

ORDINANCE NO. 1387

FISCAL SUSTAINABILITY PLAN
For the Seneca Wastewater Collection and Treatment System

This plan outlines a Fiscal Sustainability Plan (FSP) for the City of Seneca, County of Nemaha, State of Kansas, as required by the Kansas Water Pollution Control Revolving Fund (KWPCRF) to provide a plan to develop an Asset Management Plan (AMP) and a financial plan to provide funds needed to pay for the ongoing operation, maintenance, repair, rehabilitation, and replacement expenses associated with the City's wastewater collection, pumping, and treatment system.

WHEREAS, the City of Seneca, Kansas, has constructed and is responsible to maintain the wastewater treatment works; and

WHEREAS, the City must pay all ongoing expenses associated with said treatment works and charge the users of said treatment works accordingly;

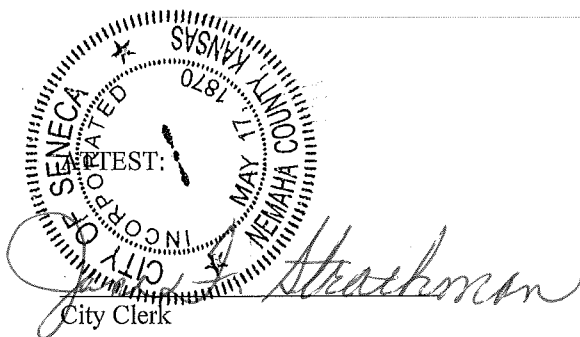
NOW, THEREFORE, BE IT AGREED:

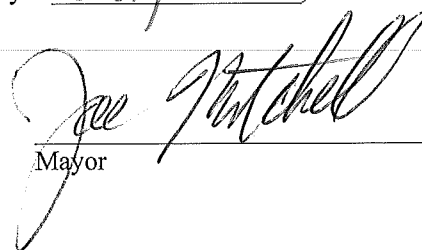
1. The City will implement a performance measurement and management strategy as part of an ongoing effort to ensure high-quality and efficient use of existing facilities.
2. The City will make it a priority to be energy-efficient in its provisions of public services.
3. The City will inspect and maintain existing wastewater collection and treatment systems. (See also the attached Operations & Maintenance Question and Answer Format attachment.)
4. The City will establish and maintain appropriate case resources to repair the existing wastewater collection, lift stations, and treatment system with the expectation that
 - a. The wastewater collection system is currently undergoing modifications (pipeline and manhole rehabilitation) for the elimination of a considerable level of inflow and infiltration, will ensure better nitrification, and allow this work to be completed prior to any required future improvements at the wastewater treatment facility. The project is financed by issuing debt for the required modifications;
 - b. Manhole and sewer lines will be inspected on an ongoing basis with a written summary of conditions and all defects and cost estimates of recommended rehabilitation measures, with inspection of a minimum of 5% of the collection system each year on the average beginning in 2023;
 - c. The wastewater treatment facility will need minor repairs and inspections annually at a current estimated cost of \$3,000. The wastewater treatment facility will need major repairs in 20 years for future nutrient limits (permit compliance) which will be financed by issuing debt for necessary

- improvements at that time;
- d. Some of the intermediate lift stations will need pump and control panel/ special systems replacement within 20 years at an estimated cost of \$7,500 with a 20 year replacement cycle thereafter which will be financed by the improvement funds or issuing debt for the necessary improvements at that time;
 - e. The main lift station and aeration basin components will need repairs and control panel/ special systems replacement within 20 years at an estimated cost of \$50,000 with a 20 year replacement cycle thereafter which will be financed by the improvement funds or issuing debt for the necessary improvements at that time;
 - f. Private sewer service lines which are connected to the sewer main are the responsibility of the private property owner;
 - g. The City will create a fund/account to receive and maintain annual payments of funds within the wastewater utility to allow the recommended rehabilitation measures (wastewater sludge build-up, wastewater lagoon dike erosion and fencing repair, lift station maintenance and replacement, ongoing manhole and sewer line inspections, and rehabilitation or repairs to service line connections, manholes or sewer mains) as identified to be repaired on an ongoing basis.
5. The City will establish appropriate cost-recovery target for its user charge fee to establish the appropriate reserves to fund on-going maintenance of the Wastewater Collection and Treatment systems.
 6. The City will work in partnership with its employees to ensure fair compensation costs related to pension and benefits are appropriately allocated between employer and employee.
 7. The City will consider competitive contracting services and equipment when appropriate and where clear cost-effective alternations exists.
 8. The City will review revenue performance annually and more often as required. (See also the attached Appendix A and Appendix B attachments.)

