Proposal for Water, Sewer and Sanitation Rate Analyses City of Riverton, Wyoming

Purpose and Need

This proposal describes the need, responsibilities, timing, investment and other issues for rate analyses (later referred to as "analyses") of the water, sewer and sanitation (trash and recyclables collection) utilities for the City of Riverton, Wyoming (later referred to as "you"). These analyses will be performed by GettingGreatRates.com (later referred to as "I"). To adequately fund operation of your utilities, build and maintain reserves, fund capital improvements and related debt service, and establish rates that are fairly structured for ratepayers, you need to analyze your rates and fees, set them appropriately and periodically reset them. The services proposed are intended to support you as you satisfy those needs.

Expected Results

With completion of the analyses:

1. You will discover at what level your utilities need to be funded to accomplish needed system development, refurbishment, repair, maintenance and operation.
2. You will have the "proof" you need to convince council members, ratepayers and property owners why rates and fees should be set as modeled.
3. You will have the "proof" you need to show funding agencies and the lending market why your systems deserve the grants, loans and loan terms you desire.
4. You will successfully comply with your permit to dispense water, NPDES permit and other requirements from the regulatory agencies.

Firm Revenues, Qualifications and References

One-hundred percent of the firm's revenues come from rate analysis and related work. Visit gettinggreatrates.com/ggr/freebies/ReferenceList.pdf and see attached for detailed qualifications and references." The list includes all rate analysis clients since 2013.

GettingGreatRates.com has one office in Jefferson City, Missouri but we operate nation-wide. Our work focuses almost exclusively on rate analysis and rate setting.

Carl Brown, President, will perform all analysis work for this project. He has been doing rate analysis work since 1993. For most of that time he has also been teaching practitioners all over the U.S. on rate analysis and rate setting, writing the rate setting book called, "How to Get Great Rates" and designing rate analysis software.

Jacki Hicks, the firm's Vice-president, will likely assist in these analyses by doing data testing and data input. Ms. Hicks prepares analysis models, especially those for analyses that require databases. She also performs data quality checks and enters raw data. Ms. Hicks has approximately 23 years of experience in accounting, financial assurance and complex spreadsheet and database design. Seven of those years have been devoted to water and sewer rate analysis.

GettingGreatRates.com serves as the rate analyst for the Wyoming RATES Program https://gettinggreatrates.com/consulting/WyRATES.pdf. Wyoming Association of Rural Water Systems (WARWS) member systems qualify for a 25 percent discount on all fees. I have verified that Riverton is a member system of WARWS. Therefore, you qualify for this discount.

You may expect your analysis results package to look much like the rate analysis report package attached and others that can be found at the bottom of this Webpage https://gettinggreatrates.com/freebies/freebies.shtml.

Form of Agreement

This proposal and your acceptance (probably by e-mail message) of one or more service packages is all the agreement I need. Nearly all my clients acquire my services this way. However, if you prefer to attach a cover "agreement" or signature page to this proposal, you are welcome to do so. About three percent of clients choose that option.

Guarantee

In the unlikely event you feel I am not fulfilling the commitments in this proposal, simply tell me what you feel the problem is. I will do my best to make it right by you. If I still am not able to satisfy you, notify me by mail or e-mail. I will cease the services in question at that point, you will owe me nothing for those services and I will refund any payments you may have already made for those services.

This has been my guarantee policy from the day the company was formed. No client has invoked this guarantee to date and I don't plan to have you be the first.

Scope of Services That You May Select or Decline, at Your Option

The following service packages are intended to satisfy your rate analysis and rate setting needs.

- Service package 1 is analysis of your water utility's user charge and other fee adjustment needs. Analysis will include output from modeling of your current financial situation and, perhaps, several proposed rate scenarios that depict rate structures and other variables you may want to consider. All potentially productive scenarios that you or I conceive of will be modeled and reported to you.
- Service package 2 is the same as service package 1, except it is for the sewer utility.
- Service package 3 is the same as service package 1, except it is for the sanitation and recyclables collection utility.
- Service package 4 is for on-site visits. Each visit will be one instance of this service package. (I generally recommend one on-site visit to present the completed analyses and recommendations and to answer questions at a public council meeting. That is especially useful when I analyze more than one utility or the analyses and rate adjustments are complex.)

You may add or drop service packages at any time.

Approach and Timeline

For most of my clients, rate analysis and eventual rate adjustments take about six months from start to finish. That is mainly because clients must gather data for the analysis and make some interim decisions as the project proceeds – that takes time. Completion time is only slightly affected by my workload. Generally, we are able to move analyses along almost as fast as data and guidance are available.

Most analyses include the same basic elements, but they do not necessarily get completed in the same order. And, each situation calls for special considerations and treatments. However, your project will likely proceed approximately as follows:

1. I will call your contact person, probably the day I am notified that I will be doing the analyses, to discuss data needs and get the contact started on initial data retrieval.

2. Your staff will assemble and send to me data and information, most of which is described in the "Data Needs Sheet," attached. I will guide your staff through the entire process. Where data is missing, I will create estimates or help you to create estimates. Initial data retrieval will be accomplished early on, preferably within a few weeks. But, some data will be acquired throughout the project.
3. I will analyze this data and information and build your rate analysis models.
    a. Coordinating with your contact, I will target a set of goals ten years in the future. These will include, at least, covering all costs, including capital improvements over that time period, and building appropriate reserves.
    b. I will model rates on a "cost to serve" basis to satisfy those goals. You may request other structures and I will model those, as well.
    c. Key model building will probably be completed about three months into the project, if you collect data quickly. Some modeling will continue through nearly the end of the project.
    d. Once models have been built, "what-if" scenarios will be run to find the optimum mix of rate and fee levels and structures, capital improvement funding options, reserve levels, etc. to suit the needs of your utilities.
4. During the last half of the project I will examine as many scenarios of your possible future as it makes sense. I will share with you all that are potentially useful.
5. You will likely choose to consider adopting rates and funding levels from the one or two most promising scenarios for each utility.
6. Final output will include a cover letter, a narrative report of my findings and recommendations and copies of the analysis scenarios that interest you.
    a. The project is "complete" when you say it is. Until then, I will reanalyze and issue supplemental reports until you are satisfied.
7. If you choose the on-site visit service package, I will present my final analysis results and recommendations to your council in person. While there I would also like to meet with staff to discuss how to effectuate needed changes to billing, equipment replacement scheduling and any other administration or operational issues that are discovered.
8. As you draft proposed amendments to your ordinances and budgets to effectuate the rate, fee and other changes, at your request I will review those changes to assure that they will accomplish what you intend to accomplish.

9. The council will pass ordinance amendments to effectuate new rates, fees, budget revisions and other changes. From this point forward, your utilities will be headed to a better financial future.

Use of Electronic Technology

I do almost all analysis work electronically and remotely, receiving and sharing data and information by e-mail attachment. I prefer to receive numerical data in a spreadsheet format and textual material in a word processor format, but we can work with other formats, too. When I return material to you that you need to manipulate further, such as a revised ordinance, I will return it electronically in a format you can conveniently use. You will receive my analysis reports, the analyses and my recommendations electronically as PDF documents.

Work Coordination

Early on you will probably want to have me communicate primarily with your finance director and public works director or delegated staff. This stage is primarily a data gathering and modeling function. When we progress to the reporting out stage, you may want to have me begin communicating with others in preparation for developing rate, fee and policy decisions and actions.

Investment

Because Riverton is a member system of WARWS, you qualify for the 25 percent Wyoming RATES program discount. Therefore, following are your complete investments for my services, materials and travel costs, based upon the service descriptions above:

- **Service package 1**, water rate analysis – full fee of $7,872, less the Wyoming RATES Program 25 percent discount of $1,968 yields a **net fee of $5,904**
- **Service package 2**, sewer rate analysis – full fee of $7,872, less my multi-study discount of $787, and less the Wyoming RATES Program discount of $1,771 yields a **net fee of $5,314**
- **Service package 3**, sanitation rate analysis – full fee of $7,872, less my multi-study discount of $787, and less the Wyoming RATES Program discount of $1,771 yields a **net fee of $5,314**
- **Service package 4**, on-site visits – $2,733, less the Wyoming RATES Program discount of $683 yields a **net fee of $2,050 per visit**

If you choose service packages 1, 2, 3 and one visit from package 4, the group of services you most likely need, the total investment will be $18,582, including total multi-study and Wyoming RATES Program discounts of $6,194.

Once the project gets started you may add or drop service packages as your needs become clearer.

Proposal Acceptance

This proposal is effective through July 31, 2019, if you choose at least one service package by July 31, 2018. Once you tell me what service packages you desire, and you provide data to work with, I will immediately start to produce the analyses.

Promptly given the data I need, there is no good reason why I cannot complete the analysis part of the project by December 31, 2018. If you gather data before July 1, we probably can complete the project in the Fall of 2018.

Action item: If you accept this proposal call me to tell me what services you desire. Or, give me the same information in writing by e-mail message.

Payment

I will first invoice you the day of, or perhaps the day after I am notified you want me to do the analyses. In that invoice you will have the opportunity to pre-pay (make payment by the 30-day due date) and capture an additional 2.5 percent pre-payment discount. **For packages 1, 2, 3 and one visit from package 4, that discount would amount to $619.39.**

If you choose not to pre-pay (about two-thirds of my clients select that option), I will re-invoice you for one-half of the project dollar amount after 90 days from proposal acceptance and the balance when I submit the final report package. You shall promptly pay the full amounts of those invoices. If you request and pay for services but later cancel those services, I will refund those fees to you. If I cancel any services in this proposal (I have yet to do such a thing), you will owe me no fees for those services and I will refund any fees you have already paid for those services.

In Closing

I am looking forward to the opportunity to conduct your rate analyses, so you can get your utility rates and finances set on an excellent course.

Best regards,
GettingGreatRates.com

Carl E. Brown
President

July 31, 2019

The Honorable Richard P. Gard, Mayor
City of Riverton
816 N. Federal Blvd.
Riverton, WY 82501

Subject: Utility Rate Analysis Report

Dear Mayor Gard:

Attached is the rate analysis report package for the City's water, sewer and sanitation utilities. Before I address the report package, I have some important housekeeping to do.

