Mayor and Town Council
Work Session
April 14, 2025
Worcester County Government Center, Boardroom, Room 1102
One West Market Street, Snow Hill, Maryland 21863
ZOOM Meeting ID: 953 699 8590

5:00 pm

AGENDA
(times approximate)

5:00 pm: Call to order by Mayor Simpson

a. Budget work session

1. Presentation by Jean Holloway, of the Southeast Rural Community Assistance Project, of her updated water & sewer rate study
2. Continue budget discussions
3. Consider date for engineering consultants' presentations

6:20 pm: Comments from the Public: members of the public may register to speak for up to three minutes on any municipal question or matter under established protocols.

6:25 pm: Announcements from the Mayor & Council.

6:30 pm: Adjournment

PLEASE NOTE:

- Meetings will be recorded and available to the public on the website.
- Portions of meetings may be closed under the terms of the State Open Meetings Act as necessary.
- If you would like to receive a meeting packet sent to you prior to the meeting, please email Kandice Ringenary at adminco@snowhillmd.com.

This agenda may be subject to change.

SERCAP, INC.

Rate Analysis Report
For
The Town of

-1686-
Snow Hill
MARYLAND

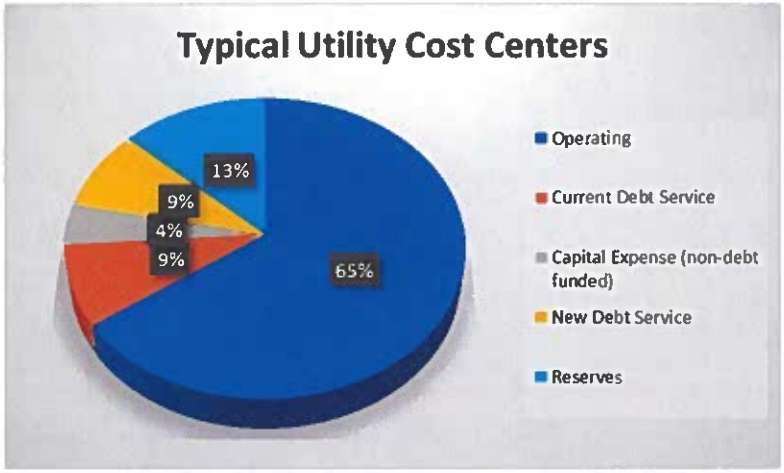
Prepared by: Jean S. Holloway
SERCAP Maryland-Delaware

Presented: April 11, 2025

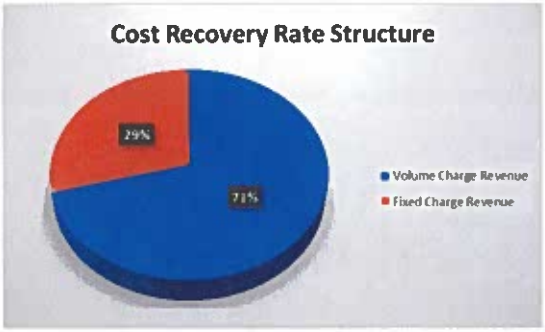
SERCAP, INC.

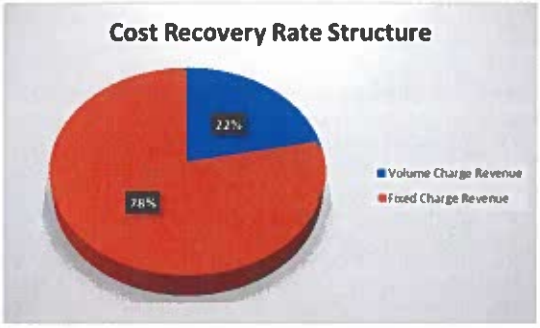
Rate Setting and Cost Recovery Principles:

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 than 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 know losses, leaks, fire flows, filter backwash, hydrant flushing, etc. When everything has been accounted for, the difference between production and know 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. That said, if your sewer charges are based on metered water usage, non-revenue water will also affect sewer revenue.

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 required.

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.

