

Village of Chatham NY – Report on Water and Sewer Rate Increases

Background

The Village of Chatham provides water and sewer services to homes and businesses within the village. It also provides water-only services to surrounding areas. There are about 700 in-village customers and an additional 150 out-of-village customers. The water and sewer systems are owned by the village and are operated and maintained by the Village of Chatham Department of Public Works (DPW).

Water System

The water system consists of a pumping station and well located near the Kline Kill airport, a 40,000 cubic-foot storage tank, a 135,000 cubic foot reservoir, chlorination equipment, and approximately 14+ miles of water mains (not including individual service lines) to connect the pumps, tank, reservoir, and all customers. Two water storage systems – the tank and the reservoir – are needed to provide adequate water pressure and flow rates to all customers. This is especially critical to provide adequate water delivery for fire fighting. Having two sources also allows water delivery to continue when one storage system must be shut down for repairs.

Parts of the water system infrastructure date back to the 1920's and possibly earlier. Significant parts of the water mains are aging and in need of replacement. Sections along Woodbridge Ave. and through part of the fairgrounds have recently been replaced. A major leak occurred this year near the Rt 66 entrance to the fairgrounds, which to this day is still shut off and remains a dead section of pipe. Other leaks have also required unscheduled repairs.

The water tank underwent a major refurbishment in 2016. It had had little maintenance for many years and was rusted and leaking. It should now be able to function for another 30-40 years as long as regular maintenance is performed.

The reservoir is critically in need of replacement. New York State now requires that our reservoir be replaced with a closed tank. Also, the reservoir is leaking up to 50,000 gallons per day. The village has received a grant that will cover approximately 60% of construction costs for a new tank, but it remains an expensive task.

Sewer System

The sewer system consists of a complex water treatment plant; approximately 9 miles of sewer mains connecting customer's drains to the treatment plant, and 8 pump stations that are need to move sewage where there is no downhill slope.

The water treatment plant was completely rebuilt in 2012 under a mandate from NYS. The former plant was not providing adequate and safe water treatment. The sewer mains have been upgraded in recent through a combination of bonded projects and increased maintenance work.

Cost Increases

Costs for the water and sewer system have increased significantly in recent years. It is often assumed that the increases are mainly the result of capital projects, but the biggest increases are actually in labor and materials.

