



Kevin Reichart, Mayor
Tammy Kelledees, Town Manager/Clerk
PO Box 340
Greensboro, MD 21639
410-482-6222

Town Council Meeting

Town of Greensboro

3.1.22

In attendance: Town Manager Tammy Kelledees, Public Work Supervisor Brandon Cunningham, Comm. Robert Harrison, Comm. Amanda Weaver, Comm. David Spencer, Mayor Kevin Reichart, Finance Clerk Sam Geib, Cathy Spencer, Jean Holloway. Juel Gibbons

The Council meeting was called to order by Mayor Kevin Reichart at 5:59 p.m. on March 1, 2022.

Mayor Reichart swore in Pete Brelia as the newly appointed Town Commissioner.

Public Works Supervisor Brandon Cunningham asked if he could talk about something before we got started on the SERCAP water rate study presentation.

Mr. Cunningham wanted to ask the council if he could get their blessing to trade in our two old Toro lawn mowers for two John Deere mowers at Atlantic Tractor. They had the best price/offer as well as warranty and service. Mayor Reichart thinks that it is a good idea

Commissioner Spencer made a motion to trade in our two current Toro mowers for two John Deere mowers. Commissioner Weaver seconded the motion. All in favor. Motion approved.

Mrs. Kelledees wanted to make sure the council was okay with doing a presale on all the surplus items. Public Works are getting pictures and prices together; she would like to give the residents the first pick before taking them to the auction in Harrington. Mayor Reichart asked if there would be a set minimum bid. Mr. Cunningham said yes, even though there are a few items that will not be worth very much. If no one meets the minimum bid at the presale it will be taken to the Harrington auction. The sale at the Harrington Fair Grounds only happens once a year so we are looking to get this done as soon as possible. The benefit of the presale is that if we can get rid of some items, we will not have to pay to have the items moved/hailed to Harrington. The council discussed having sort of a blind auction. Commissioner Spencer stated that as long as the information and the public has the time to bid on the items, he is fine with having a presale. The council would like a list of the surplus items but this coming Thursday so they can approve the items.

SERCAP Draft Presentation

Juel Gibbons and Jean Holloway were here to speak to the council about the SERCAP water rate study that was conducted. This is the first draft. Each commissioner was given a copy of the draft

water rate study, they have been attached to the minutes for reference. Ms. Gibbons wanted to go over the parts she thinks are the most important—she started with Table One on page five. They started the study determining how the costs were split between categories based off of fiscal year 2020. Expenses were projected for the next five years using a general inflation rate of two percent, with a slightly higher rate for specific items like insurance and reserves. See table one for the results.

SERCAP's job is to help us figure out the structure of the utility billing. They can help us determine if it is better for us to charge a fixed rate per EDU or if we want to go to volumetric rate. Ms. Holloway said there are things we need to do before we do any kind of a rate change. The first thing the council needs to do is look at the gallon allowance, if the gallon allowance is too high, then we are giving away water. Ms. Holloway suggests that if we do have a gallon allowance that it is no more than 3,000 a month. Which equivalates to 100 gallons a day for 30 days, giving our residents 9,000 gallons a quarter if we continue to bill quarterly. SERCAP can conduct a "desktop" water audit at no cost to the town. The water audit will help us determine how much water is not being accounted for. The audit would take about a month or two to be completed.

The water study so far has shown that the average resident uses around 5,000 gallons or less. Commissioner Spencer spoke up saying that the number one complaint that we get is that the bills are too high and people do not like the 12,000-gallon minimum, when most are not using anywhere near 12,000 gallons. There has been a lot of push from the town residents to get rid of the minimum gallon allowance. Ms. Holloway usually suggests starting at zero but depending on the towns policy, it is not always the case. They are here to get suggestions from the council as to what direction they would like to go.

On page ten of the draft there are three different rate scenarios. Three different flat rate EDU charges with a rate charge per 1,000 gallons. It is broken down monthly, quarterly and annually. It is Ms. Holloway's opinion that starting at zero is the most equitable rate, but ultimately it is up to the council. We need to see where we are losing, which means looking into our infrastructure. Ms. Holloway suggests getting an engineer to do a water audit to see where the issues are. We are currently working with Scott at GMB to figure things out.

