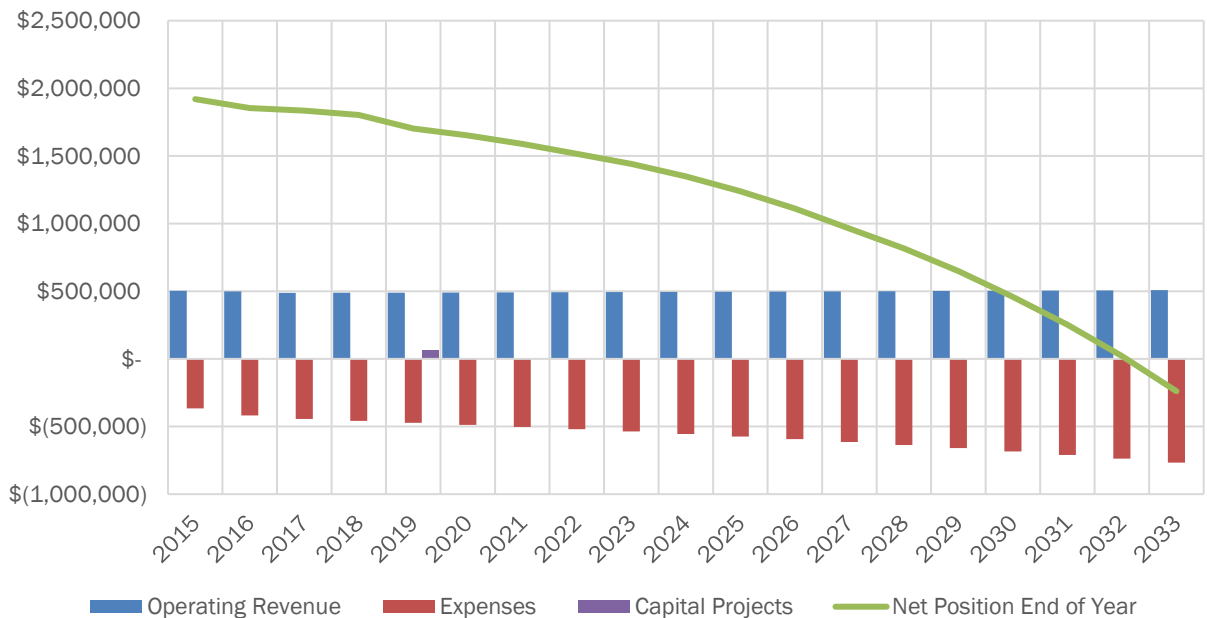


Figure 4-1 Scenario 1 – Financial Model

4.2 Scenario 2

Scenario 2 is very similar to Scenario 1, except that Charges for Service is increased at a rate of 3% per year to keep the Net Position End of Year approximately flat. The financial model for this scenario is summarized in Figure 4-2; the detailed spreadsheets are included in Appendix B.

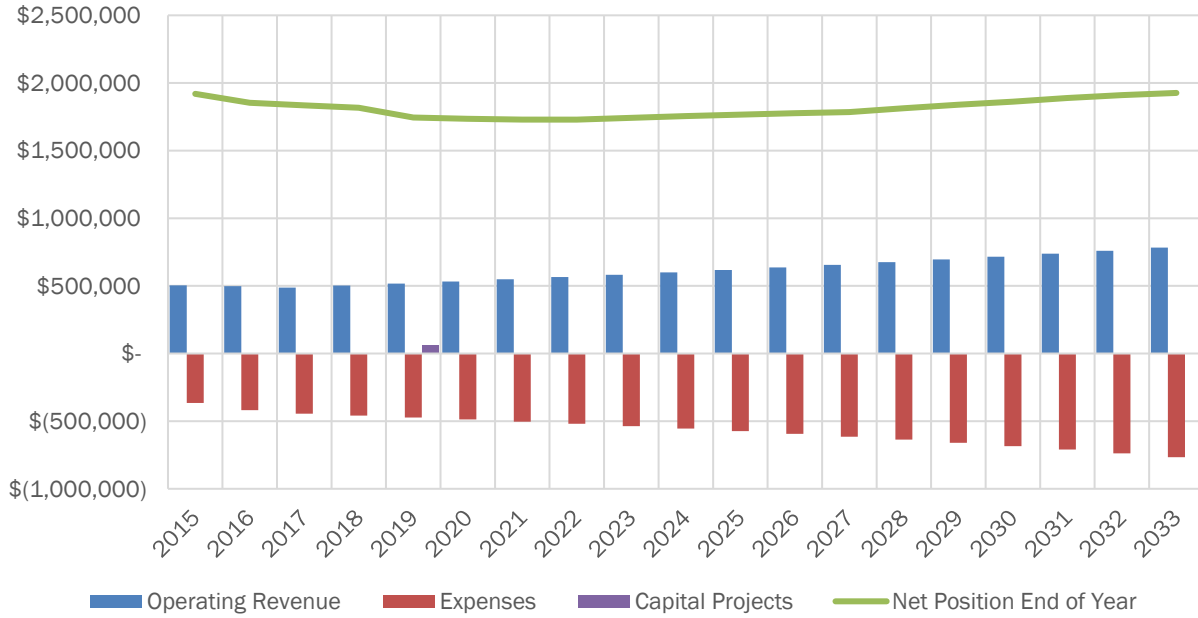


Figure 4-2 Scenario 2 - Financial Model

4.3 Scenario 3

In Scenario 3, the capital projects for maintenance of the wastewater plant and sewer collection system, as described in Chapter 1.4 are added. Steady increases at 7.4% in the Charges for Service are added so that revenue increases to cover both regular expenses and the cost of the capital projects. The financial model for this scenario is summarized in Figure 4-3, the detailed spreadsheets are included in Appendix B.

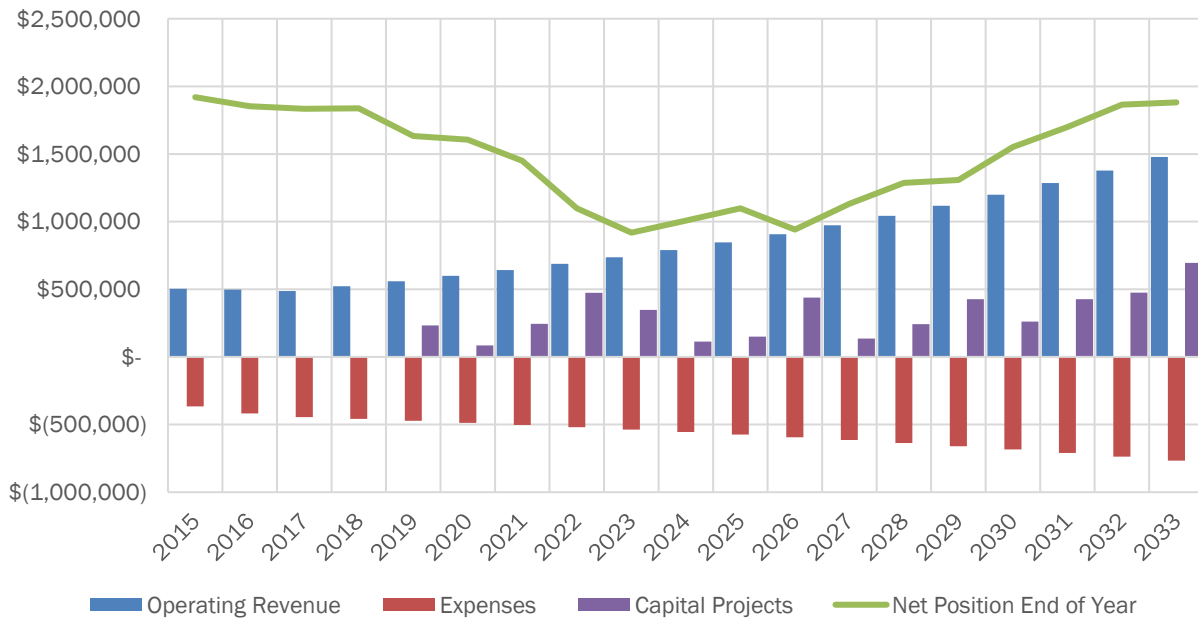


Figure 4-3 Scenario 3a - Financial Model

A variation on Scenario 3a, “Scenario 3b” was evaluated to determine the average bill for this scenario if variable percentage increases are used.³ Charges for Service in the Sewer Fund Audit is the annual income to the sewer fund from usage fees. As described in Section 3.1.4, in St. Joseph user fees includes both a flat fee and a usage fee.

Based on discussions with the Village, for Scenario 3b, both the fixed and the usage fees were increased to simulate approximately the same operating revenues as in Scenario 3a. The fees were also divided to several categories based on the expenses that they are covering to demonstrate the need for the revenue increases. These categories are:

- Capital Maintenance: Replacing equipment at the end of their design life including both at the wastewater plant and in the sewer system.
- Operation: Chemical, labor, and power costs
- Expansion: Required increases for capacity expansions needs

To maintain the End of Year Net Position at approximately \$2,000,000 ± \$700,000 under this Scenario requires volumetric charges to be increased according to the schedule in Table 4-1 with the resulting impact to Net Position as shown in Figure 4-4 . Table 4-1 also shows the resulting impact on the average user’s bi-monthly bill.