Rate analysis is data intensive, using large volumes of information and many kinds of data. When my calculations indicate that I have the "wrong" data or that something else is amiss, I ask for more data, different data and verification from the City's contacts that I finally have data as "right" as it can be.

My contact with the City for most things, especially usage and financial data, was Mia Harris, Finance Director. For the systems' technical data, like capital improvement plans and repair and replacement schedules, my contact has mainly been Kyle Butterfield, Public Works Director. Both have been wonderful to work with. Actually, they have been faster at gathering and sending me data and information than I have been able to process it. But they remained patient with me.

At the very beginning of the project, and again at the end of the analysis and reporting phase, Tony Tolsted, City Administrator, was instrumental in giving me advice and guidance for structuring the report and models to suit the specific needs of the City.

To these three staff and I'm sure others who worked behind the scenes I want to say, Thank You. To you and everyone else who will read this I want to say, I really appreciate the great help your staff gave me. Having contacts like that makes this work a joy and makes it accurate. The folks in Riverton are fortunate to have people like these serving them.

I have another thank you to offer, this time to Kathy Weinsaft and Mark Pepper of the Wyoming Association of Rural Water Systems (WARWS). Kathy, and WARWS could take the path of many of the other associations and focus on the building, permitting, compliance and running of water and sewer utilities. That is, after all, the core mandate of such associations and it is vitally important. But, Kathy and the whole WARWS team go the extra mile to see to it that all the needs of utilities are met, not just the core. Importantly, that includes funding and rates. I hope that, once your new rates are in place and serving the City well, you will thank the WARWS team, too.

Now, I have a report package to get to. The package is voluminous. Analysis for three utilities will do that. The report contains lots of details. However, each rate analysis was done using, essentially, the same spreadsheet template. Once you get acquainted with the water rates template, you will find the other two analyses to be familiar. The resulting rates of each are quite different from each other, but the same basic methodology was used to calculate each set of rates. Thus, rate structures are consistently based on cost-to-serve principles across the media.

There is a lot in the report to digest. Do not feel like you must understand everything right away. When the Council is ready to consider the results and my recommendations, I will attend a Council meeting to go over everything. At that meeting, you, the Council, staff and the public will learn many things about what needs to happen to your utility rates and why. I look forward to that.

Finally, I am sure you and the Council members know of other cities, towns and utility districts that also need rate setting help. As you run into these folks at rural water association meetings, municipal league meetings and other venues, I hope you will tell them about my services. I get much of my business by referrals from past clients and I hope to be able to trace several future clients back to my work with Riverton.

Best regards,
GettingGreatRates.com

Carl E. Brown
President

Enclosure

City of Riverton, Wyoming

Water, Sewer and Sanitation

Rate Analysis Report

Prepared July 31, 2019

Carl Brown, President
GettingGreatRates.com, LLC

Executive Summary

This report covers utility rate analyses done for the City. Analysis determined that to pay for current and soon to be incurred costs, overall, rates for all three utilities need to go up and rate structures should be changed significantly. Capital improvements are the main drivers of rate increases for water and sewer.

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Introduction

The City of Riverton, Wyoming, later called "the City" or "you," hired GettingGreatRates.com, later called "me," "we" or "I," to perform rate analysis of its water, sewer and sanitation utilities and services, collectively called "the utilities," to produce a report of my findings and recommendations and to provide you with guidance on rate setting.

The utilities' revenues are generally adequate to cover current costs, but those costs are going to rise in the future. Reserves, however, are substantial and should remain so with the recommended rates. Each utility has unique issues that will be discussed in detail later. I want to be clear. Adequate rates are job one in rate setting. The City has been handling that well concerning coverage of current costs.

Job two is setting rates in a fair structure, preferably in a cost-to-serve structure. The City's current rates and fees are set up in structures that lend themselves to cost-to-serve rates. In fact, I was pleasantly surprised to see that the City bases water and sewer plant investment fees on water meter size. That is a good cost-to-serve rates practice. It should be extended to minimum charges, as well, but you are on the right track.

It is more difficult to determine cost-to-serve rates for sanitation rates, but I can tell you have made strides there, too. My findings should help you move much closer to cost-to-serve sanitation rates.

As to the analysis methodology, this report is the culmination of a process where I submitted numerous information and data requests to the City, almost always to my primary contact, Mia Harris, Finance Director. Ms. Harris replied. We went through several iterations of this step. I subsequently modeled the City's finances and rates for each utility using that data and submitted those items for review and feedback. Ms. Harris reviewed those draft submittals to assure accuracy, and in some instances, she corrected data. With that feedback, I prepared and submitted a draft full report. Again, Ms. Harris reviewed and gave me feedback, from which I revised the full report slightly to arrive at this final report.

The report is in two parts. The first is this narrative report that tells readers what should be done to the utilities' rates and why. The second is a printout of the spreadsheets, later simply called the "models" when referring to all of them. The models, nearly identical to each other, are sets of integrated calculations that mathematically depict each utility's situation to arrive at the recommended rates.

As you read this report, please keep this in mind. The report does not *direct* the City to do anything. Actions you take or do not take are strictly up to you. The report is meant to inform and educate so you can then make well-informed decisions about actions to take. And the report and models are not legal recommendations. For legal issues consult your attorney.

Finally, a note about water meter sizes and the water and sewer rates. I recommend meter size-based system development fees and minimum charges from a five-eighths inch water meter up to a ten-inch meter. Why different rates for different meter sizes? Quite simply, "big" customers cost the utility more, in terms of capacity to serve. Thus, "big" customers would be assessed higher system development fees and minimum charges.

I recommend you adopt the full slate of meter size-based rates. That way, if you have a large business or plant that wants to locate in the City, you will have appropriate rates in place for them. Then, if they want to negotiate less than full price for the six-inch meter they need, for example, you will be on firm footing to stand your ground, if that is what you want to do. And if you are willing to "give," you will be able to show the prospective new customer, and all other ratepayers, just how much you are giving up, to get them to locate in your service area. If you start off with no adopted fee for a six-inch meter, you place yourself at a disadvantage when a prospect tries to negotiate lower fees.

The notion of capacity to serve applies to sanitation and disposal costs, too. There, instead of using meter size to differentiate capacity to demand service, we use container volumetric size.

Rate Analysis, in a Nutshell

At its simplest, rate analysis helps a utility arrive at rates and fees that are adequate – they will pay all the utility's costs. The next level of complexity is to arrive at rates that, on an average cost basis, will enable the utility to recover fixed and variable costs "fairly." Most small water and sewer utility need analysis only to this level of complexity – doing more results in rates that are overly complex.

Another level of complexity includes calculation of meter size-based minimum surcharges and system development (connection) fees. Another includes calculation of rates on a "marginal" cost basis, for special groups of customers. Yet another level is marginal cost basis calculation of rates for individual customers, such as a wholesale customer. These facets of analysis result in accurate but complex rate structures; appropriate for a larger utility with diverse customers.

Analysis can and should provide a sound basis for advising the utility to "go or don't go" concerning various actions it might take. Some of these actions are purely financial. Some, like the decision to enter into, or not enter into, a wholesale supply agreement, for example, include "hassle factor" and other non-financial issues.

Rate Setting Resources Beyond This Report

Over the years, I have found that several topics are common to lots of utilities. I used to specifically write such things into each rate analysis report, stretching the length of those reports. Now, I cover such things in separate guides, all available for FREE download at https://gettinggreatrates.com/freebies/freebies.shtml. Following is a listing of several guides and resources:

1. How to Get Great Rates© (e-book)
2. Rate Setting Issues Guide©
3. Replacement Scheduler©
4. CIP Scheduler©

The first two give guidance on rate setting and related issues. The last two are spreadsheet applications that enable users to build their own equipment repair and replacement and capital improvement schedules, calculating their costs and calculating revenue needs to pay those costs. In fact, these spreadsheets were extracted from my model template and made a bit more user-friendly for do-it-yourselfers. You will see these same sheets in the Model in this report.

Later in this report, when I leave explanation of something to one of the above resources, I will tell you in which resource you can find the detailed discussion of that issue discussed.

There are other guides and resources on that site. All are FREE, so I invite you to check them out.

Delayed Rate Adjustments

For rate modeling purposes, your rate adjustments have been delayed for all the utilities. Granted, you will adjust rates on a schedule that suits the City, so adjustments are not being delayed in your frame of reference. However, all calculations in my modeling template have been set up with the assumption that rates will be adjusted within the one-year period that follows the test year. The test year was July 1, 2016 through June 30, 2017. Therefore, the rate analysis template assumes rates would have been adjusted on a date between July 1, 2017 and June 30, 2018, with the actual date of adjustment specified by me.

I have now assumed that all rates will be adjusted in time to be in effect for the September 1, 2019, billing. Therefore, revenue increases to be generated by the adjusted rates have been delayed by two months. Likewise, the overall initial rate increases have been raised proportionately so that you will reach the reserve goals by the end of the modeling period on June 30, 2029.

I know this information is a lot of granular detail and may be esoteric to most readers. But I wanted you to know about this set of assumptions that affect the calculated rates.

Cost-based Rate Calculations

To give you a synopsis of rate analysis, as I do it, and to make it easier for you to read and understand my findings and recommendations, a tutorial on my methodology is in order. This description uses water and sewer as the example media, but the notions generally apply to the other utilities, too.

When I analyze rates for a government-owned water-based utility, and other utilities that are empowered to assess cost-of-service rates, I use the cost-needs approach. The approach is exhaustively described in the American Water Works Association's "M1 Manual, Principles of Water Rates, Fees and Charges," Seventh Edition. This manual, in use since the 1960s and periodically updated, is considered by many to be the "Bible" of water rate setting best practices. The cost-needs approach is a static (one year) rate calculation. I enhance that approach by projecting costs and revenues into the future.