This agreement shall be in full force and effect from and after its passage and approval.

Passed by the Council of the City of Seneca Kansas, this 2nd day of July, 2018.




Mayor

CITY OF SENECA, KANSAS, LAGOON, PUMPING STATION, AND GRAVITY
SEWER OPERATION, MAINTENANCE, AND REPLACEMENT GUIDANCE
Questions and Answer Format

1.A. Does the city have a Certified Operator to operate and maintain the wastewater system?

Yes, certified operator on staff (provide name and level of certification)

Brian Rusche - Class 1; Thomas Osterhaus - Class 1; James Knight - Class 1

No, see 1.B. below.

1.B. Does the city have an Operator-In-Training (OIT) on staff learning to operate and maintain the wastewater system?

N/A Yes, Operator-In-Training on staff (provide name of OIT)

If No, contact Vickie Jo Wessel of KDHE at vwessel@kdheks.gov, or by telephone at 785.296.2976

2.A. Does the city have adequate equipment to operate and maintain the lagoons, pumping station, and gravity collection system? (Check the list below to indicate the equipment the city owns.)

Maintenance Vehicle (Provide year, make and model)

2002 Sreco Jetter, 2017 VacTron, 2012 Case 580 Backhoe, 2002 Case Loader

Mowing Equipment (Provide year, make and model)

3 0-Turn Torro Mowers

Sewer Cleaning Machine (Provide type, year, make and model)

2002 Sreco Jetter, 2017 VacTron

Pump Station (if appl.) Tools, Spare Parts, Electrician or Electrical Support Services (List all)

Assorted electrical test equipment, necessary hand tools, float switches, relays, etc. Electrical support service provided by local electrician in Seneca, Kansas.

No Smoke Testing Equipment

Kansas Rural Water Association provides this service on an "as needed" basis at no cost to the City so we do not maintain our own.

No TV Inspection Equipment (Provide make and model)

- 2.B. If the city does not own adequate equipment for emergency cleaning and minor repairs of manholes and sewer lines, does the city have any Mutual Aid Agreements with other cities, or an "on call" contracts with private companies that provide these services?

No Yes, emergency cleaning is provided by a Mutual Aid Agreement(s) with (list all city names here)

Yes Yes, emergency cleaning is provided by "on call" contracts(s) with (list all company names and services here)

Wastewater certified operators/staff provide "on call" emergency cleaning. Staff also perform minor repairs to manholes and sewer lines. Johnson Services or Mayer Specialty Services are available for emergency services, if needed.

3. Does the city provide routine cleaning of sewer lines? (Indicate frequency and methods.)

Yes X; 1/5 of city each year over 5 years; Jetter and VacTron to clear debris

No _____

If not, KDHE recommends the city budget annual funds to clean sewer lines on established schedules based on the type of materials of construction of the pipes. The city should locate every manhole in the system, and update the sewer system maps as the city-wide effort progresses. Vitrified Clay Pipe (VCP) is recommended to be cleaned a minimum of once every 3 years. PVC pipe is recommended to be cleaned a minimum of once every 7 years. In areas with a mix of VCP, "truss" pipe, CIP, DIP, and/or PVC pipe, cleaning is recommended a minimum of once every 5 years. Any "problem spots" in the piping system should be identified, recorded, and cleaned on a more frequent basis based on experience. Any sewer lines rehabilitated by sliplining with CIPP or interior plastic liners can be reduced to cleaning frequency of once every 7 years.

