CITY COUNCIL WORKSHOP MEETING
MONDAY, MARCH 27, 2017
6:00 PM – COUNCIL CHAMBERS
FRANKLIN CITY HALL

AGENDA

I. **Water and Sewer Department Discussions**

II. **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.

CITY OF FRANKLIN
COUNCIL AGENDA REPORT
Water / Sewer Systems Overview

From: Brian J. Sullivan, Municipal Services Director
Subject: Water and Sanitary Sewer Enterprise Funds for Fiscal Year 2018.
Date: March 21, 2017

Purpose of this Document:

The purpose of this report is to update the City Manager, Mayor and City Council in order to assist with the FY 18 budget process as it relates to the status of the City's Water and Sanitary Sewer Enterprise Funds. It is also intended to provide the framework for understanding the scope of work needed towards the development of future budgets. In this report I have tried to balance conciseness with the need to make sure everyone understands the complex issues and challenges that confront both of these two funds and associated public utility systems.

Overview:

Each Department operates as a City Enterprise Fund relying on water consumption and quarterly availability charges to derive most of their operating revenue. As a result, both are similar in many ways and both share many short and long-term challenges. These challenges include:

1. The most important factor to consider when evaluating the long-term financial; operational and capital needs is the small customer base supporting the water and wastewater systems. There are 2,422 water connections and 1,886 sewer connections. There are simply not enough customers to adequately fund the necessary long term capital needs of both systems so planning to replace key capital assets is the priority.
2. The systems are old, with some components dating back to the late 1800's. These utilities are also spread out over a large geographic area.
3. Our customer base and water consumption have declined **significantly** since the late 1970's, which means less revenues.
4. The costs associated with the maintenance and improvements increase every year.
5. For too long, we have deferred important capital improvement projects. We are now in the position of playing catch up on many.
6. Each system is also subject to the changing regulatory requirements by the NH DES and the US EPA. One example that is in the news is the anticipated increase in the required sampling for lead and copper. All of the regulations tie back into the health, safety, and the protection of water quality for drinking water, groundwater and our surface waters.

I recognize that these are financially difficult times, with the City facing a variety of challenges. As the licensed owner of the Water and Sewer Departments, it is my obligation to make sure that all the City Council and Ratepayers are fully aware of the current conditions and the long term needs for these two **critical** public utilities. In my opinion without a properly operated and funded water and wastewater system, there will be a negative impact on the quality of life for

Franklins Residents; Business Owners; Future Industry and overall Public Health. We need a strategy that can be implemented to insure both the short and the long-term integrity of the both systems.

With the assistance of Finance Director Milner, I have divided this report into two sections dealing with the Sewer and Water Funds. Please note that these two funds operate under the same GASB accounting standards that apply to the City's budget and accounting systems.

Subsequent to your review I am available to meet as many times as necessary to provide direction; review various scenarios; conduct site visits and answer questions.

Sewer Fund and Operating Systems

Franklin is one of ten member communities participating in the Winnipesaukee 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 created the framework which ultimately established a NHDES-operated regional wastewater collection system and treatment plant serving the Lakes Region. It also identifies how the system should be structured and managed.

Within the Lakes Region, the WRBP owns and operates an extensive 64 mile collection system pipes, as well as the River Street Waste Water Treatment Plant (WWTP) and fourteen pumping stations. In addition the ten member communities maintain and operate their own municipal waste water collection systems.

The WRBP has its own set of challenges. The WRBP Advisory Board, comprised of members representing each community, along with NHDES Staff are in the process of evaluating issues such as ownership, assets, a new rate allocation formula and legislative changes. The Advisory Board is also considering the completion of a feasibility study with the objective of evaluating the concept of establishing a Public Waste Water Utility Authority which would assume responsibilities and ownership of the current State operated facilities. Any recommendation on this change would eventually come before the City Council.

Even with the complexity and magnitude of the State and Federal regulatory requirements, both the WRBP and the City systems remain in compliance with our Federal Water and Wastewater System Permits.