Table 4-1 Scenario 3b – Volumetric Charge and Average Bill

Year	Flat Fee (\$/bimonthly bill)			Average Use Fee ⁵ (\$/100 cf after the first 400 cf)			Average Bi- Monthly Bill ⁵	% Increase
	Capital Maintenance ¹	Operation ²	Plant Expansion	Capital Maintenanc e ³	Operation ⁴	Plant Expansion		
2018	\$0.00	\$25.00	\$0.00	\$0.00	\$22.50	\$0.00	\$47.50	-
2019	\$5.00	\$26.00	\$0.00	\$6.00	\$23.40	\$0.00	\$60.40	15.8%
2020	\$5.30	\$27.00	\$0.00	\$6.60	\$24.60	\$0.00	\$63.50	13.6%
2021	\$5.60	\$28.10	\$0.00	\$7.20	\$25.80	\$0.00	\$66.70	12.0%
2022	\$5.90	\$29.20	\$0.00	\$7.80	\$27.00	\$0.00	\$69.90	10.7%
2023	\$6.30	\$30.40	\$0.00	\$8.40	\$28.20	\$0.00	\$73.30	5.8%
2024	\$6.70	\$31.60	\$0.00	\$9.00	\$29.40	\$0.00	\$76.70	5.5%
2025	\$7.10	\$32.90	\$0.00	\$9.60	\$30.60	\$0.00	\$80.20	5.2%
2026	\$7.50	\$34.20	\$0.00	\$10.20	\$32.40	\$0.00	\$84.30	3.3%
2027	\$8.00	\$35.60	\$0.00	\$10.80	\$34.20	\$0.00	\$88.60	3.2%
2028	\$8.50	\$37.00	\$0.00	\$11.40	\$36.00	\$0.00	\$92.90	3.1%
2029	\$9.00	\$38.50	\$0.00	\$12.00	\$37.80	\$0.00	\$97.30	3.0%
2030	\$9.50	\$40.00	\$0.00	\$12.60	\$39.60	\$0.00	\$101.70	2.9%
2031	\$10.10	\$41.60	\$0.00	\$13.20	\$41.40	\$0.00	\$106.30	2.8%
2032	\$10.70	\$43.30	\$0.00	\$13.80	\$43.20	\$0.00	\$111.00	2.8%
2033	\$11.30	\$45.00	\$0.00	\$14.40	\$45.00	\$0.00	\$115.70	2.7%

Note:

1. The Capital Maintenance portion of the flat fee is \$5 the first year and then approximately 6% annual increases thereafter.
2. The Operation portion of the flat fee is approximately 4% annual increases.
3. The Capital Maintenance portion of the use fee is approximately \$1/100 cf (after the first 400 cf) the first year and then approximately 6% annual increases thereafter.

³ If a flat percentage is used to raise user fees then either the Sewer Fund Net Position drops towards zero in the early years before recovering if the rate is too low, or the Sewer Fund Net Position increases significantly over the \$2,000,000 mark that is the Village’s goal at the end of the period. A variable percentage increase in bill increases allows the fund to more closely maintain a constant balance over time.

4. The Operation portion of the use fee is approximately 4% annual increases on the existing \$3.75/100 cf of usage fees above the first 400 cf.
5. Calculations for average use fee assume 1,000 cf per bi-monthly billing, or 3,740 gallons/month.

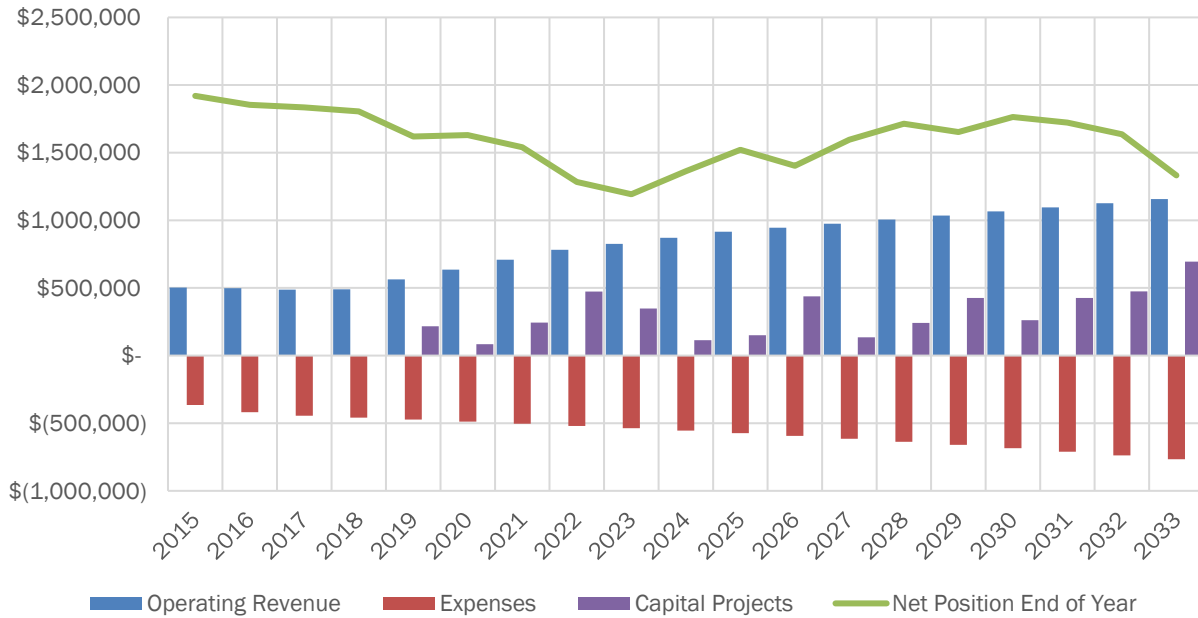


Figure 4-4 Scenario 3b – Financial Model

4.4 Scenario 4

In Scenario 4, the capital projects for maintenance of the wastewater plant and sewer collection system, as described in Chapter 1.4, are added. Steady increases of approximately 12% in the Charges for Service in the sewer rates are added so that revenue increases to cover both expenses and capital projects. The financial model for this scenario is summarized in Figure 4-5; the detailed spreadsheets are included in Appendix B.

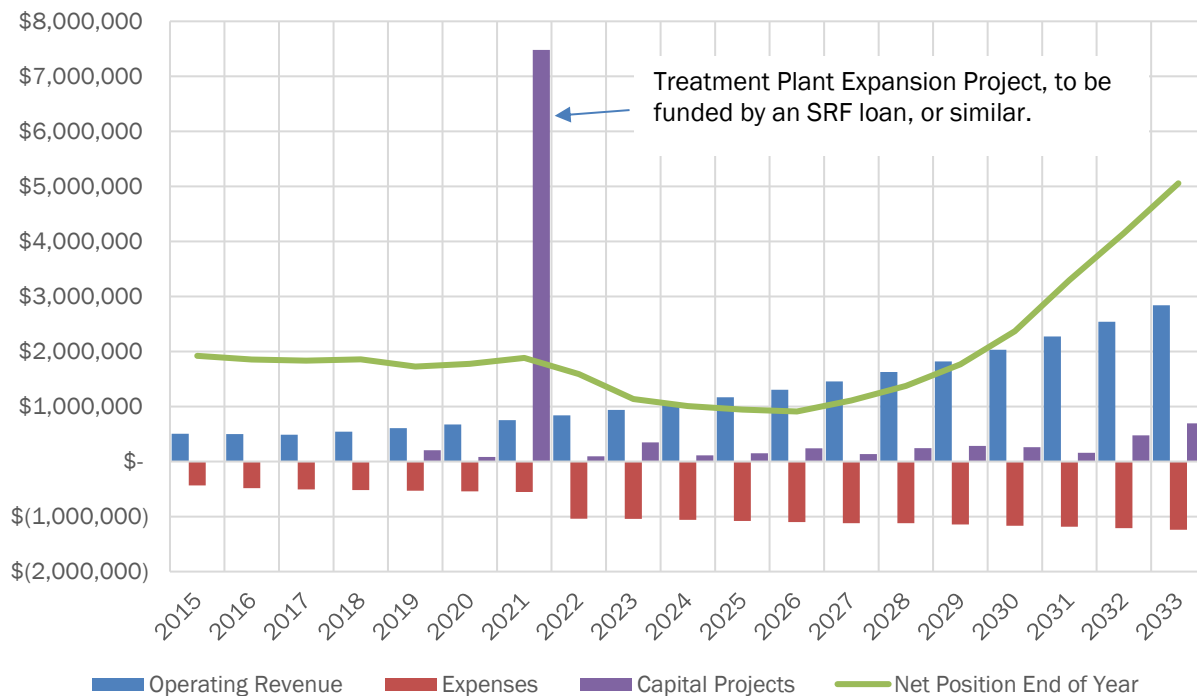


Figure 4-5 Scenario 4a – Financial Model

The treatment plant expenses shown for 2021 in Figure 4-5 would be funded by a State Revolving Fund (SRF) loan, or similar mechanism. For this model, it was assumed that the repayment would be a 20-year term at a 2.5% interest rate. This model has a constant annual 10% increase in charges for service. This will be useful through the late 2020s but continuing after with these percentage increases is not necessary and will be expensive for users.

As we did with Scenario 3, a variation on Scenario 4, “Scenario 4b” was evaluated to determine the average bill for this scenario if variable percentage increases are used. Based on discussions with the Village, for Scenario 4b, both the fixed and the usage fees were increased to simulate approximately the same operating revenues as in Scenario 4a, without large “net position” at the end of the 15 year planning period that Scenario 4a has. The fees were also divided to several categories based on the expenses that they are covering to demonstrate the need for the revenue increases. These categories are:

- Capital Maintenance: Replacing equipment at the end of their design life including both at the wastewater plant and in the sewer system.
- Operation: Chemical, labor, and power costs
- Expansion: Required increases for capacity expansions needs

To maintain the End of Year Net Position at approximately \$2,000,000 ± \$500,000 under this Scenario requires volumetric charges to be increased according to the schedule in Table 4-2 with the resulting impact to Net Position as shown in Figure 4-6. Table 4-2 also shows the resulting impact on the average user’s bi-monthly bill.

Table 4-2 Scenario 4b – Volumetric Charge and Average Bill

Year	Flat Fee (\$/monthly bill)	Use Fee (\$/100 cf)	Average Use Fee ¹ (\$/100 cf after the first 200 cf)	Use Fee (\$/100 gallons)	Average Use Fee ¹ (\$/100 gallons after the first 1500 gal)	Average Monthly Bill	% Increase
		Cubic Feet		Gallons			
2018	\$12.50	\$3.75	\$11.25	\$0.50	\$23.75	\$23.75	-
2019	\$15.00	\$5.25	\$15.75	\$0.70	\$30.75	\$30.75	29.5%
2020	\$17.50	\$7.00	\$21.00	\$0.93	\$38.50	\$38.50	25.2%
2021	\$20.00	\$9.00	\$27.00	\$1.20	\$47.00	\$47.00	22.1%
2022	\$20.40	\$10.75	\$32.25	\$1.43	\$52.65	\$52.65	12.0%
2023	\$20.80	\$12.50	\$37.50	\$1.67	\$58.30	\$58.30	10.7%
2024	\$21.20	\$13.20	\$39.60	\$1.76	\$60.80	\$60.80	4.3%
2025	\$21.60	\$13.90	\$41.70	\$1.85	\$63.30	\$63.30	4.1%
2026	\$22.00	\$14.60	\$43.80	\$1.95	\$65.80	\$65.80	3.9%
2027	\$22.40	\$15.40	\$46.20	\$2.05	\$68.60	\$68.60	4.3%
2028	\$22.80	\$16.20	\$48.60	\$2.16	\$71.40	\$71.40	4.1%
2029	\$23.30	\$17.10	\$51.30	\$2.28	\$74.60	\$74.60	4.5%
2030	\$23.80	\$18.00	\$54.00	\$2.40	\$77.80	\$77.80	4.3%
2031	\$24.30	\$18.90	\$56.70	\$2.52	\$81.00	\$81.00	4.1%
2032	\$24.80	\$19.90	\$59.70	\$2.65	\$84.50	\$84.50	4.3%
2033	\$25.30	\$20.90	\$62.70	\$2.79	\$88.00	\$88.00	4.1%