EXECUTIVE SUMMARY:

The current water and sewer rates were instituted after a previous rate analysis in 2023. The Sewer System is still being operated at a serious deficit, but that deficit was reduced by more than $109,000 by the implementation of new rates recommended in that study so the town IS making progress. The sewer system appears to have been in a deficit position for at least a few years and it will likely take several years of adjustment to operate in a full cost recovery mode. It's important to understand that a zero balanced budget does not mean a utility is fully recovering its costs of operation, if it does not cover reasonable reserves and/or allocable costs of general government. This appears to be the case with the sewer and a projected deficit of $446,135 for the test year of FY 2024-25. The Water Utility is in better shape but a deficit of $58,740 is still projected for the same test year if rates are not adjusted again. These deficits have occurred despite the significant increase in rates in the past year and are likely due to more than one factor, including:

1. The unexpected increase in inflation
2. The new rates have only been in effect for 9 months rather than a full 12
3. Users' natural tendency to conserve when rates increase, resulting in less revenue
4. The usage figures on which revenues were projected for each rate scenario are the same ones used for the 2023 study. Time constraints and billing system changes prohibited using current usage.

The water utility does not have any current debt service, so any future improvements or upgrades that incur debt will likely worsen that position. Neither the Water or the Sewer utility is financially sustainable under the present rates and rate structure, and neither can continue without substantial subsidy from the General Fund and tax revenues. While this may eliminate a short-term deficit, it is not a financially sustainable solution for the long term. The utilities need to support themselves, without tapping into other funds. That said, it is possible that the cost - revenue gap can be narrowed, particularly for the Water Utility, once a full 12 months of usage and actual costs are recorded. Whether the Town wants to take that risk is a matter of policy and not the purview of this report.

The average cost of producing 1,000 gallons of water is $10.71, up from $8.16 in the 2023 study, representing a gap of $2.55 for each 1,000 gallons of treated water produced. The average revenue collected per 1,000 gallons produced is $9.97, also a significant improvement since the previous study, but still not caught up to the average cost. Some of the costs of the water system are recovered through the base charge, but there is still a gap in the average unit cost vs. average revenue per 1,000 gallons. The town still has a moderately high level of non-revenue water at but has made significant strides toward addressing this through meter replacement and diligent monitoring. While average cost per 1,000 is not the best or the only basis for rate setting, it is a useful figure when *evaluating t*he overall costs of operation.

The average cost of collecting and treating wastewater is $25.83, a significant hike of $5.80 from the $20.30 per 1,000 gallons in 2023. The average revenue collected is only $14.61 per 1,000 gallons collected, a wider gap than 2023. The sewer rate, while much more adequate after 9 months at the new rates, is still too low to recover the full costs of operation. Moreover, the wastewater utility costs about 2 ½ times as much to operate as the water utility, a distinction that was not recognized until the last study in 2023. Failing to address this will seriously jeopardize any attempt at securing funding for future upgrades or expansion. It appears this deficit position has been the case for some time, regardless of how and when it was derived. It will likely take more than a single year or single rate adjustment to rectify the situation, as this current study has shown.

Rate scenarios were originally prepared with three options for each utility. After discussion with the Management Team, Option 3, beginning at the present level of 6,000 gallons, was selected as the most palatable for both water and sewer utilities. It is SERCAP's opinion that a customer charge plus a volume charge beginning with the first gallon is the most equitable rate structure. That is the best way to guarantee that each customer is paying for only the water they use or sewer they discharge, while giving the town a sure revenue stream to cover its own fixed costs. However, the management team unanimously felt that changing the gallon allowance was not wise at this juncture. The scenario is calculated to yield a cost recovery rate plus a "cushion" that is necessary in either case since all figures are based on a single test year and estimates of costs and inflation. The actual surplus/(deficit) may vary in actual cost/expense real time.

Above all, it is important to remember that although the rate option presented is a starting point for further consideration it *IS* based on the town's own budget, production and billing figures. There is virtually no "wiggle room" included in any of the figures, and political considerations aside, the costs must be recovered somehow, from somewhere, if not directly through the rate structures. Continued reliability on transfers from the General Fund is not sustainable and is also inequitable for the tax payers who don't use water or sewer.

The rule of thumb to calculate an "average" bill is what it costs a 5,000-gallon per month/15,000 gallon per quarter user. A table is also included that shows the effect of the prospective rates on various levels of users. Further observations and conclusions are listed at the end of each utility's analysis. More detailed recommendations for both utilities are listed at the end of the report.

