



City Council Special Meeting

Tuesday, March 24, 2020 – 6:00 p.m.

Remote Webmeeting by computer: <https://zoom.us/j/252671423>

Or by phone: 1-312-626-6799, Meeting ID# 252671423

Agenda:

- 1) Municipal Services Sewer/Water SWOT Analysis**
- 2) Other Business**

Adjournment

The City Council of the City of Franklin reserves the right to enter into non-public session when necessary according to the provisions of RSA 91-A.

This location is accessible to the disabled. Those wishing to attend who are hearing or vision impaired may make their needs known by calling 934-3900 (voice), or through "Relay New Hampshire" 1-800-735-2964 (T.D./TRY)



CITY OF FRANKLIN COUNCIL AGENDA REPORT

Water / Sewer Department(s) Overview for March, 24, 2020 City Council Workshop

From: Brian J. Sullivan, Municipal Services Director

Subject: Current information relative to the City Water and Sanitary Sewer Enterprise Funds including current and future trends, needs and projections relating to Rates; Challenges; Revenues and ongoing Expenditures.

Date: March 17, 2020

Purpose of this Document:

The purpose of this report is to update the Mayor, City Council, City Staff and Ratepayer's relative to the City of Franklin, NH Water and Sanitary Sewer Enterprise Funds.

Current Infrastructure Water Department:

52 miles of water distribution pipelines; 2,395 metered customers; three pressure zones; five water tanks; four pumping stations; two booster pumping stations; water treatment plant; two pressure reducing vaults; 354 hydrants; Average Daily demand 700,000 gallons per day.

Current Infrastructure Sewer Department:

32 miles of collection system pipeline; 1,945 customers; 693 sewer manholes; two booster stations plus state operated River Street pumping station. The average daily flow is estimated to be between 0.9 and 1.2 million gallons per day. This is less than Franklin 2.59 million gallons per day WRBP Wastewater Treatment Plant capacity allocation.

Discussion:

This update is being provided to the Mayor, City Council, City Staff and Ratepayers in preparation for the March 2020 Council Workshop on the subject. A strategy is needed relative to prioritizing and funding upcoming essential/critical projects for the next several years. We also must begin to talk about the development of a policy to deal with future budgets and setting utility rates for the Franklin Water and Sanitary Sewer Departments. The upkeep and maintenance of both systems becomes more challenging with age and potential growth. Although these are difficult times and I acknowledge some of the information contained in this report is not popular, it is my obligation to keep all stakeholders informed relative to current conditions and future challenges these funds will be dealing with in the years ahead. One thing is certain, without an adequately operated and funded water and wastewater systems, there will be a negative impact on the quality of life for Franklins Residents, Business Owners, Future Industry and overall Public Health.

Much of what will impact the two budgets and customer rates in future Water and Sanitary Sewer Funds will result from the continuing need to undertake critical infrastructure

improvements. Additionally, ongoing regulatory requirements in order to comply with the "Safe Drinking Water Act" as directed by the State of New Hampshire, Department of Environmental Services (NHDES) and the United States Environmental Protection Agency (USEPA), will have an effect on both departments. Expect the U.S.E.P.A. changing regulations relative to increased sampling requirements for public water systems and wastewater effluent discharge as well as land application of bio-solids. Grant funding for such projects will almost always require a City match and an "Asset Management Plan."

Each Department operates as City Enterprise Funds relying on water consumption and quarterly availability charges to derive their operating revenue. As a result, both are similar in many ways and share the same short and long-term challenges. The most important factor to consider when evaluating the long-term financial, operational and capital needs of both departments is the small customer base supporting extensive and complex water and wastewater systems and associated infrastructure. Water connections number 2,395 and sewer connections 1,945. This limited customer base, coupled with the age; condition of existing infrastructure and vast amount of above and subsurface assets that the ratepayer must support is highly disproportionate. The customer base and water consumption have also declined since 2003, Critical capital projects continue to be deferred while operating costs continue to increase. We are at a crossroads.

I have divided this report into two sections one for each fund (Water and Sewer). I am available to meet as many times as necessary to provide direction, review various scenarios and answer questions.

Overview:

Operation of the Water and Sewer Enterprise Funds are consistent with GASB accounting standards. Each operates under the requirements of U.S.E.P.A. issued Federal Permits as well as, State R.S.A.'s which regulate public water and wastewater systems.

Additionally, the Franklin Sewer Department is one of ten member communities participating in the Winnepesaukee River Basin Program (WRBP), which operates in compliance with its own set of guidelines created by State R.S.A., established through special legislation adopted in the late 1970's. This legislation established the framework which ultimately formed a state operated regional wastewater collection system and wastewater treatment plant serving the Lakes Region. It also identifies how the system should be structured, managed and proportional shares which each member community must pay into the program, otherwise known as cost allocation. There are a total of approximately 14,500 connections to the systems, 62 miles of collection system pipeline and 14 state owned and operated pumping stations.