The cost-needs approach results in rates that are called, "cost-to-serve" or "cost-of-service" rates. Simply stated, the costs for a targeted time period, usually in the near future, are classified as "fixed," "variable," "capacity to serve" or some combination of the three. Fixed costs are converted to a minimum charge. Variable costs are converted to a unit charge. Capacity costs are converted to some combination of system development fees and surcharges to the minimum charge.

The first step of this classification process is done in Table 8, page 68, for water (and in the same table number for the other utilities). Your water rates situation is somewhat complex so the "Average Fixed Cost/User/Month" from Table 8 of the Model is used for calculating the base minimum charge. Also, from that table, the "Average Variable Cost to Produce/1,000 gallons" is the basis for calculating unit charges.

The second step in rate structuring is arriving at capacity costs. For water and sewer, these were calculated in Table 11, page 75, and distributed to system development (tap-on) fees and surcharges to the minimum charge in Tables 13, page 77, and 15, page 79, respectively. The capacity "share" of costs of each meter size is based upon the calculated shares in Table 12, page 76. Capacity costs and fees for sanitation services are handled differently and will be discussed in that section of the report.

The third step is to project costs ten years into the future. Generally, this is done by applying an expected inflationary factor to each cost. Some expenses, like postage, permit fees, taxes, treatment chemicals and electricity, rise with inflation plus growth in the customer base or use. Those were increased in future years by both factors.

The fourth step is to set reserve goals and project those through the tenth year. Those goals will only be met if rates are set high enough, costs are reduced, or other measures are taken.

The fifth step is to arrive at the full suite of rates needed to fully fund each utility. This is a dynamic set of calculations, too complex to completely explain here. I will leave out some details. The "Cliff's Notes" version is this:

- The calculated bases for fixed costs and variable costs (Table 8) establish a ratio of the revenues that each rate component would generate.
- To increase overall revenues to a target, each revenue stream is increased by the same percentage. Thus, the revenue streams remain in the same ratio to each other. That maintains the cost-to-serve nature of the resulting rates.
- Once the overall revenue increase need is established, the base minimum charge is "back calculated" from the minimum charge revenue stream. The unit charge is "back calculated" from the unit charge revenue stream. The resulting rates are the starting rates, what you will (hopefully) adopt initially. In later years, you will increase these starter rates and fees across-the-board by an inflationary factor. With each round of across the board increases the rate structure will diverge from a true cost-to-serve structure. But, until you reach a total increase of around 20 percent, the rate structure will be close enough to cost-to-serve that a new comprehensive rate analysis will not yet be needed.

- Of course, system development fees, minimum charge surcharges, investment earnings, penalties and other income sources generate smaller revenues, which are added to rate revenues. And, I assumed future inflationary rate increases, so those revenues are added over the years, as well. Without explaining the details, you should have a sense that, while the math is complex, the rates are calculated to be proportionate to the costs each customer causes and the revenues will be adequate to cover all costs for the next ten years. That is, if our projection of costs and other things turn out to be accurate.

Cost-to-serve rates are considered by many, including me, to be the most mathematically fair and defensible rate structure. However, there may be good reasons to adopt rates that are at least somewhat different from true cost-to-serve rates. Thus, a cost-based rate analysis may be the starting point for calculating the rates that a utility would decide to adopt.

I usually recommend meter size-based minimum charges composed of two parts:

- One is the basic cost to make any level of service available to any customer. These are the so-called, "fixed costs." Billing, general administration and similar costs that are the same for all customers, regardless of "size," make up the base minimum charge. To make it easier to understand this concept, and related concepts, I use catch phrases. For this type of cost, the phrase is: *These costs are related to the fact that you have customers.* For every customer you have, you incur one increment, or "share," of this type of cost.
- The other part of the minimum charge is a surcharge intended to recover all or part of peak flow or unusual capacity costs. These are almost always based upon water meter size because the larger a meter is, the greater is its capacity to sustainably pass peak flows (as determined by American Water Works Association studies). This peak flow capacity relates well to the cost of building infrastructure "big enough" to handle peak flows. *Capacity costs are related to the fact that a particular customer has a certain capacity to demand flow or service, regardless of how much flow or service they actually use.* The surcharges are added to the base minimum charge to arrive at the surcharged minimum charge for each meter size.

With this structure, the smallest meter size customers end up paying the lowest minimum charge. As meter size goes up, a larger capacity surcharge is added to the base minimum charge resulting in ever higher total minimum charges for larger meter size customers. Remember: It's not just how much water such customers use that determines how much they cost the utility. It's how big and robust they cause the utility to be built, because it must be built robust enough to handle their maximum demand should they someday draw it.

Unit charges are related to the volume of service received. While unit charges can be structured in various ways, the revenues they generate should be adequate to pay those costs that are related to the flow that customers actually use.

There are three main unit charge structures that I recommend in different situations:

- Some systems need "conservation rates," or, their administrations simply like the notion of encouraging customers to use less of the utility's services. In this rate structure, the unit charge goes up as volume used goes up. Most of us respond to, or at least we think twice about it, when we are assessed a higher price to buy more of something. Conservation rates are most appropriate in areas with limited water supplies or in a utility that is bumping up against its capacity to produce water.
- Most systems use, and should use, level unit charges – a unit charge that is the same regardless of how much volume a customer uses. With level unit charges, everyone is assessed unit charges at the average unit cost. Such rates are the easiest to calculate, they are the easiest for a clerk to explain to a complaining customer on the phone and the revenues such rates will produce next year are the easiest to accurately predict. I like to tell most of my clients that if they are going to err either on the side of complex rates that precisely assess costs to each customer or simpler rates that round off some of the accuracy corners but are easier to administer, choose simple rates. Most water and almost all sewer service is billed using level unit charges.
- The last major unit charge structure is called, "declining" rates. These are the reverse of conservation rates. I often call them, "use encouragement" rates. It is popular these days for many to belittle those who do not conserve resources at every opportunity. Declining rates are often scorned for that reason. However, if a system has an ample water supply and ample infrastructure to produce and distribute it, doing so will not cause unintended bad (mostly environmental) consequences; and if the governing body wants to encourage high use (which often entails such users hiring more or better paid workers), declining rates make good sense. Declining rates are most appropriate in areas that have a high concentration of high water-using industries or in an area where folks want to attract such users.

To complicate the aforesaid just a bit, rate setting is, indeed, about recovering costs. Job one of utility rates is to pay the utility's costs. But usually proper rate setting is also about building adequate reserves; funding a capital improvements program (CIP); catching up on needed equipment repair and replacement (R&R); and covering similar needs. Thus, these soon-to-be-experienced costs or likely-to-be-experienced costs need to be factored into rates and fees, as well. Because time marches on and costs usually inflate over time, rate setting should account for future incremental increases to cover inflation. And, you cannot just assume that because the utility needs more revenue that your ratepayers will be glad to pay higher rates. Rate affordability, and the public's perception of affordability, must be addressed, too.

Even the simplest rates situation requires some complex and integrated calculations to account for these factors. For that reason, I build a spreadsheet for each analysis that depicts, in virtual reality, the utility's real-life financial and rates situation.

These models are dynamic. When the initial rate increase is set higher, future inflationary increases can be lower. When minimum charges are set lower, unit or other charges need to be set higher to make up the revenue shortfall. When system development fees are assessed, the utility's other charges can be lower. When future expenses need to be higher, or lower, or of a different nature, the model adjusts rates and fees accordingly. Such modeling enables me to do dynamic "what-if" scenario calculations. That enables me to arrive at the "best fit" rates for the utility.

Coincidentally, such a dynamic model makes it easy to calculate rate and other changes over the next two or three years, too. If, in the next two or three years, you find that something is going to be different from what we initially assumed, and you think it will affect rates and revenues, just give me a call. I can adjust the model and re-run the rates. Most adjustments like that take me a day or less to do, so the fee for that additional service usually runs less than $500. And, oftentimes, I find I can just talk clients through most situations for no fee. I am here to help you keep your rates in great shape, so bear this in mind over the next few years and just call when you don't know how to approach a situation.

Two final thoughts on this topic:

- Almost always, rate adjustments include revenue increases. Thus, time is money, often big money, to the utility. A rate increase delayed is a rate increase that must be even higher to reach the same reserve target. Get to know this report well but do not spend months mulling it over. Time will not make your rate setting task easier. Proceed deliberately but quickly and make the needed changes. If you cannot make all the needed changes at the same time, make those that you can as soon as you can.
- You will get complaints from some customers about their bills going up. In my experience, most of the time, when the math is laid out for all to see, most people are understanding. Cost-to-serve rate analysis does not arrive at unfair rates. It arrives at fair rates. The degree by which some customers' bills will change highlights the fact that rates are unfairly structured right now.

Please keep the above summary of cost-based rate calculations in mind as you read on.

Principles

I use several guiding principles when I help systems set their utility rates, fees and policies. As you read the report and models, keep in mind that my recommendations have been weighed against these principles:

1. Water, sewer and all other utilities are businesses, regardless of who owns them. Businesses must cash flow properly. Otherwise, they go out of business and your customers do not want that.

2. In addition to functioning in a business-like manner, a utility has a responsibility to its customers to strive to guarantee its long-term prosperity for their benefit. The customers expect the service to be there whenever they want to use it. Thus, a utility must err on the conservative side by building and maintaining strong reserves that will enable it to weather financial storms.
3. If a service costs the utility money, the utility should recover that cost from the most logical "person" if that makes good business and community administration sense. For example, generally "growth should pay for growth." Developers should fairly pay for their consumption of utility capacity by paying commensurate system development fees. Likewise, service users should pay for what they use. Each user or class of users should pay their fair share of service costs.
4. Sometimes contradicting point 3 above, if adjusting a rate, fee or policy will turn currently "good" customers into "bad" customers, or discourage development that the community desires, consider the necessity of the change carefully before making it. For example, while it may be warranted, raising the minimum charge markedly to your residential customers may make it very difficult for fixed, low-income customers to pay their utility bill. That may cause more of them to pay late or not pay at all. That may trigger the utility's attorney to write collection letters to those customers and eventually require shutoff of service. Thus, in the attempt to generate more net revenue by raising rates, net revenues may go down due to non-payment and payment collection costs. Likewise, stifling development with uncompetitive system development fees costs a utility in the form of additional paying customers. That forces existing customers to pay all the costs of the utility rather than sharing them with new customers.