The critical financial and operational issues are as follows:

Sewer Rates:

1. Support Operations, Maintenance and Administrative costs of this Department [31% for the City side, and 61% for the WRBP side].
2. Fund Capital Repairs and Debt Service for the City Sewer Collection System.
3. Are needed to fund the City's current and future "Inflow & Infiltration (I&I) Reduction Program".

4. Have steadily increased, primarily to fund necessary WRBP operations, maintenance and capital projects at the WWTP located on River Street in Franklin. This trend will continue as the WRBP WWTP, Collection System and Pumping Stations are well over 30 years in age and upgrades are necessary as equipment is nearing the end of its useful life and in order to ensure compliance with its' NPDES discharge permit .

Challenges:

a. As noted above, the infrastructure of the both the City and WRBP system components are aging, cover a large geographic areas and are supported by very limited customer bases.
b. Controlling and funding WRBP "Capital Recovery Costs" will be a major challenge. WRBP maintains 65 miles of Sewer Collection System Pipelines, 14 Pumping Stations and the 11.54 million gallon per day capacity WWTP. There are approximately 14,500 connections to the WRBP wastewater collection system. The City owns and operates another 28 miles of its own collection system.
c. Reducing excessive City wastewater flow due to Inflow and Infiltration (I & I) of **non wastewater** into the collection system is necessary if we are going to stabilize and maintain affordable sewer rates.
d. Meeting future regulatory requirements as USEPA updates our federal National Pollutant Discharge Elimination (NPDES) permit.

Revenues:

i. Metered water consumption is the basis for the "Sewer Disposal Charge" and is also the primary source of revenue.
ii. **Over the past twelve years the <u>annual</u> wastewater disposal by Sewer Customers is down by 5,055,133 cubic feet. This equates to an <u>annual</u> decrease in revenue of $316,957!**
iii. The reason for less water consumption is mainly due to the amount of vacant properties, loss of customer base and increased water conservation by the customer.
iv. The last sewer rate increase was in FY15. The current "Disposal Charge" is $6.27 per 100 cubic feet which is equivalent to 748 gallons of wastewater.
v. For every 13 cent increase in the "Sewer Disposal Charge", the fund generates an additional $25,000 in annual sewer revenue.
vi. The quarterly "Sewer Availability Charge" is $20 per quarter. A one dollar increase generates an additional $1,886 per quarter or $7,544 annually.
vii. Budgeted unrestricted retained earnings in the Sewer Fund are estimated to be $363,231 at 6/30/17 .
viii. For the past four years, the City has invested about $458,558 in capital improvements including system maintenance; mapping; cleaning & flushing of lines; condition assessment and inspection reports; smoke testing and implementing components to be utilized for our ongoing "Inflow and Infiltration [I & I] Reduction Program".
ix. The leachate disposal from the recently capped ashfill owned by the Concord Regional Solid Waste Resource Recovery Cooperative (CRSWRRC) which discharged into the Franklin Sewer Collection system will be nearly eliminated due to the ash fill closure; this results in an estimated $38,000 decrease in annual revenue to the Sewer Fund beginning in FY18.

x. Without adequate revenue to fund I & I reduction in the City system, our sewer rates could be adversely affected. WRBP is developing a new assessment formula [the current formula has been in place since 1979] which will be primarily based on municipal wastewater flows. Without reducing I & I flows, we will be paying to treat clean water entering our system that runs through the WWTP. The new flow based assessment formula is projected to be in place in 2020. Essential to keeping sewer rates stable or less than our current WRBP billing is the **reduction in flow**.

Expenditures:

- A significant portion of City Sewer Department's Capital Expenditures have been utilized to meet National Pollutant Discharge Elimination System (NPDES) Permit Requirements for the City's Wastewater Collection System which took effect in 2009.
- WRBP costs continue to increase annually and passed on to the municipalities. In most cases the City has kept up with these increases by raising the sewer "Disposal Charge" to support the expenditures, equal to the amount that the WRBP assesses the City.
- City collection system improvements have been limited and based on available revenue we have to work with after we pay our annual WRBP assessments. We do continue to perform annual maintenance to keep the City collection system operable and in compliance with permits.
- Service requests and subsequent repairs due to the age (1890's) and size of the sewer collection system continue to increase. This takes time and labor.
- The ten-member WRBP Advisory Board has become very pro-active in reviewing and assisting WRBP Staff on various projects. Many projects and initiatives 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. [See item "x" above].