The WRBP has its own set of challenges that are currently being addressed both short and long term. I could do a workshop solely on the WRBP as decisions are going to need to be made by each participating community relative to ownership, cost allocation formula, assets and the potential of the member communities operating the WRBP as a public Waste Water Utility Authority thus taking the ownership and operation away from the State of New Hampshire, NHDES. The WRBP Advisory Board is in the process of evaluating a "roadmap" which identifies the necessary steps that need to be undertaken should we decide to expend time and resources on the concept of a municipally operated utility authority.

Based on the complexity and magnitude of the State and Federal regulatory requirements we work under, the City has performed extremely well remaining in compliance and meeting our obligations under our water and wastewater system permit compliance.

Fiscal Impact Sewer Fund:

The Fiscal Impact section of this report is divided into two sections, the first deals with the Sanitary Sewer Fund and the second is specific to the Water Fund.

(1) Sanitary Sewer Fund including Sewer Rates; Challenges; Revenues and Expenditures

Sewer Rates:

- Support Operations, Maintenance and Administrative costs of the City Department.
- Fund the State portion of the City Sewer Budget which in FY 20 is estimated to be 68% of the total.
- Fund Capital Repairs and Debt Service for the City Sewer Collection System.
- Are needed to fund the City's current and future "Inflow & Infiltration (I&I) Reduction Program" which is required under our NPDES permit.
- Have steadily increased, primarily to fund desperately needed WRBP operations, maintenance and capital project at the WRBP Wastewater Treatment Plant (WWTP) located on River Street in Franklin. This will continue as the WWTP, Collection System and Pumping Stations are well over 30 years in age and upgrades are necessary as equipment and subsurface infrastructure are nearing the end to their useful life.
- Unfortunately it is inevitable that sewer rates will continue to escalate as a result of essential capital projects as well as, increasing operation and maintenance costs on both the City and State portions of the Sewer Budget.
- The Phase two "Sanitary Sewer Assessment" report performed by Underwood Engineering is complete and the reports Executive Summary is included in your packet. This recently completed document provides a thorough overview of the current conditions and future recommendations towards making necessary repairs and improvements to the City Sanitary Sewer System with the main focus being to reduce inflow and infiltration thus reducing flow to the River Street Wastewater Treatment Plant.

Challenges:

- Maintaining an antiquated City collection system with a majority of pipe that is original.
- Extensive aging of both the City and WRBP infrastructure, which is in need of on-going capital investment. Both systems have miles of collection system pipelines spread over a large geographic area, with very limited customer bases.
- Controlling and funding WRBP "Capital Recovery Costs" will be a major challenge. WRBP operates 62 miles of its Sewer Collection System, 14 Pumping Stations and the 11.54 million gallon per day capacity Wastewater Treatment Plant. There are approximately 14,500 connections to the WRBP wastewater interceptors / collection system. The City owns and operates another 32 miles of its own collection system.
- Reducing excessive City wastewater flow due to Inflow and Infiltration is necessary if we are going to stabilize and maintain affordable sewer rates and our cost allocation

formula assessed to the City by the WRBP. Up to 70 % of Franklin's wastewater is fresh water entering the system due to Inflow and Infiltration!

- Meeting future regulatory requirements as USEPA changes the City's NPDES permit.

Revenues:

- Metered water consumption is the basis for the sewer "Disposal Charge" and is also the primary source of revenue.
- In 2017 over the past three previous fiscal years, water consumption by Sewer Customers was down therefore billable wastewater disposal charges were down by 723,936 cubic feet. Between fiscal years 17 to 18 the revenue loss decreased 926,604 equating to a \$64,862 revenue loss for the same period.
- The reason is less water consumption is mainly due to the amount of vacant properties, loss of customer base and increased water conservation by the customer.
- The last sewer rate increase was in FY19. The current "Disposal Charge" is \$7.00 per 100 cubic feet, equivalent to 748 gallons. A .09 cent reduction.
- For every 13-cent increase in the "Sewer Disposal Charge", the fund generates an additional \$25,000 in annual revenue.
- The quarterly "Sewer Availability Charge" had remained at \$20 per quarter for 27 years and has now been adjusted to \$30. Increasing the quarterly "Sewer Availability Charge" by \$1.00 will generate an additional \$7,780 in annual revenue.
- For the past eight years, the City has invested about \$458,558 in capital improvements including: system maintenance; mapping; sewer line cleaning and flushing; condition assessment and inspection; smoke testing and implementing components to be utilized for an "Inflow and Infiltration Reduction Program".
- Leachate disposal from the recently capped ash fill owned by the Concord Regional Solid Waste Resource Recovery Cooperative (CRSWRRC) and discharged into the Franklin Sewer Collection system will continue to decrease due to the ash fill closure. This leachate disposed into the City's Sewer Collection System is a significant revenue source. The ash fill closure will equate to an estimated \$38,000 decrease in annual revenue to the Sewer Fund beginning in FY 21.
- Without adequate revenue to fund Inflow and Infiltration (I and I) reduction and other capital projects, City Sanitary Sewer Customers could be adversely affected. WRBP is developing a new assessment formula which will be primarily based on municipal wastewater flow, wastewater strength and capacity. Billing using a flow/strength-based assessment formula means that I and I will be accounted for in the quarterly charges to each community. The new flow-based assessment formula is projected to be in place in 2021 and based on a five-year average flow from member communities.