WATER ANALYSIS

System Costs and Cost Projection:

Costs were calculated with FY 2025 Budget as the base year and projected out for four additional years after the base. A rate of 5% was used in most projections with a higher percentage for fuel, electricity and health insurance as those are the line items most likely to increase at a greater rate. The table below represents the 5-year estimate of system operations costs.

Cost Center	Base Year	Year 2	Year 3	Year 4	Year 5
Personnel	$502,567	$527,695	$554,080	581,784	610,873
Operations	$301,600	$319,055	$337,733	$357,746	$379,222
Debt Service & Reserves	$45,240	$47,502	$49,877	$52,371	$54,990
TOTAL COSTS	**$849,407**	**$894,252**	**$941,690**	**$991,901**	**$1,045,085**

It is important to note here that these projections assume costs, including salaries, will rise at the rate of inflation used in the calculations, and that may or may not turn out to be the case in reality. These projections also assume that there will be no new debt service for the water utility, and if there is need for debt in subsequent years, the numbers will obviously change accordingly.

Part of the rate analysis includes calculating the average cost of producing 1,000 gallons of water. The first 1,000 gallon unit costs much more than the last 1,000 gallons due to economies of scale, and the cost of system start up being higher than for a system already in operation. There is an average cost per 1,000-gallon unit that reflects the overall cost of system operations, including all cost centers. Snow Hill's average cost per 1,000 gallons of water produced is $10.71. That is *not* to say that the town should charge $10.71 at minimum, but it is a useful figure to compare different rate scenarios when making budgetary and rate decisions. It is also a useful figure to consider when evaluating the cost of non-revenue water, which will be discussed later in this report.

System Revenue and Revenue Requirement Projection:

Like the costs, system revenues were projected using the FY24 budget as a base year, but with only a 2.5% rate of inflation in order to be safely conservative in revenue estimation. The table below represents the five-year projection for revenues AND the revenues that must be collected from water rates alone.

Revenue	Base Year	Year 2	Year 3	Year 4	Year 5
Total Anticipated Revenue	$ 804,167	$ 824,271	$ 844,878	$ 866,000	$ 887,650
LESS Restricted Revenues	$ (13,500)	$ (13,838)	$ (14,183)	$ (14,538)	$ (14,901)
EQUALS Rate Revenue	$ 790,667	$ 810,434	$ 830,695	$ 851,462	$ 872,748

Again, these subsequent year projections are based on minimal growth and a conservative inflation estimate. Changes in growth, additional sources of revenues and other developments may change these future year projections accordingly. The town's level of non-revenue water will also factor into the costs per 1,000 gallons, but this will be discussed further in the section of this report on Non-revenue water. Again, these are useful figures to keep in mind when considering rate changes.

Surplus/Deficit 5-year Projections:

The table below shows Cost and Revenue projections together, and it is readily apparent that the current rates and rate structures are insufficient to fully recover the costs of operating the water system, for now, with no current debt service. The table below summarizes the current and projected position of the water system based on current rates and rate structure.

	Base Year	Year 2	Year 3	Year 4	Year 5
Rate Revenue Projected	$790,667	$810,434	$830,695	$851,462	$872,748
System Costs	($849,407)	($894,252)	($941,690)	($991,901)	($1,045,085)
Surplus/(Deficit)	**($58,740)**	**($83,819)**	**($110,995)**	**($140,439)**	**($172,336)**

Observations and Comments on Costs/Revenues Analysis:

The water utility is in a precarious financial situation, at present, even with the previous rate change. The town is not recovering its average cost of producing 1,000 gallons of water at $10.71 when the average revenue per 1,000 gallons produced is only $9.97. The town has narrowed the gap between average costs and average revenues significantly since with the new rates. This gap in average costs is less than $1.00 per 1,000 gallons and may or may not be the same when actual year-to-date figures are available. It is possible that a full year of usage and billing at that new rate could narrow or even close that gap. That said, a "possibility" may not be something the Town is willing to bank on if the goal is to make the system fully sustainable. It must be emphasized again that any decision to change rates should be viewed in the long term and the effect of any change on long-term sustainability of the utility.

The figures presented for years after the base year are estimates and should be viewed as such, given the assumptions stated in the previous sections about debt service, inflation, customer growth and salary increase levels. Moreover, the rate scenario presented later in this report for both Water and Sewer utilities should be viewed as **starting points**, not necessarily end results. There are other considerations that go into rate making that should be fully examined before any final decision is made on new rates or a rate structure.

