Water and Wastewater Capital Plan

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"*To provide safe, reliable and sustainable water and wastewater services to the residents, businesses and visitors of the Town of Plattsburgh.*"

Mission Statement of the Water and Wastewater Department
Town of Plattsburgh

Water and Wastewater Capital Plan

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EXECUTIVE SUMMARY

The Town Board authorized this Capital Plan and report to determine how best to move forward with improvements to the existing water and sewer infrastructure in the Town as well as the addition of some new infrastructure that benefits the entire system. As part of the planning process, the way the Town charges outside Town users as well as how the costs between the Town districts are allocated was reviewed.

Overall, there has been $17,763,000 of capital improvements identified for the water system between the Consolidated Water and Base Water Districts and another $6,213,000 for the Consolidated Sewer and Base Sewer Districts. The overall total capital program is $23,976,000.

Although this figure is significant, the Town is in a very good position to undertake a program of this magnitude. Some of the projects identified in the plan can be undertaken by funding them through the operating budget. This includes items such as water meter replacement and asset management systems. Some funds have already been set aside for the testing required at the potential water supply location at May Currier Park. Others can be funded with available surplus funds that are allocated to the various districts. The remainder of the projects must be funded through bonds authorized by the Town Board.

A. CAPITAL PROJECTS

The following is a listing of all the projects defined in this plan along with their estimated cost and funding mechanism.

CONSOLIDATED WATER DISTRICT		**FUNDING**
Existing Water Storage Facilities	$ 6,233,000	Bond/Surplus
Salmon River Road	$ 750,000	Bond
Quarry Road	$ 750,000	Bond
BASE WATER DISTRICT		
Water Storage	$ 1,500,000	Bond
Water mains	$ 2,750,000	Bond/Surplus
NON-DISTRICT SPECIFIC WATER		
Source of Supply:		
Additional Supply Capacity	$ 2,000,000	Bond/Grant
Bullis Road Pump Station	$ 750,000	Bond
Well 2 Testing	$ 50,000	Surplus
2,000,000 gallon storage tank at Kimberly Lane	$ 1,750,000	Bond
Metering	$ 1,200,000	Operating Budget
Asset Management System	$ 30,000	Operating Budget
Total Water System Improvement Capital Required	**$17,763,000**	

CONSOLIDATED SEWER DISTRICT		FUNDING
Wastewater Lift Stations		
Route 9 North	$ 500,000	Surplus
Trade Road (aka I-87)	$1,000,000	Surplus
Cliff Haven	$ 500,000	Bond/Surplus
Flannigan	$ 150,000	Bond
Church Street	$ 150,000	Bond
Singing Sands	$ 150,000	Bond
Beach	$ 300,000	Bond
Woodcliff	$ 300,000	Bond
Lake Land	$ 150,000	Bond
Carsone	$ 150,000	Bond
Cadyville Wastewater Treatment Plant	$ 500,000	Bond
Cliff Haven Sewer Lining	$ 900,000	Bond
BASE SEWER DISTRICT		
Manholes	$ 433,000	Operating Budget
Connecticut Avenue Pump	$1,000,000	Bond/Surplus
NON-DISTRICT SPECIFIC SEWER		
Asset Management System	$ 30,000	Operating Budget
Total Sewer System Improvement Capital Required	**$6,213,000**	

The total estimated amount of bonding required for this plan is $16,003,000.

B. TAX EFFECTS

Based upon the division of the projects across the two water districts and two sewer districts and assuming that none of the cost will be allocated to outside users, the effect of the bonding upon the average residential customer is relatively small. Assisting this is the current debt payoff schedule, particularly on the water side, wherein much of the debt service being paid now for past projects will be eliminated thereby allowing the absorption of additional debt. All figures presented herein are based upon the Town having the ability to obtain financing for a 20 year period at 4 percent interest.

For the Consolidated Water District, the tax rate will increase from the current $1.049/$1,000 of assessed value to $1.5579/$1,000 in 2020. For the average residential property assessed at $162,400 this results in an increase from $170.44 to $231.68 per year, an increase of $61.24 over a two year period. In year 7(2025), the average residential property tax will fall to $166, less than the current average residential tax at the date of this report. In addition to the ad valorum tax adjustment, there will be an increase in the metered usage rate to pay for the water storage tank maintenance plan currently put in place by the Town. The rate adjustment will begin in 2020 with an increase of $0.29 per 1,000 gallons of water and increase to 0.47 per 1,000 gallons in 2021 after which it will increase by 3.5 percent each year. Based upon a typical residential water use of 80,000 gallons per year this additional metered rate results in an additional cost to the average homeowner of $38 per year. Combined with the ad valorum tax the average residential homeowner can expect a total increase of approximately $99 by year 2021.

Similarly, for the Consolidated Sewer District, the tax rate will increase from the current $0.4095/$1,000 of assessed value to $0.6859/$1,000 in 2021. For the average residential property assessed at $162,400, this results in an increase from $67 to $112 per year, an increase of approximately $45 per year. This will remain fairly constant throughout the ten year planning period.

It is noted that based upon a review by the Town's Assessor, just over 40 percent of the affected parcels are in both the water and sewer districts and will therefore be affected by both increases. The other roughly 60 percent of the affected parcels will only pay one or the other district increases.

The Base Water District will see the current tax rate increase from $3.7009/$1,000 of assessed valuation to $5.5480/$1,000 and will remain constant during the next 10 years.

The Base Sewer District will see the current tax rate of $5.3178/$1,000 of assessed valuation to $5.6501/$1,000 and will also remain constant during the next 10 years.

C. FACTORS AFFECTING COST

- ***Cost Allocations – Capital projects***

  As mentioned above, the figures presented thus far assume the Town water and sewer district property owners will pay all the costs associated with these improvements. Since all of the improvements are for the benefit of the districts as a whole, water districts outside of the Town of Plattsburgh are also benefitting. The Town should consider that some of the costs associated with these improvements be allocated to the various outside districts. This can be done on a water consumption or number of customer basis. Any allocation to outside districts will serve to decrease the rate to Town property owners.

- ***Cost Allocations – Operating Budget***

  Based upon a review of the existing operating budgets for the water districts, it is apparent that the Town of Plattsburgh is subsidizing the cost to the outside Districts. It is suggested that the Town allocate all of the costs for operating the water system on a water consumption basis to make the appropriate allocations. This will require renegotiation of the existing water service agreements with the various districts. Again, any allocation to outside districts will serve to decrease the rate to Town property owners.

- ***Timing***

  As stated, the borrowing costs presented herein are based upon a term of 20 years at a rate of 4 percent. Though it is not expected that interest rates will rise rapidly, it is likely that they will increase over time. Time will also affect the project costs due to inflationary pressures. As a result, it is recommended that if the Town wishes to pursue this plan that it be at an accelerated pace.

- ***Funding Assistance***

  Should the opportunity present itself to obtain grant funding or low or zero interest financing, the costs presented herein will be reduced.

D. RECOMMENDATIONS

The following recommendations are made to progress the Capital plan projects:

1. Present the plan to the public to provide education on the need for the improvements and the impact upon the water and sewer users in terms of service and rates.

2. Meet with representatives of the outside water districts to discuss the need for modifications to the existing water service agreements and to provide them the opportunity to make rate adjustments to their customers in a timely fashion.
3. Apply for financing assistance to help defray the cost to the rate payers. Projects should be listed on the Environmental Facilities Corporation Intended use Plan for both water and sewer projects. In addition, as different grant/loan programs become available each project should be evaluated for eligibility.
4. Due to the amount of funds required, the Town should consider the use of a financial manager to provide recommendations on the best way to approach the financing of the project.
5. Procure the services of Bond Counsel to provide legal assistance in preparing the required bond resolutions and to assist in the subsequent financing.
6. Initiate design of the required improvements so that they can be ready for public bidding and regulatory review as required.
7. Based upon the design, update cost estimates to verify the assumptions in this report and modify the program as required.
8. Once bonding is in place, commence the construction phase of the various projects.

I. INTRODUCTION

The Town of Plattsburgh has extensive water and wastewater utilities throughout the Town that serve property owners both within and outside the Town's municipal boundary. These utilities have allowed the Town of Plattsburgh to prosper by attracting commercial growth that leads to jobs, lower tax rates and quality residential neighborhoods. These facilities have been constructed over the past sixty to seventy years and require various improvements due to their age and condition. In addition, the system has been serving more and more customers resulting in the need to enhance the capacity of the various system components. All of the improvements require significant capital investment. In order to be proactive and responsible caretakers of this vital Town infrastructure, the Town Board has authorized this Capital Plan report to assist in the structuring of expenditures required and to provide a plan going forward to make the necessary upgrades and expansions.

The projects included herein have either been under consideration for some time or are expected to be required in the relatively near future. The cost associated with each item is a rough estimate as no detailed estimating was performed for this planning effort. With that in mind, this document should be considered a living document in that it should be reevaluated and updated on an annual basis as project costs are better defined and as priorities evolve.

This plan presents a forecast for a 3 year improvement plan. The reasoning behind the aggressive implementation schedule is that at this point in time interest rates remain low, a significant amount of existing indebtedness will be paid off and many of the projects presented herein should be implemented sooner rather than latter. As with any projection, the more near term the more realistic it will be. The plan has attempted to prioritize the needs of each system and layout a capital plan to achieve the desired result while minimizing the annual user cost increases associated with each improvement.

Unless otherwise specifically stated, the plan does not include the potential of having projects funded through grant and low interest or zero interest loan programs that may be made available through various State and Federal funding agencies. Should these types of funding opportunities become available for projects on the priority list they will only help reduce the cost impact to the rate payers.

II. WATER IMPROVEMENT NEEDS

The Town currently has two water districts, the Consolidated Water District, also known as the Greater Plattsburgh Water District and the Base Water District. With two exceptions, all customers within the district are supplied with water from the Town's Morrisonville well field on Bullis Road. The Cadyville area, while part of the Consolidated District, is supplied by water from the Gougeville Road wells and the Salmon River Road area is supplied by water from the Salmon River wells.