Note:

1. Calculations for average use fee assume 3,740 gallons/month.

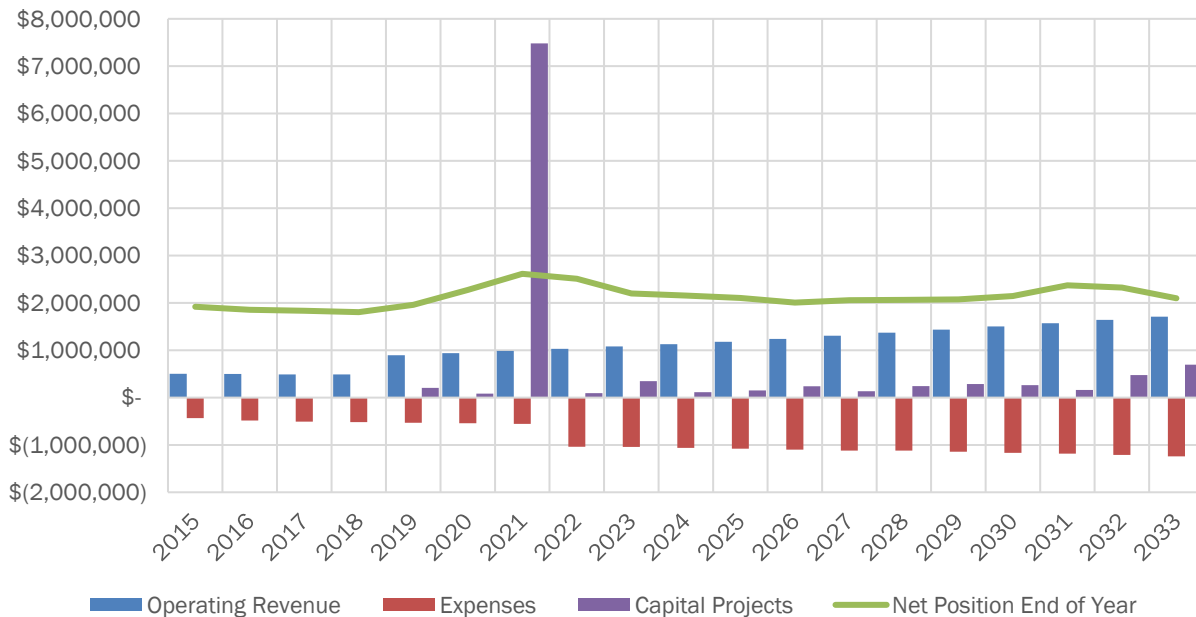


Figure 4-6 Scenario 4b – Financial Model

Chapter 5 - Recommendation

Scenarios 1 and 2 are impractical for the Village to keep their wastewater treatment plant and collection system in working order for the long-term. Proceeding with either of these scenarios is not recommended.

If no additional growth is anticipated in the Village, and if the high wet-weather infiltration from some areas of town are found and managed so that flow to the wastewater plant does not increase significantly, then the rate increases associated with Scenario 3 is sufficient.

If, however, the Village plans to expand their wastewater treatment capabilities for additional growth within the system, then the rate increases associated with Scenario 4 will be required. When the Village has decided on which scenario to use for planning purposes, Clark Dietz can make suggested changes to the language in Ordinance 7-2-2.

The 2019 recommended rates for Scenarios 3b (Table 4-1) and Scenario 4b (Table 4-2) were used to update the chart comparing 2018 sewer bills shown in Table 3-1. This updated comparison is shown in Figure 5-1.

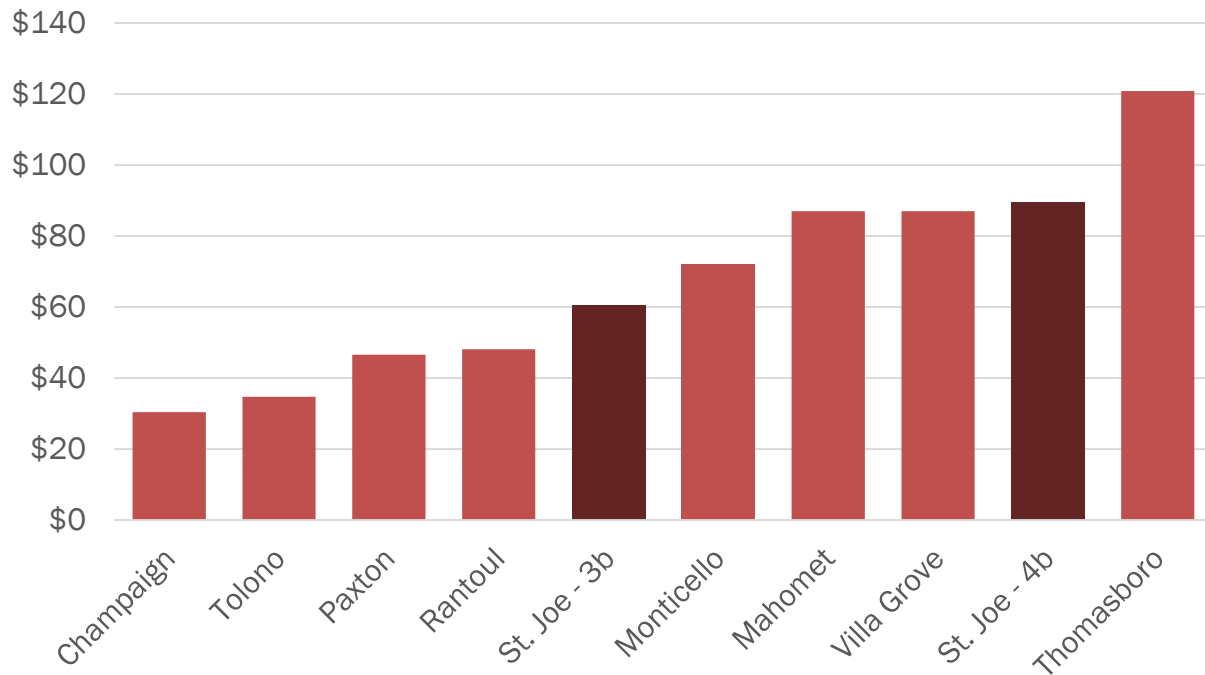


Figure 5-1 2019 Monthly Sewer Charge Based on 1,000 cubic feet

Appendix A

Audit for the Fiscal Year Ended April 30, 2015 – Sewer Fund Extract

Audit for the Fiscal Year Ended April 30, 2016 – Sewer Fund Extract

Audit for the Fiscal Year Ended April 30, 2017 – Sewer Fund Extract

VILLAGE OF ST. JOSEPH

St. Joseph, Illinois

Proprietary Funds
Statement of Net Position

April 30, 2015

	Business-Type Activities Major Funds Enterprise Funds		Total Proprietary Funds
	Sewer Fund	Sewer Plant Upgrade Fund	
<u>ASSETS</u>			
CURRENT ASSETS:			
Cash and Equivalents	\$ 72,498	\$ 117,443	\$ 189,941
Investments	525,000	-	525,000
Accounts Receivable - Customers	88,515	-	88,515
Prepaid Items	7,234	-	7,234
Total Current Assets	<u>693,247</u>	<u>117,443</u>	<u>810,690</u>
Capital Assets:			
Non-Depreciating Assets	7,500	-	7,500
Buildings and Building Improvements	1,427,322	1,149,003	2,576,325
Land Improvements	268,938	-	268,938
Equipment and Vehicles	238,191	-	238,191
Less Accumulated Depreciation	(579,345)	(126,845)	(706,190)
Total Capital Assets, Net	<u>1,362,606</u>	<u>1,022,158</u>	<u>2,384,764</u>
Total Assets	<u>2,055,853</u>	<u>1,139,601</u>	<u>3,195,454</u>
<u>LIABILITIES</u>			
CURRENT LIABILITIES:			
Accounts Payable	7,321	-	7,321
Accrued Salaries	5,377	-	5,377
Accrued Bond Interest	-	2,835	2,835
Customer Deposits	(59)	-	(59)
Current Portion of Bonds Payable	-	65,000	65,000
Total Current Liabilities	<u>12,639</u>	<u>67,835</u>	<u>80,474</u>
NON-CURRENT LIABILITIES:			
Bonds Payable	-	1,195,000	1,195,000
Total Non-Current Liabilities	<u>-</u>	<u>1,195,000</u>	<u>1,195,000</u>
Total Liabilities	<u>12,639</u>	<u>1,262,835</u>	<u>1,275,474</u>
<u>NET POSITION</u>			
Net Investment in Capital Assets	1,362,606	(237,842)	1,124,764
Restricted for Prepaid Items	7,234	-	7,234
Unrestricted	673,374	114,608	787,982
Total Net Position	<u>\$ 2,043,214</u>	<u>\$ (123,234)</u>	<u>\$ 1,919,980</u>

The Notes to Financial Statements are an integral part of this statement.

VILLAGE OF ST. JOSEPH

St. Joseph, Illinois

Proprietary Funds
Statement of Revenues, Expenses, and Changes in Net Position
For the Fiscal Year Ended April 30, 2015

	Business-Type Activities Major Funds Enterprise Funds		Total Proprietary Funds
	Sewer Fund	Sewer Plant Upgrade Fund	
<u>Operating Revenues:</u>			
Charges for Services	\$ 464,691	\$ -	\$ 464,691
Other Revenue	15,966	22,804	38,770
Total Operating Revenues	<u>480,657</u>	<u>22,804</u>	<u>503,461</u>
<u>Operating Expenses:</u>			
Current:			
Utility Services:			
Salaries and Wages	108,143	-	108,143
Fringe Benefits	26,058	-	26,058
Commodities	144,225	-	144,225
Depreciation	58,387	28,725	87,112
Total Operating Expenses	<u>336,813</u>	<u>28,725</u>	<u>365,538</u>
Operating Income (Loss)	<u>143,844</u>	<u>(5,921)</u>	<u>137,923</u>
<u>Nonoperating Revenues (Expenses):</u>			
Interest Income	735	167	902
Interest Expense	-	(70,220)	(70,220)
Transfers In	-	112,500	112,500
Transfers Out	(112,500)	-	(112,500)
Net Nonoperating Revenues (Expenses)	<u>(111,765)</u>	<u>42,447</u>	<u>(69,318)</u>
Change in Net Position	32,079	36,526	68,605
Net Position - Beginning of Year	<u>2,011,135</u>	<u>(159,760)</u>	<u>1,851,375</u>
Net Position - End of Year	<u>\$ 2,043,214</u>	<u>\$ (123,234)</u>	<u>\$ 1,919,980</u>

The Notes to Financial Statements are an integral part of this Statement.