Water Production and Non-Revenue Water:

As outlined in page 2 of this report, a part of all rate analyses should be an examination of the amount of non-revenue water the system is experiencing. That is, water that is produced at a cost to the town vs. the amount of water that is actually sold, and for which revenue is received. Some non-revenue water is inevitable, since water pipes always contain a certain volume all the time, and there is a need to flush hydrants and provide occasional fire protection, as well as usage by town-owned facilities. AWWA recommends that the level of non-revenue water not exceed 10% of the volume produced. For a small system such as Snow Hill, SERCAP recommends no more than 15% of production. There is a sort of break-even point in attempting to recover non-revenue water where the cost to ferret out the losses exceeds the revenue that would be recovered, and 15% is a reasonable goal for small systems.

Snow Hill's previous level of non-revenue water was 21.1% for the test year. While 6% more than SERCAP's recommendation may not seem like a lot, it is important to put that in the perspective of lost revenue, rather than just lost water. 21.1% of production represents 16,715,468 gallons. At the present rate of $7.70 per 1,000 gallons that equates to a loss of $128,709 just for water. Since sewer charges are based on water use, that revenue loss is exacerbated for sewer revenue loss.

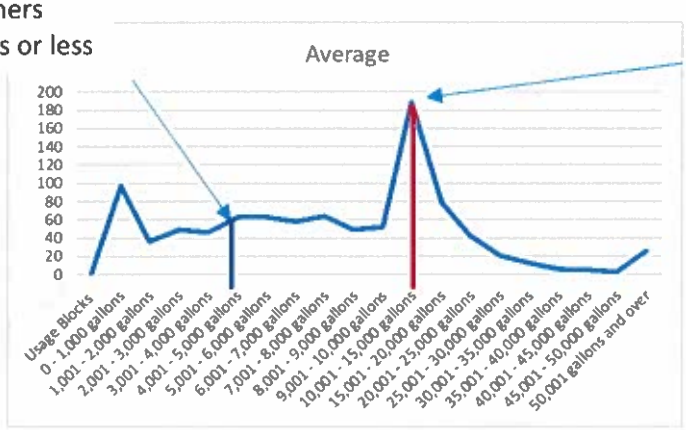
Realistically, not all of the 21.1% is recoverable, but reducing the non-revenue level to an acceptable 15% level equates to a less dramatic volume of 11,894,551 gallons, with a revenue loss of $91,588 for the water utility. The Water and Wastewater Superintendent has worked diligently to reduce this volume to a more acceptable level, and while actual figures were not available at this writing, it is believed to be closer to the recommended 15% of total production.

User Blocks and Average Users per Billing Period:

SERCAP examined quarterly billing records for all classes of customers to determine the average number of users in each 1,000-gallon block and the amount used by that block in an average quarter. These averages were then used to project revenues for each rate scenario offered here. The averages were also used to develop a usage curve that helps to identify where the majority of users fall in considering the impact of any proposed rate on the majority of customers. The table below represents the average users and total usage in each block. As noted previously, usage figures are the same as those from the 2023 study and actual figures will give a more accurate revenue projection once they are available.

AVERAGES - QUARTERLY BILLING		
Usage Blocks	Average # in Block	Average Gallons Used
0 - 1,000 gallons	98	20,623
1,001 - 2,000 gallons	36	54,148
2,001 - 3,000 gallons	50	123,028
3,001 - 4,000 gallons	47	165,518
4,001 - 5,000 gallons	63	268,725
5,001 - 6,000 gallons	63	349,950
6,001 - 7,000 gallons	58	373,398
7,001 - 8,000 gallons	64	480,368
8,001 - 9,000 gallons	49	419,760
9,001 - 10,000 gallons	52	488,260
10,001 - 15,000 gallons	189	2,304,230
15,001 - 20,000 gallons	79	1,356,533
20,001 - 25,000 gallons	43	945,963
25,001 - 30,000 gallons	21	556,033
30,001 - 35,000 gallons	13	403,920
35,001 - 40,000 gallons	6	214,660
40,001 - 45,000 gallons	5	189,058
45,001 - 50,000 gallons	3	118,500
50,001 gallons and over	26	6,812,708
EXCESS EDU'S	71	--
AVERAGE QUARTERLY	1,033	15,645,378
AVERAGE ANNUALLY		62,581,510

28.4% of Customers
use 4,000 gallons or less



74.4% of customers
Use 15,000 gallons or less

Nearly ¾ of the water customers use an average of 15,000 gallons or fewer per quarter. This helps to identify the impacts of any change in rates or rate structure, but it is also important to note that almost 30% of customers use 4,000 gallons per quarter or less. That is also significant when examining the impacts of any proposed rates.