A. CONSOLIDATED WATER DISTRICT

1. Existing Water Storage Facilities

There are nine water storage tanks in the Consolidated Water District that provide water storage for the entire water system with the exception of the Salmon River Road area. These tanks are in various states of disrepair and require some level of attention based upon their current condition. The Town has had the steel tanks evaluated to determine what repairs and maintenance is currently required and what maintenance and repair work can be expected in the future. All of the tanks are in need of some type of work including, but not limited to, interior and exterior painting, cleaning, minor structural repairs, ladder replacements and vent repairs. The Town has entered into an agreement with Utility Service Co. Inc. to restore and maintain all of the water storage tanks with the exception of the Kimberly 1, 2 and 4 tanks. Kimberly 2 and 4 will ultimately be taken out of service and Kimberly 1 is not currently in immediate need of significant rehabilitation. Table 1 presents the rehabilitation costs for each tank.

TABLE 1

	Rehabilitation Cost	Annual Maintenance
-Kimberly 1	$1,200,000	N/A
-Kimberly 3	$1,069,731	$37,046
-Bluff Point	$947,364	$31,888
-Cadyville	$738,901	$21,394
-Champlain Park	$663,498	$27,062
-Cumberland Corners	$791,751	$37,995
-Hammond Lane	$821,598	$33,559
TOTAL	**$6,232,843**	**$188,944**

The contracted maintenance costs for the tanks is an annual cost in addition to the rehabilitation costs identified in Table 1. The annual maintenance cost for each tank is presented in Table 1. After the first year, the annual cost increases 3.5 percent per year. The Town can elect to terminate the agreement at any time should the cost become unreasonable due to factors that may occur in the future. The maintenance program provides several advantages to the Town including:

- All required maintenance and inspections are provided by the contractor. The Town has considerably reduced financial risk of poor rehabilitation and painting services that can occur without a maintenance program.
- It allows the Town to reliably predict the annual cost going forward in regard to tank maintenance.
- It eliminates the need for large tank renovation/painting capital projects in the future.

2. Salmon River Road

As indicated, the Salmon River Road area is supplied with water from the Salmon River wells. These wells provide the 13 customers with domestic water. The system is not capable of providing fire protection as there is no storage facility other than a small hydropneumatic tank. In the past, the Town has considered extending a water main from the Consolidated Water District system in Superior Drive to Salmon River Road to eliminate the need to operate and maintain the existing

Salmon River Road water supply, as well as to provide water storage and fire protection for the area. It will also assist in the extension of the Consolidated Water District in the future should any of the property owners in the adjoining area wish to become customers of the District.

Preliminary cost opinions prepared in 2008 placed the cost of the improvement between $400,000 and $500,000 depending upon the route of the water main. At the time the estimate was prepared, it was assumed that the Town would utilize its own staff to install the main. Adjusting for inflation and assuming the use of private contractors to construct the main, the updated cost is expected to be $750,000

3. *Quarry Road Water*

A water main in Quarry Road from Tom Miller Road to the Wallace Hill Road will provide a redundant connection to the northeast part of the water system. This area contains the Wallace Hill neighborhood, Trade Road, Route 9 north, Moffitt Road and Cumberland head. The main will also assist in service to the Beekmantown water districts. The redundant connection will help assure continuation of service in the event of a water main break on the existing single connection. The overall length of the main is approximately 5,100 feet and will include a crossing of NYS Route 374. The cost to install a water main along Quarry Road has been estimated to be $750,000.

B. BASE WATER DISTRICT

1. *Water Storage*

Water storage for the Base Water District is provided by water storage facilities that are part of the Consolidated Water District. The primary tanks providing fire flow and pressure to the Base Water District are the Hammond Lane tank located adjacent to Route 3 and the Bluff Point tank located adjacent to Clinton Community College. Due to the type of facilities that are currently located within and are planned to be located within the Base Water District, additional water storage has been recommended. A tank has been proposed along Pleasant Ridge Road near its intersection with Carbide Road. This tank was originally proposed since the Town currently has only one water storage facility on the south side of the Saranac River that provides storage to the Cliff Haven and Bluff Point areas of Town, as well as the Base Water District. This area of Town is fed by a single line under the Saranac River. In the event this water main is disrupted, the minimal amount of storage on the south side of the Saranac will be insufficient. It has been recommended that an additional water storage tank of approximately 750,000 gallons be constructed along Pleasant Ridge Road where it intersects with Carbide Road. This storage facility will also dramatically increase the fire flow available within the Base Water District as it will reduce the amount of head loss currently experienced due the distance the water must travel to reach the District.

Initial cost estimates for this tank have been place at approximately $1,500,000.

2. *Water mains*

The Base Water District water mains were constructed when the United States Air Force constructed the former Plattsburgh Air Force Base. The system was constructed using transite pipe which has life expectancy of about 50 to 60 years depending upon the environment in which it is installed. Being that the Air Force Base was constructed in the 1950's, the mains have surpassed their life expectancy. This has been demonstrated by the water main breaks that plague this system.

No analysis of cost has been prepared to date for the replacement of the water mains in the district; however, based upon the total linear feet of pipe being 34,000, a rough cost estimate is $2,750,000.

C. NON-DISTRICT SPECIFIC IMPROVEMENTS

Due to the way the Town water system and Districts are structured, there are improvements required that benefit all water customers regardless of what district they may be in.

1. Source of Supply

i. Additional Supply Capacity

The Town is approaching capacity of the existing water supply. The Town has undertaken a search for additional groundwater and has located a site with high potential for additional wells. The site is not in the same location as the Morrisonville wells which provides a factor of safety should there ever be a problem at Morrisonville. Should the proposed well site be fully tested and found to be of sufficient quality and quantity, a new treatment facility will be required.

The items associated with this new source of supply include:

- Finalization of a test well.
- Pumping tests and water quality tests.
- Installation of one or two large diameter production wells.
- Construction of a treatment facility to include at a minimum chlorination and fluoridation.
- Connection to the Town water distribution system.

The estimated cost associated with is work is $2,000,000.

ii. Bullis Road Pump Station

The Bullis Road Pump Station is the station that provides both treatment, in the form of chlorination and fluoridation, as well as boosts the water pressure to meet the demands of the distribution and storage systems. The existing pump configuration is in need of upgrades to allow the station to increase its capacity and operate more efficiently.

The items associated with the Bullis Road pump station include:

- Expansion of the building footprint.
- Installation of three 100 hp pumps and VFDs.
- New Electrical service.

The estimated cost associated with this work is $750,000.

iii. Well 2 Testing

Well 2 at the Morrisonville well field has been out of production for many years due to a concern about its effect upon Well 6, which is a primary well. It has been recommended that a hydrogeologist be retained to perform testing and evaluation of the well and to determine if there is any problem with operating both wells so that additional water can be extracted. This evaluation is expected to cost approximately $50,000.

2. Metering

All water users in the Town are metered. The meters provide a method of billing each customer for the water they use. Over time, meters begin to lose accuracy and nearly always register less use than actual resulting in a loss of revenue. Replacement of the residential meters with radio read capability is the preferred option to correct this problem. The radio read capability allows for quick and easy meter reading. It also allows the water department to track water use for each customer and identify if there is a leak within the customer's home or building.

There are approximately 4,000 residential meters currently installed in the system. The Town has replaced approximately 1,000 meters to date leaving approximately 3,000 meters awaiting replacement. The replacement program utilizes Town staff to perform the work. The only capital expenditures are for meters and associated parts and fittings.

The cost to replace a meter is approximately $400. It is projected that the remaining meters will be installed over the next 6 years by installing 500 meters per year at a cost of $200,000 per year for the purchase of materials. It is preferred that the replacement be performed over time so that when it is time to replace them again in the future not all the meters will require replacement at one time.

The remaining cost to replace all meters is $1,200,000.

Commercial meters are the responsibility of the property owner and although they may need replacement, the financial burden is on the property owner and not the District.

3. Additional Water Storage

In order to gain additional storage capacity at the Kimberly Lane water storage tank site, it would be beneficial to construct a new 2,000,000 gallon ground storage tank in place of rehabilitating the Kimberly 2 and 4 tanks. The Kimberly 2 tank is 750,000 gallons and the Kimberly 4 tank is only 375,000 gallons. The cost to renovate these two tanks has been placed at $1,410,000. The cost of a new 2,000,000 tank has been estimated to be $1,750,000. The additional cost to install a new 2,000,000 tank and gain 1,000,000 gallons of storage is $340,000.

4. Facility Communications (SCADA)

The Town has been slowly incorporating System Control and Data Acquisition (SCADA) equipment into facilities that are being modified or upgraded. Not all facilities have been equipped with this technology and ideally all water facilities should be updated with this equipment. SCADA makes it very easy to monitor what is happening at the water supply sites, water tanks, pressure reducing valves, etc. The SCADA equipment can also be arranged to allow remote control of pumps and other equipment allowing for improved maintenance and emergency management if required. The facilities which can benefit from the installation of SCADA technology include:

- Bullis Road Pumping Station for monitoring and control of pumps, chlorination and fluoridation equipment.
- Well 8 pumping facility for monitoring and control of the well pump.
- Water Storage Tanks for monitoring the water level in each tank.
- Pressure Reducing Valve to monitor valve position.

The cost to install the required equipment has been included in the upgrade costs of the various projects identified herein.

5. *Asset Management System*

For the size of the Town of Plattsburgh water system, an asset management system should be implemented to track all components of the water system including everything from the age of each component, last maintenance performed, scheduled maintenance, scheduled replacement, and inventory tracking. Management systems will pay for themselves over the years by making sure no portion of the system is neglected resulting in fewer repairs and emergencies.

An asset management system is estimated to cost approximately $30,000 for the software and equipment. If the system is populated by Town staff, the additional cost will be minimal.

D. MISCELLANEOUS PROJECTS

In addition to the projects identified above, the following projects, while not a priority, are being maintained on the water department's project list. These projects are not included in the capital plan expenditures. Should the importance of any of these projects be elevated in the future they can be included into the annual plan as funds allow.