VILLAGE OF ST. JOSEPH, ILLINOIS
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
APRIL 30, 2016

	<u>Business-Type Activities - Enterprise Funds</u>
	<u>Sewer Fund</u>
ASSETS	
Current assets:	
Cash and cash equivalents	\$ 146,538
Investments	600,000
Total current assets	<u>746,538</u>
Noncurrent assets:	
Capital assets:	
Land	7,500
Property, plant and equipment	3,083,454
Accumulated depreciation	<u>(789,034)</u>
Total noncurrent assets	<u>2,301,920</u>
Total Assets	<u>3,048,458</u>
LIABILITIES	
Current Liabilities :	
Bonds payable - current	<u>70,000</u>
Total current liabilities	<u>70,000</u>
Noncurrent Liabilities:	
Bonds payable	<u>1,125,000</u>
Total noncurrent liabilities	<u>1,125,000</u>
Total Liabilities	<u>1,195,000</u>
NET POSITION	
Net investment in capital assets	1,106,920
Restricted by debt covenants	40,670
Unrestricted	<u>705,868</u>
Total Net Position	<u>\$ 1,853,458</u>

The notes to basic financial statements are an integral part of this statement.

VILLAGE OF ST. JOSEPH, ILLINOIS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUNDS
FOR THE YEAR ENDED APRIL 30, 2016

	Business-Type Activities - Enterprise Funds
	Sewer Fund
Operating Revenues:	
Charges for services	\$ 458,948
Miscellaneous	39,097
Total operating revenues	498,045
Operating Expenses:	
Salaries and wages	106,307
Fringe benefits	28,030
Commodities	201,247
Depreciation	82,844
Total operating expenses	418,428
Operating Income (Loss)	79,617
Non Operating Revenues (Expenses):	
Interest income	1,768
Interest expense	(67,631)
Total non operating revenues (expenses)	(65,863)
Change in net position	13,754
Fund balances - beginning of the year, originally stated	1,919,980
Cumulative effect of change in accounting principle	(80,276)
Fund balances - beginning of the year, as restated	1,839,704
Fund balances - end of year	\$ 1,853,458

The notes to basic financial statements are an integral part of this statement.

VILLAGE OF ST. JOSEPH, ILLINOIS
STATEMENT OF NET POSITION - MODIFIED CASH BASIS
PROPRIETARY FUND
APRIL 30, 2017

	<u>Business-Type Activities - Enterprise Fund</u>
	<u>Sewer Fund</u>
ASSETS	
Current assets:	
Cash and cash equivalents	\$ 153,253
Investments	565,000
Total current assets	<u>718,253</u>
Capital assets:	
Land	7,500
Property, plant and equipment	3,110,184
Accumulated depreciation	(876,333)
Total net capital assets	<u>2,241,351</u>
Total assets	<u>2,959,604</u>
LIABILITIES	
Current liabilities:	
Bonds payable - current	70,000
Noncurrent liabilities:	
Bonds payable	1,055,000
Total liabilities	<u>1,125,000</u>
NET POSITION	
Net investment in capital assets	1,116,351
Restricted by debt covenants	40,532
Unrestricted	677,721
Total net position	<u>\$ 1,834,604</u>

The notes to basic financial statements are an integral part of this statement.

VILLAGE OF ST. JOSEPH, ILLINOIS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION -
MODIFIED CASH BASIS
PROPRIETARY FUND
FOR THE YEAR ENDED APRIL 30, 2017

	Business-Type Activities - Enterprise Fund
	Sewer Fund
Operating revenues:	
Charges for services	\$ 454,726
Miscellaneous	32,846
Total operating revenues	487,572
Operating expenses:	
Salaries and wages	106,670
Fringe benefits	30,357
Commodities	220,348
Depreciation	87,299
Total operating expenses	444,674
Operating income (loss)	42,898
Nonoperating revenues (expenses):	
Interest income	2,733
Interest expense	(64,485)
Total nonoperating revenues (expenses)	(61,752)
Change in net position	(18,854)
Net position - beginning of year	1,853,458
Net position - end of year	\$ 1,834,604

The notes to basic financial statements are an integral part of this statement.

Appendix B

Financial Model Spreadsheets

Village of St. Joseph
Sewer Rate Study

SCENARIO 1: NO MAINTENANCE, NO RATE INCREASES

REVENUE STATEMENT	Increases	REVENUE, EXPENSE, CHANGE IN NET POSITION			PROJECTION															
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Operating Revenue																				
Charges for Services	0%	\$ 464,691	\$ 458,948	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726	\$ 454,726
Other Revenue	3%	\$ 38,770	\$ 39,097	\$ 32,846	\$ 33,831	\$ 34,846	\$ 35,892	\$ 36,968	\$ 38,078	\$ 39,220	\$ 40,396	\$ 41,608	\$ 42,857	\$ 44,142	\$ 45,467	\$ 46,831	\$ 48,235	\$ 49,683	\$ 51,173	\$ 52,708
Total Operating Revenue		\$ 503,461	\$ 498,045	\$ 487,572	\$ 488,557	\$ 489,572	\$ 490,618	\$ 491,694	\$ 492,804	\$ 493,946	\$ 495,122	\$ 496,334	\$ 497,583	\$ 498,868	\$ 500,193	\$ 501,557	\$ 502,961	\$ 504,409	\$ 505,899	\$ 507,434
Operating Expense																				
Salaries and Wages	3%	\$ (108,143)	\$ (106,307)	\$ (106,670)	\$ (109,870)	\$ (113,166)	\$ (116,561)	\$ (120,058)	\$ (123,660)	\$ (127,370)	\$ (131,191)	\$ (135,126)	\$ (139,180)	\$ (143,356)	\$ (147,656)	\$ (152,086)	\$ (156,648)	\$ (161,348)	\$ (166,188)	\$ (171,174)
Fringe Benefits	10%	\$ (26,058)	\$ (28,030)	\$ (30,357)	\$ (33,393)	\$ (36,732)	\$ (40,405)	\$ (44,446)	\$ (48,890)	\$ (53,779)	\$ (59,157)	\$ (65,073)	\$ (71,580)	\$ (78,738)	\$ (86,612)	\$ (95,273)	\$ (104,801)	\$ (115,281)	\$ (126,809)	\$ (139,490)
Commodities	3%	\$ (144,225)	\$ (201,247)	\$ (220,348)	\$ (226,958)	\$ (233,767)	\$ (240,780)	\$ (248,004)	\$ (255,444)	\$ (263,107)	\$ (271,000)	\$ (279,130)	\$ (287,504)	\$ (296,129)	\$ (305,013)	\$ (314,164)	\$ (323,588)	\$ (333,296)	\$ (343,295)	\$ (353,594)
Depreciation	1%	\$ (87,112)	\$ (82,844)	\$ (87,299)	\$ (88,172)	\$ (89,054)	\$ (89,944)	\$ (90,844)	\$ (91,752)	\$ (92,670)	\$ (93,596)	\$ (94,532)	\$ (95,478)	\$ (96,432)	\$ (97,397)	\$ (98,371)	\$ (99,354)	\$ (100,348)	\$ (101,351)	\$ (102,365)
Total Operating Expenses		\$ (365,538)	\$ (418,428)	\$ (444,674)	\$ (458,393)	\$ (472,719)	\$ (487,691)	\$ (503,351)	\$ (519,746)	\$ (536,926)	\$ (554,944)	\$ (573,862)	\$ (593,742)	\$ (614,655)	\$ (636,678)	\$ (659,893)	\$ (684,392)	\$ (710,273)	\$ (737,644)	\$ (766,622)
Operating Income (Loss)		\$ 137,923	\$ 79,617	\$ 42,898	\$ 30,164	\$ 16,853	\$ 2,927	\$ (11,657)	\$ (26,942)	\$ (42,980)	\$ (59,822)	\$ (77,528)	\$ (96,160)	\$ (115,787)	\$ (136,486)	\$ (158,337)	\$ (181,431)	\$ (205,864)	\$ (231,745)	\$ (259,188)
Nonoperating Revenues (Expenses)																				
Net Non Operating Revenues (Expenses)		\$ (69,318)	\$ (65,863)	\$ (61,752)	\$ (61,100)	\$ (57,775)	\$ (54,331)	\$ (50,488)	\$ (46,225)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ -	\$ -	\$ 1
Changes in accounting principle		\$ -	\$ (80,276)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Position - Beginning of Year		\$ 1,851,375	\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,803,668	\$ 1,702,746	\$ 1,651,342	\$ 1,589,198	\$ 1,516,030	\$ 1,440,923	\$ 1,348,974	\$ 1,239,318	\$ 1,111,031	\$ 963,116	\$ 816,981	\$ 648,994	\$ 457,913	\$ 252,049	\$ 20,305
Net Position End of Year		\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,803,668	\$ 1,702,746	\$ 1,651,342	\$ 1,589,198	\$ 1,516,030	\$ 1,440,923	\$ 1,348,974	\$ 1,239,318	\$ 1,111,031	\$ 963,116	\$ 816,981	\$ 648,994	\$ 457,913	\$ 252,049	\$ 20,305	\$ (238,883)
Assumed Capital Inflation	6%																			
Capital Projects - Plant Operations					Planning Costs (2018 Dollars)															
Headworks - 2 pump, 1 screen rehabilitation, each					\$ 60,000															
Headworks - influent flow meter					\$ 35,000															
Package Plants - Rehab Plant 1					\$ 125,000															
Package Plants - Rehab Plant 2					\$ 125,000															
Package Plants - Rehab Plant 3					\$ 125,000															
Package Plants - Rehab Plant 4					\$ 125,000															
Blowers - New Turbo Blower					\$ 300,000															
Blowers - Air piping repairs					\$ 10,000															
Chemical Addition - Chlorine system rehab					\$ 30,000															
Chemical Addition - Sodium bisulfate system rehab					\$ 30,000															
Chemical Addition - Alum for phosphorous removal					\$ 60,000	\$ 60,000														
Effluent Flume - Resize for existing flows					\$ 25,000															
Sludge Storage Pond Rehab					\$ 50,000															
Building Roof Replacement					\$ 25,000															
Building Mechanical Maintenance, periodic upgrades					\$ 5,000															
Electrical MCC Upgrades					\$ 100,000															
Lab Upgrades					\$ 25,000															
Electrical Generator					\$ 150,000															
Subtotal Plant Operations					\$ 1,405,000	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Projects - Collection System																				
Annual sewer improvements: CCTV, smoke testing, lining or repairs					\$ 75,000															
Lift Station Upgrades - Station 1					\$ 100,000															
Lift Station Upgrades - Station 2					\$ 75,000															
Lift Station Upgrades - Station 3					\$ 75,000															
Lift Station Upgrades - Station 4					\$ 75,000															
Subtotal Collection System					\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Project Expenses					\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Village of St. Joseph
Sewer Rate Study