Expenditures:

- A significant portion of City Sewer Department's Capital Expenditures on the City portion of our budget have been utilized to meet National Pollutant Discharge Elimination System (NPDES) Permit Requirements for the City's Wastewater Collection System which took effect since 2009.
- Operation and Maintenance (O&M) costs continue to increase annually primarily due to costs passed on to the municipalities by WRBP. The City has kept up these increases by the WRBP by increasing the sewer "Disposal Charge" to support the expenditures, equal to the amount that the NHDES assesses the City.

- City collection system improvements have been limited as the available revenue we have to work with after we pay annual WRBP assessments.
- We do continue to perform adequate annual maintenance to keep the City collection system operable and in compliance with our permits.
- Service requests and subsequent repairs due to the age and size of the sewer collection system amounted to 19 in 2019. Most of these are the homeowners' issue due to poor condition of sewer laterals resulting in backups into a building.
- The ten-member WRBP Advisory Board has become very pro-active in reviewing and assisting NHDES Staff on various projects. Many continue to be undertaken simultaneously.
- Flow meters throughout the WRBP sewer interceptor lines are now in place and we are collecting data on municipal flows. Municipal flow is the basis for establishing and resetting the new assessment formula for each WRBP community. This is the incentive to identify and eliminate as much I and I as feasible.
- Customer outreach and education is essential to keep all informed of our progress. This is a requirement of our federal NPDES Permit.

Fiscal Impact Water Fund:

Section 2, Water Fund including Water Rates; Challenges; Revenues and Expenditures:

Water Rates:

- Support Operations, Maintenance and Administrative costs for the Water Department.
- Support critical capital projects.
- Fund Debt Service. Currently four NHDES/DWSRF loans with 25% forgiveness on principal and one USDA loan with 49.5% forgiveness on principal and interest.
- The loans are necessary to keep a public water system reliable, operable and in compliance. All deal with funding identified critical infrastructure projects.
- Since 2003 there have been 11 rate increases totaling \$5.12 bringing the Water Commodity Charge from \$2.27 to the current rate of \$7.32 per 100 cubic feet. This equates to a penny a gallon!!!
- Communities with higher rates tend to be very proactive by investing in necessary Capital Projects.
- In February of 2015 the City increased the quarterly "Availability Charge" from \$20 to \$30 per quarter generating an additional \$92,000 in annual revenue. This increase is being used to pay off 10-year debt service on the Cross-Street Water Tank Rehabilitation Project and the Route 3 Water Main Relocation Project.

Challenges:

- The most critical issue facing the department now is the condition of our wells, pumps and motors. Sanbornton Well field needs continuous well point rehabilitation to meet demand and more importantly to add a level of redundancy to the water distribution system. This well operates independently of the Water Treatment Plant. In other words if we have to shut down the plant for maintenance Sanbornton Wells become the City's primary source of water. The upcoming "New Hampton Road, Water Main Replacement Project will ensure that the distribution system from the wells to our water tanks is

reliable. The cost to the ratepayer is \$3,087,545 equating to \$2.97 per linear foot of new water main replacement. Of the total approximately \$617,500 is grant reimbursement.

- Acme #2 well, developed in 1964, is currently in the process of complete replacement. Its production rate dropped from 650 to 150 G.P.M during a three-year period. Well water pumping rates decline with age. Each time we rehabilitate a well the cost is approximately \$45,000 thus well cleaning on a 3 to 5-year rotation is necessary due to high iron and manganese. The total cost of well repair with new well casing, pump, motor and building enclosure for this well will be upwards of \$425,000 and complete by May of this year. Money was not borrowed for this project.
- Extensive aging subsurface infrastructure, in need of on-going capital investment. The City has 52 miles of pipe in the ground. The current cost per foot for replacement is \$257 per linear foot.
- Meeting future regulatory requirements is a new trend. The USEPA will be issuing new drinking water standards for PFOA's, lead, copper and manganese.
- The City's Water Treatment Plant will be in need of approximately \$350,000 worth of upgrades over the next two years. The plant will be in service nine years this July.
- USEPA requires cleaning of water tanks every 5 years. Cost is approximately \$7,500 per tank.
- Well rehabilitation is necessary due to the high iron and manganese levels in our raw well water. High levels of iron and manganese have an adverse impact on pump and well performance as well as, the performance of the Water Treatment Plant. We are on a 5-year rotation for well rehabilitation at a cost of \$45,000 each.
- Other operation and maintenance activities include: software/hardware upgrades to meter equipment, SCADA communications systems, emergency generators, motorized equipment, water sampling and reporting and the replacement of antiquated curb stops and associated service connections to the water main.
- In F.Y. 21 there is the need to replace truck #13 which is the service truck for the Water/Sewer Departments. The truck is a key piece of equipment and at the end of its useful life.
- There is the need to replace and repair other aging motorized equipment.
- Three additional water main replacement projects include East/West Bow Streets, Gilman Street and Thunder Road.