General Issues

Concerning construction of the models, they were built to match the systems' actual financial statements and other data as much as possible. However, the intent of rate modeling is to see to it that the resulting rates are adequate to pay all system expenses for the next ten years, build and maintain responsible reserves and collect fees from customers on a fair basis. Because incomes and expenses in your financial statements, and other data, were not always grouped in such a way as to enable the required rate calculation methodology, tables in the models do not always match your statements.

For the techie reader, the analysis model we use – a Microsoft Excel spreadsheet application we call, "CBGreatRates" – is usually 3.8 mega-bites in size. Each rate analysis includes one of these sheets.

For a 1,000-connection utility, for example, we use another spreadsheet, 12.1 mega-bites in size, to sort and calculate customer volume use. We use one of these sheets for each rate class. There are usually five or so for the simplest rates. Each of these sheets is linked to the client's usage data file, usually a few mega-bites in size, for importing usage data. Thus, an analysis for a 1,000 connection utility totals 65 or so mega-bites in size.

For some of our larger client utility with more rate classes and more customers, total size of all the linked spreadsheets runs over 250 mega-bites. We run computers with lots of RAM and memory but some of the calculations for larger utility can take around 90 minutes to run. When usage data sheet runtimes get long we usually switch to a database format application to speed up the heavy number crunching.

For modeling purposes, it does not matter whether funds are held in the general system account, a debt service sinking fund, repair and replacement fund, etc. Therefore, the models account for funds in a more simplified way than you probably will. When it comes to segregating funds, staff knows best how to do that, so the models do little in this regard and leave the segregating up to staff.

Several line graph charts in the models graphically depict some things which would be difficult to pick out of the tables. In all the charts, the **blue line** represents what would happen under the **recommended** rates and the **red line** under the **current** rates. Financial trends for the red lines are (generally) bad. Those for the blue lines are (generally) good. Review the definitions section of the water model (definitions were left out of the other models to keep the report shorter) to learn the meaning of terms used in the charts.

"Current" Rates

In the models and this report, the modeled rates and outcomes (incomes, reserves, etc.) are often compared to those that the "current" rates would produce.

I usually assume that the current rates will be continued for the next ten years. Holding rates where they are is an easy assumption to make. But City staff told me they have not been keeping rates the same for years and they recognize that is not a reasonable expectation – costs rise. They asked that I assume the City would raise overall rates by the same percentages that I assumed you will need to raise the modeled rates.

Therefore, the "current" rates start where the current rates are now and in future years, they rise across the board on an inflationary basis.

I will say it simply, like this. Chart 8 depicts reserve levels under the existing rates (red line) and the modeled rates (blue line). When the blue line goes up, that is a good thing for the utility. When the red line goes down, that is a bad thing, at least, if you decide to keep your current rates. If either line is headed down toward zero, that is a very bad thing that needs to change by reducing costs, if you prudently can, or increasing rates.

In contrast to Chart 8, Charts 3 and 4 in the models depict user rates. When the Chart 3 and 4 blue lines go up, meaning rates are going up, customers don't like that. But the utility will be better funded as a result of those higher rates and that benefits ratepayers because it makes their utility more resilient and able to make improvements that will serve them better.

One thing you will notice in viewing the charts in the models is this. Sometimes, only one of the lines shows up. When that occurs, it means that all the lines are taking the same path (one line is covering up the others). For example, sometimes Chart 5 shows only one line – the working capital goal amount. When that happens both the current rates and the modeled rates' net revenues are adequate to satisfy the goal, so those two lines are hidden by the line for the goal. That is because, in the models, I programmed all funds that exceed what is needed to meet the working capital goal to "spill over" into the CIP and Debt Service fund reserve. When that happens, rest assured, the other two lines are underneath the goal line and that is a good thing.

Charts 6 and 7 can do the same thing, making it seem like the current rates are "just as good as" the modeled rates. But, Chart 8 will spell the difference between the two sets of rates. The modeled rates will generate more revenue and, thus, produce stronger total reserves. Since the working capital reserve gets truncated at a certain level, the differences in the total reserves show up in the CIP and Debt Service fund balances. These balances appear near the bottom of Table 6, page 66, and they are included in the Chart 8 amounts on page 91.

As you set and later reset rates, I suggest you follow the guidance I give in my book, "How to Get Great Rates." I gave a copy to Ms. Harris so check with her about reviewing it. You may want to consider using the "Replacement Scheduler©" spreadsheet for future equipment replacement scheduling. I gave a copy of this spreadsheet to Ms. Harris, as well.

Action Recommendations for Policy and General Issues

Use the following as a checklist of "to-do" tasks. Many if not all these things you are already doing but they bear repeating:

1. Periodically determine how long, on average, it takes to perform the various services you provide in the field, such as after-hours service, meter disconnects and reconnects, special meter readings, delivery and pick up of bins and dumpsters, etc. Be sure to include all the time you actually pay staff for performing these services. Then determine how much it costs the utility per hour, on average, to have staff perform these services. This includes benefits, taxes, use of utility vehicles, tools and minor equipment, etc. It should also include a fair amount to cover the time that office staff devotes to working on these services to track them, bill for them, etc. This should be the hourly rate or a set fee you will charge for these services. In addition, set a minimum that you will charge for showing up, whether the service takes an hour to perform or 10 minutes. In essence, set your fees in the same way plumbers and similar technicians do – a set fee for showing up, which buys the customer a set amount of time, and an hourly rate if the job takes longer than the show up charge will cover. While accounting for time and other investments in the various functions is important, do not make the process burdensome. For many functions you likely can just estimate your time occasionally and charge fees based upon those estimates.
2. Retain required funds in interest bearing debt service and debt reserve accounts when required by your lender(s).
3. Have me conduct a full rate analysis again when the actual financial performance and my projection of future performance significantly diverge. Conditions should dictate rate analysis frequency.
4. Fully adopt management strategies that are included in what is most commonly called, "advanced asset management." These strategies can yield better service and reduced costs for utility, especially those looking to build new facilities or replace existing facilities soon, which is a critical issue for your utility.
5. Track volume usage, incomes and expenses on a regular basis so the data and information you generate will support future rate analyses.
6. As a reminder, check with your attorney for language and legality of all charges and issues discussed.

The remaining sections of this report cover each of the utilities that were analyzed. Each section discusses important issues for that utility. At the end of each section is a set of recommendations and a table that shows the recommended rates and fees.

Starting in the first section, and continuing through the rest of the report, I call each model by the following names:

- The water model is called, "Riverton WY; Water Rates, Model 2019-1,"
- The sewer model is called, "Riverton WY; Sewer Rates, Model 2019-2," and
- The sanitation model is called, "Riverton WY; Sanitation Rates, Model 2019-3."

To abbreviate, I will call each the "Water Model," the "Sewer Model," and the "Sanitation Model," respectively. Within each section, I will sometimes just say, "the Model" when referring to the model that is the subject of that section.

Water Rates Discussion

Introduction

In this section on water rates, I discuss issues at some length. The sewer utility experiences many of these same issues. The sanitation utility also experiences some of the same issues. When that is the case, in the later sections, I only mention such issues and I refer readers back to this section for how to think about and deal with the issue. This was done to shorten and simplify the report.

In many respects, the current water rates are in a structure much like I am recommending. In a few respects, I am recommending a very different structure. And, quite importantly, capital improvements will be a major driver of rates. Thus, I start with that issue.

Capital Improvements and Debt

Capital improvement and repair and replacement planning are discussed at length in Chapter 13 of the "Rate Setting Issues Guide."

Ms. Harris gave me information about a large slate of capital improvements (CIP). I incorporated this CIP into the Water Model in Table 5, page 62. It has been the City's experience to receive some grant funding for improvement projects. However, to be conservative I assumed CIP funding will usually be 75 percent loan and 25 percent reserves if I was not informed otherwise. It is likely you will fund small projects with reserves and larger ones with some or maybe all loans. There is one large project you are working on now an another will follow in 2020. Otherwise, other projects are small.

Equipment Repair and Replacement

Ms. Harris sent to me the City's equipment repair and replacement (R&R) schedule. I incorporated that data into Table 6, page 66, of the Water Model. The cost of the City's schedule was quite low compared to what I usually experience, so I added $50,000 as an annual "Misc. R&R" item to Table 6. The Model then calculated the annual annuity in Table 7, page 67. The annual annuity, or annual deposit amount needed to fund the R&R schedule, was then entered into Table 4, page 60, as an annual operating cost, with rates calculated to cover that cost along with all others.

A technical note: I model R&R separate from capital improvements (CIP). You handle both together. It is acceptable that you handle these costs together. I bring this up only to make all readers aware that I account for these costs, and balances meant to pay for them differently, so you cannot compare my R&R and CIP data, calculations and balances side by side with yours. However, I have entered all your data into the models, so all costs are being accounted-for and rates were calculated to handle all costs.

The take-away is this: do all the R&R and CIP projects that are needed, which should be what you gave me to model, and continue handling these costs as you customarily do and the results I modeled should closely match your actual cost, revenue and balance results for several years to come.

System Development Fees and Capacity Surcharges

The fees are discussed at length in Chapter 12 of the "Rate Setting Issues Guide."

To pay for part of the coming improvements and debt costs, I assumed you would assess and collect system development fees and minimum charge surcharges, later just called, "SDFs" and "surcharges." You already do SDFs under the name, "plant investment fees," so my recommendations only adjust the structure of those fees.

However, you currently assess level minimum charges, no surcharges. I recommend you use the same meter size-based structure for minimum charges as you do for SDFs and assess capacity surcharges, too.