- Route 9 North Water main Replacement
- Cliff Haven Water main Rehabilitation
- Crossing Redundancy - Saranac River
- Crossing Redundancy - Scomotion Creek
- Banker Road/Military Turnpike Water Loop
- Golf Course Water Loop

E. WATER IMPROVEMENT COST SUMMARY

Table 2 on the following page summarizes the various projects and associated costs relative to the Town's water system.

TABLE 2 WATER IMPROVEMENTS COSTS	
CONSOLIDATED WATER DISTRICT	
Existing Water Storage Facilities(Less Kimberly 2&4)*	$ 6,232,843
Salmon River Road	$ 750,000
Quarry Road	$ 750,000
BASE WATER DISTRICT	
Water Storage	$ 1,500,000
Water mains	$ 2,750,000
NON-DISTRICT SPECIFIC	
Source of Supply	
Additional Supply Capacity	$ 2,000,000
Bullis Road Pump Station	$ 750,000
Well 2 Testing	$ 50,000
2,000,000 gallon storage tank at Kimberly Lane	$ 1,750,000
Metering	$ 1,200,000
Asset Management System	$ 30,000
Total Water System Improvement Capital Required	**$17,762,843**
* Kimberly Lane Tanks 2 & 4 will not be required with the construction of a new 2,000,000 gallon storage tank.	

F. PROJECT PRIORITIES

The identified projects have been prioritized based upon need. The following list identifies the year in which each project is expected to be initiated:

- Cadyville Water Tank 2017
- Champlain Park Tank 2017
- Cumberland Corners Tank 2017
- Hammond Lane Water Tower 2018
- Bullis Road Pump Station 2018
- 2,000,000 gal Storage Tank 2018
- Additional Supply Capacity 2018
- Metering 2018 thru 2023
- Well 2 Testing 2019
- Base Water Storage 2019
- Asset management System 2019
- Base Water Main Improvements 2019
- Kimberly 1 Tank 2019
- Kimberly 2 Tank 2019
- Salmon River Road 2019
- Quarry Road 2019
- Kimberly 3 Tank 2019

III. WASTEWATER IMPROVEMENT NEEDS

Similar to the water system, the Town has two sewer districts, the Consolidated Sewer District and the Base Sewer District. The sewer districts provide collection and transport of wastewater from the customer to the City of Plattsburgh where it is treated. The one exception is the Cadyville area which has its own wastewater treatment plant.

A. CONSOLIDATED SEWER DISTRICT

1. Wastewater Lift Stations

The Consolidated Sewer District has 17 lift stations to convey wastewater to the City of Plattsburgh. Many of the stations were constructed in the 1970's. Three of these stations, Route 3, Sorrell Avenue and Champlain Park, were recently upgraded leaving the remaining 14 stations in need of update and repair.

The priority stations are listed below along with the associated cost. The cost also includes the replacement of the old transite force mains associated with each station.

- Route 9 North $ 500,000
- Trade Road (aka I-87) $1,000,000
- Bluff Point $ 500,000
- Cliff Haven $ 500,000

Of the ten remaining stations, three are relatively new and do not require much in the way of improvements. These include the Tom Miller Road, UPS and White Pines Commons stations.

The remaining seven will require updating for a variety of reasons and an average budget of $200,000 per station has been suggested resulting in a budget of $1,400,000. These seven include:

- Flannigan
- Woodcliff
- Church Street
- Singing Sands
- Lake Land
- Beach
- Carsone

The overall cost to update and repair the lift stations within the district is therefore $3,900,000.

2. Cadyville Wastewater Treatment Plant

The Cadyville Wastewater Treatment Plant was installed in 1997. The plant is an extended aeration type facility. The major treatment plant component was donated by a nearby pharmaceutical company that was upgrading their own facility at the time and no longer needed the component. The plant was modified to treat the flow from approximately 14 houses surrounding the plant. Due to the type of treatment, the plant requires constant attention and adjustment and it has been proposed to replace this plant with a recirculating sand filter which is easier to operate and maintain. The estimated cost to install a recirculating sand filter at this location was estimated to be $250,000 in 2008 assuming that the Town would utilize its own forced to do most of the work. Accounting for inflation and the use of private contracting services, this figure would now be closer to $500,000.

3. Cliff Haven Sewer Lining

The sanitary sewers in the Cliff Haven neighborhood were install in the 1950's and are comprised of transite pipe. As mentioned in the section concerning the Base Water District, transite of this age is past its life expectancy. The Town has had many sewer main repairs in this area. The

Town has had success in lining transite pipe to restore its integrity and the Cliff Haven area is in need of such work. There is approximately 13,000 linear feet of sewer main in the Cliff Haven neighborhood. The cost to line the sewers and repair the manholes is expected to be approximately $900,000.

B. BASE SEWER DISTRICT

The Base Sewer District has been upgraded over the last four years by lining the existing sewer mains. The only remaining improvements include repair and/or replacement of the manholes and the potential upgrade or replacement of the Connecticut Avenue Pump Station.

1. *Manholes*

The manholes that are part of the Base Sewer District were constructed in the 1950's. Most are made of brick and are in various states of disrepair. The Town will be undertaking an inspection of all the structures to identify the improvements required for each. There are approximately 103 manholes in the system. Recently received bids to rehabilitate the structures in need of repair totaled $433,000.

2. *Connecticut/Bluff Point Station*

The existing Connecticut and Bluff Point pump stations are within 500 feet of each other. Due to their proximity to each other, it has been proposed to eliminate the Connecticut Avenue station and modify the Bluff Point station to accept all the flow that the Connecticut Avenue station currently pumps. This will reduce operational costs as well as eliminate the oldest station in the system. The cost to perform this improvement is approximately $1,000,000.

C. NON-DISTRICT SPECIFIC IMPROVEMENTS

1. *Facility Communications (SCADA)*

The Town has been slowly incorporating System Control and Data Acquisition (SCADA) equipment into facilities that are being modified or upgraded. Not all facilities have been equipped with this technology and ideally all wastewater facilities should be updated with this equipment. SCADA makes it very easy to monitor what is happening at each of the pumping stations and treatment facilities and allows remote control of pumps and other equipment for improved maintenance and emergency management if required. The facilities which can benefit from the installation of SCADA technology include:

- All lift stations with the exception of Champlain Park, Route 3 and Sorrell Avenue as these stations have SCADA installed.
- Cadyville Wastewater Treatment Plant.

The cost to install the required equipment has been included in the upgrade costs of the various projects identified herein.

2. *Asset Management System*

For the size of the Town of Plattsburgh sewer system, an asset management system should be implemented to track all components for the sewer system including everything from the age of each component, last maintenance performed, scheduled maintenance, scheduled replacement, and inventory tracking. Management systems will pay for themselves over the years by making sure no portion of the system is neglected resulting in fewer repairs and emergencies.

An asset management system is estimated to cost approximately $30,000 for the software and equipment. If the system is populated by Town staff the additional cost will be minimal.

D. MISCELLANEOUS PROJECTS

In addition to the projects identified above, the following projects, while not a priority, are being maintained on the wastewater department's project list. These projects are not included in the capital plan expenditures. Should the importance of any of these projects be elevated in the future they can be included into the annual plan as funds allow.

- Banker Road Sewer
- Wallace Hill Infiltration and Inflow Reduction
- Banker/22B Morrisonville Sewer
- Pleasant Ridge Sewer
- Facteau Road/Newell Avenue Sewer Extension
- Wallace Hill Phase I – Sewer Lining
- Route 3 Sewer Lining
- Generators/Quick Connections at Lift Stations
- UPS, Tom Miller, Nightingale Lift Station SCADA

E. WASTEWATER IMPROVEMENT COST SUMMARY

Table 3 below summarizes the various projects and associated costs relative to the Town's sewer system.

TABLE 3
WASTEWATER IMPROVEMENT COSTS

CONSOLIDATED SEWER DISTRICT	
Wastewater Lift Stations	
Route 9 North	$ 500,000
Trade Road (aka I-87)	$1,000,000
Bluff Point *	$ 0
Cliff Haven	$ 500,000
Flannigan	$ 150,000
Church Street	$ 150,000
Singing Sands	$ 150,000
Beach	$ 300,000
Woodcliff	$ 300,000
Lake Land	$ 150,000
Carsone	$ 150,000
Cadyville Wastewater Treatment Plant	$ 500,000
Cliff Haven Sewer Lining	$ 900,000
BASE SEWER DISTRICT	
Manholes	$ 433,000
Connecticut Avenue Pump	$1,000,000
NON-DISTRICT SPECIFIC	
Asset Management System	$ 30,000
Total Sewer System Improvement Capital Required	**$6,213,000**

*Bluff Point station expenditure is not required if combined with the Connecticut Avenue Station

F. PROJECT PRIORITIES

The identified projects have been prioritized based upon need. The following list identifies the year in which each project is expected to be initiated:

- Route 9 North Lift Station 2017
- Trade Road Lift Station 2018
- Bluff point Lift Station 2018
- Cliff Haven Lift Station 2019
- Cadyville WWTP 2019
- Cliff Haven Sewer Lining 2019
- Base Manholes 2017-2018
- Connecticut Ave Lift Station 2018
- Flannigan Lift Station 2019
- Church Street Lift Station 2019
- Singing Sands Lift Station 2019
- Beach Lift Station 2019
- Woodcliff Lift Station 2020
- Lakeland Lift Station 2020
- Carsone Lift Station 2020

IV. EXISTING INDEBTEDNESS

As of December 31, 2017, the Town will have a total of $4,588,294 in outstanding debt for all water and sewer districts. The debt is in the form of bonds and bond anticipation notes (BAN). A listing of all the indebtedness including the annual payment, balance at the end of 2017, interest rates and pay off year is contained in Appendix B.

The debt associated with the Consolidated Water and Sewer Districts is summarized below in Table 4. There is no debt associated with the Base Water and Sewer Districts.