Commissioner Harrison would like the draft reworded so that it is more easily understandable. The council also agreed that they would only like the first two different scenarios shown (page 10) shown in the next draft of the water study. Commissioner Spencer asked if they would come back when the study was complete to present this to the public. The council asked if they would also do the sewer rate study for us as well and for the new budget, they think they can have it done by then.

Mayor Reichart asked for a motion to adjourn the meeting. Comm. Harrison made a motion. Comm. Weaver seconded the motion. All in favor, meeting adjourned at 7:15 PM.

Respectfully submitted by Samantha Geib

Water Rate Analysis Report

For



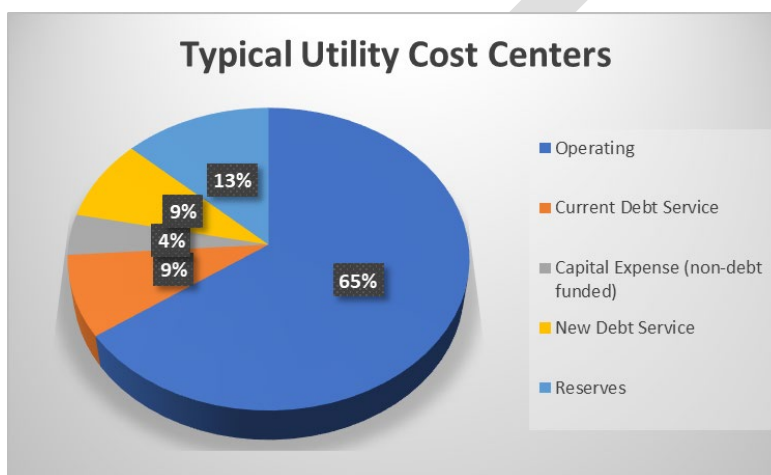
SERCAP, INC.

Water Analysis and Recommendations

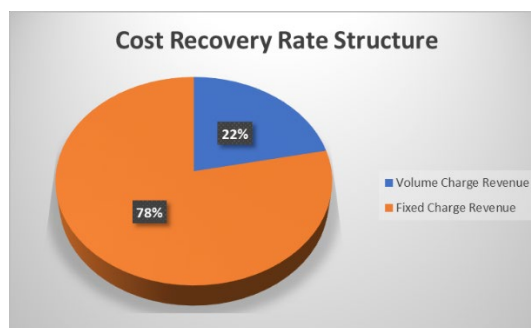
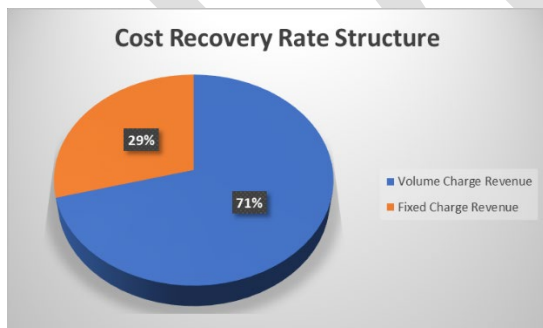
DRAFT

Rate Setting and Cost Recovery Principles:

The goal of any sustainable utility is to fully recover its costs of operation, including capital expenditures, both self- and debt-funded, reasonable reserves and general overhead. The way in which these various costs may be recovered is embedded in the rate structure. The level of charges for fixed and variable costs is generally known as “the rates”. If the full costs of owning and operating the utility are viewed as a pie, the rate structure and subsequent charges reflect how that pie is sliced. What doesn’t change in any of these scenarios is the size of the pie itself. What is not in one piece will be in the other, but the pie remains the same. This is illustrated in the figure below.



These costs of operations, “the pie,” can be recovered through fixed charges or volume charges that reflect what each customer uses. Usually it is with a combination of both, with fixed charges covering the utility’s fixed costs, and volumetric charges covering the variable costs that change according to the amount of water (or sewer) used, but again, what isn’t in one piece must be in the other as the two figures below illustrate.



Either structure will recover the utility’s costs, but the structure used will determine *where* the money comes from, how and when it is received.