SDFs and minimum charge surcharges should be based upon water meter size, as further described in the following:

1. You should assess SDFs that recover as much of the peak capacity costs as possible, while keeping the connection fees reasonably competitive with those of other water systems in the area. (SDFs are the only important fees where I suggest competing with other systems' fees.) Therefore, I calculated these fees such that, the smallest meter new connection would pay a total system development fee of $623. That is the base fee you now charge for a new connection.
2. As meter size goes up, you should assess higher system development fees that are based upon the maximum sustainable flow rate of each meter as determined by flow studies done by the American Water Works Association. Those capacity "shares" are shown in Table 12, page 76.

System Development Fees

In this report and elsewhere, you will see the terms "tap fee," "tap-on fee" and "connection charges." There are other names for these and similar fees. You call them "plant investment fees." I call them, "system development fees."

Most small systems set such fees anecdotally, and almost always too low, as well. They almost never attempt to recover the full cost of the infrastructure capacity they dedicate to each customer when they authorize them to "tap on." Rarely do they even have much of an idea what that capacity costs.

Failing to assess development costs to development is a problem because with each dedication of capacity to customers, the capacity of the utility gets "used up." That hastens the day when new capacity must be built. If that capacity cost is not assessed to those who cause it, it will be assessed by default to all customers. That forces existing customers to subsidize development, and that is a rate structure fairness issue.

I recommend you handle system development costs with a combination of system development fees and surcharges to minimum charges based upon meter size. **And, in your ordinances and elsewhere: call new connection charges by the name, "system development fees."** This descriptively tells developers and new customers what they are paying for. It is not just an arbitrary fee. They are actually buying something of great value. Then, **assess as much of the full cost of system development as you can and still be competitive with comparable systems.**

Later in this report when you see "tap-on fee" and those other terms, think, "system development fee." And when you talk with customers and others about this fee, make sure they know this is not just "government assessing another kind of tax." This is a utility having customers fairly pay for what they are buying – capacity to serve them.

3. You serve a few customers outside of the City. Generally, I do not recommend out of city limits service – it commonly leads to problems. But that is your current practice, so it would be fine if you continue it. Because it costs more, in dollars and risk, to connect and serve out-of-City connections, I recommend you assess a premium to out-of-City new connections. In my experience, that premium is commonly "priced" at 25 to 100 percent more than in-City rates. It is my understanding that State law exerts some restrictions on out-of-City rates. That may also apply to SDFs. Please verify out-of-City rate and fee restrictions with your attorney. I have assumed out-of-City SDFs and minimum charges at 25 percent higher than in-City fees. The column entitled, "Out of City Multiplier," in Table 13, page 77, reflects that difference.
4. In calculation of SDFs, I included no out of pocket costs the City incurs for permitting, signing up new customers, making and inspecting connections, or the cost of equipment and supplies the City uses when making new connections. Essentially, these are separate fee for service propositions, so you should recover out of pocket costs, and at least come close to recovering costs of new connection-related services, in addition to collecting the calculated SDFs.
5. Even though revenue generation from these fees is a minor issue, the important reason for meter size based SDFs is to charge each new customer or developer proportionately for what they get from the utility. That is capacity to serve the property. That is related to the size of the meter. In addition, you should be ***seen*** by all ratepayers as attempting to recover costs from each based upon the costs that each causes the utility to incur.
6. The same thing applies to minimum charge surcharges. SDFs and surcharges do the same thing – they recover capacity costs. The difference between the two is, SDFs recover those costs "up front," while surcharges recover them over time. Or to say it very simply, development fees buy capacity with cash and surcharges buy capacity on "the easy payment plan."

As shown on the left-hand side of Table 11, page 75, between SDFs and system development surcharges, I modeled rates that will recover a bit over 50 percent of system development costs.

The Model calculated SDFs from the smallest customer meter to a ten-inch meter. I recommend you adopt this set of fees and, as a matter of policy, you should let the standard fees for all meter sizes below a chosen size be controlling. In other words, let City staff handle the "retail stuff" of small meter new connections. I suggest that all connections with meters of two inches or less be paid for off the system development fees table you adopt. Almost all larger meter connections should be handled that way, as well.

However, the Council has the authority and should, when warranted, exercise its prerogative to accept (grant a variance for) new connections for some other system development fee amount and/or for other considerations offered by a potential new customer. Most commonly, the issue will be economic development and job creation by a new customer needing a large meter size. There can be City-wide benefits to allowing such new customers to build or expand in the service area, at a discounted fee, that outweigh the reduction in SDF revenues, such as job creation. Just be careful about giving too much in the hope that it will bring greater benefits to all other customers, and the City. Often, the discounting-for-economic-development strategy does not pan out.

I recommend you assess the same system development fee to three-quarter inch, and smaller meters because these are the most common meter sizes for residential customers in most systems. Setting the same SDF for these meter sizes will simplify administration of the system development fee program. To make minimum charges consistent with the SDF structure, you should assess the same minimum charge for these meter sizes, as well. The rates I recommend at the end of this section are set up in that structure.

The City currently assesses a two-tier inclining or "conservation" block rate structure for water service. Above 30,000 gallons of use, the unit charge goes up by 28 percent. First, the 28 percent premium is interesting. Second, in the smallest meter class, 92 percent of these customers' use occurs below 30,000 gallons. Thus, the "conservation" rate has no practical effect on this meter size.

Once you get to the two-inch meter class, much more of the total use is over 30,000 gallons. Thus, these conservation rates probably do exert some effect on usage.

There are other data I might cite, but I will keep it simple. The practical effect of this rate structure is to shift fees from small meter, mostly residential customers, toward large meter, high-volume customers. I am sure the City did not arrive at such a structure by accident. It probably took a great deal of discussion before adopting such rates. Therefore, I have continued that structure in the rates I modeled and recommend.

Sewer rates have level unit charges and I recommend such a structure for sewer rates, so I recommend you continue that structure.

Recommended Rate Structure

I recommend cost-of-service based rates for minimum and unit charges with no usage allowance. Such rates are not concerned with types of customers. Rather, they are concerned with the meter size that serves each customer. The City currently assesses level minimum charges for all, one set of conservation rate blocks for residential customers and another for commercial customers. I recommend one set of rate blocks for all customers.

"Snowbird" Billing

This issue is discussed at length in Chapter 11 of the "Rate Setting Issues Guide." If you have enough snowbirds to warrant having a fee program for them, please follow the instructions in the guide. You may have few snowbirds and you may prefer to handle them in a simpler way. If that is the case, I still advise you to review Chapter 11, to make sure you can avoid risks in how you deal with snowbirds.

Should you decide to institute such fees, I calculated them as follows.

In Table 8, page 68, I establish the base fixed cost for all customers. That is done by the values assessed in the "Fixed Cost Percentage" column. The resulting dollar amounts are shown in the "Average Fixed Cost" column. I arrive at the "Average Fixed Cost per User per Month During Basis Year" in the bottom left corner of that table by summing these costs and dividing by the number of bills sent during the year. This is the "starting place" for calculating the base minimum charge for each customer. That is also the starting place for calculating snowbird fees.

In Table 9, page 70, I establish the degree by which snowbirds share in each fixed cost category. That is done in the "Marginal Fixed Cost Percentage" column. (Snowbirds use no volume while they are away so the "Marginal Variable Cost" calculations in this table do not apply to them.) As was done in Table 8, I arrive at the "Marginal Fixed Cost" at the bottom of Table 9, by summing these costs and dividing by the number of bills sent during the year. This is the basis for calculating the base snowbird fee.

As the modeled base minimum charge needs to rise or fall compared to its "starting place" to arrive at the base minimum charge, the base snowbird fee needs to be increased or decreased. Example: If the base fixed cost needs to be reduced by 25 percent to arrive at the starting base minimum charge, the marginal fixed also must be reduced by 25 percent to arrive at the base snowbird fee.

Finally, there are capacity costs to recover. Capacity costs arise simply because a customer is connected to the system. It does not matter whether the customer is there using the service or not, or how much volume they use. Capacity has been dedicated to that service connection simply because it is connected. That capacity allocation costs money. Therefore, snowbirds need to pay a full share of those costs. That is done in Table 15, page 79, by adding to the base snowbird fee the relevant amount from the "Final Capacity Cost per Meter per Billing Period" column for each meter size. The resulting snowbird fee for each meter size shows in the last column of Table 15.

These calculations are complex and hard to follow. The important point is this. Snowbirds cause certain fixed costs to occur. They also cause a full share of capacity costs to occur. In fairness, snowbirds should pay these costs.

"Extra Units" Billing

I placed Extra Units billing after Snowbird billing because the two have many of the same traits and the mathematics are almost the same.

Extra Units are apartment units, mobile home pads, strip mall units and similarly situated users of water or sewer service, downstream of what is functionally a master meter, the meter associated with the account that gets billed. Extra Units use water and sewer service and cause the utility to incur some additional fixed costs, but they do not directly pay fees to the utility. Thus, the utility cannot recover those costs directly from Extra Units. It must do so indirectly from the master meter account holder.

In your case, the City assesses a full minimum charge for each Extra Unit. I prefer you cease assessing Extra Unit charges entirely and instead assess a single meter size-based minimum charge to each billed customer. But if you are to bill using Extra Unit charges, the Extra Unit charge should be less than a full minimum charge. Extra Unit charges should be calculated on a marginal cost basis. I will explain.

When there is a user downstream of a master meter, costs accrue in addition to those related to service provided to the customer or account holder with the master meter. I calculated these costs in Table 9, page 70. As you will see in that table, Extra Unit costs and snowbird costs are figured the same way because most of the costs for each are the same.

Unit Charges versus Extra Units

The term "unit" is part of both names, but the term means different things in each.

A "unit charge" is the fee per increment of commodity sold. In this case, it is the fee per 1,000 gallons of use that exceeds the usage allowance.

An "Extra Unit" can be described this way.

A single-family home is a unit, for minimum charge billing purposes. A single-family home has no Extra Units. It only has one unit.

In an apartment complex or similar situation, one unit is assessed a full minimum charge. The remaining units, called the "Extra Units," should be assessed something less than a full minimum charge. Add all these charges together and that is the minimum charge to assess to the account holder.

One that is different is billing. Billing-related costs, and similar costs that are only associated with the master meter account are not caused by downstream Extra Units. Therefore, those costs should not be recovered from each Extra Unit.