Revenues:

- Metered water consumption is the primary source of revenue for the department.
- During the three-year period between 2015 through 2017, water consumption was down by about 1,275,000 cubic feet. This equates to about a \$74,077 loss in revenue from water sales over the past three years annually. The issue is we still need to perform the same amount of maintenance to the system. Revenues have now stabilized.
- The reason for less water consumption is primarily due to vacant properties, loss of customer base and water conservation measures by customers. Unfortunately we still must maintain the extensive water system regardless of the number of customers
- The last "Water Commodity Charge" increase was raised in FY20. The current FY "Water Commodity Charge" is \$7.32 per 100 cubic feet which is equivalent to 748 gallons.

- For every 12-cent increase in the "Water Commodity Charge" the fund generates an additional \$25,000 in annual revenue.

Expenditures:

- The overall operation and maintenance cost to pump, treat, meter and deliver water has steadily increased.
- The overall percentage for fuel, oil, vehicle parts, heating fuel, electricity, disinfection chemicals, and personnel related expenses and most other costs directly associated with operation and maintenance of a water system have increased by 24% since 2007.
- Although there have been numerous improvements and the costs for operation and maintenance have risen, in the past we have been able to absorb these costs by supplementing them with a portion of retained earnings rather than propose larger rate increases.
- Unfortunately we are no longer in this position and this trend will continue. Again the increases are basically covering critical infrastructure and maintenance projects to keep our water system operable and in compliance.
- Regulatory requirements relative to operating a public water system have also become complex complicating budget stability.
- Costs associated with specialized contractual services such as engineering; well rehabilitation; meter replacement; reconditioning of pumps and motors; laboratory analysis, scada communications and programming and many other types of maintenance/service contracts are all essential to the operation of the system.
- A significant amount of distribution system maintenance is necessary to keep the system operable. Customer assistance due to the age and size of the system has also increased significantly. This involves considerable staff time.
- On the average we have certified laboratory costs on water sampling for over 1,200 samples annually.
- The Water Department "Capital Efficiency Plan" (CEP) was completed in September 2015. The CEP identifies and prioritizes short- and long-term capital needs. The CEP supports the Asset Management Program that we have been developing.

Alternatives:

Proper operation of both the Water and Sanitary Sewer Enterprise Funds are necessary to support clean potable water; fire protection; and the sanitary sewer collection, disposal and treatment of City wastewater. These are the most basic and primary components of municipal infrastructure. Without reliable facilities and staffing there is the negative effect towards attracting and maintaining residential, commercial and industrial growth. We must also consider the quality of life these two essential services provide to our customers!

Because both funds are State and Federally regulated and involve public health, there is little choice but to operate and maintain each system in the most economical manner, satisfying our permit requirements while always considering the long-term effect on the ratepayer. As you can see from this report, I have continuing concerns with respect to future costs and revenues for both the short and long term. More important, Franklin is not the only municipal water and wastewater systems system facing these many challenges.

Alternatives relative to the long-term operation of the City's Water System are very limited other than to sell off the assets and operate the system by contract operators. **I have concluded that this is not a viable alternative because most of our long-term challenges and costs are less related with the operation and maintenance of the system and far more heavily weighted on system wide, future, Capital Infrastructure needs.** These needs will be the most significant impact to the Water Fund rate payer.

In closing Water Department Staff are the registered owners and operators of the Franklin system thus we have the obligation under our Public Water System Operators License's to protect public health by insuring the delivery of an ongoing, adequate supply of clean, safe, potable drinking water for human consumption and fire protection.

It is my responsibility to advocate for the long-term viability of Franklins Water and Wastewater Systems as much as I do for the ratepayer. Should something happen due to our inability to correct an operational problem or deficiency, we could run into significant financial burdens and potential enforcement action coupled with bad publicity. This will far outweigh adjusting rates and allowing us to operate pro actively. Unfortunately rising consumer costs are the trend in all public utilities and Franklin's two public utilities are no different.