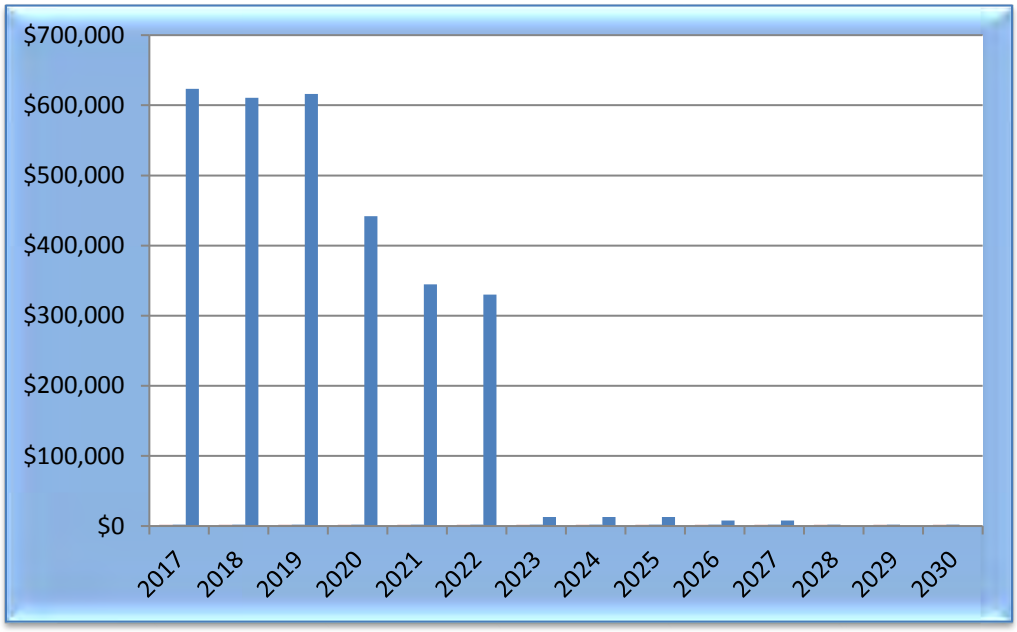
TABLE 4

WATER / WASTEWATER INDEBTEDNESS

BANS	
Moffit Road Water	$645,000
BONDS	
Champlain Park Water	$24,000
Cadyville Water	$40,000
Treadwell Mills Water	$75,000
Wallace Hill Water	$38,400
Morrisonville Water	$41,600
Cumberland Head Water	$1,534,210
Subtotal Water Bonds	**$1,753,210**
Cadyville Sewer	$4,234
Wallace Hill Sewer	$216,706
Wallace Hill Sewer	$289,144
Champlain Park Sewer	$1,680,000
Subtotal Sewer Bonds	**$2,190,084**

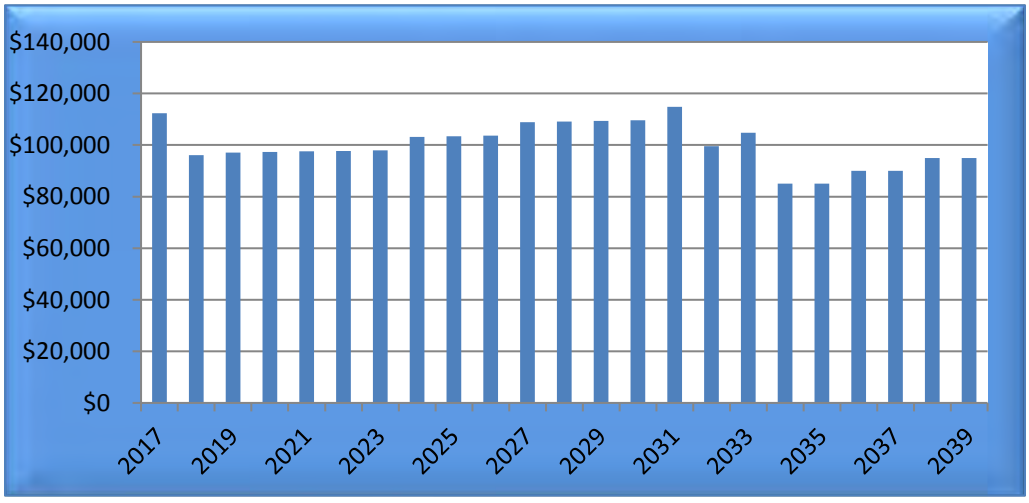
Graphs 1 and 2 below present the existing annual total debt service payments for the Consolidated Water and Sewer Districts.

Graph 1
Annual Debt Service – Consolidated Water



Graph 1 indicates that the existing annual water debt service in the Consolidated Water District will remain steady through 2019 and decrease by approximately $175,000 in 2020 and decrease another approximately 100,000 in 2021. It will then remain relatively stable from 2023 to 2027 when it will be less than $15,000 per year.

Graph 2
Annual Debt Service – Consolidated Sewer



Graph 2 indicates that the existing annual sewer debt in the Consolidated Sewer District service will decrease by approximately $20,000 in 2018 and fluctuate slightly through 2039.

V. RESERVES

The Town has been slowly accumulating funds in the various water and sewer districts for a considerable period of time. Based upon the 2017 budget, there is expected to be the following surplus funds available:

- Water and Sewer Department ($1,008,195 prorated to districts)*
  - Water
    - Consolidated (66%) $ 665,409
    - Base (4%) $ 40,328
  - Sewer
    - Consolidated (26%) $ 262,131
    - Base (4%) $ 40,328
- Consolidated Sewer District $2,207,803
- Base Sewer District $ 742,835
- Consolidated Water District $1,850,738
- Base Water District $1,103,225

$6,912,346

*Proration provided by the Town Finance office.

In addition to the above, there are several Capital Project accounts that contain available funds, these include:

- Consolidated Water District $867,819
  - Morrisonville Water CP $ 57,151
  - Water Supply Investigation $ 45,535
  - Tank Maintenance $765,133

$867,600

Overall, there is $7,780,165 in available funds. Table 5 below presents the total reserve funds in each district. In order to be in a position to take care of any significant problems that may arise unexpectedly in the future, it is recommended that each of the four Town districts maintain a minimum reserve fund of $500,000. The reserve fund should be evaluated every year to determine if additional monies should be added to the reserve. Based on the $500,000 per district reserve, the available surplus capital is $5,780,200.

TABLE 5
AVAILABLE FUNDS BY DISTRICT

District	Current Funds	Recommended Reserve	Funds Available
Consolidated Sewer District	$2,470,000	$ 500,000	$1,970,000
Base Sewer District	$ 782,700	$ 500,000	$ 282,700
Consolidated Water District	$3,384,000	$ 500,000	$2,884,000
Base Water District	$1,143,500	$ 500,000	$ 643,500
TOTAL	**$7,780,200**	**$2,000,000**	**$5,780,200**

VI. BUDGET REVIEW

The overall water and sewer budget is comprised of five portions. These include:

1. Water and Sewer Department

   This budget includes revenues from contracted districts outside the Town, connection and inspection fees and other miscellaneous revenues. The major expenditures in this budget include personnel, benefits, office, and vehicle expense.

2. Consolidated Water District

   This budget includes revenues from property tax assessments and water use and other miscellaneous revenues. Expenses are specific to the District and include items such as treatment cost, bond payments, water maintenance and repair materials.

3. Base Water District

   This budget includes revenues from property tax assessments and water use and other miscellaneous revenues. Expenses are specific to the District and include items such as bond payments and water maintenance and repair materials.

4. Consolidated Sewer District

   This budget includes revenues from property tax assessments and water use and other miscellaneous revenues. Expenses are specific to the District and include items such as treatment cost, bond payments, sewer maintenance and repair materials.

5. Base Sewer District

   This budget includes revenues from property tax assessments and water use and other miscellaneous revenues. Expenses are specific to the District and include items such as treatment cost, bond payments, sewer maintenance and repair materials.

A. ALLOCATION OF COSTS

1. Water and Sewer Department Allocation

Since all personnel, vehicle and office costs are included in the Water and Sewer Department budget, these costs are allocated to the various water and sewer district budgets. The allocation is currently performed on a point system basis. This system has been in place dating back into the 1970's prior to the consolidation of the many Town water and sewer districts established over the years. The system is antiquated and in need of modification.

i. Consumption Based

For the water districts, a simple method is to prorate the expense based upon the percentage of water consumed. As a district begins to use additional water the cost allocation can be amended accordingly. See Table 6 for the 2015 Water Use by District and the associated percent of use. When considering the relative water use between only the Town Consolidated Water District and the Base Water District, the Consolidated District uses 96.28 percent of the water and the Base Water District uses 3.72 percent. Should the consumption based method of cost allocation be used, these percentages can be used to determine the cost allocation of the non-district specific improvements being considered as part of this capital plan as well as other improvements that may occur in the future.

TABLE 6 2015 WATER USE BY DISTRICT		
District	**2015 Water Use**	**Percent of Total**
Consolidated Water District	395,752,000	96.28%
Base Water District	15,306,000	3.72%
	411,058,000	**100.00%**

The percentages identified above do not take into account out of Town water customers including Beekmantown and Schuyler Falls. For the purpose of this analysis, these outside users are ignored as they have contracts in place which must be modified prior to including them in the consumption based cost distribution. As the outside districts are included, the Consolidated Water District percentage of consumption is reduced to approximately 85 percent of overall water use and Base Water District percentage will decrease slightly to approximately 3.3 percent.

ii. Customer Based

Another simple method to allocate costs is based upon the number of customers in each of the various service areas. See Table 7 below for the 2015 Customers by District and the associated percent of use. When considering the relative number of customers between only the Town Consolidated Water District and the Base Water District, the Consolidated District has 97.85 percent of the customers and the Base Water district has 2.15 percent. Should the customer based method of cost allocation be used, these percentages can be used to determine the cost allocation of the non-district specific improvements being considered as part of this capital plan as well as other improvements that may occur in the future.

TABLE 7 2015 WATER CUSTOMERS BY DISTRICT		
	2015 Customers	**Percent of Total**
Consolidated Water District	4,046	97.85%
Base Water District	89	2.15%
	4,135	**100.00%**

As with the consumption based method, the percentages identified above do not take into account out of Town water customers including Beekmantown and Schuyler Falls. For the purpose of this analysis, these outside users are ignored as they have contracts in place which must be modified prior to including them in the customer based cost distribution. As the outside districts are included, the Consolidated Water District percentage of customers is reduced to approximately 84.5 percent of overall water use and Base Water District percentage will decrease to approximately 1.9 percent.