Important Sewer Work Now Underway:

In March of 2017, the City entered into a contract for the "City of Franklin, NH Sanitary Sewer Assessment Project". This is part four of the City's I & I Reduction Program and is aimed at identifying intrusion of clean water into the Sanitary Sewer System. Flow meters have been installed in City sewer lines to identify the major sources of I & I. With that information we can focus on maintenance and improvements to those areas. My overall goal is to request the use of USDA Rural Development Funding once we have identified major sources of I and I. Customer outreach and education is also an essential component of the I & I Reduction Program. Expect to be hearing much more about I and I reduction as this study progresses.

Continued work in all aspects of the Sewer Collection System as part of the I and I Reduction Program.

Water Fund and Operating System

The City owns and operates a federally permitted public water system. Included as part of the system are 3 well fields and pumping stations [Sanbornton, Acme, and Franklin Falls]; five water

storage tanks [North Main St., Salisbury Rd., Cross St., Pleasant St. and East Pleasant St.] a Water Treatment Plant and 57 miles of pipe. We operate an aging system, with some components dating back to the late 1890's. The City had deferred maintenance for many years and we are now playing catch up. The Water Department "Capital Efficiency Plan" (CEP), completed in September 2015, identifies and prioritizes capital needs. The cost of providing safe drinking water continues to rise!

The critical financial and operational issues are as follows:

Water Rates:

1. Support O & M, Administrative, and Capital Project costs for the Water Department.
2. Fund Debt Service.
3. Are necessary to keep a public water system reliable, operable and in compliance.
4. From F.Y. 2008 to F.Y.2016 the Water Department offset rate increases for operation and maintenance by utilizing money from retained earnings.
5. The current FY 17 "Water Commodity Charge" is $6.06 for 748 gallons of water.
6. Every $0.12 cent increase in the "Water Commodity Charge" generates an additional $25,000.
7. The current "Water Availability Charge" is $30 per quarter per metered customer. Every $1.00 increase per quarter generates approximately $9,688 annually in new revenue.
8. Communities with higher rates tend to be more proactive towards performing ongoing capital projects.

Challenges:

a. This is an aging system, with older components spread out over an extensive geographic area with three separate pressure zones.
b. We need all of our well fields operating, or ready to operate at a moments notice, in order to maintain adequate fire hydrant flows and water pressures to our customers.
c. Current revenues will not support future capital needs of the department. We are now at point of the "run it to failure" mode of operation with respect to capital improvements.
d. **Over the past twelve fiscal years, annual water consumption is down by 4,725,912 cubic feet! This equals an annual reduction of $286,862 in revenue from water sales!** The drop in consumption is primarily due to water conservation, vacant properties, and less customer base.
e. Regardless of the number of water customers, we still need to operate the entire water system for fire protection and to maintain adequate water pressures.
f. We must remain current with our regulatory-based permit and operational requirements, which can add to our budgetary needs.
g. The Sanbornton Well field is circa-1940. It requires continuous well point rehabilitation to meet demand. Since this pumping station operates independently of the Water Treatment Plant it can provide an adequate water supply to the entire City in the event of a plant shutdown. While regular maintenance has been performed, pumps; motors and the vacuum pumping system are original and have been rebuilt several times. Eventual replacement is unavoidable.
h. Acme Well #2 was installed in 1964, and since its last rehabilitation work 3 years ago, its pumping rate has dropped from 700 to 300 Gallons per minute (GPM). It has been offline

for 8 months. We anticipate a continued downward trend in this wells water production. The well has been rehabilitated 3 times in the past 12 years. I have concluded that the well finally needs replacement. A visual inspection of this well in the fall of 2015 revealed a corroded brass well point screen which allows sand to pass through. As this is one of three wells connected to Water Treatment Plant and is essential towards meeting our daily demand of 549,000 gallons per day, we have no option but to deal with the replacement of this well ASAP! Should a second well become inoperable, this limits our supply options, cuts back on well rotation, and jeopardizes use of the plant, which requires a base line minimum flow. The projected replacement cost is $240,000.