This usage curve also indicates that the town's 6,000-gallon allowance included in the minimum bill may be higher than it should be, however, a change to that gallon allowance may not be wise at this time as the Town tries to make up for rates that have been historically under-performing. When a volume of water is included in a minimum bill, some lower use customers may be paying for gallons they don't actually use, while higher use customers are getting some gallons they're not specifically paying for, beyond the minimum charge. SERCAP usually recommends no gallon allowance at all, believing that to be the most equitable way to charge for usage. The gallon allowance is a matter of policy and the Town has elected to continue that policy.

As discussed in the early pages of this report, a "Customer Charge," aka the town's minimum bill, should reflect the recovery of fixed charges that the town has to cover with or without any volume sales. Typically, these fixed charges are debt service and reserves that represent the costs of installing the system and making service available to all users, as well as some contribution to reserves for replacing equipment as it wears out. The customers connected to the system at any given time are contributing to that equipment's wearing out and should be paying some fair share of those costs.

In consultation with the Town's management team SERCAP maintained the 6,000 gallons included in the customer charge, although other scenarios were originally calculated. SERCAP continues to recommend starting at 0 gallons as being the most equitable, but the political and public relations concerns may dictate retaining some level of gallons included in the base charge. The effect on typical customers using 15,000 gallons per quarter is shown for each scenario.

Current Rate Scenario:

Customer Charge per EDU:	$50.00	Typical Bill at 15,000 gallons:
Gallon Allowance:	6,000	Quarterly - $119.30
Usage Rate per 1,000 gallons:	$7.70	Annually - $477.20

To maintain this current base rate would require the town to increase its usage charge per 1,000 gallons to $11.10 to avoid an estimated deficit of $58,740. Since an increase of that magnitude did not seem acceptable or desirable, another scenario was calculated raising the base rate and usage rate by a lesser amount as follows:

Proposed Rate Scenario:

	IN TOWN CUSTOMERS	OUT OF TOWN CUSTOMERS @ 2X
Customer Charge per EDU:	$50.00	$100.00
Gallon Allowance:	6,000	6,000
Usage Rate per 1,000 gallons:	$9.65	$19.30

Rate Scenario Comparisons per User Block: Seeing the effect of a rate change on various levels of usage is often a critical consideration for decision makers. SERCAP has calculated the rate scenario's impact on 3,000, 6,000, 9,000, 12,000 and 15,000-gallon users since about 75% of Snow Hill's customers fall in that range. In addition, the impact on a larger, 20,000-gallon user is shown for the basis of comparison. Figures shown below are for in-town customers only.

Volume	Current Quarterly	Current Annually	Proposed Quarterly	Difference Quarterly	Proposed Annually	Difference Annually
3,000	$ 50.00	$200.00	$50.00	$0	$200.00	$0
6,000	$50.00	$200.00	$50.00	$0	$200.00	$0
9,000	$73.10	$292.40	$78.95	$5.85	$315.80	$23.40
12,000	$96.20	$384.80	$107.90	$11.70	$431.60	$46.80
15,000	$119.30	$477.20	$136.85	$17.55	$547.20	$70.20
20,000	$157.80	$631.20	$185.10	$27.30	$740.40	$109.20

The table below shows the difference in revenues each option makes for the town.

Option	Surplus/(Deficit)
Current Rate - $50.00 + $7.70 over 6,000 gal	($ 58,740)
Proposed - $50.00 + $9.65 per 1,000 gal	$ 15,511

Holding the line on the base charge is proposed as a way to cause the least impact on the lower end users who rarely exceed the 6,000 gallon allowance. It is only possible to maintain this $50.00 base charge if out-of-town customers are charged more than in-town customers. The management team has proposed a rate for the approximately 40 out-of-town customers that would be double the rate for in-town customers. Proposed rates and revenue projections are based on that charge.