4. Does the city provide routine cleaning and inspection of manholes? (Indicate frequency and methods.)

Yes X; \$20,000/year for 5 years rehab program; Turn brick manhole into concrete

No _____

If not, KDHE recommends the city inspect and record the conditions of manholes concurrently with the efforts to clean sewer lines on the established schedules stated above. Vitrified Clay Pipe (VCP) sewers tend to have brick manholes, and so would be opened, inspected, and conditions recorded a minimum of once every 3 years. PVC pipe tends to have precast concrete manholes and so would be opened, inspected, and conditions recorded a minimum of once every 7 years. In areas with a mix of VCP, "truss", CIP, DIP, and/or PVC pipe, the manholes may also be a mix of brick and precast concrete, and conditions would be recorded a minimum of once every 5 years. Any "problem spots" in the system of manholes should be identified, recorded, and considered for rehabilitation when discovered.

5. Does the city routinely provide or contract for television inspection and record keeping of information as gathered after cleaning of sewer lines? (Indicate frequency and methods.)

Yes X; TV is part of current rehab process, city to keep all TV records when done

No _____

If not, KDHE recommends the city inspect and record the conditions of the portion of the sewer lines that are accessible from the manhole concurrently with manhole inspections, concurrently with the efforts to clean sewer lines on the established schedules stated above. This information can then be reviewed by an experienced engineer

or technician to provide recommendations for TV inspection of certain sewer lines. The TV inspection records would then be reviewed by an experienced engineer or technician to recommend sewer line and manhole repairs and/or rehabilitation. Any "problem spots" in the sewer system should also be rehabilitated with any larger project.

6. Does the city budget annually for manhole rehabilitation and/or sewer line rehabilitation or replacement? (Indicate annual budget amount for each.)

Yes X-Manhole Rehab \$20,000

No X-Sewer Rehab (rehabbed all VCP lines as current project in 2017-2018)

KDHE recommends the routine cleaning of sewer lines, manholes inspections and recording of defects, and TV inspections of selected sewer lines be provided funding with the annual budget process. Perhaps manhole rehabilitation can also be provided on an annual budget "cash flow" basis. If the system is in good condition and sewer line rehabilitation needs are relatively small, perhaps rehabilitation of sewer lines can also be provided on an annual budget "cash flow" basis.

KDHE recommends the sewer systems be cleaned, inspected, and defects recorded with rehabilitation or replacement as needed. The initial review inspections can be completed with a cleaning program for the entire sewer system of 3 to 7 years, as discussed above. For systems constructed of VCP pipe and brick manholes, an initial minimum inspection and rehabilitation effort to complete 5% of the system per year, on the average, is recommended. For systems constructed of PVC pipe (or pipes sliplined with CIPP or plastic pipe) and precast concrete manholes, a minimum inspection and rehabilitation effort to complete 2% of the system per year, on the average, is recommended. When budgeting to rehabilitate or replace sewer lines, a larger city-wide effort may be in order to be funded with debt financing.

7. Does the city have a program to detect and remove private sector sources of infiltration and inflow? (Please provide a brief description of practices and attach any applicable city ordinances.)

Yes X-no surface water allowed in SS line from any outside area drain per Municipal Code

If not, KDHE recommends operator training and recommends the city establish ordinance as necessary to resolve defects in the privately-owned portion of the system.

APPENDIX "A" TO USER CHARGE ORDINANCE
Flat Rate Structure

This appendix presents the methodology to be used in calculating user charge rates and illustrates the calculations followed in arriving at the first year's user charges. The charges established in this appendix are based on estimates of expenses and loadings. The actual expenses and loadings that occur may differ from these estimates and certainly they will change as time passes. Therefore, the user charges must be reestablished whenever necessary to reflect actual expenses and loadings. Once the system is in use, the expenses and loadings can be determined from operating records and the user charges can be adjusted based on these figures.

1. Expenses: The total annual expenses associated with the treatment works are estimated as follows:

| <u>Item</u> | <u>Annual Expense</u> |
|------------------------------------|-----------------------|
| Billing and Collection | \$7,052.00 |
| Administrative | \$8,815.00 |
| Power | \$13,000.00 |
| Labor (including fringe benefits) | \$35,258.00 |
| Material Costs | \$24,045.00 |
| Replacement Costs (See Appendix B) | \$68,382.00 |
| (Debt Service) | \$141,789.00 |
| Contractual | \$11,297.00 |
| Other | \$500.00 |
| TOTAL ANNUAL EXPENSE | \$310,138.00 |

2. Loadings:

The initial hydraulic loading is estimated to be 110,905,250 gal/year.