But some fixed costs related to downstream users do occur. These can include general administration of the service program and capacity and fixed costs related to City-owned distribution lines and appurtenances that directly serve Extra Units. That is, City lines connect directly to the service lines of Extra Units. These costs occur in addition to the costs to just bring service to the master meter. (Even when the master metered customer owns and operates their own internal distribution system to serve Extra Units, costs associated with downstream Extra Units still accrue to the utility, but at a lower rate than discussed so far. That will be discussed later.)

Consider this example. A restaurant that serves customers in a dining room incurs costs to serve them there. If the restaurant adds a home delivery service, it will incur some of the same costs but also some different costs to provide that service.

Extra Unit costs are not the same as those incurred to serve the master metered customer. Some costs occur at a marginal, or partial rate, something less than 100 percent compared to the master metered customer costs. Extra Unit charges recover these marginal costs. These fees are discussed at length in Chapter 12 of the "Rate Setting Issues Guide."

As you can see in Tables A and B, starting on page 27, the "Monthly Extra Unit Charge" stays the same regardless of master meter size. It is equal to the Monthly Snowbird Fee at the smallest meter size for two reasons:

1. The costs to serve Extra Units, where the City's distribution lines go directly to each Extra Unit, are similar to those incurred to serve typical snowbirds, but
2. The distribution line costs to Extra Units do not track with the size of the master meter because each Extra Unit likely would not need a meter as large as that needed to serve all Extra Units collectively. Thus, in most cases, it would be appropriate to serve each Extra Unit with the smallest size meter the City allows, if you were to serve and bill them directly.

If you want to bill using Extra Unit Charges, calculate each such customer's minimum charge following this example:

The Riverview Mobile Home Park, located inside the City, has a four-inch singlet (master) meter serving a total of eight pads. The minimum charge would be as follows:

- Multiply the Monthly Extra Unit Charge of $9.97 from Table A, page 27, by the seven Extra Units, and
- Add the five-eighths inch meter Monthly Minimum Charge of $20.69, representing the eighth unit,
- For a total minimum charge of $90.48.

By the way, in this example, at 11 Extra Units, the Extra Units billing method generates more revenue (assesses a higher minimum charge) than the meter size-based minimum charge method.

Question: In the calculation above, why did I use the smallest meter size Monthly Minimum Charge for the master meter charge instead of the four-inch meter size charge of $123.29?

Answer: Extra Unit charges recover extra costs of all kinds that those Extra Units create. That includes the extra capacity costs that meter size-based fees are also calculated to recover. Thus, you should not recover extra capacity costs from the master meter size-based charge plus recover extra capacity costs from the downstream users, too. That would be double charging for the same costs.

As you consider what you just read, you will realize that, in some situations, when you assess meter size-based minimums and disregard any downstream users, that structure would generate more revenue for the utility. Sometimes, it will go the other way. Thus, the City needs to decide this:

1. Will the City retain the right to decide which rate structure to assess in Extra Unit situations? If so, you should be consistent. Or,
2. Will the City leave it to the customer to decide under what structure it desires to be charged?

Option 1 invites more disagreement by customers if the City decides to charge at the higher fee rate. Option 2 makes minimum charge calculations a bit more complex because the customer is also involved. Both options require the City to determine how many Extra Units each such customer has. But there is not a right or wrong answer, it is a choice.

Finally, there may be some Extra Unit situations where the City's lines serve the individual Extra Units. But there are other situations; probably the most common situation, where the property has its own distribution system to serve the Extra Units. Table 9 of the Model, and the fee calculations above, assume the City serves all Extra Units directly with City lines.

For those situations where the City does not serve Extra Units directly, the City's costs will be lower because the costs of distribution lines and appurtenances are borne by the customer, not the City. Line and related costs are substantial, so the Extra Unit charge should be cut substantially to arrive at the Extra Unit charge in those situations. I do not have that level of knowledge of your distribution system costs, so I am not situated to calculate those fees. In fact, probably no one has such knowledge – such infrastructure data is not usually delineated and recorded. Thus, you need to arrive at that fee level as a matter of reasoned policy.

It is most likely that, should you assess Extra Unit charges as described above, those charges will bring in slightly more total user charge revenue than the rates that were modeled.

I will sum up this subsection this way. Meter size-based minimum charges, with no Extra Unit charges, are the most mathematics-based method of calculating cost-to-serve minimum charges. Extra Unit charges get at the same costs, but do it using more assumptions about what costs should go into such fees.

Out-of-City Sales

You have a small number of out-of-City customers. You price sales to those customers 25 percent higher than in-City customers. I continued that pricing strategy. There are good reasons to assess higher rates for out-of-City customers compared to in-City customers.

There is at least an implied obligation on the part of the City to supply water to in-City properties. When water is made available to such properties, those property owners are also obligated to pay for at least the capacity costs the City incurred on their behalf to build the water system, even if they do not use the system. And, in-City properties are subject to Ad Valorem taxes that could be authorized to pay for water system construction and improvements. These are significant obligations that in-City customers cannot escape.

The relationship between out-of-City property owners and the City is different. Out of City properties are not obligated to hook up to the City's water system. And, the City is not obligated to serve out-of-City customers. Aside from specific State laws that govern such sales, the relationship between the City and out-of-City customers is, essentially, the "willing seller, willing buyer" relationship. The parties come together and agree upon service to be rendered and a price for that service.

The City's primary obligation is to serve its in-City customers well. It would not serve them well if the City sold water to out-of-City customers below cost. That would shift costs to the in-City customers. It would serve in-City customers well if water sales outside of the City made a "profit." Around the U.S., I find this profit margin to range from 10 percent on the low side to 200 percent on the high side for out-of-City sales versus in-City retail sales.

In the Water Model, I assumed the out-of-City price premium would be 25 percent.

Wholesale Sales

This issue is discussed at length in Chapter 10 of the "Rate Setting Issues Guide."

Wholesale sales and out-of-City sales often go together. The City may sell or decide to sell water on a wholesale basis. If so, I recommend you assess unit charge rates on a marginal cost, plus profit margin basis. I will explain that.

In Table 8, page 68, I classified the overall cost structure of the water system. This calculation determined the average base minimum charge and the average unit charge, with no usage allowance.

In Table 9, page 70, I reclassified those same costs on a marginal cost basis. (See the Definitions section of the Water Model.)

Stated simply, marginal cost just means, as compared to the average of all customers, the special customers cause the utility to incur each category of variable costs at the same (100 percent) rate, or at some lower rate. (This only applies to variable costs – unit charges. The minimum charges are calculated on a base cost, plus surcharge basis, as already described.) I then totaled up the marginal variable costs in the right-most column of Table 9 and calculated the overall ratio (percentage) of marginal costs compared to the average variable cost. That percentage shows in the bottom right corner of Table 9.

Therefore, for such a customer, you should multiply that percentage by the unit charge rate in Table A, page 27, and then add a profit margin percentage to that to arrive at the wholesale unit charge. I usually recommend a marginal unit charge profit margin between 25 and 50 percent. If you choose 25 percent as the margin for other sales already described, you may want to set the margin for wholesale sales profits at 25 percent to be consistent.

If you had a wholesale customer that was also located outside of the City, you should give them the marginal (lower) unit charge rate, plus the profit margin plus the out-of-City premium.

A wholesale customer's minimum charge should come from the rate table that will soon follow.

Target Reserve Levels

Your current total reserves exceed the target reserves I recommend. However, I suspect you built those reserves in anticipation of the need to fund many capital improvements and some would be large.

Most systems serving fewer than 5,000 connections, including yours, should have reserves at least as high as the sum of the following:

1. Unobligated cash and cash equivalent reserves equal to at least 35 percent of the annual operating costs, not including debt service and general administration costs. *I recommend 50 percent in your case;*
2. A 20-year repair and replacement (R&R) schedule reserve, in the 20th year equal to at least one average year's cost of R&R. *In your case, I factored in a discretionary increase to the standard deposit that will enable this fund to have an inflation-adjusted balance after 20 years that would be twice the average annual R&R cost, and*
3. Capital improvement reserves at the end of the tenth year, after debt is paid, equal to that year's debt payments plus cash-paid capital improvement expenses.

The test year balance was higher than this amount. Thus, by the tenth year, the balance will fall by about $800,000 to the target reserves level.

The lines on the bottom of Table 17, page 81, and several of the charts at the end of the Water Model show your reserve balances expected for the next ten years. The last line of Table 17, the "Sum of All Reserves," is the critical one.

A caution: Projecting budgets and ending balances for next year is difficult. Doing the same five years out, I can usually get close. Ten-years out, there are so many assumptions we must make now that will not pan out years from now that you should not bank on those numbers. But they serve as good planning targets. In most cases, a utility will see big cost, income, growth, debt and other changes looming on the horizon a few years out. When that happens, it is time to do a new rate analysis to get rates back on track to meet those challenges. Thus, target balances give you something to aim for, but the target will move over time. With each new rate analysis, we bring you back on course.

A Technical Note About How Reserves Are Shown in the Model

In Table 17, at the bottom of the table, find the reserve balances. These deserve a bit of discussion.

From your balance sheet, I extracted the starting balances for three categories of reserves: operating, R&R, and CIP and debt service. (I disregarded meter deposit and similar funds because those are restricted and self-funding.) As funds flow through the rate analysis Model, they first fund up the R&R reserve and the operating reserve, in that order. Funds exceeding those requirements flow into the CIP and debt service reserve. Therefore, in all years after the test year, balances in the Water Model will be different than how you normally separate them. That is OK. Separate reserves as you see fit.

The take-away is this. The "Sum of All Reserves" at the bottom of Table 17, is the key balance to track. That balance will remain positive and strong.

Rate Affordability

This issue is discussed at length in Chapter 3 of the "Rate Setting Issues Guide." Related to that, Chapter 4 discusses bill assistance programs. I am not recommending you start such a program. But I wanted you to be aware of this guidance, too.

Rate affordability, often measured by the Affordability Index, is an important indicator to which you should pay attention.