For the same levels of usage as shown in the charge above, out-of-town customers would pay as follows:

Quarterly	Annually
3,000 gallons usage - $100.00	$ 400.00
6,000 gallons usage - $100.00	$ 400.00
9,000 gallons usage - $157.90	$ 631.60
12,000 gallons usage -$215.80	$ 863.20
15,000 gallons usage - $273.70	$1,094.80
20,000 gallons usage - $370.20	$1,480.80

Observations and Recommendations:

1. The first, and most obvious observation, is that the utility is not covering its costs of operation under the present circumstances and cost centers. The utility must cover ALL its costs with its own revenues without subsidy from tax dollars. It is apparent from the table on Pages 7-9, however, that the projected deficit increases each year for the projected 5-year period, if nothing else changes. This jeopardizes the sustainability and compliance capabilities of the water utility, as well as the town's ability to obtain financing for capital improvements.

2. The current rates as presented are insufficient to fully recover the costs of operations of the water system, but they ***may*** be more sufficient when current usage and actual costs are available for further analysis.

3. The non-revenue water level should continue to be examined closely to determine the source of any discrepancies. While the town has eliminated several sources of non-revenue water since the 2023 study, keeping that percentage to 10-15% can help to ensure sufficient revenues and system sustainability.

4. It is important to recognize that the scenarios above are starting points in any rate decisions and the Town should keep in mind that these are suggested figures. At $10.71, the average cost per 1,000 gallons produced is higher than the volumetric rate proposed, but setting a base customer charge to recover fixed costs offsets that difference. In effect, this is a way of re-slicing the "pie" as discussed on page 1 of this report.

Sewer Analysis

System Costs and Cost Projection:

Wastewater system costs and revenues were projected using the same percentages for inflation as were used in the water system analysis. Usage blocks and number of users from the water system study were also used since wastewater is usually billed based on metered water usage. There are likely some differences in the customer base for each, with some users having only water or some having only sewer service, but that has not been considered for the purpose of this analysis. Likewise, the analysis is based on current debt service and the advent of any new debt would impact these costs and projections significantly. The costs and cost centers are represented in the table below.

Cost Center	Base Year	Year 2	Year 3	Year 4	Year 5
Personnel	$396,570	$416,399	$437,218	$459,079	$482,033
Operations	$990,874	$1,044,192	$1,096,402	$1,151,222	$1,208,783
Debt Service & Reserves	$228,757	$240,195	$ 252,205	$ 264,815	$ 278,056
TOTAL	**$1,616,201**	**$1,700,786**	**$1,785,825**	**$1,875,116**	**$1,968,872**

The average cost to collect and treat 1,000 gallons is $25.83, an increase of $5.80 from $20.03 in the 2023 study. As with the water utility, this increase over the 2023 analysis is likely due to any number of factors, including the effect of tariffs and inflation on the cost of supplies, chemicals, electricity and fuel. Overall, sewer costs 2.5 times as much to operate as water, and a higher user rate is necessary to keep the system sustainable. It appears that the rates for sewer were historically less than water rates, which has certainly contributed to this deficit position. Some portion of the costs of operation are recovered through the base charge so that the average cost per 1,000 gallons is not a rate setting figure, but is furnished for the purpose of perspective and illustration.

System Revenue and Revenue Requirement Projection:

Like the water system, revenues were projected using the FY25 amended budget as a test year, but with only a 2.5% rate of inflation in order to be safely conservative in revenue estimation. The table below represents the five-year projection for revenues AND the revenues that must be collected from sewer rates alone.

Revenue	Base Year	Year 2	Year 3	Year 4	Year 5
Total Anticipated Revenue	$1,249,730	$ 1,199,307	$ 1,229,290	$ 1,260,022	$ 1,291,523
LESS Restricted Revenues	$(79,674)	$(81,666)	$ (83,707)	$ (85,800)	$ (87,945)
EQUALS Rate Revenue	$1,170,056	$1,199,307	$ 1,229,290	$ 1,260,022	$ 1,291,523

Again, these subsequent year projections are based on minimal growth and a conservative inflation estimate. Changes in growth, additional sources of revenues and other developments may change these future year projections accordingly. The average revenue per 1,000 gallons collected is $14.61 per 1,000 gallons. At an average cost of $25.83 per 1,000 gallons this is a significant revenue deficit of more than $11.00 per 1,000 gallons, despite the increase in rates from the 2023 study. Again, some of that can be attributable to conservation of water, and other factors; there is really no way to know for sure. Some of that revenue loss could be attributable to older meters but that is also unknowable without further examination.