(NOTE: For administrative ease, the annual hydraulic loading to the wastewater treatment plant may be assumed to be four times the winter quarter water usage for the municipality from both public and private water supplies. By using winter quarter water usage, residential users will not be charged for consumptive use of water during the summer months. The difference between actual total wastewater flow at the wastewater treatment plant and the actual total potable water used by users of the municipality is infiltration/inflow. By calculating a unit flow charge based on the total annual water usage and the total annual budget, the cost of transporting and treating infiltration/inflow is being distributed according to flow volume of the users. This approach is shown because of its ease of administration and because infiltration/inflow tends to be less significant in municipalities where flat rate structures are acceptable because of the collection system size, age of the collection system, and type of treatment generally employed in these municipalities. Other acceptable means of distributing the cost of transporting and treating infiltration/inflow include allocation based on the number of users or allocation based on the land area of the users.)

3. Unit Cost:

The initial unit cost for flow in \$/gallons = \$0.0028
Total annual budget / Total annual flow

(NOTE: If debt service is to be addressed in this ordinance, it may be allocated in the same manner or it may be allocated in any other manner that the municipality desires)

4. Establishment of User Classes:

| User | Number of Users | Average Monthly Water Used per User (Gallons) | Total Annual Water Used | Cumulative Usage per Class |
|------------------|--------------------|---|----------------------------|----------------------------------|
| Residential | 883 | | <u>89,903,279</u> | <u>89,903,279</u> |
| Light Commercial | 207 | | <u>19,942,238</u> | <u>19,942,238</u> |
| Industrial | 11 | | <u>1,059,732</u> | <u>1,059,732</u> |

(NOTE: The establishment of various user classes is dependent, of course, on the particular users discharging to the grantee's treatment works. The classes must be established such that the individual users within a single user class do not vary significantly in volume or strength of wastewater contributed to the treatment works.)

5. Calculation of charges to users in each user class:

$$\text{Monthly charge per user in Residential} = \frac{(89,903,279) (\$0.0028)}{(12) (883)} = \$23.73$$

$$\text{Monthly charge per user in Light Commercial} = \frac{(19,942,238) (\$0.0028)}{(12) (207)} = \$22.45$$

$$\text{Monthly charge per user in Industrial} = \frac{(1,059,732) (\$0.0028)}{(12) (11)} = \$22.45$$

where: Monthly charge per user is in dollars

Cumulative class usage is in gallons from paragraph 4

Unit cost is in \$/gallon from paragraph 3

Number of users in class is from paragraph 4, and

12 is a conversion factor.

APPENDIX B

TO
USER CHARGE ORDINANCE

This appendix contains a replacement schedule that was developed to determine the amount of revenue needed to fund the Replacement Account. The replacement schedule lists the equipment in the treatment works, the estimated dates when the equipment will have to be replaced, and the estimated cost of replacement (including an allowance for inflation) over the useful life of the treatment works. Also listed is the estimated cash flow that will occur in the Replacement Account. The replacement dates and costs shown are estimates; the actual replacement dates and costs could be significantly different from those shown. If the actual replacement expenses differ significantly from those listed in the replacement schedule, the funding of the Replacement Account should be adjusted accordingly.

REPLACEMENT SCHEDULE

| Years From Treatment Works In Operation | Replacement Item | Replacement Account | | |
|--|--|---------------------|--------|---------|
| | | Expenditure | Income | Balance |
| 20 Years | Sewage Lift Station Repairs (5 Intermediate Stations) | \$100,000 | | |
| 15 Years | Replace Sewer Jetter | \$100,000 | | |
| 10 Years | Submersible Pump Replacement | \$20,000 | | |
| 10 Years | Electrical/Special Systems Replacement | \$7,500 | | |
| 10 Years | WWTF Desludge/Repairs | \$200,000 | | |
| 10 Years | WWTF – Lift Station & Aeration Basin | \$50,000 | | |
| 5 Years | Rehabilitate Manholes & Sewer Lines | \$20,000 * | | |
| Annually | Wastewater Lagoon Inspection & Repairs | \$3,000 | | |
| Annually | Repairs to Lift Stations (5 Intermediate Stations) | \$7,500 | | |
| Annually | Inspect Manholes & Sewer Lines | \$1,500 | | |

* The replacement plan for manhole and sewer rehabilitation will be entirely complete within the next five years.