Of the two methods described above, it is recommended that the consumption based method be utilized since it provides a better representation of the resources utilized by each district in terms of storage needs and water supply. The customer based system can under represent system use since a single large water user will still only count as one customer even though they may utilize a disproportionate share of system resources. All analysis presented herein shall utilize consumption based allocation.

2. *Consolidated District*

The Consolidated District owns and operates the Town water supply, water storage facilities and transmission mains. Review of the budgets indicates that there is no sharing of the expenses associated with these items. As with the Water and Sewer Department budget, the cost of these items should be allocated to all other districts on either a consumption or customer basis. This will result in a lower cost to the Consolidated District and conversely an increase to all other districts.

i. Consumption Based Allocation

Table 8 below presents the cost sharing allocation for each of the major expense categories in the Consolidated Water District based upon percentage of consumption.

TABLE 8
CONSUMPTION BASED ALLOCATION

	Percent of Use	Supply	Distribution	Bonds	BANs	Admin	Total
Consolidated Water District	96.28%	$208,920	$209,016	$351,167	$281,749	$1,301,341	$2,352,193
Base Water District	3.72%	$8,080	$8,084	$13,582	$10,987	$50,330	$90,973
TOTALS	**100%**	**$217,000**	**$217,100**	**$364,749**	**$292,646**	**$1,351,671**	**$2,443,166**

As shown in Table 8, when considering allocation by consumption, the cost to the Consolidated Water District decreases from $2,443,000 to $2,352,000; a reduction of approximately $91,000. This amount is transferred to the Base Water District. When outside Town water districts are included in the analysis, the cost allocation to the Consolidated and Base Water districts will be reduced accordingly.

VII. SERVICE AGREEMENTS

The Town has agreements with water districts in other municipalities to provide water supply and water system services. The contracts include:

1. Macy Lane Water District, Town of Schuyler Falls
2. Morrisonville Water District, Town of Schuyler Falls
3. Woods Mills Water District, Town of Schuyler Falls
4. Southeast Beekmantown/Route 9-Spellman Road Water Districts, Town of Beekmantown

While there are many similarities in the various agreements, each has its own individual conditions and rate structure that makes administration of the services required somewhat difficult. A good example of this is in the scope of the services to be provided. For instance, in the Woods Mills Water District agreement, the Town of Plattsburgh is responsible for maintenance and repair of the system where in the other districts the Town is only responsible for the routine maintenance.

It is recommended that the Town create a standard form of agreement for water service to outside districts such that the scope of services to be provided and the system of charges are the same for all. This may be difficult to do with the current agreements but it is suggested that the Town also try to modify these as well. All of the agreements have termination provisions and it may be necessary to utilize those provisions to force the changes desired.

It is also suggested that the agreement for Macy Lane Water District be used as the model typical agreement. The only exception is that the charges for system maintenance and capital contribution should be adjusted to be based upon water consumption as identified in the allocation of costs section above. Table 9 below presents the cost effect upon each of the districts utilizing consumption based cost allocations.

TABLE 9
OUTSIDE DISTRICT COST ALOCATION

District	Current Charge	Allocation by Consumption
Macy Lane Water District	$ 28,000	$ 9,400
Morrisonville Water District	$ 44,500	$136,100
Woods Mills Water District	$ 45,200	$ 47,000
Southeast Beekmantown/Route 9-Spellman	$ 88,600	$ 60,500
Totals	**$206,300**	**$253,000**

VIII. RATE EFFECTS

A. WATER IMPROVEMENTS

Appendix A –Water 10 Year Plan, presents the impact to the ad valorum water tax rates and metered use rates in both the Consolidated and Base Water Districts for each year of the 10 year plan starting in 2017 assuming that there will be no cost sharing with outside districts. Where a project is to be financed, the annual cost is based upon a 20 year loan at 4% interest. This is currently a conservative approach since interest rates are currently less than 4%, and most, if not all of the improvements can be financed for a term of 30 years.

The left side of the table identifies each project, the capital cost, the amount to be financed, payment method and term. In most cases the amount to be financed is less than the capital cost as reserve and grant funds have been applied to reduce the financing amount.

The right side of the table identifies the associated annual cost of each project to be financed and the impact on the property tax rate in each of the Town districts.

The bottom of the table presents the projected tax rate for each year and the percent increase over the prior year. For the Consolidated Water District the total property tax for the average, median and mode home assessment are presented. This information is not presented for the Base Water District since there are no residential customers within the district. The bottom of the table also identifies the metered use rate per 1,000 gallons required to pay for the water storage tank maintenance program.

Graphs 3 and 4 on the following page present the 10 year rate effect of the proposed improvement plan for each district.

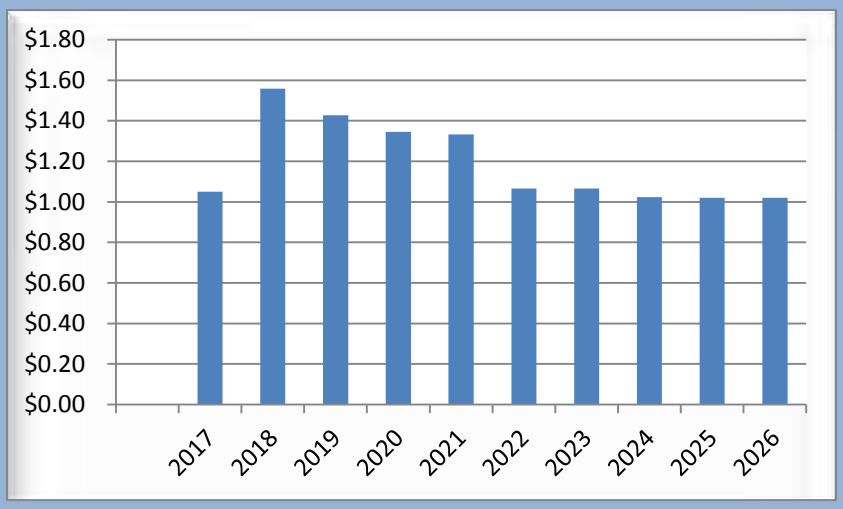
Graph 5 presents the average annual homeowner water district tax over the same 10 year period. Graph 5 also includes the effect for the additional metered use rate for the water storage tank maintenance program. The cost to the typical homeowner is based upon the typical annual residential use of 80,000 gallons.

As presented, the average home in the Consolidated Water District will experience a cost increase of approximately $83 by 2019 in the ad valorum tax and can expect to pay $253 in 2019 for ad valorum tax and another $23 for metered use in 2019. After 2019, the ad valorum tax rate begins to decrease so that in 2027, the end of the 10 year planning period, the ad valorum tax is essentially the same as in 2017 and the metered use increases to $46 for a net overall increase over 2017 of less than $50. It is important to note that since the financing amounts are fixed, as are the tank maintenance costs and the associated annual increase therefor, when considering the time value of money, the future cost in 2017 dollars is less than that at the time this plan has been prepared.

Water and Wastewater Capital Plan

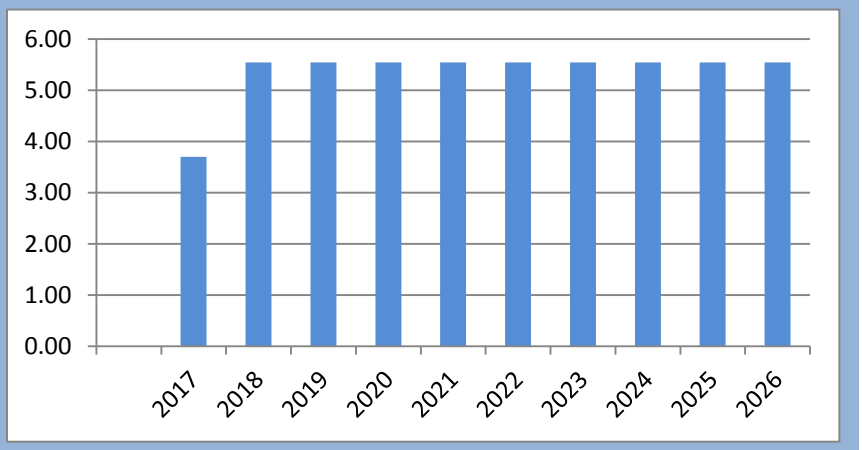
Graph 3

Consolidated Water District Tax Rate



Graph 4

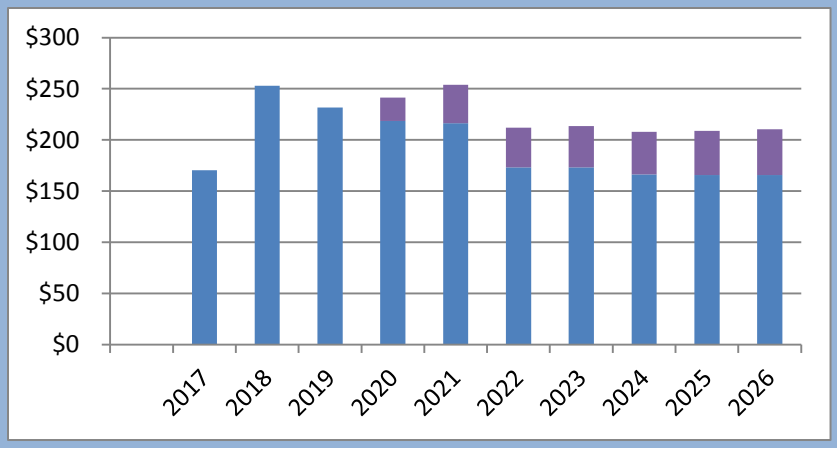
Base Water District Tax Rate



Graph 5

Consolidated Water District Average Cost to Home-owner

Blue = AV
Purple = Tank Maint.



B. WASTEWATER IMPROVEMENTS

Appendix B – Wastewater 10 Year Plan, presents the impact to the ad valorum wastewater tax rates in both the Consolidated and Base Sewer Districts for each year of the 10 year plan starting in 2017. Where a project is to be financed, the annual cost is based upon a 20 year loan at 4% interest. This is currently a conservative approach since interest rates are currently less than 4%.and most, if not all of the improvements can be financed for a term of 30 years.