Three Things to Do BEFORE a Rate Change:

1. If there is a gallon allowance included in a minimum bill, consider reducing or eliminating those gallons, making them subject to the volume charge. If that is politically or practically not feasible, then make sure the charge that includes those gallons is not less than the base cost to produce those gallons. No gallon allowance is preferred, however, if there must be a quantity of water included in a minimum charge it should be as low as possible and not more than 3,000 gallons per month or 9,000 gallons per quarter. If your gallon allowance is too high you may be giving away water in that minimum bill as well as encouraging people to waste water rather than conserve it.
2. Get a handle on non-revenue water. That is water your system produces and which costs to produce, but for which there is no revenue coming back to cover costs. There will always be a certain amount of water that doesn't get billed or paid for, after all, unlike sewer pipes, water pipes hold water all the time. There may also be connections you don't charge for water service, such as your own town buildings or the fire department. Those buildings should still be metered even if you choose not to charge them as a matter of policy. If they are not, consider installing meters and reading them without billing. Otherwise, there is no way to tell how much water is lost or un-billable. A simple calculation or two can give you an idea of how much is non-revenue water. Subtracting billed gallons from gallons produced during the same period, whether month or quarter, will give you a non-revenue figure. That can then be reduced further by deducting known losses, leaks, fire flows, filter backwash, hydrant flushing, etc. When everything has been accounted for, the difference between production and known water consumption should be less than 15%. If it is higher than 15% an evaluation of meters and leak detection may be in order, or at least a more in-depth water audit to drill down on the amount of water not being billed.
3. Get a grip on collections. You should be collecting at least 95% of what you're billing before the next bill is sent out. You can measure that as 95% of the \$\$ billed or 95% of the total number of bills sent, but if you have more than 5% in arrears when the next bill is due, your paying customers are paying more than their share of the operating costs for the system.

These three things are stated in relation to a water utility but, with the possible exception of #2 above, the principles are the same for water or sewer. The difference with a sewer system would be if you see your system is treating more than its average daily flow or substantially more than the water that is produced whenever it rains, there may be an inflow and infiltration problem. That can mean you're treating water that isn't really sewage but runoff.

A Word About General Overhead/General Government:

If you are a municipal system and have other services that are offered from your main office or town hall, it's important to measure the proportion of those general services that are directly related to the water and/or sewer utilities. The cost of a clerk who provides customer service daily, the cost of a town clerk/treasurer, the cost of a town manager/administrator, care and maintenance of the building, insurance, telephone, electricity, etc. are all services that may be

applied to all the town's services, and the costs of these should be allocated in some way to the utility if it is to recover its full cost of operation. Even if the governing body chooses deliberately to forego these costs and let them be paid by the General Fund, there should be some calculation to indicate how much those costs actually are.

A Word about Reserves:

Many systems, small systems in particular, tend to think of reserves as something that is either a "paper number" and a nice thing to have or that should be accumulated outside of the rate structure for a rainy day. Reserves are, in fact, an actual cost of operation and, as such, should be included in whole or in part in the calculation of a *full* cost recovery rate structure. Including reserves as a cost of operation reflects two basic philosophies: 1) current users should pay for the cost to serve them rather than putting the cost burden on future users; and 2) current users should bear some of the costs of the system's eventual replacement as they are the ones causing it to wear out currently by receiving service. That is not to say that every user currently connected should pay a portion of the cost to install the system when it was brand new, but that current users should pay a fair share of the debt service on that installation cost and any upgrades since as long as they remain customers.

In addition to bearing some share of the costs of system installation and repairs in a reserve, users should also pay for accumulating some level of reserve for emergencies. What that level is can be a matter of policy or a matter of simple arithmetic, but some reserve for contingencies is strongly recommended. Also, most lenders require some level of reserve to cover debt service in the event that there's an un-expected drop in revenue or loss of large portions of the customer base. The amount of that reserve depends on the lender and whatever is specified in the loan instruments and conditions but a minimum of 10% per year or one year's debt service payment is recommended.

In Summary:

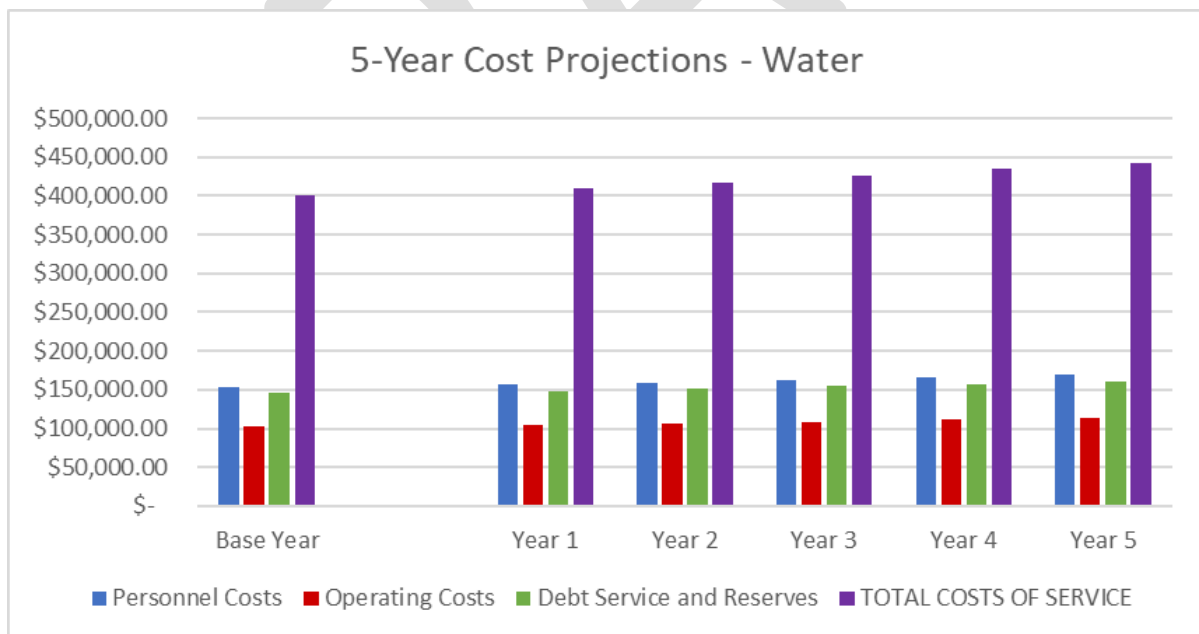
These principles have been used in the course of analyzing your system's rate structure and offering options and recommendations for your consideration. The usual rules of thumb used by our analysis may have been altered or adjusted based on direction from your management team before this final report was presented. Changes from standard procedure, if any, will be duly noted in the applicable section's narrative.

System Costs and 5-year Cost Projection:

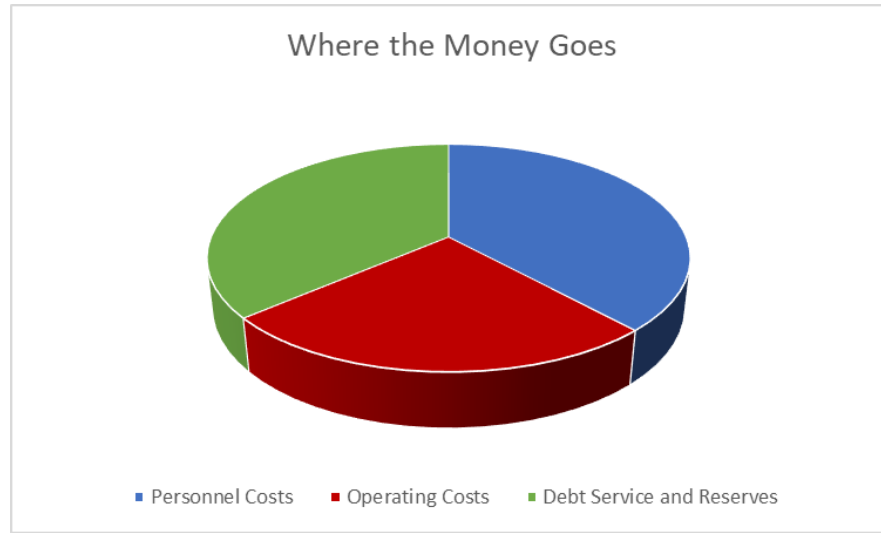
Town's expenses for the water system were examined using FY 20 as the test year and expenses were projected for five years forward using a general inflation rate of 2% for most items with a slightly higher rate for specific items like insurance (10%) and reserves (3%). A summary of the results is shown below.

Table 1

Cost Group	FY 2020	Year 1	Year 2	Year 3	Year 4	Year 5
Personnel	\$153,105.00	\$156,167.10	\$159,290.44	\$162,476.25	\$165,725.78	\$169,040.29
Operating	\$102,578.50	\$104,630.07	\$106,722.67	\$108,857.12	\$111,034.27	\$113,254.95
Debt & Reserves	\$145,625.78	\$148,538.29	\$151,509.06	\$154,539.24	\$157,630.02	\$160,782.62
TOTAL	\$401,309.28	\$409,335.46	\$417,522.17	\$425,872.61	\$434,390.07	\$443,077.87



An illustration of the costs and where the money goes using the pie analogy is shown below.