SAMPLE CALCULATION OF ANNUAL REPLACEMENT REVENUE TO BE COLLECTED

| I. | Today's Replacement Cost | <u>5 Years</u> | <u>10 Years</u> | <u>15 Years</u> | <u>20 Years</u> |
|----|--|----------------|-----------------|-----------------|-----------------|
| | Manhole & Sewer Inspections | \$7,500 | \$7,500 | \$7,500 | \$7,500 |
| | Repairs to Lift Stations | \$37,500 | \$37,500 | \$37,500 | \$37,500 |
| | Wastewater Lagoon Inspection & Repairs | \$15,000 | \$15,000 | \$15,000 | \$15,000 |
| | Rehabilitate Manholes & Sewer Lines | \$20,000 | | | |
| | WWTF – Lift Station & Aeration Basin | | \$50,000 | | \$50,000 |
| | WWTF – Lagoon Desludge/Repairs | | \$200,000 | | \$200,000 |
| | Electrical/Special Systems Replacement | | \$7,500 | | \$7,500 |
| | Submersible Pump Replacement | | \$20,000 | | \$20,000 |
| | Replace Sewer Jetter | | | \$100,000 | |
| | Sewage Lift Station Repairs | | | | \$100,000 |
| | | \$80,000 | \$337,500 | \$160,000 | \$437,500 |

| II. | Future Replacement Cost (Assumed 2% Inflation) | <u>Cost at:</u> | | | |
|-----|---|--------------------------|---------------------------|---------------------------|---------------------------|
| | Present Cost (Interest Factor) | <u>5 Years</u> (1.10) | <u>10 Years</u> (1.22) | <u>15 Years</u> (1.35) | <u>20 Years</u> (1.49) |
| | \$80,000 (5-Year Cycle) | \$88,000 | N/A | N/A | N/A |
| | \$337,500 (10-Year Cycle) | N/A | \$411,750 | N/A | N/A |
| | \$160,000 (15 Year Cycle) | N/A | N/A | \$216,000 | N/A |
| | \$437,500 (15-Year Cycle) | N/A | N/A | N/A | \$ |
| | Future Replacement Costs | \$88,000 | \$411,750 | \$216,000 | \$651,875 |

III. How Much is Needed Annually?

| | | | | |
|---------------------------------------|----------|-----------|-----------|-----------|
| Future Inspection & Replacement Costs | \$88,000 | \$436,150 | \$216,000 | \$651,875 |
|---------------------------------------|----------|-----------|-----------|-----------|

Total Reimbursement Revenue for the 20 year period - \$1,367,625

Annual amount required - \$68,382

ORDINANCE NO. 1376

AN ORDINANCE REPEALING ORDINANCE NO. 1219 AND PROVIDING FOR THE DETERMINATION OF RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL SEWAGE DISPOSAL FEES.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF SENECA, KANSAS, AS FOLLOWS:

SECTION I: That Ordinance 1219, Section III is hereby repealed.

SECTION II: That Section 13.08.030 of the Seneca Municipal Code shall state:

13.08.030 Sewage disposal fee—Schedule

The fee schedule for sewage disposal shall be as follows:

A. Commercial

| Annual Water Consumption | Monthly Fee: |
|-----------------------------|--------------|
| 0-25,000 gallons | \$26.25 |
| 25,000-50,000 gallons | \$27.25 |
| 50,000-100,000 gallons | \$28.25 |
| 100,000-500,000 gallons | \$32.25 |
| 500,000-1,000,000 gallons | \$42.25 |
| 1,000,000-1,500,000 gallons | \$52.25 |
| 1,500,000-2,000,000 gallons | \$62.25 |

For each additional five hundred thousand (500,000) gallons of annual water consumption above two million (2,000,000) gallons, or portion thereof, the sewage disposal fee shall increase the monthly fee ten dollars.

B. Residential

| | |
|-----------------------|-------------------------|
| All Water Consumption | Monthly Fee: \$26.25 |
|-----------------------|-------------------------|

SECTION III. The sewage disposal fee shall change with the State of Kansas average on an annual basis. The State of Kansas average is established by the Kansas Department of Commerce for the Community Development Block Grant Program.