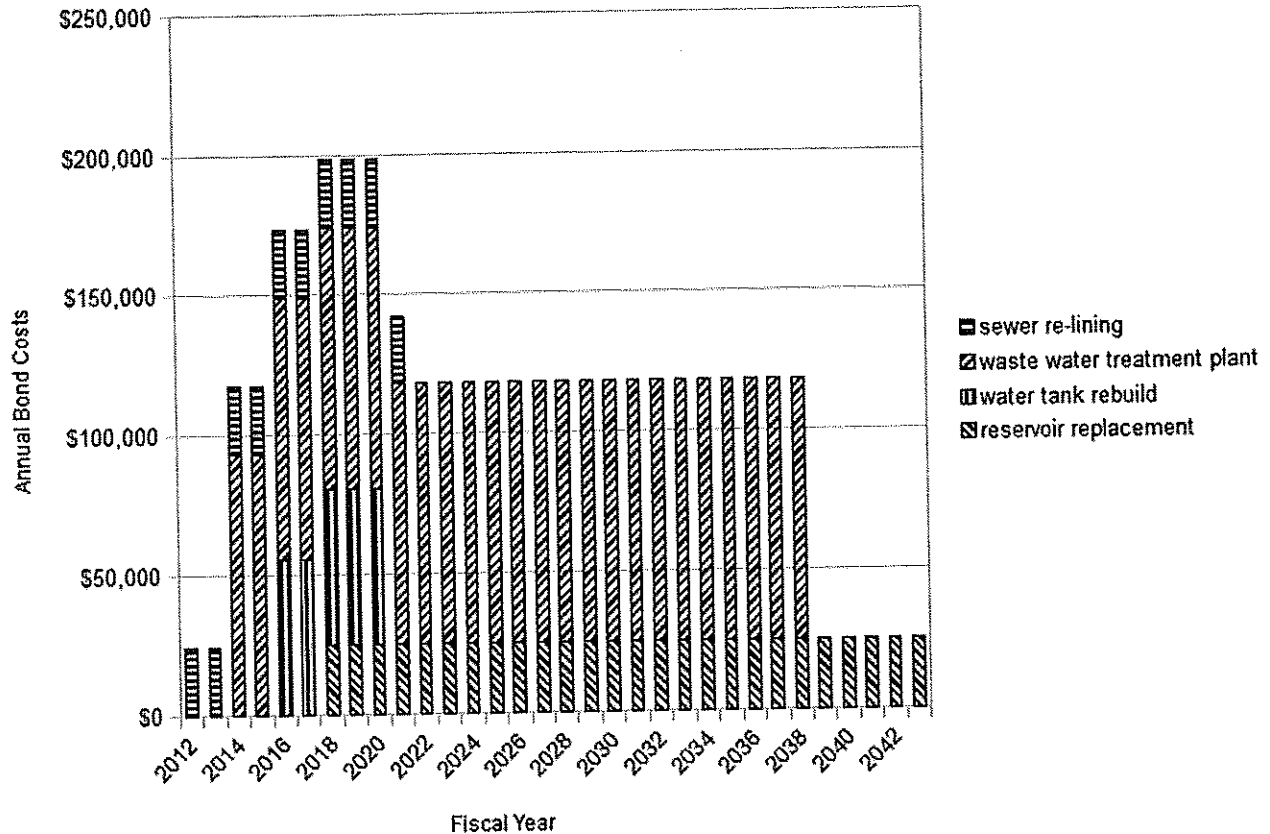
Capital (Bonded) Projects

The largest bonded project was the rebuilding of the water treatment plant. Other bonded projects are

refurbishment of the water tank, relining of sewer mains, and the projected construction of a new water tank to replace the open reservoir. No additional bonded projects are planned at this time, although there may in future be financial advantages to bonding water main replacements.

The chart below shows the current and projected annual costs for these projects. We are now at a peak in debt service, which should start to fall in several years. At this time debt service (combined principal and interest) accounts for about 28% of total water and sewer expense.

Debt Service (Bond Payments) - Projected Through 2044



Projected annual cost for reservoir replacement is estimated at \$25k/year. Actual cost could be in the range of \$20k-\$30k/yr. Costs shown for 2012-2017 are correct in total but actual payments may not have been made in the year shown.

Materials and services

All material costs have increased in recent years. Materials are basically in two categories: one is pipe and asphalt for water main or sewer main replacement or repairs and the other is chemicals and “digesters” for water and sewer treatment. Services include use of outside contractors for digging, boring, or road repair outside the capabilities of DPW. It also includes testing services for water quality and water treatment effectiveness and engineering and consulting services. The village has made a strong effort over the last several years to reduce dependence on outside contractors by increasing DPW capabilities.

Labor

In 2013 there were 3 FT DPW employees. This was inadequate to perform routine maintenance and other work for water and sewer as well as streets. Staffing has been increased so that maintenance can be done properly and with less use of outside contractors. To comply with state law, it is necessary to have two employees with certifications for water treatment plant operation.

Wages have also increased. In 2013 wages ranged from \$13.60 to \$18.78 per hour; now they are \$18.00 to \$24.00 per hour. This is been due partly to union negotiations and partly to the need to hire and retain competent and hard-working employees. The village is confident that DPW is highly productive and providing services at significantly lower costs than can be provided by outside contractors.

All DPW employees perform a variety of jobs, including water and sewer work, road work, snow removal, and many other tasks. Time sheets are maintained for all work and are used to apportion labor costs to various budgets including water and sewer. A fixed fraction of the village clerk and treasurer salaries is apportioned to water and sewer; this is a very small part of overall water and sewer costs.