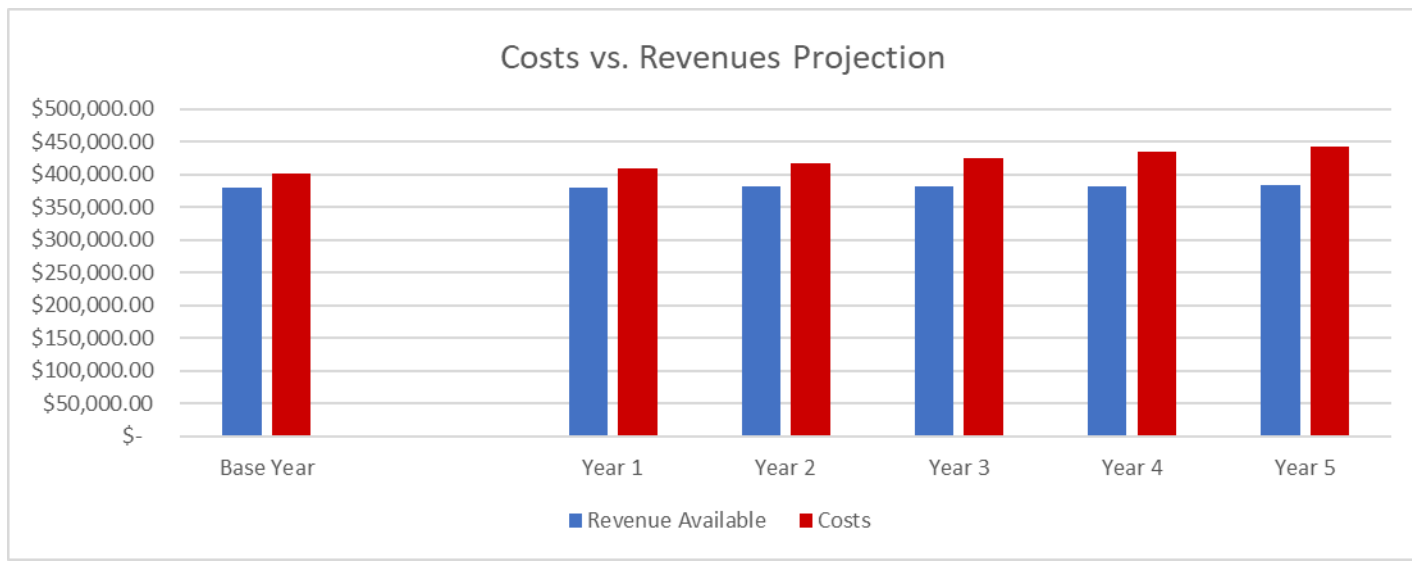


Revenue use is split almost evenly between personnel costs (38%) and funding debt service and reserves (36%). Operating costs account for 26% of revenue.

System Revenue and Revenue Requirement Projection:

Table 2

	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue Available	\$379,107.00	\$379,967.00	380,837.00	\$381,716.00	\$382,605.00	\$ 383,504.00
Costs	\$401,309.00	\$ 409,335.00	\$417,522.00	\$425,873.00	\$ 434,390.00	\$ 443,078.00
Surplus/Deficit	\$ (22,202.00)	\$(29,368.00)	(36,685.00)	\$(44,157.00)	\$(51,785.00)	\$ (59,574.00)



Observations and Comments on Costs/Revenues Analysis:

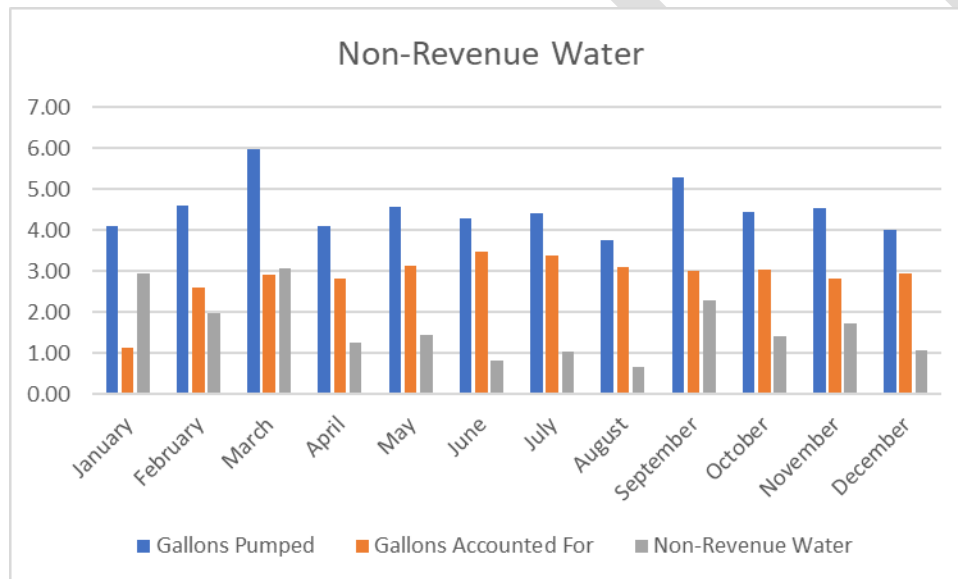
It is obvious the water utility is not recovering all of its costs through rates and rate revenue. The system is not recovering all it should through rates and using the connection fee revenue to subsidize the rate revenue is not a good practice, and has even been found to be illegal in some states by case law. It is also clear that the deficit between costs and rate revenue will only increase over time, even without any future debt, so rates clearly need to be adjusted. It is further recommended that the rate structure be adjusted and the resulting rate options presented here are based on that revised rate structure.

At present cost levels, the minimum charge per Equivalent Dwelling Unit (EDU) needs to be \$43, and that results in a per 1,000-gallon rate of \$5.87 to fully recover costs. The scenarios presented in this report start with a minimum charge per Equivalent Dwelling Unit (EDU) of \$50, \$45, and \$40 with corresponding usage rates of \$5.10, \$5.60, and \$5.85, respectively to show the effects of each fixed charge on the usage rate and what each will mean to different levels of customer usage. These numbers are for the basis of comparison and can be altered to reflect policy and desired outcomes, so long as decision makers understand that the “pie” as shown on page 1 will always be the same size, and what doesn’t come from one revenue slice must come from another.

Water Production and Non-Revenue Water:

Table 3

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Gallons Pumped (MG)	4.09	4.59	5.97	4.09	4.57	4.29	4.40	3.76	5.28	4.45	4.53	4.01
Gallons Accounted For	1.14	2.61	2.91	2.82	3.14	3.47	3.37	3.11	2.99	3.05	2.82	2.93
Non-Revenue Water	2.95	1.98	3.06	1.27	1.43	0.82	1.03	0.65	2.29	1.40	1.71	1.08



Water production and billing was examined for Calendar 2020, while costs and revenues are audited FY 2020 figures because of the way water production is reported to the state. Despite this overlap of periods, the water production and billing figures are from 12 months that reflect seasonal fluctuations and should be typical for the system.