Affordability Index: The monthly charge for (typically) 5,000 gallons of residential service divided by the median monthly household income for the area served by the system. An index of 1.0, meaning a household pays one percent of its income to pay its bill for 5,000 gallons of service, is generally considered affordable. Affordability index is a primary factor in determining grant and loan eligibility and grant amount.

In Table 17, page 81, near the top, I show the estimated Affordability Index for the current rates in the first column, at 0.69 percent, and the modeled rates in the following column, at 0.72 percent. Note that the same thing is shown graphically in Chart 4 of the Water Model. On an Affordability Index basis, your current rates are about 30 percent cheaper than the national average. After the initial rate adjustments, they will become slightly more affordable and continue that trend for the next ten years.

The Affordability Index is useful, but it does not depict how new rates will affect customers using different volumes. Table 18, page 82, shows how bills at different volumes of use for each meter size will be affected by the recommended rates. The report, in its entirety, is complex for a ratepayer who primarily wants to know what will happen to their bill. This table is the one thing such a ratepayer wants to see. Thus, I recommend you copy and bring to the Council meeting, Table 18, so ratepayers can see the effects on them.

Recommendations for Adjusting Water Rates

The Water Model contains all my rates-related recommendations and shows what they are built upon. However, the Model is complex, components of the rates and fees are calculated and shown in different tables and the Model does not spell out policy issues. Therefore, I have summarized most of my recommendations as follows:

1. You should assess the system development fees, monthly minimum charges, unit charges and snowbird charges shown in Tables A and B, that follow this list. These rates will move you quite close to a cost-to-serve structure.
    a) If you prefer using Extra Unit charges for those customers with Extra Units, in those situations, do not adopt the minimum charges in Tables A and B. Instead, calculate minimum charges that include Extra Unit charges as described in the "'Extra Units' Billing" subsection that started on page 19 of this report.
2. As to system development fees:
    a) I recommend that almost all new connections, especially all those made with water meters two inches in diameter or less, be paid for at the rates included in the new system development fee rate table you will adopt. Ideally, larger meter system development fees would be paid for in that way, too. However, the Council retains the authority to waive the standard system development fee or adjust that charge for certain larger meter size customers that, due to other offsetting values they would bring to the service area (primarily economic development) that would substantially benefit the City and its customers.
    b) Continue to bill for equipment and services that the City provides to facilitate making new connections. Call these whatever you want but be clear that these charges are to pay for materials, supplies and services you sell to owners of developing properties. These are separate from system development fees that pay for capacity dedicated to new customers.
3. The calculations assumed you would have made these adjustments early enough to enable you to collect at these rates for the September 1, 2019, billing. You would need to satisfy all Statutory requirements for making rate adjustments in advance of the adjustment date. That is coming up soon, so if you want to make that date, you will need to move promptly.
4. I recommend a late payment fee of $10.00 or ten percent of the outstanding total bill amount owed to the City for all services provided, whichever is greater, each month. Note: I do not consider this to be a late payment "penalty." Rather, I consider it to be a fee assessed for providing lending services, extra billing services and taking on the risk of such customers not paying or paying late or in installments. I believe you should refer to it in similar terms, too.

5. If costs, incomes and balances accrue close to those I assumed in the Model, about one year from now and each year for about five years, raise all rates and significant fees by 3.0 percent.
6. If balances do not accrue as shown at the bottom of Table 17, page 81, but they are not egregiously too low, follow the instructions in Chapter 9 of the book, "How to Get Great Rates" for how to make inflationary increases correctly.

Table A: Recommended In-City Water Fees and Charges

Table A: Riverton, WY Water System Development Fees; Minimum and Snow Bird Charges, Usage Allowance (None), Unit Charges for In-City Customers

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Unit Charge per 1,000 Gallons for 0 to 5,999 Gallons	Unit Charge per 1,000 Gallons for 6,000 or More Gallons	Monthly Snowbird Fee	Monthly Extra Unit Charge
0.625	Displacement	$623	$20.69	$2.61	$3.00	$9.97	$9.97
0.750	Displacement	$623	$20.69	$2.61	$3.00	$9.97	$9.97
1.000	Displacement	$1,332	$27.10	$2.61	$3.00	$16.38	$9.97
1.500	Displacement	$2,513	$37.79	$2.61	$3.00	$27.07	$9.97
2.000	Displacement	$3,931	$50.61	$2.61	$3.00	$39.89	$9.97
2.500	Displacement	$6,058	$69.85	$2.61	$3.00	$59.13	$9.97
3.000	Singlet	$7,712	$84.81	$2.61	$3.00	$74.09	$9.97
3.000	Compound, Class I	$7,712	$84.81	$2.61	$3.00	$74.09	$9.97
3.000	Turbine, Class I	$8,421	$91.23	$2.61	$3.00	$80.51	$9.97
4.000	Singlet	$11,966	$123.29	$2.61	$3.00	$112.57	$9.97
4.000	Compound, Class I	$11,966	$123.29	$2.61	$3.00	$112.57	$9.97
4.000	Turbine, Class I	$14,802	$148.94	$2.61	$3.00	$138.22	$9.97
6.000	Singlet	$23,782	$230.16	$2.61	$3.00	$219.44	$9.97
6.000	Compound, Class I	$23,782	$230.16	$2.61	$3.00	$219.44	$9.97
6.000	Turbine, Class I	$30,871	$294.29	$2.61	$3.00	$283.57	$9.97
8.000	Compound, Class I	$37,961	$358.41	$2.61	$3.00	$347.69	$9.97
8.000	Turbine, Class I	$66,319	$614.91	$2.61	$3.00	$604.19	$9.97
10.000	Turbine, Class II	$99,404	$914.17	$2.61	$3.00	$903.45	$9.97

Table B: Recommended Out-of-City Water Fees and Charges

Table B: Riverton, WY Water System Development Fees; Minimum and Snow Bird Charges, Usage Allowance (None), Unit Charges for Out-of-City Customers

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Unit Charge per 1,000 Gallons for 0 to 5,999 Gallons	Unit Charge per 1,000 Gallons for 6,000 or More Gallons	Monthly Snowbird Fee	Monthly Extra Unit Charge
0.625	Displacement	$778	$25.86	$3.26	$3.75	$12.46	$12.46
0.750	Displacement	$778	$25.86	$3.26	$3.75	$12.46	$12.46
1.000	Displacement	$1,664	$33.88	$3.26	$3.75	$20.48	$12.46
1.500	Displacement	$3,141	$47.24	$3.26	$3.75	$33.84	$12.46
2.000	Displacement	$4,914	$63.27	$3.26	$3.75	$49.87	$12.46
2.500	Displacement	$7,572	$87.31	$3.26	$3.75	$73.91	$12.46
3.000	Singlet	$9,640	$106.02	$3.26	$3.75	$92.62	$12.46
3.000	Compound, Class I	$9,640	$106.02	$3.26	$3.75	$92.62	$12.46
3.000	Turbine, Class I	$10,526	$114.03	$3.26	$3.75	$100.63	$12.46
4.000	Singlet	$14,957	$154.11	$3.26	$3.75	$140.71	$12.46
4.000	Compound, Class I	$14,957	$154.11	$3.26	$3.75	$140.71	$12.46
4.000	Turbine, Class I	$18,502	$186.17	$3.26	$3.75	$172.77	$12.46
6.000	Singlet	$29,727	$287.71	$3.26	$3.75	$274.31	$12.46
6.000	Compound, Class I	$29,727	$287.71	$3.26	$3.75	$274.31	$12.46
6.000	Turbine, Class I	$38,589	$367.86	$3.26	$3.75	$354.46	$12.46
8.000	Compound, Class I	$47,451	$448.02	$3.26	$3.75	$434.62	$12.46
8.000	Turbine, Class I	$82,899	$768.64	$3.26	$3.75	$755.24	$12.46
10.000	Turbine, Class II	$124,255	$1,142.71	$3.26	$3.75	$1,129.31	$12.46

Closing

I recommend you adopt the rates calculated in the Water Model and shown in the tables immediately above. Bills for most customers, especially residential customers, will go up by about the same percentage. That speaks well of your current rate structure – it does not need to change too much.

The revenues generated by the new rates are projected to fully fund all expenses included in the Model.

***

Sewer Rates Discussion

Introduction

The sewer system's minimum charge and usage allowance are structured very different as compared to the water rates. There are also rate classes set up for several individual customers. I have sought to arrive at cost-to-serve and consistent rates as much as possible. That will simplify the rate structure, too.

In this report section, I will only mention those issues that are essentially the same for sewer and for water. And, I add coverage of winter-averaged billing and consumptive use of water.

Capital Improvements and Debt

Sewer system capital improvements will be a major driver of sewer rates.

I ran scenarios where CIP would be funded with various mixes of loan, reserves and grant funding. I know that the State's financial situation has been bad for a few years and grants have been harder to get. Thus, I assumed a more conservative scenario; 75 percent loan funding and 25 percent from reserves. These things are shown in Table 5, page 104.

Equipment Repair and Replacement

I incorporated sewer R&R data into Table 6, page 108, of the Sewer Model. Like the water schedule, the sewer R&R schedule was less costly than I normally see, so I added an annual $20,000 "Misc R&R" item to the schedule. The Model calculated the annual annuity in Table 7, page 112. The annual annuity, or annual deposit amount needed to fund the R&R schedule, was then entered into Table 4, page 102, as an annual operating cost, with rates calculated to cover that cost along with all others.

In the water subsection for R&R, I included a technical note. That applies here, too.

System Development Fees and Capacity Surcharges

These fees mirror those for water. Refer to the discussion in the water section and apply those considerations and treatments to sewer SDFs and surcharges, too.

The current water SDFs are based on water meter size, which is a good practice. Sewer SDFs, however, are on a flat fee basis; $337 for a residential property and $413 for all others. Under the meter size-based fee structure I recommend, I assumed you would keep the current residential fee and apply it to three-quarter inch or smaller water meter connections. But, SDFs for larger meters would graduate up, as shown in Table 13, page 123.

I included no out of pocket costs the City incurs in the course of making new connections. Be sure to add those to the calculated SDFs.