Surplus/Deficit 5-year Projections:

The table below shows Cost and Revenue projections together, and not surprisingly, there is a significant deficit projected for each year. If there is a single "snapshot" takeaway from this report, it is the table below which summarizes the current and projected position of the wastewater system based on current rates and rate structure.

	Base Year	Year 2	Year 3	Year 4	Year 5
Rate Revenue Projected	$1,170,056	$1,199,307	$1,229,290	$1,260,022	$1,291,523
System Costs	$1,616,201	$1,700,786	$1,785,825	$1,875,116	$1,968,872
Surplus/(Deficit)	**$ (446,145)**	**$(501,478)**	**$ (556,535)**	**$ (615,094)**	**$ (677,349)**

Observations and Comments on Costs/Revenues Analysis:

There is little doubt that the sewer utility is still in a serious deficit situation if rates do not change again. The town is not recovering its average cost of collecting and treating 1,000 gallons of wastewater at $25.83 when the average revenue per 1,000 gallons is $14.61. That said, it must be emphasized *again* that these are not the real costs or revenues of each and

every 1,000 gallons through the system, but the average of costs per 1,000 gallons from first unit to the last each year. Some of the cost per 1,000 gallons is recovered through the base charge, obviously, but this average cost is a way to illustrate the gap between revenues and expenses affecting the system's sustainability.

The figures presented for years after the base year are estimates and should be viewed as such, given the assumptions stated in the previous sections about debt service, inflation, customer growth and salary increase levels. Again, the rate scenarios presented in this report for both Water and Sewer utilities should be viewed as starting points, not necessarily end results. There are other considerations that go into rate making that should be fully examined before any final decision is made on new rates or a rate structure.

Water Production and Non-Revenue Water:

With wastewater billing based on metered water usage, the level of non-revenue water becomes even more critical for the sewer utility, particularly given the high average cost of operations. When compared to the average COST per 1,000 gallons of wastewater that revenue loss could be even higher in real terms. As stated previously the Superintendent is diligently monitoring the level of non-revenue water and has brought the level down significantly since the 2023 study.

Rate Scenarios:

SERCAP compared the costs of the water utility with that of the wastewater utility and found that the wastewater service costs about two and a half times the cost of operating the water utility. The gap widens when comparing the average costs of 1,000 gallons for each utility. The average cost of 1,000 gallons of water is $10.16 while wastewater costs $25.83 per 1,000 gallons, a factor of 2.5 times the average cost of water. The fixed costs are higher for wastewater because there is current debt service each year, and reserves, based on operations costs, are higher as a result. These average costs per 1,000 gallons have increased during the last year, again, largely due, but not limited to inflation.

It is imperative to keep all that in mind when considering any of the rate options, that these are starting points and represent minimums to fully recover costs of operation. SERCAP originally calculated options and compared each with the current rates and effects on various levels of usage. Maintaining the same rates as were chosen after the 2023 study would put the town's Sewer System operating at a loss of $446,145. The town has no real choice but to increase rates again to keep the system sustainable. Maintaining the current $135.00 base charge would require an increase of the per 1,000 gallons charge to $17.10, even if there were 0 gallons included in the base charge. Raising the base charge to $150.00 and lowering the gallon allowance to 4,000 gallons would require a usage rate increase to $16.45 per 1,000 gallons. The management team chose Option #3 as shown below.

Rate Scenario #3: IN TOWN

Customer Charge per EDU: $150.00
Gallon Allowance: 6,000
Usage Rate per 1,000 gallons: $17.10

Typical Bill at 15,000 gallons:
Quarterly - $ 453.90
Annually - $ 1,815.60

OUT-OF-TOWN

Customer Charge per EDU: $300.00
Gallon Allowance: 6,000
Usage Rate per 1,000 gallons: $34.20

Typical Bill at 15,000 gallons:
Quarterly - $ 907.80
Annually - $3,631.20

Rate Scenario Comparisons per User Block:

Seeing the effect of a rate change on various levels of usage is often a critical consideration for decision makers. The 2023 Study presented 3 options for the town's consideration – 0 gallon allowance, 4,000 gallon allowance and the current 6,000 gallon allowance included in the base charge per EDU. The management team felt the gallon allowance should stay at the current 6,000 gallons per quarter for the base charge, so SERCAP has calculated that proposed rate scenario and its impacts on 3,000, 6,000, 9,000, 12,000, 15,000 and 20,000-gallon users. About 75% of Snow Hill's customers fall in the 15,000 gallons per quarter range. The impact on a larger, 20,000-gallon user is shown for the basis of comparison. The town may wish to calculate impacts on actual customers in the presentation of any rate change proposal(s).