SCENARIO 2: NO MAINTENANCE, RATE INCREASES TO MAINTAIN FUND

REVENUE STATEMENT	Increases	REVENUE, EXPENSE, CHANGE IN NET POSITION					PROJECTION													
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Operating Revenue																				
Charges for Services	3%	\$ 464,691	\$ 458,948	\$ 454,726	\$ 468,368	\$ 482,419	\$ 496,891	\$ 511,798	\$ 527,152	\$ 542,967	\$ 559,256	\$ 576,033	\$ 593,314	\$ 611,114	\$ 629,447	\$ 648,331	\$ 667,780	\$ 687,814	\$ 708,448	\$ 729,702
Other Revenue	3%	\$ 38,770	\$ 39,097	\$ 32,846	\$ 33,831	\$ 34,846	\$ 35,892	\$ 36,968	\$ 38,078	\$ 39,220	\$ 40,396	\$ 41,608	\$ 42,857	\$ 44,142	\$ 45,467	\$ 46,831	\$ 48,235	\$ 49,683	\$ 51,173	\$ 52,708
Total Operating Revenue		\$ 503,461	\$ 498,045	\$ 487,572	\$ 502,199	\$ 517,265	\$ 532,783	\$ 548,767	\$ 565,230	\$ 582,186	\$ 599,652	\$ 617,642	\$ 636,171	\$ 655,256	\$ 674,914	\$ 695,161	\$ 716,016	\$ 737,496	\$ 759,621	\$ 782,410
Operating Expense																				
Salaries and Wages	3%	\$ (108,143)	\$ (106,307)	\$ (106,670)	\$ (109,870)	\$ (113,166)	\$ (116,561)	\$ (120,058)	\$ (123,660)	\$ (127,370)	\$ (131,191)	\$ (135,126)	\$ (139,180)	\$ (143,356)	\$ (147,656)	\$ (152,086)	\$ (156,648)	\$ (161,348)	\$ (166,188)	\$ (171,174)
Fringe Benefits	10%	\$ (26,058)	\$ (28,030)	\$ (30,357)	\$ (33,393)	\$ (36,732)	\$ (40,405)	\$ (44,446)	\$ (48,890)	\$ (53,779)	\$ (59,157)	\$ (65,073)	\$ (71,580)	\$ (78,738)	\$ (86,612)	\$ (95,273)	\$ (104,801)	\$ (115,281)	\$ (126,809)	\$ (139,490)
Commodities	3%	\$ (144,225)	\$ (201,247)	\$ (220,348)	\$ (226,958)	\$ (233,767)	\$ (240,780)	\$ (248,004)	\$ (255,444)	\$ (263,107)	\$ (271,000)	\$ (279,130)	\$ (287,504)	\$ (296,129)	\$ (305,013)	\$ (314,164)	\$ (323,588)	\$ (333,296)	\$ (343,295)	\$ (353,594)
Depreciation	1%	\$ (87,112)	\$ (82,844)	\$ (87,299)	\$ (88,172)	\$ (89,054)	\$ (89,944)	\$ (90,844)	\$ (91,752)	\$ (92,670)	\$ (93,596)	\$ (94,532)	\$ (95,478)	\$ (96,432)	\$ (97,397)	\$ (98,371)	\$ (99,354)	\$ (100,348)	\$ (101,351)	\$ (102,365)
Total Operating Expenses		\$ (365,538)	\$ (418,428)	\$ (444,674)	\$ (458,393)	\$ (472,719)	\$ (487,691)	\$ (503,351)	\$ (519,746)	\$ (536,926)	\$ (554,944)	\$ (573,862)	\$ (593,742)	\$ (614,655)	\$ (636,678)	\$ (659,893)	\$ (684,392)	\$ (710,273)	\$ (737,644)	\$ (766,622)
Operating Income (Loss)		\$ 137,923	\$ 79,617	\$ 42,898	\$ 43,806	\$ 44,546	\$ 45,092	\$ 45,416	\$ 45,484	\$ 45,261	\$ 44,708	\$ 43,780	\$ 42,429	\$ 40,601	\$ 38,235	\$ 35,268	\$ 31,624	\$ 27,224	\$ 21,978	\$ 15,787
Nonoperating Revenues (Expenses)																				
Net Non Operating Revenues (Expenses)		\$ (69,318)	\$ (65,863)	\$ (61,752)	\$ (61,100)	\$ (57,775)	\$ (54,331)	\$ (50,488)	\$ (46,225)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)
Changes in accounting principle		\$ -	\$ (80,276)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1
Net Position - Beginning of Year		\$ 1,851,375	\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,817,310	\$ 1,744,081	\$ 1,734,842	\$ 1,729,770	\$ 1,729,029	\$ 1,742,162	\$ 1,754,742	\$ 1,766,394	\$ 1,776,695	\$ 1,785,168	\$ 1,813,754	\$ 1,839,371	\$ 1,861,345	\$ 1,888,569	\$ 1,910,547
Net Position End of Year		\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,817,310	\$ 1,744,081	\$ 1,734,842	\$ 1,729,770	\$ 1,729,029	\$ 1,742,162	\$ 1,754,742	\$ 1,766,394	\$ 1,776,695	\$ 1,785,168	\$ 1,813,754	\$ 1,839,371	\$ 1,861,345	\$ 1,888,569	\$ 1,910,547	\$ 1,926,335
Assumed Capital Inflation	6%																			
Capital Projects - Plant Operations					Planning Costs (2018 Dollars)															
Headworks - 2 pump, 1 screen rehabilitation, each					\$ 60,000															
Headworks - influent flow meter					\$ 35,000															
Package Plants - Rehab Plant 1					\$ 125,000															
Package Plants - Rehab Plant 2					\$ 125,000															
Package Plants - Rehab Plant 3					\$ 125,000															
Package Plants - Rehab Plant 4					\$ 125,000															
Blowers - New Turbo Blower					\$ 300,000															
Blowers - Air piping repairs					\$ 10,000															
Chemical Addition - Chlorine system rehab					\$ 30,000															
Chemical Addition - Sodium bisulfate system rehab					\$ 30,000															
Chemical Addition - Alum for phosphorous removal					\$ 60,000	\$ 60,000														
Effluent Flume - Resize for existing flows					\$ 25,000															
Sludge Storage Pond Rehab					\$ 50,000															
Building Roof Replacement					\$ 25,000															
Building Mechanical Maintenance, periodic upgrades					\$ 5,000															
Electrical MCC Upgrades					\$ 100,000															
Lab Upgrades					\$ 25,000															
Electrical Generator					\$ 150,000															
Subtotal Plant Operations					\$ 1,405,000	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Projects - Collection System																				
Annual sewer improvements: CCTV, smoke testing, lining or repairs					\$ 75,000															
Lift Station Upgrades - Station 1					\$ 100,000															
Lift Station Upgrades - Station 2					\$ 75,000															
Lift Station Upgrades - Station 3					\$ 75,000															
Lift Station Upgrades - Station 4					\$ 75,000															
Subtotal Collection System					\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Project Expenses					\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Village of St. Joseph
Sewer Rate Study