The left side of the table identifies each project, the capital cost, the amount to be financed, payment method and term. In several cases the amount to be financed is less than the capital cost as reserve and grant funds have been applied to reduce the financing amount.

The right side of the table identifies the associated annual cost of each project to be finances and the impact on the property tax in each of the Town districts.

The bottom of the table presents the projected rate for each year and the percent increase over the prior year. For the Consolidated Sewer District the total property tax for the average, median and mode home assessment are presented. This information is not presented for the Base Water District since there are no residential customers within the district.

Graphs 6 and 7 on the following page present the 10 year rate effect of the proposed improvement plan for each district.

Graph 8 presents the average annual homeowner water district tax over the same 10 year period.

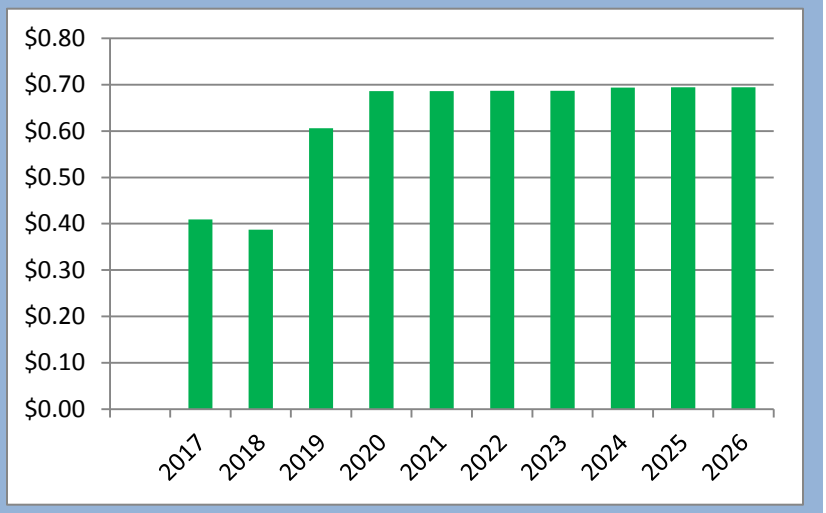
As presented, the average home in the Consolidated Sewer District will experience a cost increase of approximately $44 by 2020 in the ad valorum tax after which the annual cost will flatten out and remain fairly constant through 2027, the end of the 10 year planning period. As with the Consolidated Sewer district. It is important to note that since the financing amounts are fixed, when considering the time value of money, the future cost in 2017 dollars is less than that at the time this plan has been prepared.

Water and Wastewater Capital Plan

Graphs 6 and 7 below present the 10 year rate effect of the proposed wastewater improvement plan. Graph 8 presents the average annual cost to the homeowner.

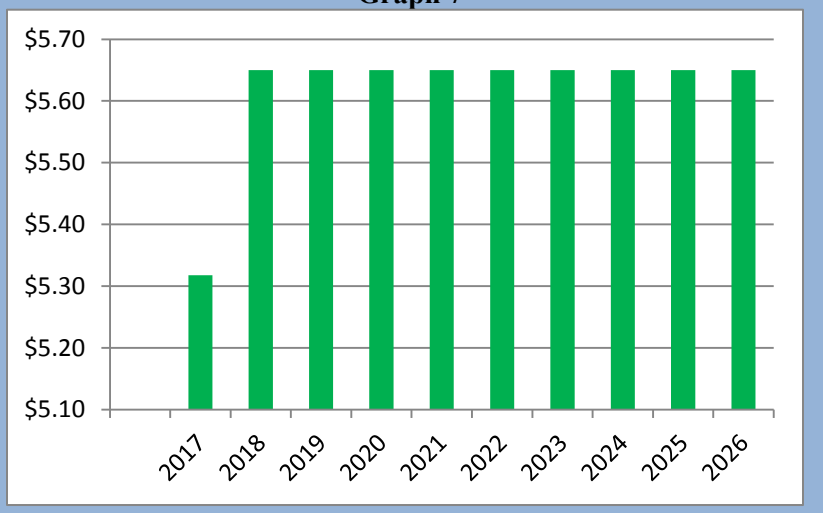
Graph 6

Consolidated Sewer District Tax Rate



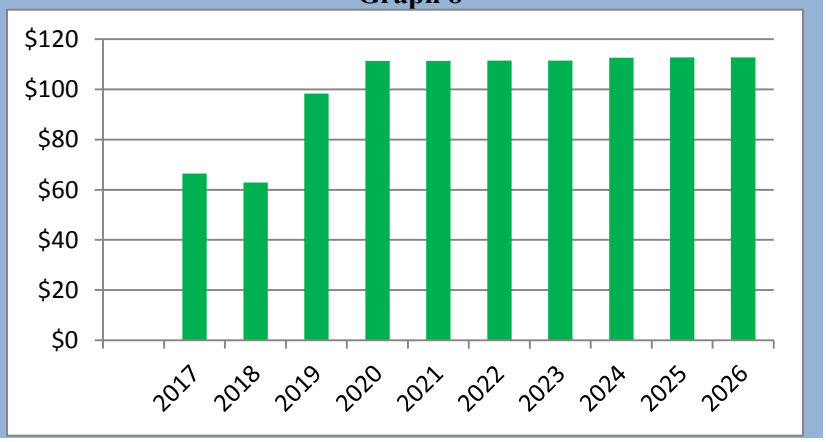
Graph 7

Base Sewer District Tax Rate



Graph 8

Consolidated Sewer District Cost to Average Homeowner



IX. GRANTS AND SUBSIDIZED LOANS

In addition to simply financing the various projects with conventional finance, the Town is preparing to apply for various grant and subsidized loan opportunities. As of the date of this plan, the Town has been successful in obtaining $500,000 of assistance from the Northern Regional Border Commission for the advancement of additional water supply. Other programs will be available in the future such as the New York Water Program which provides grant funding for water and sewer projects as various levels as well as the Environmental Facilities Corporation which provides subsidized loans to income eligible areas. To that end, the Town has authorized an income survey be performed in the area covering the Consolidated Water and Sewer Districts to be used in grant and loan funding applications.

X. SUMMARY PROJECT COST AND ALLOCATIONS

The following tables provide a summary of all the projects proposed within this plan and the allocation of that cost to each of the Water and Sewer Districts.

TABLE 10
WATER DISTRICT COSTS AND ALLOCATIONS

Improvement	Capital Cost	Finance Amount	District Allocation Capital Cost		District Allocation Finance Amount	
			CONSOL.	BASE	CONSOL.	BASE
CONSOLIDATED WATER DISTRICT						
Kimberly 1 Water Tank	$1,200,000	$1,200,000	$1,155,317	44,683	$1,155,317	$44,683
Kimberly 3 Water Tank	$1,069,731	$1,029,899	$1,029,899	39,832	$1,029,899	$0
Bluff Point Water Tank	$947,364	$0	$912,088	35,276	$0	$0
Cadyville Water Tank	$738,901	$0	$738,901	0	$0	$0
Champlain Park Water Tank	$663,498	$0	$663,498	0	$0	$0
Cumberland Corners Water Tank	$791,751	$272,238	$791,751	0	$272,238	$0
Hammond Lane Water Tank	$821,598	$791,005	$791,005	30,593	$791,005	$0
Salmon River Road	$750,000	$750,000	$750,000	0	$750,000	$0
Quarry Road Water	$750,000	$750,000	$750,000	0	$750,000	$0
BASE WATER DISTRICT						
Water Storage Tank	$1,500,000	$1,500,000	$0	1,500,000	$0	$1,500,000
Water main Replacement	$2,750,000	$2,379,761	$0	2,750,000	$0	$2,379,761
			$0		0	
NON-DISTRICT SPECIFIC						
Additional Supply Capacity	$2,000,000	$1,425,529	$1,925,529	74,471	$1,425,529	$0
Bullis Road Pump Station	$750,000	$722,073	$722,073	27,927	$722,073	$0
Well 2 Testing	$50,000	$0	$50,000	0	$0	0
2,000,000 Water Storage Tank	$1,750,000	$1,684,838	$1,684,838	65,162	$1,684,838	$0
Metering	$1,200,000	$0	$1,200,000	0	$0	0
Asset Management System	$30,000	$0	$30,000	0	$0	0
Totals	$17,762,843	$12,505,343	$13,194,899	$4,567,944	$8,580,899	$3,924,444

TABLE 11 SEWER DISTRICT COSTS AND ALLOCATIONS						
Improvement	Capital Cost	Finance Amount	District Allocation Capital Cost		District Allocation Finance Amount	
			CONSOL	BASE	CONSOL	BASE
CONSOLIDATED SEWER DISTRICT						
Route 9 North	$500,000	$0	$500,000	$0	$0	$0
Trade Road (aka I-87)	$1,000,000	$0	$1,000,000	$0	$0	$0
Cliff Haven	$500,000	$30,000	$500,000	$0	$30,000	$0
Flannigan	$150,000	$150,000	$150,000	$0	$150,000	$0
Church Street	$150,000	$150,000	$150,000	$0	$150,000	$0
Singing Sands	$150,000	$150,000	$150,000	$0	$150,000	$0
Beach	$300,000	$300,000	$300,000	$0	$300,000	$0
Woodcliff	$300,000	$300,000	$300,000	$0	$300,000	$0
Lake Land	$150,000	$150,000	$150,000	$0	$150,000	$0
Carsone	$150,000	$150,000	$150,000	$0	$150,000	$0
Cadyville Wastewater Treatment Plant	$500,000	$500,000	$500,000	$0	$500,000	$0
Cliff Haven Sewer Lining	$900,000	$900,000	$900,000	$0	$900,000	$0
BASE SEWER DISTRICT						
Manholes	$433,000	$0	$0	$433,000	$0	$0
Connecticut Avenue Pump	$1,000,000	$717,300	$0	$1,000,000	$0	$717,300
NON-DISTRICT SPECIFIC						
Asset management System	$30,000	$0	$30,000	$0	$0	$0
Totals	$6,213,000	$3,497,300	$4,780,000	$1,433,000	$2,780,000	$717,300

XI. RECOMMENDATIONS AND CONCLUSIONS

Based upon the forgoing review and analysis, the Town of Plattsburgh is in an excellent position to undertake significant required capital improvements with a relatively small impact upon the ad valorum tax rates currently in effect.