Equipment

New equipment including a truck, skid steer, excavator and front-end loader have been purchased over the last several years, much of it without financing. These replaced aged and broken-down equipment or added capabilities for DPW work. Because this equipment is used for a variety of tasks, a fixed apportionment of assigned to water and sewer, as well as streets and snow removal.

The table below shows the distribution of actual expenses broken down into Labor, Equipment, Operating and Debt as well as the actual revenue for each of the fiscal years reported.

Actual Expenses

	Labor with Benefits	Equipment	Operating	Debt	Total Actual Expenses	Total Actual Revenue
2016-2017						
Water	\$114,516.00	\$5,285.00	\$240,057.00	\$61,188.00	\$421,046.00	\$210,414.55
Sewer	\$122,336.00	\$24,888.00	\$96,675.00	\$158,402.00	\$402,301.00	\$242,702.14
2015-2016						
Water	\$104,122.00	\$48,256.00	\$143,649.00	\$0.00	\$296,027.00	\$234,931.69
Sewer	\$121,183.00	\$53,748.00	\$86,825.00	\$116,909.00	\$378,665.00	\$276,167.34
2014-2015						
Water	\$91,050.00	\$785.00	\$127,526.00	\$0.00	\$219,361.00	\$232,359.09
Sewer	\$90,817.00	\$7,685.00	\$118,322.00	\$120,121.00	\$336,945.00	\$191,215.94
2013-2014						
Water	\$83,518.00	\$0.00	\$194,857.00	\$0.00	\$278,375.00	\$190,811.95
Sewer	\$95,576.00	\$0.00	\$94,925.00	\$101,329.00	\$291,830.00	\$211,168.95

Water and Sewer Rates

Water and sewer bills to customers are considered a fee for service rather than a tax. This may seem arbitrary to many people, but there are legal distinctions. One distinction is that all water and sewer customers are charged on the same basis; there is no tax-exempt or senior status for water and sewer customers. Further, by NYS law, water and sewer costs must be paid from water and sewer fees, not from general tax revenue. The intent here is that no customer should be required to subsidize other customers' water and sewer use.

History

Water rates in the Village of Chatham have been low compared to other nearby municipalities. The rates had a complex structure that had minimum quarterly charges as well as progressively discounted rates for greater amounts of water use. An oddity in the rate structure, discussed in more detail below, gave a cost savings to some customers with low water use. This "discount" actually reduced the village's water and sewer income by about \$65,000 per year. (Nearly 700 in-village customers received a \$24 "discount" four times a year.)

The village was unprepared for how increasing costs, as described above, were running ahead of income. Changes in software, accounting procedures, and personnel delayed the realization that water rates needed to be increased. As a result, the water and sewer budgets were operating at a deficit, with general fund balances being used to cover the difference. This needed to be stopped and a plan put in place to replace the money taken from the general fund.

Current rates

Beginning in the 3rd quarter of 2017 water rates were increased and the rate structure was simplified. Minimum charges and quantity discounting were both eliminated. The rate increase were based on the mid-year estimates available at that time of increased water and sewer costs.

The overall increase in revenue at the new rates was about 50%, or about 1.5 times the previous revenue. However, cost increases for individual customers could vary over a wide range because of the change in rate structure. Bills decreased for a few customers with very little water use because the minimum payments were eliminated. Bills increased moderately for large users.

The biggest percentage increases were seen by customers with usages between about 900 and 1700 cubic feet per quarter, many seeing a doubling of costs. The reason for this was that, on the old rate structure, customers were effectively being under billed on their first 1000 cubic feet of water. This amounted to about a \$24 "discount" for all customers who used at least the minimum of 1000 cubic feet per quarter. The combination of the new higher rate and the loss of this discount is what made some customers see a doubling of their bills. (Larger usage customers also lost this "discount", but it was only a small fraction of their overall costs, so less noticeable.)