SCENARIO 3A: PERFORM MAINTENANCE, PERCENTAGE INCREASES TO MAINTAIN FUND

REVENUE STATEMENT	Increases	REVENUE, EXPENSE, CHANGE IN NET POSITION					PROJECTION													
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Operating Revenue																				
Charges for Services	7.4%	\$ 464,691	\$ 458,948	\$ 454,726	\$ 488,376	\$ 524,516	\$ 563,330	\$ 605,016	\$ 649,787	\$ 697,872	\$ 749,514	\$ 804,978	\$ 864,546	\$ 928,523	\$ 997,234	\$ 1,071,029	\$ 1,150,285	\$ 1,235,406	\$ 1,326,826	\$ 1,425,011
Other Revenue	3%	\$ 38,770	\$ 39,097	\$ 32,846	\$ 33,831	\$ 34,846	\$ 35,892	\$ 36,968	\$ 38,078	\$ 39,220	\$ 40,396	\$ 41,608	\$ 42,857	\$ 44,142	\$ 45,467	\$ 46,831	\$ 48,235	\$ 49,683	\$ 51,173	\$ 52,708
Total Operating Revenue		\$ 503,461	\$ 498,045	\$ 487,572	\$ 522,207	\$ 559,362	\$ 599,221	\$ 641,985	\$ 687,865	\$ 737,091	\$ 789,910	\$ 846,586	\$ 907,403	\$ 972,665	\$ 1,042,700	\$ 1,117,859	\$ 1,198,520	\$ 1,285,089	\$ 1,377,999	\$ 1,477,719
Operating Expense																				
Salaries and Wages	3%	\$ (108,143)	\$ (106,307)	\$ (106,670)	\$ (109,870)	\$ (113,166)	\$ (116,561)	\$ (120,058)	\$ (123,660)	\$ (127,370)	\$ (131,191)	\$ (135,126)	\$ (139,180)	\$ (143,356)	\$ (147,656)	\$ (152,086)	\$ (156,648)	\$ (161,348)	\$ (166,188)	\$ (171,174)
Fringe Benefits	10%	\$ (26,058)	\$ (28,030)	\$ (30,357)	\$ (33,393)	\$ (36,732)	\$ (40,405)	\$ (44,446)	\$ (48,890)	\$ (53,779)	\$ (59,157)	\$ (65,073)	\$ (71,580)	\$ (78,738)	\$ (86,612)	\$ (95,273)	\$ (104,801)	\$ (115,281)	\$ (126,809)	\$ (139,490)
Commodities	3%	\$ (144,225)	\$ (201,247)	\$ (220,348)	\$ (226,958)	\$ (233,767)	\$ (240,780)	\$ (248,004)	\$ (255,444)	\$ (263,107)	\$ (271,000)	\$ (279,130)	\$ (287,504)	\$ (296,129)	\$ (305,013)	\$ (314,164)	\$ (323,588)	\$ (333,296)	\$ (343,295)	\$ (353,594)
Depreciation	1%	\$ (87,112)	\$ (82,844)	\$ (87,299)	\$ (88,172)	\$ (89,054)	\$ (89,944)	\$ (90,844)	\$ (91,752)	\$ (92,670)	\$ (93,596)	\$ (94,532)	\$ (95,478)	\$ (96,432)	\$ (97,397)	\$ (98,371)	\$ (99,354)	\$ (100,348)	\$ (101,351)	\$ (102,365)
Total Operating Expenses		\$ (365,538)	\$ (418,428)	\$ (444,674)	\$ (458,393)	\$ (472,719)	\$ (487,691)	\$ (503,351)	\$ (519,746)	\$ (536,926)	\$ (554,944)	\$ (573,862)	\$ (593,742)	\$ (614,655)	\$ (636,678)	\$ (659,893)	\$ (684,392)	\$ (710,273)	\$ (737,644)	\$ (766,622)
Operating Income (Loss)		\$ 137,923	\$ 79,617	\$ 42,898	\$ 63,814	\$ 86,643	\$ 111,531	\$ 138,634	\$ 168,119	\$ 200,166	\$ 234,966	\$ 272,725	\$ 313,661	\$ 358,010	\$ 406,022	\$ 457,966	\$ 514,128	\$ 574,816	\$ 640,356	\$ 711,097
Nonoperating Revenues (Expenses)																				
Net Non Operating Revenues (Expenses)		\$ (69,318)	\$ (65,863)	\$ (61,752)	\$ (61,100)	\$ (57,775)	\$ (54,331)	\$ (50,488)	\$ (46,225)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)
Changes in accounting principle		\$ -	\$ (80,276)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1
Net Position - Beginning of Year		\$ 1,851,375	\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,837,318	\$ 1,648,886	\$ 1,621,815	\$ 1,465,802	\$ 1,114,268	\$ 934,367	\$ 1,023,724	\$ 1,113,958	\$ 957,183	\$ 1,147,907	\$ 1,302,514	\$ 1,324,233	\$ 1,567,126	\$ 1,715,357	\$ 1,880,922
Net Position End of Year		\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,837,318	\$ 1,648,886	\$ 1,621,815	\$ 1,465,802	\$ 1,114,268	\$ 934,367	\$ 1,023,724	\$ 1,113,958	\$ 957,183	\$ 1,147,907	\$ 1,302,514	\$ 1,324,233	\$ 1,567,126	\$ 1,715,357	\$ 1,880,922	\$ 1,897,018
Assumed Capital Inflation	6%																			
Capital Projects - Plant Operations					Planning Costs (2018 Dollars)															
Headworks - 2 pump, 1 screen rehabilitation, each					\$ 60,000					\$ 80,294					\$ 107,451					\$ 143,793
Headworks - influent flow meter					\$ 35,000	\$ 37,100														
Package Plants - Rehab Plant 1					\$ 125,000			\$ 148,877												
Package Plants - Rehab Plant 2					\$ 125,000								\$ 199,231							
Package Plants - Rehab Plant 3					\$ 125,000												\$ 266,616			
Package Plants - Rehab Plant 4					\$ 125,000															
Blowers - New Turbo Blower					\$ 300,000			\$ 378,743												
Blowers - Air piping repairs					\$ 10,000	\$ 10,600														
Chemical Addition - Chlorine system rehab					\$ 30,000													\$ 67,827		
Chemical Addition - Sodium bisulfate system rehab					\$ 30,000													\$ 67,827		
Chemical Addition - Alum for phosphorous removal					\$ 60,000	\$ 63,600														
Effluent Flume - Resize for existing flows					\$ 25,000	\$ 26,500														
Sludge Storage Pond Improvements					\$ 50,000												\$ 100,610			
Building Roof Replacement					\$ 25,000				\$ 33,456											
Building Mechanical Maintenance					\$ 5,000			\$ 5,955			\$ 7,093		\$ 8,447			\$ 10,061				\$ 11,983
Electrical MCC Upgrades					\$ 100,000															\$ 141,852
Lab Upgrades					\$ 25,000						\$ 37,591									
Electrical Generator					\$ 150,000															\$ 359,484
Subtotal Plant Operations					\$ 1,405,000	\$ 137,800	\$ -	\$ 154,832	\$ 378,743	\$ 113,749	\$ 7,093	\$ 37,591	\$ 199,231	\$ 8,447	\$ 107,451	\$ 141,852	\$ 110,671	\$ 266,616	\$ 135,654	\$ 515,260
Capital Projects - Collection System																				
Annual sewer improvements: CCTV, smoke testing, lining or repairs					\$ 75,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 100,367	\$ 106,389	\$ 112,772	\$ 119,539	\$ 126,711	\$ 134,314	\$ 142,372	\$ 150,915	\$ 159,970	\$ 169,568	\$ 179,742
Lift Station Upgrades - Station 1					\$ 100,000					\$ 133,823										
Lift Station Upgrades - Station 2					\$ 75,000							\$ 119,539								
Lift Station Upgrades - Station 3					\$ 75,000										\$ 142,372					
Lift Station Upgrades - Station 4					\$ 75,000														\$ 169,568	
Subtotal Collection System					\$ 400,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 234,189	\$ 106,389	\$ 112,772	\$ 239,077	\$ 126,711	\$ 134,314	\$ 284,745	\$ 150,915	\$ 159,970	\$ 339,136	\$ 179,742
Total Capital Project Expenses					\$ 217,300	\$ 84,270	\$ 244,158	\$ 473,429	\$ 347,939	\$ 113,482	\$ 150,363	\$ 438,308	\$ 135,158	\$ 241,764	\$ 426,597	\$ 261,586	\$ 426,586	\$ 474,790	\$ 695,002	

Village of St. Joseph
Sewer Rate Study

SCENARIO 3B: PERFORM MAINTENANCE, VARIABLE PERCENTAGE INCREASES TO MAINTAIN FUND AT \$2,000,000 ± \$500,000.

REVENUE STATEMENT	Increases	REVENUE, EXPENSE, CHANGE IN NET POSITION					PROJECTION														
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Operating Revenue		\$ 464,691	\$ 458,948	\$ 454,726	\$ 456,000	\$ 528,000	\$ 600,000	\$ 672,000	\$ 744,000	\$ 787,200	\$ 830,400	\$ 873,600	\$ 902,400	\$ 931,200	\$ 960,000	\$ 988,800	\$ 1,017,600	\$ 1,046,400	\$ 1,075,200	\$ 1,104,000	
Charges for Services		\$ 464,691	\$ 458,948	\$ 454,726	\$ 456,000	\$ 528,000	\$ 600,000	\$ 672,000	\$ 744,000	\$ 787,200	\$ 830,400	\$ 873,600	\$ 902,400	\$ 931,200	\$ 960,000	\$ 988,800	\$ 1,017,600	\$ 1,046,400	\$ 1,075,200	\$ 1,104,000	
Other Revenue	3%	\$ 38,770	\$ 39,097	\$ 32,846	\$ 33,831	\$ 34,846	\$ 35,892	\$ 36,968	\$ 38,078	\$ 39,220	\$ 40,396	\$ 41,608	\$ 42,857	\$ 44,142	\$ 45,467	\$ 46,831	\$ 48,235	\$ 49,683	\$ 51,173	\$ 52,708	
Total Operating Revenue		\$ 503,461	\$ 498,045	\$ 487,572	\$ 489,831	\$ 562,846	\$ 635,892	\$ 708,968	\$ 782,078	\$ 826,420	\$ 870,796	\$ 915,208	\$ 945,257	\$ 975,342	\$ 1,005,467	\$ 1,035,631	\$ 1,065,835	\$ 1,096,083	\$ 1,126,373	\$ 1,156,708	
Operating Expense																					
Salaries and Wages	3%	\$ (108,143)	\$ (106,307)	\$ (106,670)	\$ (109,870)	\$ (113,166)	\$ (116,561)	\$ (120,058)	\$ (123,660)	\$ (127,370)	\$ (131,191)	\$ (135,126)	\$ (139,180)	\$ (143,356)	\$ (147,656)	\$ (152,086)	\$ (156,648)	\$ (161,348)	\$ (166,188)	\$ (171,174)	
Fringe Benefits	10%	\$ (26,058)	\$ (28,030)	\$ (30,357)	\$ (33,393)	\$ (36,732)	\$ (40,405)	\$ (44,446)	\$ (48,890)	\$ (53,779)	\$ (59,157)	\$ (65,073)	\$ (71,580)	\$ (78,738)	\$ (86,612)	\$ (95,273)	\$ (104,801)	\$ (115,281)	\$ (126,809)	\$ (139,490)	
Commodities	3%	\$ (144,225)	\$ (201,247)	\$ (220,348)	\$ (226,958)	\$ (233,767)	\$ (240,780)	\$ (248,004)	\$ (255,444)	\$ (263,107)	\$ (271,000)	\$ (279,130)	\$ (287,504)	\$ (296,129)	\$ (305,013)	\$ (314,164)	\$ (323,588)	\$ (333,296)	\$ (343,295)	\$ (353,594)	
Depreciation	1%	\$ (87,112)	\$ (82,844)	\$ (87,299)	\$ (88,172)	\$ (89,054)	\$ (89,944)	\$ (90,844)	\$ (91,752)	\$ (92,670)	\$ (93,596)	\$ (94,532)	\$ (95,478)	\$ (96,432)	\$ (97,397)	\$ (98,371)	\$ (99,354)	\$ (100,348)	\$ (101,351)	\$ (102,365)	
Total Operating Expenses		\$ (365,538)	\$ (418,428)	\$ (444,674)	\$ (458,393)	\$ (472,719)	\$ (487,691)	\$ (503,351)	\$ (519,746)	\$ (536,926)	\$ (554,944)	\$ (573,862)	\$ (593,742)	\$ (614,655)	\$ (636,678)	\$ (659,893)	\$ (684,392)	\$ (710,273)	\$ (737,644)	\$ (766,622)	
Operating Income (Loss)		\$ 137,923	\$ 79,617	\$ 42,898	\$ 31,438	\$ 90,127	\$ 148,201	\$ 205,617	\$ 262,332	\$ 289,494	\$ 315,852	\$ 341,346	\$ 351,514	\$ 360,687	\$ 368,788	\$ 375,737	\$ 381,443	\$ 385,810	\$ 388,729	\$ 390,086	
Nonoperating Revenues (Expenses)																					
Net Non Operating Revenues (Expenses)		\$ (69,318)	\$ (65,863)	\$ (61,752)	\$ (61,100)	\$ (57,775)	\$ (54,331)	\$ (50,488)	\$ (46,225)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	
Changes in accounting principle		\$ -	\$ (80,276)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1	
Net Position - Beginning of Year		\$ 1,851,375	\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,804,942	\$ 1,619,994	\$ 1,629,594	\$ 1,540,565	\$ 1,283,243	\$ 1,192,671	\$ 1,362,914	\$ 1,521,770	\$ 1,402,849	\$ 1,596,250	\$ 1,713,623	\$ 1,653,114	\$ 1,763,322	\$ 1,722,546	\$ 1,636,486	
Net Position End of Year		\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,804,942	\$ 1,619,994	\$ 1,629,594	\$ 1,540,565	\$ 1,283,243	\$ 1,192,671	\$ 1,362,914	\$ 1,521,770	\$ 1,402,849	\$ 1,596,250	\$ 1,713,623	\$ 1,653,114	\$ 1,763,322	\$ 1,722,546	\$ 1,636,486	\$ 1,331,570	
Assumed Capital Inflation	6%																				
Capital Projects - Plant Operations					Planning Costs (2018 Dollars)																
Headworks - 2 pump, 1 screen rehabilitation, each					\$ 60,000					\$ 80,294					\$ 107,451					\$ 143,793	
Headworks - influent flow meter					\$ 35,000	\$ 37,100															
Package Plants - Rehab Plant 1					\$ 125,000			\$ 148,877													
Package Plants - Rehab Plant 2					\$ 125,000								\$ 199,231								
Package Plants - Rehab Plant 3					\$ 125,000												\$ 266,616				
Package Plants - Rehab Plant 4					\$ 125,000																
Blowers - New Turbo Blower					\$ 300,000			\$ 378,743													
Blowers - Air piping repairs					\$ 10,000	\$ 10,600															
Chemical Addition - Chlorine system rehab					\$ 30,000													\$ 67,827			
Chemical Addition - Sodium bisulfate system rehab					\$ 30,000													\$ 67,827			
Chemical Addition - Alum for phosphorous removal					\$ 60,000	\$ 63,600															
Effluent Flume - Resize for existing flows					\$ 25,000	\$ 26,500															
Sludge Storage Pond Improvements					\$ 50,000												\$ 100,610				
Building Roof Replacement					\$ 25,000					\$ 33,456											
Building Mechanical Maintenance					\$ 5,000			\$ 5,955			\$ 7,093			\$ 8,447			\$ 10,061			\$ 11,983	
Electrical MCC Upgrades					\$ 100,000															\$ 141,852	
Lab Upgrades					\$ 25,000							\$ 37,591									
Electrical Generator					\$ 150,000															\$ 359,484	
Subtotal Plant Operations					\$ 1,405,000	\$ 137,800	\$ -	\$ 154,832	\$ 378,743	\$ 113,749	\$ 7,093	\$ 37,591	\$ 199,231	\$ 8,447	\$ 107,451	\$ 141,852	\$ 110,671	\$ 266,616	\$ 135,654	\$ 515,260	
Capital Projects - Collection System																					
Annual sewer improvements: CCTV, smoke testing, lining or repairs					\$ 75,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 100,367	\$ 106,389	\$ 112,772	\$ 119,539	\$ 126,711	\$ 134,314	\$ 142,372	\$ 150,915	\$ 159,970	\$ 169,568	\$ 179,742	
Lift Station Upgrades - Station 1					\$ 100,000					\$ 133,823											
Lift Station Upgrades - Station 2					\$ 75,000							\$ 119,539									
Lift Station Upgrades - Station 3					\$ 75,000															\$ 142,372	
Lift Station Upgrades - Station 4					\$ 75,000															\$ 169,568	
Subtotal Collection System					\$ 400,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 234,189	\$ 106,389	\$ 112,772	\$ 239,077	\$ 126,711	\$ 134,314	\$ 284,745	\$ 150,915	\$ 159,970	\$ 339,136	\$ 179,742	
Total Capital Project Expenses					\$ 217,300	\$ 84,270	\$ 244,158	\$ 473,429	\$ 347,939	\$ 113,482	\$ 150,363	\$ 438,308	\$ 135,158	\$ 241,764	\$ 426,597	\$ 261,586	\$ 426,586	\$ 474,790	\$ 695,002		