i. The Pleasant Street Pressure Reducing Vault lowers the water pressure [from 140 psi. to approximately 70 psi] for customers within the service area of the one million gallon water tank located on upper Pleasant Street. This vault is over 30 years old, structurally deficient, requires constant maintenance since a valve failure can damage residential plumbing fixtures, is categorized as extreme confined space which complicates our ability to perform maintenance and is well below the groundwater table making it constantly prone to flooding. City Staff and our engineer propose a 10' x 15' replacement building with less confined space. Floor elevation will be raised by 12' and valve design upgraded with a far more reliable configuration making it far less subject to failure. The vault needs to be replaced, and the total project cost is $285,560. Proposed funding is through NHDES Drinking Water State Revolving Fund. Principle loan forgiveness towards the project is approximately $56,980.

Revenues:

i. Metered water consumption known as the "Water Consumption Charge" is the primary source of revenue for the Water Department.

ii. The FY 16 budget increased the "Water Commodity Charge" to $6.06 per 100 cubic feet.

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

iv. Budgetary Unrestricted Retained Earnings in the Water Fund are estimated at $302,222 as of 6/30/17.

Expenditures:

- The overall costs related to operating the water system including personnel; fuel and electricity; vehicle maintenance; engineering; outside contractual work; distribution line repairs; meter replacements; pumps and motors have increased by 37% since 2003.
- We have been able to absorb these cost increases is by offsetting them with retained earnings rather than proposing ongoing increases to the water rates. Since we need to maintain a safe level of reserve funding for unforeseen emergencies we need to address this shortfall.
- Due to the age of the system, failure to various system components is an ongoing issue and can result in unexpected expenditures.

Important Water Work Now Underway

- As noted above, the Pleasant Street Pressure Vault needs to be replaced. The design work is now under contract and underway. Total project cost $285,560.

- MSD staff is working with Barry Miller Well Company on the design for the Acme Well # 2 replacement. No formal engineering work is required for this project, so the total cost remains at $240,000.
- Preparation of distribution system components for upcoming road resurfacing projects.
- Meter replacement and upgrades to curb stops.
- System mapping.
- Pump repair and ongoing maintenance of tanks; pumps; motors; waterlines and services; hydrants; communications systems; plant operations; well inspections and maintenance; oversight of our Cross Connection Control Program and satisfying our Operating Permit Requirements.

Recommendations

1. The City Council should consider adopting a tiered "Water Availability Charge" which will generate a more consistent; fair and equitable and dependable revenue stream. City Staff recommends that this quarterly fee should be recalculated and based on the property classification.
2. The City Council should consider increasing the "Water Commodity Charge".

Wrap Up /Summary Water and Sewer Enterprise Funds

- ✓ Operation of both the Water and Sanitary Sewer Enterprise Funds are necessary to support clean potable water; fire protection and the collection, disposal and treatment of City wastewater. These are the most basic components of a municipal utility system.
- ✓ Without reliable facilities there is the negative effect attracting and maintaining residential, commercial and industrial growth.
- ✓ We are obligated to comply with the State and Federal operational standards.
- ✓ I have the obligation under my Public Water System Operators License to protect public health by insuring the delivery of an adequate supply of clean, safe, potable drinking water for **human consumption and fire protection at adequate and required water pressures**.
- ✓ As the MSD Director, I have great concerns with respect to future costs and revenues in order to maintain and operate these systems in both the short and long term. I need to advocate for the long term viability of Franklins Water and Wastewater Systems as much as I do for the ratepayer.

In closing, without adequately funded systems, should one or both of these utilities develop a major problem or deficiency, we could run into a significant financial burden and potential enforcement action coupled with bad publicity. This could far outweigh the need to adjust rates. Unfortunately rising consumer costs are the trend in ALL public utilities and Franklin's two public utilities are no different.

I write this report with no other interest than to update the City Council; insure the continued integrity of these two utility systems; protect **our Customers** and to call to everyone's attention the importance of funding these two budgets thus avoiding the "run it to failure" method of operation and maintenance.