The village also had a long standing problem with unpaid water and sewer bills. Along with rate increases, late penalties were increased and enforcement by shut-offs was made more timely. This has been controversial, but payments have mostly caught up with billing, for the first time in years.

It may appear from other budget documents that water and sewer income has been significantly lower than billing, but this is a usual difficulty with reading current accounts. Immediately after new bills are mailed out the accounts will show a big gap between billing and income, but this gap closes as customers pay their bills. Only a small fraction remains unpaid by the beginning of the next billing cycle.

The table below shows the actual amounts billed and received by quarter for the current and previous

fiscal year. The total received may be higher than total billed for some quarters due to back payments, penalties and late fees.

	Billed			Received		
	Water	Sewer	Total	Water	Sewer	Total
FY18 Q3	\$74,598.68	\$73,075.61	\$147,674.29	\$82,730.51	\$85,847.06	\$168,577.57
FY18 Q2	\$79,130.13	\$77,226.40	\$156,356.53	\$76,098.29	\$74,389.65	\$150,487.94
FY18 Q1	\$82,512.43	\$78,299.57	\$160,812.00	\$73,631.04	\$71,887.83	\$145,518.87
FY17 Q4	\$77,030.87	\$75,334.43	\$152,365.30	\$77,380.24	\$74,846.92	\$152,227.16
FY17 Q3	\$49,116.97	\$49,498.06	\$98,615.03	\$50,003.62	\$47,900.74	\$97,904.36
FY17 Q2	\$46,851.79	\$44,507.78	\$91,359.57	\$48,160.29	\$46,043.51	\$94,203.80
FY17 Q1	\$44,266.43	\$41,314.88	\$85,581.31	\$51,393.97	\$44,121.87	\$95,515.84
	New rates					

Proposed rates

Unfortunately, the mid-year 2017 cost estimates were significantly less than the actual cost. This became evident as the fiscal year 2017 drew to a close. It was evident that an additional and larger increase would be required. The increase has been calculated by the village treasurer and accountant, based on current and projected costs and allowing for a gradual repayment of money taken from the general fund.

Sample Water & Sewer Bills at Old, Current, and Proposed Rates Inside Village – Combined Water and Sewer

Sample usage in cubic feet	Bills Prior to March 2017	Current Bills	Proposed Bills	Cost increase – old rate to current rate	Cost increase – current rate to proposed rate	Cost increase – old rate to proposed rate
500	\$39.12	\$55.00	\$91.00	1.41X	1.65X	2.33X
900	\$39.12	\$99.00	\$163.80	2.53X	1.65X	4.19X
1190	\$51.12	\$130.90	\$216.58	2.56X	1.65X	4.24X
1400	\$64.39	\$154.00	\$254.80	2.39X	1.65X	3.96X
1700	\$83.34	\$187.00	\$309.40	2.24X	1.65X	3.71X
2050	\$105.32	\$225.50	\$373.10	2.14X	1.65X	3.54X
3180	\$174.64	\$349.80	\$578.76	2.00X	1.65X	3.31X
5760	\$326.77	\$633.60	\$1,048.32	1.94X	1.65X	3.21X
7220	\$413.42	\$794.20	\$1,314.04	1.92X	1.65X	3.18X
10970	\$632.03	\$1,206.70	\$1,996.54	1.91X	1.65X	3.16X

Outside Village – Water

Sample usage in cubic feet	Bills Prior to March 2017	Current Bills	Proposed Bills	Cost increase -old rate to current rate	Cost increase -current rate to proposed rate	Cost increase -old rate to proposed rate
500	\$66.89	\$45.00	\$73.00	0.67X	1.62X	1.09X
900	\$66.89	\$81.00	\$131.40	1.21X	1.62X	1.96X
1730	\$111.74	\$155.70	\$252.58	1.39X	1.62X	2.26X
3440	\$216.80	\$309.60	\$502.24	1.43X	1.62X	2.32X
4890	\$305.89	\$440.10	\$713.94	1.44X	1.62X	2.33X

Questions and Answers

Why are the Village of Chatham's water and sewer costs getting so high?