Village of St. Joseph
Sewer Rate Study

SCENARIO 4A: EXPAND PLANT, PERFORM MAINTENANCE, PERCENTAGE INCREASES TO MAINTAIN FUND

REVENUE STATEMENT	Increases	REVENUE, EXPENSE, CHANGE IN NET POSITION					PROJECTION														
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Revenue																					
Charges for Services	12.0%	\$ 464,691	\$ 458,948	\$ 454,726	\$ 509,293	\$ 570,408	\$ 638,857	\$ 715,520	\$ 801,383	\$ 897,548	\$ 1,005,254	\$ 1,125,885	\$ 1,260,991	\$ 1,412,310	\$ 1,581,787	\$ 1,771,602	\$ 1,984,194	\$ 2,222,297	\$ 2,488,973	\$ 2,787,649	
Other Revenue	3%	\$ 38,770	\$ 39,097	\$ 32,846	\$ 33,831	\$ 34,846	\$ 35,892	\$ 36,968	\$ 38,078	\$ 39,220	\$ 40,396	\$ 41,608	\$ 42,857	\$ 44,142	\$ 45,467	\$ 46,831	\$ 48,235	\$ 49,683	\$ 51,173	\$ 52,708	
Total Revenue		\$ 503,461	\$ 498,045	\$ 487,572	\$ 543,125	\$ 605,255	\$ 674,749	\$ 752,489	\$ 839,460	\$ 936,768	\$ 1,045,651	\$ 1,167,493	\$ 1,303,848	\$ 1,456,452	\$ 1,627,254	\$ 1,818,432	\$ 2,032,429	\$ 2,271,980	\$ 2,540,146	\$ 2,840,358	
Expenses																					
Salaries and Wages	3%	\$ (108,143)	\$ (106,307)	\$ (106,670)	\$ (109,870)	\$ (113,166)	\$ (116,561)	\$ (120,058)	\$ (123,660)	\$ (127,370)	\$ (131,191)	\$ (135,126)	\$ (139,180)	\$ (143,356)	\$ (147,656)	\$ (152,086)	\$ (156,648)	\$ (161,348)	\$ (166,188)	\$ (171,174)	
Fringe Benefits	10%	\$ (26,058)	\$ (28,030)	\$ (30,357)	\$ (33,393)	\$ (36,732)	\$ (40,405)	\$ (44,446)	\$ (48,890)	\$ (53,779)	\$ (59,157)	\$ (65,073)	\$ (71,580)	\$ (78,738)	\$ (86,612)	\$ (95,273)	\$ (104,801)	\$ (115,281)	\$ (126,809)	\$ (139,490)	
Commodities	3%	\$ (144,225)	\$ (201,247)	\$ (220,348)	\$ (226,958)	\$ (233,767)	\$ (240,780)	\$ (248,004)	\$ (255,444)	\$ (263,107)	\$ (271,000)	\$ (279,130)	\$ (287,504)	\$ (296,129)	\$ (305,013)	\$ (314,164)	\$ (323,588)	\$ (333,296)	\$ (343,295)	\$ (353,594)	
Depreciation	1%	\$ (87,112)	\$ (82,844)	\$ (87,299)	\$ (88,172)	\$ (89,054)	\$ (89,944)	\$ (90,844)	\$ (91,752)	\$ (92,670)	\$ (93,596)	\$ (94,532)	\$ (95,478)	\$ (96,432)	\$ (97,397)	\$ (98,371)	\$ (99,354)	\$ (100,348)	\$ (101,351)	\$ (102,365)	
Existing Bond Payments		\$ (69,318)	\$ (65,863)	\$ (61,752)	\$ (61,100)	\$ (57,775)	\$ (54,331)	\$ (50,488)	\$ (46,225)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ (9,650)	
New SRF Loan Repayment	2.5%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	\$ (473,682)	
Total Expenses		\$ (434,856)	\$ (484,291)	\$ (506,426)	\$ (519,493)	\$ (530,494)	\$ (542,022)	\$ (553,839)	\$ (1,039,652)	\$ (1,042,735)	\$ (1,060,754)	\$ (1,079,671)	\$ (1,099,551)	\$ (1,120,465)	\$ (1,120,010)	\$ (1,143,225)	\$ (1,167,724)	\$ (1,183,954)	\$ (1,211,325)	\$ (1,240,304)	
Operating Income (Loss)		\$ 68,605	\$ 13,754	\$ (18,854)	\$ 23,631	\$ 74,761	\$ 132,727	\$ 198,650	\$ (200,192)	\$ (105,966)	\$ (15,103)	\$ 87,822	\$ 204,296	\$ 335,988	\$ 507,244	\$ 675,207	\$ 864,706	\$ 1,088,025	\$ 1,328,821	\$ 1,600,054	
New SRF Loan								\$ (7,384,299)													
Nonoperating Revenues (Expenses)																					
Changes in accounting principle		\$ -	\$ (80,276)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Position - Beginning of Year		\$ 1,851,375	\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,858,235	\$ 1,726,296	\$ 1,774,753	\$ 1,884,076	\$ 1,589,198	\$ 1,135,293	\$ 1,006,709	\$ 944,168	\$ 909,387	\$ 1,110,216	\$ 1,375,696	\$ 1,766,158	\$ 2,369,278	\$ 3,297,334	\$ 4,151,364	
Net Position End of Year		\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,858,235	\$ 1,726,296	\$ 1,774,753	\$ 1,884,076	\$ 1,589,198	\$ 1,135,293	\$ 1,006,709	\$ 944,168	\$ 909,387	\$ 1,110,216	\$ 1,375,696	\$ 1,766,158	\$ 2,369,278	\$ 3,297,334	\$ 4,151,364	\$ 5,056,416	
Assumed Capital Inflation	6%																				
Capital Projects - Plant Operations					Planning Costs (2018 Dollars)																
Headworks - 2 pump, 1 screen rehabilitation, each					\$ 60,000					\$ 80,294					\$ 107,451					\$ 143,793	
Headworks - influent flow meter					\$ 35,000	\$ 37,100															
New Treatment Plant					\$ 6,200,000			\$ 7,384,299													
Chemical Addition - Chlorine system rehab					\$ 30,000													\$ 67,827			
Chemical Addition - Sodium bisulfate system rehab					\$ 30,000													\$ 67,827			
Chemical Addition - Alum for phosphorous removal					\$ 60,000	\$ 63,600															
Effluent Flume - Resize for existing flows					\$ 25,000	\$ 26,500															
Sludge Storage Pond Rehab					\$ 50,000												\$ 100,610				
Building Roof Replacement					\$ 25,000				\$ 33,456												
Building Mechanical Maintenance					\$ 5,000		\$ 5,955				\$ 7,093		\$ 8,447			\$ 10,061			\$ 11,983		
Lab Upgrades					\$ 25,000						\$ 37,591										
Electrical Generator					\$ 150,000														\$ 359,484		
Subtotal Plant Operations					\$ 6,695,000	\$ 127,200	\$ -	\$ 7,390,254	\$ -	\$ 113,749	\$ 7,093	\$ 37,591	\$ -	\$ 8,447	\$ 107,451	\$ -	\$ 110,671	\$ -	\$ 135,654	\$ 515,260	
Capital Projects - Collection System																					
Annual sewer improvements: CCTV, smoke testing, lining or repairs					\$ 75,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 100,367	\$ 106,389	\$ 112,772	\$ 119,539	\$ 126,711	\$ 134,314	\$ 142,372	\$ 150,915	\$ 159,970	\$ 169,568	\$ 179,742	
Lift Station Upgrades - Station 1					\$ 100,000					\$ 133,823											
Lift Station Upgrades - Station 2					\$ 75,000							\$ 119,539									
Lift Station Upgrades - Station 3					\$ 75,000										\$ 142,372						
Lift Station Upgrades - Station 4					\$ 75,000													\$ 169,568			
Subtotal Collection System					\$ 400,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 234,189	\$ 106,389	\$ 112,772	\$ 239,077	\$ 126,711	\$ 134,314	\$ 284,745	\$ 150,915	\$ 159,970	\$ 339,136	\$ 179,742	
Total Capital Project Expenses					\$ 206,700	\$ 84,270	\$ 7,479,580	\$ 94,686	\$ 347,939	\$ 113,482	\$ 150,363	\$ 239,077	\$ 135,158	\$ 241,764	\$ 284,745	\$ 261,586	\$ 159,970	\$ 474,790	\$ 695,002		