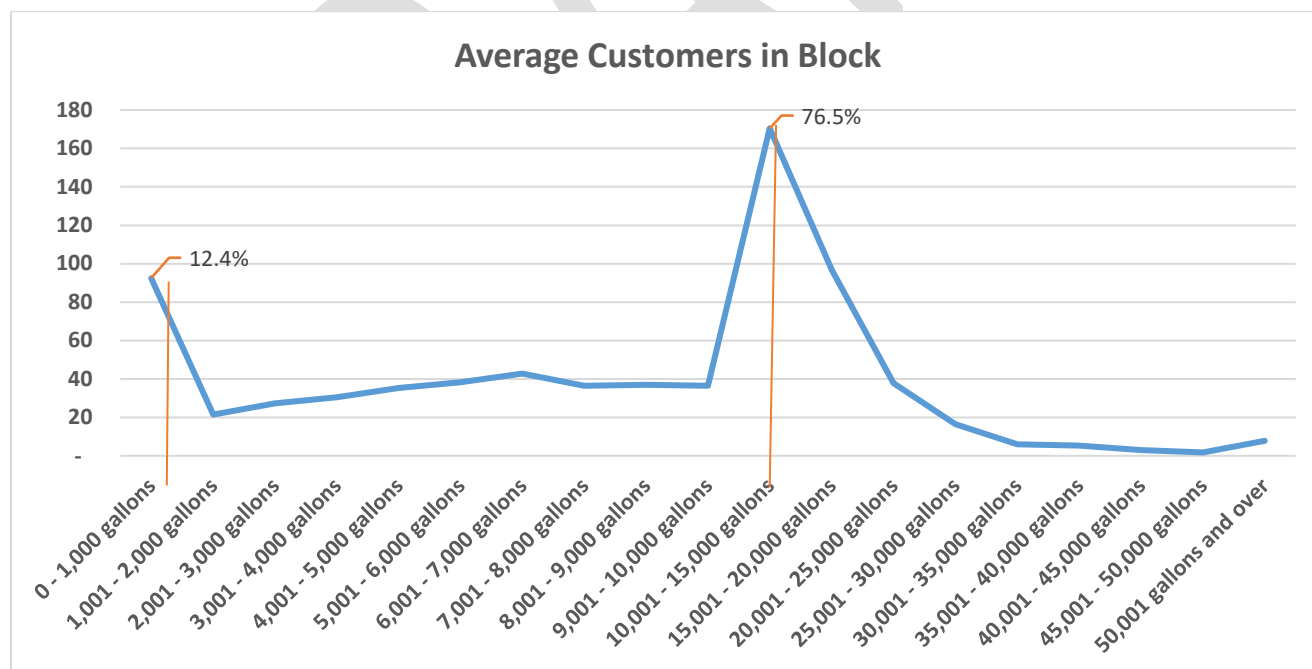
The results of this analysis show an average non-revenue water of more than 19.67 million gallons (MG) for the calendar year or about 36% of the gallons produced. As a point of comparison, the American Water Works Association (AWWA) standard is 10%. To put this in perspective, at an average rate of \$5.85 per 1,000 gallons, that represents \$115,070 in potential lost revenue. The actual revenue loss is more difficult to quantify given the graduated flat rate and gallon allowance of the present rate structure. In addition to that some non-revenue water is to be expected, given that water lines remain full, filters must be backwashed, etc.

Nevertheless, if the actual gallons lost is even half of that amount, the lost revenue is still substantial.

If there is only one recommendation from this report accepted, it is most strongly recommended that the Town get a handle on this non-revenue water and reduce what is not accounted for to less than 15%. A water audit can help to identify the sources of this non-revenue water and determine what the actual gallon loss is vs. the apparent, or “paper” loss along with the system’s own use. It is also strongly recommended, that the town replace any water meters older than 10 years, since older meters will tend to exacerbate an already serious revenue loss by under-registering actual use.

User Blocks and Average Users per Billing Period:

A usual part of the rate analysis is to look at the user blocks to get an idea of where the majority of users fall. In Town’s case about 12% of customers use 1,000 gallons per month or less, nearly one-third use 5,000 gallons or less, and about 77% use 15,000 gallons or below. This can be an important factor in determining a minimum or customer charge in setting rates and rate structure. In addition, it was found that almost 90% of customers use 20,000 gallons or below, another significant figure in identifying the impact of rate changes on specific customers or groups of customers. The Town’s usage curve is represented below.



Rate Scenarios and Alternatives:

Rate Scenario #1:		Monthly for 5,000 gal	Annually for 5,000 gal
Minimum Charge/EDU	\$ 45.00	\$ 15.00	\$ 180.00
Rate per 1,000 gal	\$ 5.60	\$ 9.33	\$ 112.00
	TOTAL	\$ 24.33	\$ 292.00
Rate Scenario #2:		Monthly for 5,000 gal	Annually for 5,000 gal
Minimum Charge/EDU	\$ 40.00	\$ 13.33	\$ 160.00
Rate per 1,000 gal	\$ 5.85	\$ 9.75	\$ 117.00
	TOTAL	\$ 23.08	\$ 277.00
Rate Scenario #3:		Monthly for 5,000 gal	Annually for 5,000 gal
Minimum Charge/EDU	\$ 50.00	\$ 16.67	\$ 200.00
Rate per 1,000 gal	\$ 5.10	\$ 8.50	\$ 102.00
	TOTAL	\$ 25.17	\$ 302.00