In the Consolidated Water and Sewer Districts, due to the amount of assessed value in each district and the large fund balances available for use, the average homeowner can expect an increase of only $99 for water and $45 for sewer. Considering that the capital plan presented herein includes a total of $23,976,000 in expenditures for the two districts, the cost increase is relatively small.

The borrowing requirement to fund the projects incorporated into the plan is $16,003,00 as presented in the Table 12 below:

TABLE 12
PROJECT FUNDING SOURCES
($1,000's)

District	Capital Cost	Surplus Applied	Operating Budget	Grants Applied	Financing Required
		Consol.			
Consolidated Water	$13,195	$2,884	$1,230	$500	$ 8,581
Consolidated Sewer	$ 4,780	$1,970	$ 30	$ 0	$ 2,780
Base Water	$ 4,568	$ 643	$ 0	$ 0	$ 3,925
Base Sewer	$ 1,433	$ 283	$ 433	$ 0	$ 717
	$23,976	**$5,780**	**$1,693**	**$500**	**$16,003**

Should the Town elect to advance this plan the following steps are recommended for implementation:

1. Present the plan to the public to provide education on the need for the improvements and the impact upon the water and sewer users in terms of service and rates.
2. Meet with representatives of the outside water districts to discuss the need for modifications to the existing water service agreements and to provide them the opportunity to make rate adjustments to their customers in a timely fashion.
3. Apply for financing assistance to help defray the cost to the rate payers. Projects should be listed on the Environmental Facilities Corporation Intended use Plan for both water and sewer projects. In addition, as different grant/loan programs become available each project should be evaluated for eligibility.
4. Due to the amount of funds required, the Town should consider the use of a financial manager to provide recommendations on the best way to approach the financing of the project.
5. Procure the services of Bond Counsel to provide legal assistance in preparing the required bond resolutions and to assist in the subsequent financing.
6. Initiate design of the required improvements so that they can be ready for public bidding and regulatory review as required.

7. Based upon the design, update cost estimates to verify the assumptions in this report and modify the program as required.
8. Once bonding is in place, commence the construction phase of the various projects.

APENDIX A

WATER 10 YEAR PLAN

Laberge ENGINEERING ARCHITECTURE Group SURVEYING PLANNING

Town of Plattsburgh
Water-Wastewater Capital Plan
Water 10-Year Plan
November 2017

Improvement	Project Cost	Finance Amount	Payment Method	Term	Start Year	District Cost Allocation CONSOL. 96.28%	District Cost Allocation BASE 3.72%	2017 Annual Cost	2017 Tax Rate Impact CONSOL.	2017 Tax Rate Impact BASE	2018 Annual Cost	2018 Tax Rate Impact CONSOL.	2018 Tax Rate Impact BASE	2019 Annual Cost	2019 Tax Rate Impact CONSOL.	2019 Tax Rate Impact BASE	2020 Annual Cost	2020 Tax Rate Impact CONSOL.	2020 Tax Rate Impact BASE	2021 Annual Cost	2021 Tax Rate Impact CONSOL.	2021 Tax Rate Impact BASE
CONSOLIDATED WATER DISTRICT																						
Kimberly 1 Water Tank	$1,200,000	$1,200,000	Bond	20	2019	$1,155,317	$44,683	$0	0.0000	0.0000	$0	0.0000	0.0000	($88,298)	0.0715	0.0207	($88,298)	0.0715	0.0207	($88,298)	0.0715	0.0207
Kimberly 3 Water Tank	$1,069,731	$1,029,899	Bond	20	2019	$991,550	$38,349	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	($78,713)	0.0662	0.0000	($78,713)	0.0662	0.0000
Bluff Point Water Tank	$947,364	$0	S	N/A	2017	$0	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Cadyville Water Tank	$738,901	$0	S	N/A	2017	$0	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Champlain Park Water Tank	$663,498	$0	S	N/A	2017	$0	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Cumberland Corners Water Tank	$791,751	$272,238	S	N/A	2018	$272,238	$0	$0	0.0000	0.0000	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000
Hammond Lane Water Tank	$821,598	$791,005	Bond/S	20	2018	$761,552	$29,454	$0	0.0000	0.0000	($58,204)	0.0471	0.0136	($60,455)	0.0508	0.0000	($60,455)	0.0000	0.0000	($60,455)	0.0000	0.0000
Salmon River Road	$750,000	$750,000	Bond	20	2019	$750,000	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000
Quarry Road Water	$750,000	$750,000	Bond	20	2019	$750,000	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000
BASE WATER DISTRICT																						
Water Storage Tank	$1,500,000	$1,500,000	Bond	20	2019	$0	$1,500,000	$0	0.0000	0.0000	$0	0.0000	0.0000	($110,373)	0.0000	0.6949	($110,373)	0.0000	0.6949	($110,373)	0.0000	0.6949
Watermain Replacement	$2,750,000	$2,379,761	Bond/S	20	2019	$0	$2,750,000	$0	0.0000	0.0000	$0	0.0000	0.0000	($175,107)	0.0000	1.1024	($175,107)	0.0000	1.1024	($175,107)	0.0000	1.1024
NON-DISTRICT SPECIFIC																						
Additional Supply Capacity	$2,000,000	$1,425,529	Bond	20	2018	$1,372,448	$53,080	$0	0.0000	0.0000	($104,893)	0.0849	0.0246	($104,893)	0.0849	0.0000	($104,893)	0.0849	0.0000	($104,893)	0.0849	0.0000
Bullis Road Pump Station	$750,000	$722,073	Bond	20	2018	$695,186	$26,887	$0	0.0000	0.0000	($53,131)	0.0430	0.0125	($53,131)	0.0430	0.0000	($53,131)	0.0430	0.0000	($53,131)	0.0430	0.0000
Well 2 Testing	$50,000	$0	S	N/A	2019	$0	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
2,000,000 Water Storage Tank	$1,750,000	$1,684,838	Bond	20	2018	$1,622,102	$62,736	$0	0.0000	0.0000	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291
Metering	$1,200,000	$0	OB	6	2019-23	$0	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	($50,000)	0.0420	0.0000	($50,000)	0.0420	0.0000	($50,000)	0.0420	0.0000
Asset Management System	$30,000	$0	OB	N/A	2019	$0	$0	$0	0.0000	0.0000	$0	0.0000	0.0000	($30,000)	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Totals	$17,762,843	$12,505,343				$8,370,393	$4,505,189	$0	0.0000	0.0000	($360,233)	0.2922	0.0798	($926,634)	0.5023	1.8471	($975,347)	0.5176	1.8471	($975,347)	0.5176	1.8471
Existing Rate									1.0495	3.7009		1.0495	3.7009		1.3390	3.7807		1.5579	5.5480		1.4266	5.5480
Additional Debt Service									0.0000	0.0000		0.2922	0.0798		0.2100	1.7673		0.0154	0.0000		0.0000	0.0000
Reduction in Existing Debt Servive									0.0000	0.0000	$3,246	(0.003)	0.0000	($10,579)	0.009	0.0000	$174,421	(0.147)	0.0000	$97,421	(0.082)	0.0000
Projected Rate for Stated Year									1.0495	3.7009		1.3390	3.7807		1.5579	5.5480		1.4266	5.5480		1.3447	5.5480
Percent Change from Previous Year									0.00%	0.00%		27.58%	2.15%		16.35%	46.75%		-8.43%	0.00%		-5.74%	0.00%
Utility Service Co. Inc. Maintenance	d rate per 1,000 gallons								0.00	0.00		0.00	0.00		0.00	0.00		0.29	0.29		0.47	0.47
Average Home Annual Tax		$162,400	$170.44						$170.44			$217.45			$253.01			$231.68			$218.38	
Median Home Annual Tax		$138,000	$144.83						$144.83			$184.78			$214.99			$196.87			$185.57	
Mode Home Annual Tax		$120,000	$125.94						$125.94			$160.68			$186.95			$171.20			$161.37	
Avg Annual Maint Cost basesd on	80,000	gal/yr							$0.00			$0.00			$0.00			$23.03			$37.58	

Town of Plattsburgh
Water-Wastewater Capital Plan
Water 10-Year Plan
November 2017