Village of St. Joseph
Sewer Rate Study

SCENARIO 4B: EXPAND PLANT, PERFORM MAINTENANCE, VARIABLE PERCENTAGE INCREASES TO MAINTAIN FUND AT \$2,000,000 ± \$700,000.

REVENUE STATEMENT	Increases	REVENUE, EXPENSE, CHANGE IN NET POSITION																		
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Operating Revenue																				
Charges for Services		\$ 464,691	\$ 458,948	\$ 454,726	\$ 456,000	\$ 590,400	\$ 739,200	\$ 902,400	\$ 1,010,880	\$ 1,119,360	\$ 1,167,360	\$ 1,215,360	\$ 1,263,360	\$ 1,311,120	\$ 1,370,880	\$ 1,432,320	\$ 1,493,760	\$ 1,555,200	\$ 1,622,400	\$ 1,689,600
Other Revenue	3%	\$ 38,770	\$ 39,097	\$ 32,846	\$ 33,831	\$ 34,846	\$ 35,892	\$ 36,968	\$ 38,078	\$ 39,220	\$ 40,396	\$ 41,608	\$ 42,857	\$ 44,142	\$ 45,467	\$ 46,831	\$ 48,235	\$ 49,683	\$ 51,173	\$ 52,708
Total Revenue		\$ 503,461	\$ 498,045	\$ 487,572	\$ 489,831	\$ 625,246	\$ 775,092	\$ 939,368	\$ 1,048,958	\$ 1,158,580	\$ 1,207,756	\$ 1,256,968	\$ 1,306,217	\$ 1,361,262	\$ 1,416,347	\$ 1,479,151	\$ 1,541,995	\$ 1,604,883	\$ 1,673,573	\$ 1,742,308
Expenses																				
Salaries and Wages	3%	\$ (108,143)	\$ (106,307)	\$ (106,670)	\$ (109,870)	\$ (113,166)	\$ (116,561)	\$ (120,058)	\$ (123,660)	\$ (127,370)	\$ (131,191)	\$ (135,126)	\$ (139,180)	\$ (143,356)	\$ (147,656)	\$ (152,086)	\$ (156,648)	\$ (161,348)	\$ (166,188)	\$ (171,174)
Fringe Benefits	10%	\$ (26,058)	\$ (28,030)	\$ (30,357)	\$ (33,393)	\$ (36,732)	\$ (40,405)	\$ (44,446)	\$ (48,890)	\$ (53,779)	\$ (59,157)	\$ (65,073)	\$ (71,580)	\$ (78,738)	\$ (86,612)	\$ (95,273)	\$ (104,801)	\$ (115,281)	\$ (126,809)	\$ (139,490)
Commodities	3%	\$ (144,225)	\$ (201,247)	\$ (220,348)	\$ (226,958)	\$ (233,767)	\$ (240,780)	\$ (248,004)	\$ (255,444)	\$ (263,107)	\$ (271,000)	\$ (279,130)	\$ (287,504)	\$ (296,129)	\$ (305,013)	\$ (314,164)	\$ (323,588)	\$ (333,296)	\$ (343,295)	\$ (353,594)
Depreciation	1%	\$ (87,112)	\$ (82,844)	\$ (87,299)	\$ (88,172)	\$ (89,054)	\$ (89,944)	\$ (90,844)	\$ (91,752)	\$ (92,670)	\$ (93,596)	\$ (94,532)	\$ (95,478)	\$ (96,432)	\$ (97,397)	\$ (98,371)	\$ (99,354)	\$ (100,348)	\$ (101,351)	\$ (102,365)
Existing Bond Payments		\$ (69,318)	\$ (65,863)	\$ (61,752)	\$ (61,100)	\$ (57,775)	\$ (54,331)	\$ (50,488)	\$ (46,225)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (32,128)	\$ (9,650)	\$ (9,650)	\$ (9,650)	\$ -	\$ -	\$ -
New SRF Loan Repayment	2.5%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)	\$ (502,102)
Total Expenses		\$ (434,856)	\$ (484,291)	\$ (506,426)	\$ (519,493)	\$ (530,494)	\$ (542,022)	\$ (553,839)	\$ (1,068,073)	\$ (1,071,156)	\$ (1,089,175)	\$ (1,108,092)	\$ (1,127,972)	\$ (1,148,886)	\$ (1,148,431)	\$ (1,171,646)	\$ (1,196,144)	\$ (1,212,375)	\$ (1,239,746)	\$ (1,268,725)
Operating Income (Loss)		\$ 68,605	\$ 13,754	\$ (18,854)	\$ (29,662)	\$ 94,752	\$ 233,070	\$ 385,529	\$ (19,116)	\$ 87,424	\$ 118,582	\$ 148,876	\$ 178,244	\$ 212,377	\$ 267,916	\$ 307,505	\$ 345,851	\$ 392,507	\$ 433,827	\$ 473,583
New SRF Loan									\$ (7,827,357)											
Nonoperating Revenues (Expenses)																				
Changes in accounting principle		\$ -	\$ (80,276)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Position - Beginning of Year		\$ 1,851,375	\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,804,942	\$ 1,692,994	\$ 1,841,794	\$ 2,132,042	\$ 2,018,241	\$ 1,757,726	\$ 1,762,827	\$ 1,761,340	\$ 1,700,507	\$ 1,777,726	\$ 1,803,877	\$ 1,826,637	\$ 1,910,902	\$ 2,143,440	\$ 2,102,477
Net Position End of Year		\$ 1,919,980	\$ 1,853,458	\$ 1,834,604	\$ 1,804,942	\$ 1,692,994	\$ 1,841,794	\$ 2,132,042	\$ 2,018,241	\$ 1,757,726	\$ 1,762,827	\$ 1,761,340	\$ 1,700,507	\$ 1,777,726	\$ 1,803,877	\$ 1,826,637	\$ 1,910,902	\$ 2,143,440	\$ 2,102,477	\$ 1,881,059
Assumed Capital Inflation	6%																			
Capital Projects - Plant Operations					Planning Costs (2018)															
Headworks - 2 pump, 1 screen rehabilitation, each					\$ 60,000					\$ 80,294				\$ 107,451					\$ 143,793	
Headworks - influent flow meter					\$ 35,000	\$ 37,100														
New Treatment Plant					\$ 6,200,000				\$ 7,827,357											
Chemical Addition - Chlorine system rehab					\$ 30,000														\$ 67,827	
Chemical Addition - Sodium bisulfate system rehab					\$ 30,000														\$ 67,827	
Chemical Addition - Alum for phosphorous removal					\$ 60,000	\$ 63,600														
Effluent Flume - Resize for existing flows					\$ 25,000	\$ 26,500														
Sludge Storage Pond Rehab					\$ 50,000														\$ 100,610	
Building Roof Replacement					\$ 25,000					\$ 33,456										
Building Mechanical Maintenance					\$ 5,000			\$ 5,955			\$ 7,093			\$ 8,447		\$ 10,061			\$ 11,983	
Lab Upgrades					\$ 25,000						\$ 37,591									
Electrical Generator					\$ 150,000															\$ 359,484
Subtotal Plant Operations					\$ 6,695,000	\$ 127,200	\$ -	\$ 5,955	\$ 7,827,357	\$ 113,749	\$ 7,093	\$ 37,591	\$ -	\$ 8,447	\$ 107,451	\$ -	\$ 110,671	\$ -	\$ 135,654	\$ 515,260
Capital Projects - Collection System																				
Annual sewer improvements: CCTV, smoke testing, lining or repairs					\$ 75,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 100,367	\$ 106,389	\$ 112,772	\$ 119,539	\$ 126,711	\$ 134,314	\$ 142,372	\$ 150,915	\$ 159,970	\$ 169,568	\$ 179,742
Lift Station Upgrades - Station 1					\$ 100,000					\$ 133,823										
Lift Station Upgrades - Station 2					\$ 75,000							\$ 119,539								
Lift Station Upgrades - Station 3					\$ 75,000											\$ 142,372				
Lift Station Upgrades - Station 4					\$ 75,000														\$ 169,568	
Subtotal Collection System					\$ 400,000	\$ 79,500	\$ 84,270	\$ 89,326	\$ 94,686	\$ 234,189	\$ 106,389	\$ 112,772	\$ 239,077	\$ 126,711	\$ 134,314	\$ 284,745	\$ 150,915	\$ 159,970	\$ 339,136	\$ 179,742
Total Capital Project Expenses						\$ 206,700	\$ 84,270	\$ 95,281	\$ 7,922,043	\$ 347,939	\$ 113,482	\$ 150,363	\$ 239,077	\$ 135,158	\$ 241,764	\$ 284,745	\$ 261,586	\$ 159,970	\$ 474,790	\$ 695,002