The biggest problem is size. The village has only about 700 water and sewer customers and 100 water-only customers. But we still need wells, pumps, water and waste-water treatment, and water and sewer mains. Also we must maintain NYS standards for inspections and testing. So just a small number of customers must pay for costs that are not that much less than those of a larger town or city.

The best way of reducing rates would be to increase the number of customers, either residential or commercial. It may be possible in the future to sell more water outside the village, but the costs of extended sewer service would be prohibitive. New construction within the village would help with both water and sewer costs.

Are rates really so high? At the proposed rates most of us will be paying \$3-\$4 per day. This is about the same cost a household pays for cell phone service or cable TV. For this cost we can turn on a tap at any day or hour to get clean, safe water. We can flush the toilet at any time without worrying about waste and contamination. These services become invisible to us after awhile, but providing them requires constant maintenance, skilled labor, and regular replacement and upgrading of infrastructure.

Why did the village board not raise rates earlier and more gradually?

Short answer: we should have done that. We did not realize the magnitude of the problem and, once we realized it, we spent time searching for alternative solutions that did not materialize. In any case, it is not clear that a series of small increases would have been any less painful than a couple of big ones.

Should we delay or cancel the reservoir replacement to control rate increases?

We have considered this carefully. We have a grant to cover about 60% of the costs. If we delay the replacement the grant will expire and may not become available again. Costs for metals and construction are increasing at a rate of about 20% per year at this time, so the project may be a lot more expensive if done later. Finally, if we don't do this project now then NYS will eventually require it to be done, possibly at an even worse time.

Has the village board spent money on unnecessary capital projects?

The capital projects have been the water treatment plant (required by NYS and interest-subsidized by NYS), relining of sewer mains (needed to reduce operating costs), refurbishment of the water tank (needed due to long-delayed maintenance), and now replacement of the reservoir (required by NYS, 60% grant financed, and needed to reduce operating costs). It is hard to see how any of this work could have been avoided. In all cases the village board has worked closely with engineers, DPW, and contractors to minimize costs.

Could the village save money by using contracted services or shared services rather than DPW employees?

The village tried contracting for oversight of water/sewer plant operations and found that there was no effective savings and reduced responsiveness to village and customer needs. Shared services has become a mantra for municipal cost reduction, but it seems to work best where expensive equipment or expertise is needed only occasionally. At this time it is less effective in cases where work needs to be performed every day. That being said, DPW maintains informal relationships with county departments that can help with emergencies or out-of-service equipment.

Can general funds be used to cover water and sewer shortfalls?

No, by NYS law. And any money that was taken from the general fund must be paid back in a reasonable amount of time.

Can we reduce taxes to compensate for increased water rates?

This suggestion has been made a number of times and the answer is yes, we could do that. But two caveats:

Property taxes and water fees affect people in different ways. A single person or couple living in a large house may have small water fees but high property taxes; they would not save a lot if taxes were reduced. But a large family living in a small house will likely have higher water fees and lower property taxes; they would save much less if taxes were reduced.

Any decrease in taxes will require some decrease in village services – there is no fat in the budget. Do we want to get rid of the police department? Stop trash and garbage collection? Reduce street maintenance, snow removal and other DPW work? These and other village expenses can and should be discussed but this will be a long-term process that is sure to be controversial.

Will rates continue to increase, making the village unaffordable for some residents?

There is no way to make guarantees about future expenses, but we have reason to think that this may be sufficient for some years. No further capital projects are on the horizon. DPW is well staffed and equipped. The plan is to replace older water mains on a regular basis and within the normal water and sewer budget. With reasonable luck we will not have too many unplanned repairs or replacements as upgrade work proceeds. Replacing the reservoir and gradually replacing leaky mains will reduce waste and so cut operating costs at least slightly. We can expect labor, material, and equipment cost to continue to increase over time, but this may be offset by coming decreases in debt service and, a few years later, completing replenishment of the general fund.