Rate Scenario Comparisons per User Block

Rate Scenario #1	Monthly Difference	Annual Difference
1,000 gallons	\$ 0.58	\$ 6.92
2,000 gallons	\$ 0.49	\$ 5.84
3,000 gallons	\$ 0.40	\$ 4.76
4,000 gallons	\$ 0.31	\$ 3.68
5,000 gallons	\$ 0.22	\$ 2.60
10,000 gallons	\$ (0.23)	\$ (2.80)
15,000 gallons	\$ (0.68)	\$ (8.20)
20,000 gallons	\$ (1.13)	\$ (13.60)

Rate Scenario #2	Monthly Difference	Annual Difference
1,000 gallons	\$ (1.01)	\$ (12.08)
2,000 gallons	\$ (1.01)	\$ (12.16)
3,000 gallons	\$ (1.02)	\$ (12.24)
4,000 gallons	\$ (1.03)	\$ (12.32)
5,000 gallons	\$ (1.03)	\$ (12.40)
10,000 gallons	\$ (1.07)	\$ (12.80)
15,000 gallons	\$ (1.10)	\$ (13.20)
20,000 gallons	\$ (1.13)	\$ (13.60)

Rate Scenario #3	Monthly Difference	Annual Difference
1,000 gallons	\$ 2.08	\$ 24.92
2,000 gallons	\$ 1.82	\$ 21.84
3,000 gallons	\$ 1.56	\$ 18.76
4,000 gallons	\$ 1.31	\$ 15.68
5,000 gallons	\$ 1.05	\$ 12.60
10,000 gallons	\$ (0.23)	\$ (2.80)
15,000 gallons	\$ (1.52)	\$ (18.20)
20,000 gallons	\$ (2.80)	\$ (33.60)

Observations and Comments:

1. The use of a graduated charge with a gallon allowance included, is not the most efficient way to recover fixed costs. Since there is already an issue with “non-revenue” or un-accounted for water, it exacerbates that to a degree as well. A better, more equitable method, and the one presented here, is to assess a minimum or customer charge to each Equivalent Dwelling Unit (based on relative meter size as discussed) and charge the per 1,000 usage from the first gallon. That way there is a more consistent and predictable revenue stream NOT based on usage to cover the fixed costs, and a variable charge that is completely based on each customer’s actual usage. If the town wishes to establish tiered rates tied to usage, it should be done in the variable usage charge and not through the minimum or base customer charge.
2. As previously stated on pages 8-9, the non-revenue water volume is a significant loss of revenue and every effort should be examined to resolve this to a level less than 15% of production. Avoiding this in the course of any rate consideration will only increase lost volume over time, resulting in more lost revenue.

Conclusions and Recommendations:

1. A water audit is recommended to identify the real source of the non-revenue water. There is a likelihood that at least a portion of that amount is from “paper” or apparent losses that arise in the course of clerical, administrative and meter reading processes. At least some of the actual, or gallon losses are likely to be from old meters and meters that do not read in anything less than 1,000-gallon units. Whatever the source or combination of sources, the

non-revenue water should be remedied as a first priority and any capital needs planned accordingly. A water audit can help to direct the remedies.

2. An across-the-board customer charge per EDU is recommended to replace the current graduated minimum bill based on levels of usage. As discussed above, tying the minimum bill to usage results in a less predictable revenue stream to cover fixed costs and also leads to a higher cost per 1,000 gallons to offset costs of operation. A uniform customer charge per EDU is easier to administer and results in a much more consistent revenue stream to cover the fixed costs for the utility.
3. Determining the actual volume of lost water for the water utility will tighten up cost recovery measures and make revenues more predictable. It will also have a multiplier effect on the wastewater utility as that billing is generally based on volume of water used.
4. Serious consideration should be given to replacing any meters older than 10 years or any meters that do not register every gallon used until a 1,000-gallon increment is reached. Older meters will almost always UNDER-register, resulting in water provided that is not paid for, i.e. NON-revenue water. A meter replacement effort can pay for itself over a few years, particularly with the level of loss seen here. Raising the customer charge beyond the present level needed to cover fixed costs (\$2.70) can help to prepare for and eventually cover any debt service incurred to accomplish that. If meter replacement is self-funded then the higher fixed charge revenue can help to build a fund to offset those costs. Either way meter replacement will help to make the system more sustainable.
5. It is further recommended that the town conduct an inventory of its water lines and ages, along with a regular leak detection program to identify which lines may be past their useful life, and therefore another source of non-revenue water and lost revenue.