IN TOWN CUSTOMERS

Volume	Current Quarterly	Current Annually	Proposed Quarterly	Quarterly Difference	Proposed Annually	Annual Difference
3,000	$135.00	$540.00	$150.00	$15.00	$600.00	$60.00
6,000	$135.00	$540.00	$150.00	$15.00	$600.00	$60.00
9,000	$172.05	$688.20	$201.30	$29.25	$805.20	$117.00
12,000	$209.10	$836.40	$252.60	$43.50	$1,010.40	$174.00
15,000	$246.15	$984.60	$303.90	$57.75	$1,215.60	$231.00
20,000	$307.90	$1,231.60	$389.40	$81.50	$1,557.60	$326.00

OUT OF TOWN CUSTOMERS

For the same levels of usage as shown in the charge above, out-of-town customers would pay as follows:

Quarterly	Annually
3,000 gallons usage - $300.00	$1,200.00
6,000 gallons usage - $300.00	$1,200.00
9,000 gallons usage - $402.60	$1,610.40
12,000 gallons usage -$505.20	$2,020.80
15,000 gallons usage -$607.80	$2,431.12
20,000 gallons usage -$778.80	$3,115.20

While this would represent another significant rate increase, it is critical to understand that until the first 9 months of 2024 the town was charging well *BELOW* what the service actually costs, and had been for some time. Catching up to that deficit and trying to ensure a sustainable system after that is going to take more than one or two years.

To put the proposed rate vs. the current rate structure in perspective the table below shows the difference in revenues each makes for the town.

Option	Surplus/(Deficit)
Current Rate - $135.00 + $12.35 over 6,000 gal	**($446,145)**
Proposed - $150.00 + $17.10 over 6,000 gal	$6,275

SERCAP recognizes that these proposed rates represent another dramatic rate increase for both utilities and their customers. Continuing to charge rates so far below the average cost per 1,000 gallons of $25.83 while only recovering about $14.61 per 1,000 gallons on average will only deepen the existing deficit situation. An analysis may be performed again when the town has a full 12 months of usage and billing figures. The town must consider what is currently needed to sustain the system based on the information currently available.

CONCLUSIONS AND RECCOMMENDATIONS:

1. The Wastewater utility needs to increase rates again to fully recover the costs of operation, Both utilities are projected to be significantly in the red, and the wastewater utility almost certainly has been for some time. These gaps will only widen in future years without further action. It is imperative that this be attended to for the utilities to be sustainable, let alone qualify for any future funding.

2. It is *absolutely critical* that the town continue its diligence in identifying and reducing non-revenue water and that all connections be metered, regardless of ownership or non-profit status. The non-revenue water represents a significant loss to the town in both water and wastewater utilities, particularly when both are in such a deficit position.

3. The Town has improved its financial and utility management position since the last rate study in 2023, however, it still requires due diligence to bring both utilities to a sustainable financial position and keep them there.

4. NEITHER the water nor wastewater analysis has included depreciation figures as a cost on which to base rates. Instead SERCAP has used its standard percentage for "reserves" to repair/replace equipment and another for Emergencies/Contingencies. The town's actual depreciation may be greater than the figures used for this analysis and that should be taken into consideration as well. While depreciation is often viewed as a "paper" number that doesn't have to be funded, it does represent the real cost of equipment's wearing out and eventually becoming inoperable. Customers who are connected to the system at any given time are contributing to that equipment's wear and should pay some pro rata share of the costs to replace it. If these costs are not built into rate calculations, whether by funding depreciation or funding reserves, as was done in this analysis, then the future customers who are connected when the equipment needs replacing will bear the entire cost of that replacement.

5. BOTH utilities must be attended to immediately lest they drain the reserves already set aside to cover the costs of operation. Failure to address the deficits immediately as well as over the long term will jeopardize the utilities' sustainability and ultimately their compliance with required regulations.