Improvement	2022			2023			2024			2025			2026			2027		
		Tax Rate Impact			Tax Rate Impact			Tax Rate Impact		Debt	Tax Rate Impact			Tax Rate Impact			Tax Rate Impact	
	Annual Cost	CONSOL.	BASE	Annual Cost	CONSOL.	BASE	Annual Cost	CONSOL.	BASE	Service	CONSOL.	BASE	Annual Cost	CONSOL.	BASE	Annual Cost	CONSOL.	BASE
CONSOLIDATED WATER DISTRICT																		
Kimberly 1 Water Tank	($88,298)	0.0715	0.0207	($88,298)	0.0715	0.0207	($88,298)	0.0715	0.0207	($88,298)	0.0715	0.0207	($88,298)	0.0715	0.0207	($88,298)	0.0715	0.0207
Kimberly 3 Water Tank	($78,713)	0.0662	0.0000	($78,713)	0.0662	0.0000	($78,713)	0.0662	0.0000	($78,713)	0.0662	0.0000	($78,713)	0.0662	0.0000	($78,713)	0.0662	0.0000
Bluff Point Water Tank	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Cadyville Water Tank	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Champlain Park Water Tank	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Cumberland Corners Water Tank	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000	($20,032)	0.0168	0.0000
Hammond Lane Water Tank	($60,455)	0.0000	0.0000	($60,455)	0.0000	0.0000	($60,455)	0.0000	0.0000	($60,455)	0.0000	0.0000	($60,455)	0.0000	0.0000	($60,455)	0.0000	0.0000
Salmon River Road	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000
Quarry Road Water	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000	($55,186)	0.0464	0.0000
BASE WATER DISTRICT																		
Water Storage Tank	($110,373)	0.0000	0.6949	($110,373)	0.0000	0.6949	($110,373)	0.0000	0.6949	($110,373)	0.0000	0.6949	($110,373)	0.0000	0.6949	($110,373)	0.0000	0.6949
Watermain Replacement	($175,107)	0.0000	1.1024	($175,107)	0.0000	1.1024	($175,107)	0.0000	1.1024	($175,107)	0.0000	1.1024	($175,107)	0.0000	1.1024	($175,107)	0.0000	1.1024
NON-DISTRICT SPECIFIC																		
Additional Supply Capacity	($104,893)	0.0849	0.0000	($104,893)	0.0849	0.0000	($104,893)	0.0849	0.0000	($104,893)	0.0849	0.0000	($104,893)	0.0849	0.0000	($104,893)	0.0849	0.0000
Bullis Road Pump Station	($53,131)	0.0430	0.0000	($53,131)	0.0430	0.0000	($53,131)	0.0430	0.0000	($53,131)	0.0430	0.0000	($53,131)	0.0430	0.0000	($53,131)	0.0430	0.0000
Well 2 Testing	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
2,000,000 Water Storage Tank	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291	($123,973)	0.1004	0.0291
Metering	($50,000)	0.0420	0.0000	($50,000)	0.0420	0.0000	($50,000)	0.0420	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Asset Management System	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Totals	($975,347)	0.5176	1.8471	($975,347)	0.5176	1.8471	($975,347)	0.5176	1.8471	($925,347)	0.4756	1.8471	($925,347)	0.4756	1.8471	($925,347)	0.4756	1.8471
Existing Rate		1.3447	5.5480		1.3326	5.5480		1.0661	5.5480		1.0661	5.5480		1.0240	5.5480		1.0198	5.5480
Additional Debt Service		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		-0.0420	0.0000		0.0000	0.0000		0.0000	0.0000
Reduction in Existing Debt Servive	$14,421	(0.012)	0.0000	$317,000	(0.267)	0.0000	$0	0.000	0.0000	$0	0.000	0.0000	$5,000	(0.004)	0.0000	$0	0.000	0.0000
Projected Rate for Stated Year		1.3326	5.5480		1.0661	5.5480		1.0661	5.5480		1.0240	5.5480		1.0198	5.5480		1.0198	5.5480
Percent Change from Previous Year		-0.90%	0.00%		-20.00%	0.00%		0.00%	0.00%		-3.94%	0.00%		-0.41%	0.00%		0.00%	0.00%
Utility Service Co. Inc. Maintenance		0.49	0.49		0.50	0.50		0.52	0.52		0.54	0.54		0.56	0.56		0.58	0.58
Average Home Annual Tax		$216.41			$173.13			$173.13			$166.30			$165.62			$165.62	
Median Home Annual Tax		$183.90			$147.12			$147.12			$141.31			$140.73			$140.73	
Mode Home Annual Tax		$159.91			$127.93			$127.93			$122.88			$122.38			$122.38	
Avg Annual Maint Cost basesd on		$38.89			$40.25			$41.66			$43.12			$44.63			$46.19	

APPENDIX B

WASTEWATER 10 YEAR PLAN

Laberge ENGINEERING ARCHITECTURE Group SURVEYING PLANNING

Town of Plattsburgh
Water-Wastewater Capital Plan
Wastewater 10-Year Plan
November 2017

Improvement	Capital Cost	Finance Amount	Payment Method	Term	2017			2018			2019			2020			2021		
					Annual Cost	Rate Impact		Annual Cost	Rate Impact		Annual Cost	Rate Impact		Annual Cost	Rate Impact		Annual Cost	Rate Impact	
						CONSOL.	BASE		CONSOL.	BASE		CONSOL.	BASE		CONSOL.	BASE		CONSOL.	BASE
CONSOLIDATED SEWER DISTRICT																			
Route 9 North	$500,000	$0	Surplus	N/A	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Trade Road (aka I-87)	$1,000,000	$0	Surplus	N/A	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Cliff Haven	$500,000	$30,000	Bond/Surplus	20	$0	0.0000	0.0000	$0	0.0000	0.0000	($2,207)	0.0030	0.0000	($2,207)	0.0030	0.0000	($2,207)	0.0030	0.0000
Flannigan	$150,000	$150,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Church Street	$150,000	$150,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Singing Sands	$150,000	$150,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Beach	$300,000	$300,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	($22,075)	0.0299	0.0000	($22,075)	0.0299	0.0000	($22,075)	0.0299	0.0000
Woodcliff	$300,000	$300,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Lake Land	$150,000	$150,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Carsone	$150,000	$150,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000
Cadyville Wastewater Treatment Plant	$500,000	$500,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000
Cliff Haven Sewer Lining	$900,000	$900,000	Bond	20	$0	0.0000	0.0000	$0	0.0000	0.0000	($66,224)	0.0896	0.0000	($66,224)	0.0896	0.0000	($66,224)	0.0896	0.0000
BASE SEWER DISTRICT																			
Manholes	$433,000	$0	OB	N/A	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Connecticut Avenue Pump	$1,000,000	$717,300	Bond	20	$0	0.0000	0.0000	($52,780)	0.0000	0.3323	($52,780)	0.0000	0.3323	($52,780)	0.0000	0.3323	($52,780)	0.0000	0.3323
NON-DISTRICT SPECIFIC																			
Asset management System	$30,000	$0	OB	N/A	($30,000)	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Totals	$6,213,000	$3,497,300			($30,000)	0.0000	0.0000	($52,780)	0.0000	0.3323	($213,188)	0.2171	0.3323	($272,054)	0.2967	0.3323	($272,054)	0.2967	0.3323
Existing Rate	$/$1,000 AV					0.4095	5.3178		0.4095	5.3178		0.3875	5.6501		0.6059	5.6501		0.6859	5.6501
Additional Debt Service	$/$1,000 AV					0.0000	0.0000		0.0000	0.3323		0.2171	0.0000		0.0797	0.0000		0.0000	0.0000
Reduction in Existing Debt Service	$/$1,000 AV					0.0000	0.0000	$16,267.00	(0.0220)	0.0000	($988.00)	0.0013	0.0000	($228.00)	0.0003	0.0000	($227.00)	0.0003	0.0000
Projected Rate for Stated Year	$/$1,000 AV					0.4095	5.3178		0.3875	5.6501		0.6059	5.6501		0.6859	5.6501		0.6862	5.6501
Percent Change Over Previous Year	$/$1,000 AV					0.00%	0.00%		-5.38%	6.25%		56.36%	0.00%		13.20%	0.00%		0.04%	0.00%
Average Home Annual Tax	$162,400		$66.50			$66.50			$62.93			$98.40			$111.38			$111.43	
Median Home Annual Tax	$138,000		$56.51			$56.51			$53.47			$83.61			$94.65			$94.69	
Mode Home Annual Tax	$120,000		$49.14			$49.14			$46.50			$72.71			$82.30			$82.34	

Laberge Group
ENGINEERING ARCHITECTURE
SURVEYING PLANNING

Town of Plattsburgh
Water-Wastewater Capital Plan
Wastewater 10-Year Plan
November 2017

Improvement	2022			2023			2024			2025			2026		
	Annual Cost	Rate Impact		Annual Cost	Rate Impact		Annual Cost	Rate Impact		Annual Cost	Rate Impact		Annual Cost	Rate Impact	
		CONSOL.	BASE		CONSOL.	BASE		CONSOL.	BASE		CONSOL.	BASE		CONSOL.	BASE
CONSOLIDATED SEWER DISTRICT															
Route 9 North	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Trade Road (aka I-87)	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Cliff Haven	($2,207)	0.0030	0.0000	($2,207)	0.0030	0.0000	($2,207)	0.0030	0.0000	($2,207)	0.0030	0.0000	($2,207)	0.0030	0.0000
Flannigan	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Church Street	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Singing Sands	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Beach	($22,075)	0.0299	0.0000	($22,075)	0.0299	0.0000	($22,075)	0.0299	0.0000	($22,075)	0.0299	0.0000	($22,075)	0.0299	0.0000
Woodcliff	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Lake Land	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000	($11,037)	0.0149	0.0000
Carsone	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000
Cadyville Wastewater Treatment Plant	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000	($36,791)	0.0498	0.0000
Cliff Haven Sewer Lining	($66,224)	0.0896	0.0000	($66,224)	0.0896	0.0000	($66,224)	0.0896	0.0000	($66,224)	0.0896	0.0000	($66,224)	0.0896	0.0000
BASE SEWER DISTRICT															
Manholes	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Connecticut Avenue Pump	($52,780)	0.0000	0.3323	($52,780)	0.0000	0.3323	($52,780)	0.0000	0.3323	($52,780)	0.0000	0.3323	($52,780)	0.0000	0.3323
NON-DISTRICT SPECIFIC															
Asset management System	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000	$0	0.0000	0.0000
Totals	($272,054)	0.2967	0.3323	($272,054)	0.2967	0.3323	($272,054)	0.2967	0.3323	($272,054)	0.2967	0.3323	($272,054)	0.2967	0.3323
Existing Rate		0.6862	5.6501		0.6865	5.6501		0.6868	5.6501		0.6939	5.6501		0.6942	5.6501
Additional Debt Service		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000
Reduction in Existing Debt Service	($227.00)	0.0003	0.0000	($227.00)	0.0003	0.0000	($5,228.00)	0.0071	0.0000	($227.00)	0.0003	0.0000	($227.00)	0.0003	0.0000
Projected Rate for Stated Year		0.6865	5.6501		0.6868	5.6501		0.6939	5.6501		0.6942	5.6501		0.6945	5.6501
Percent Change Over Previous Year		0.04%	0.00%		0.04%	0.00%		1.03%	0.00%		0.04%	0.00%		0.04%	0.00%
Average Home Annual Tax		$111.48			$111.53			$112.68			$112.73			$112.78	
Median Home Annual Tax		$94.73			$94.78			$95.75			$95.79			$95.84	
Mode Home Annual Tax		$82.38			$82.41			$83.26			$83.30			$83.34	