Sewer minimum charge surcharges were calculated like the water surcharges. That is shown in Table 15, page 125. Between SDFs and system development surcharges, I modeled rates that will recover a bit over 50 percent of system development costs.

Finally, and as I recommended for water rates, I recommend higher rates for out-of-City sewer connections and service.

Recommended Rate Structure

I generally recommend the same rate structure for sewer as for water. The sewer rates also include winter-averaged use for residential customers, which you already do, plus an allowance for metered consumed water for other customers. Those issues are discussed briefly in separate subsections that follow.

Winter-averaged Billing for Residential Sewer Customers

You bill for residential sewer use based on water volume used during winter months. This is usually the fairest and simplest rate structure for residential sewer rates, it is quite common, and I almost always recommend it. This structure is called, "winter-averaged billing." You should continue to use winter-averaged billing for nearly all your residential customers.

You bill for sewer service to other types of customers based on water use each month. These are primarily commercial customers. Some will have substantial water use but little of that flow returns to the sewer system. For such customers, you can use two other averaging systems that are somewhat related. All these billing systems are discussed at length in Chapter 4 of the "Rate Setting Issues Guide."

I understand that the City serves a number of multi-family, apartment or condo-style customers. Such customers are normally handled the same way you handle commercial customers. However, if you desire, you could also offer billing as described in the guide.

"Snowbird" Billing

"Snowbird" billing is done the same way for sewer as it is for water. Table 9, page 115, establishes the degree by which snowbirds share in each fixed cost category. The resulting snowbird fees are listed in Table C at the end of this section.

"Extra Units" Billing

Extra Unit charges for sewer rates apply to sewer rates just as they apply to water rates, so refer to that subsection of the report. Extra Unit charges were calculated in Table 9, page 115, and appear in Tables C and D, starting on page 34.

Out-of-City Sales

You may have some out-of-City sewer customers. For reasons described in the water section, you should assess out-of-City customers a premium. In the Sewer Model, I assumed the out-of-City price premium to be 25 percent.

Wholesale Sales

Like water, wholesale sewer sales should be priced to recover marginal costs, plus a profit. Table 9, page 115, establishes the marginal cost basis for these rates. From that I arrived at the marginal variable cost for such sales and calculated that cost as a percentage of average costs. Therefore, for such a customer, you should multiply that percentage by the unit charge rate in Table C, page 34, and then add a profit margin percentage to that to arrive at the wholesale unit charge. I usually recommend a marginal unit charge profit margin between 25 and 50 percent. If you choose 25 percent as the margin for the sale of other services already described, you may want to set the margin for wholesale sewer sales profits at 25 percent to be consistent. I assumed as much.

The minimum charge is a different matter. You should assess minimum charges to wholesale customers just as you do regular customers from Table C that appears later.

Septic Waste Rates

The City accepts for treatment septage or other high-strength wastewater from haulers. There are two classes of such waste called, "Wastewater Dump" and "WWTP Dump-Sump." Septage is much more expensive to treat than regular waste streams. It is also risky because the City has little, if any control over what someone decides to put into a septic tank or "porta-potty." The City does, and should, charge premium rates for septage.

The only information I have about your costs to receive and treat such wastes is the relationship between regular customers' rates and the current rates for septage. The income from septage is very minor. Therefore, I simply increased the test year rates for this waste by the same percentage that all in-City residential bills will go up.

Other Special Rate Classes

These rate classes are the ones that do not have both a minimum and unit charge in the current rates. For the same reasons discussed in the Septic Waste Rates subsection immediately above, I increased the test year rates for this waste by the same percentage that all in-City residential customers' bills will go up.

I suggest you examine the customers in these special rate classes. If there is not a good reason to keep each of these customers in these special classes and they can logically be fit into classes that are assessed meter size-based minimum charges and unit charges, you should do that.

Target Reserve Levels

The sewer system's reserves are right at what I would normally recommend. Therefore, I targeted future sewer reserves that will stay at this level, plus cover the cost of inflation over the next ten years. Reserves are shown on the lines on the bottom of Table 17, page 127, and several of the charts at the end of the Sewer Model.

Rate Affordability

In Table 17, near the top, I show the estimated Affordability Index for the current rates in the first column, at 0.50 percent, and the modeled rates in the following column, at 0.75 percent. The same thing is shown graphically in Chart 4 of the Sewer Model. On an Affordability Index basis, your current rates are about half of the national average – they are quite affordable. After the initial rate adjustments, they will still be well below the national average and fall gradually through the next ten years.

To supplement the Affordability Index, Table 18, page 128, shows how bills at different volumes of use for each meter size will be affected by the recommended rates. Because I eliminated the 4,000 gallon per month usage allowance you give to most customers (and 8,000 gallons for a few others), the big bill increase occurs in the range of 1,000 to 4,000 gallons of use. The current rate structure is far from being a cost-to-serve structure. This one change brings the rates very close to cost-to-serve.

Please note that, while bills will go down for high volumes of use, there are few customers that use high volumes of sewer service. Examples: In Table 18, page 128, in the "Residential" class of customers section, you can see that there are only nine customers that use 45,000 gallons or more per month. And, in Table 19, page 131, add up the percent of users ("% Users") of 15,000 gallons or more, only 1.4 percent of all customers use at least that much sewer service.

Recommendations for Adjusting Sewer Rates

The Model contains all my rates-related recommendations and shows what they are built upon. However, the Sewer Model is complex, components of the rates and fees are calculated and shown in different tables and the Sewer Model does not spell out policy issues. Therefore, I have summarized most of my recommendations as follows:

1. You should assess the system development fees, monthly minimum charges, unit charges and snowbird charges shown in Tables C and D, that follow this list. These rates will not move you all the way to a cost-to-serve structure. But except for the numerous special rate classes, they will be close. *Note: In the case of residential customers, you should continue to bill for sewer use based upon the winter averaged volume used by each customer.*

    a) If you prefer using Extra Unit charges for those customers with Extra Units, in those situations, do not adopt the minimum charges in Tables C and D. Instead, calculate minimum charges that include Extra Unit charges as described in the "'Extra Units' Billing" subsection that started on page 19 of this report.

2. As to system development fees:

    a) I recommend that almost all new connections, especially all those made with water meters two inches in diameter or less, be paid for at the rates included in the new system development fee rate table you will adopt. Ideally, larger meter system development fees would be paid for in that way, too. However, the Council retains the authority to waive the standard system development fee or adjust that charge for certain larger meter size customers that, due to other offsetting values they would bring to the service area (primarily economic development) that would substantially benefit the City and its customers.

    b) Continue to bill for equipment and services that the City provides to facilitate making new connections. Call these whatever you want but be clear that these charges are to pay for materials, supplies and services you sell to owners of developing properties. These are separate from system development fees that pay for capacity dedicated to new customers.

3. The calculations assumed you would have made these adjustments early enough to enable you to collect at these rates for the September 1, 2019, billing. You would need to satisfy all Statutory requirements for making rate adjustments in advance of the adjustment date. That is coming up soon, so if you want to make that date, you will need to move promptly.

4. I recommend a late payment fee of $10.00 or ten percent of the outstanding total bill amount owed to the City for all services provided, whichever is greater, each month. Note: I do not consider this to be a late payment "penalty." Rather, I consider it to be a fee assessed for providing lending services, extra billing services and taking on the risk of such customers not paying or paying late or in installments. I believe you should refer to it in similar terms, too.

5. If costs, incomes and balances accrue close to those I assumed in the Model, about one year from now and each year for about five years, raise all rates and significant fees by 3.0 percent.

6. If balances do not accrue as shown at the bottom of Table 17, page 127, but they are not egregiously too low, follow the instructions in Chapter 9 of the book, "How to Get Great Rates" for how to make inflationary increases correctly.

Table C: Recommended In-City Sewer Fees and Charges

Table C: Riverton, WY Sewer System Development Fees; Minimum and Snow Bird Charges; Usage Allowance (None), Unit Charge for In-City Customers

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Unit Charge per 1,000 Gallons	Monthly Snowbird Fee	Monthly Extra Unit Charge
0.625	Displacement	$337	$17.73	$3.50	$9.75	$9.75
0.750	Displacement	$337	$17.73	$3.50	$9.75	$9.75
1.000	Displacement	$617	$25.81	$3.50	$17.84	$9.75
1.500	Displacement	$1,085	$39.29	$3.50	$31.31	$9.75
2.000	Displacement	$1,645	$55.46	$3.50	$47.48	$9.75
2.500	Displacement	$2,486	$79.71	$3.50	$71.74	$9.75
3.000	Singlet	$3,140	$98.58	$3.50	$90.60	$9.75
3.000	Compound, Class I	$3,140	$98.58	$3.50	$90.60	$9.75
3.000	Turbine, Class I	$3,421	$106.67	$3.50	$98.69	$9.75
4.000	Singlet	$4,823	$147.09	$3.50	$139.12	$9.75
4.000	Compound, Class I	$4,823	$147.09	$3.50	$139.12	$9.75
4.000	Turbine, Class I	$5,944	$179.43	$3.50	$171.46	$9.75
6.000	Singlet	$9,495	$281.84	$3.50	$273.87	$9.75
6.000	Compound, Class I	$9,495	$281.84	$3.50	$273.87	$9.75
6.000	Turbine, Class I	$12,299	$362.70	$3.50	$354.72	$9.75
8.000	Compound, Class I	$15,102	$443.55	$3.50	$435.57	$9.75
8.000	Turbine, Class I	$26,317	$766.96	$3.50	$758.98	$9.75
10.000	Turbine, Class II	$39,400	$1,144.26	$3.50	$1,136.29	$9.75

Table D: Recommended Out-of-City Sewer Fees and Charges and Special Fees

Table D: Riverton, WY Sewer System Development Fees; Minimum and Snow Bird Charges, Usage Allowance (None), Unit Charge for Out-of-City Customers

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Unit Charge per 1,000 Gallons	Monthly Snowbird Fee	Monthly Extra Unit Charge
0.625	Displacement	$421	$22.16	$4.38	$12.19	$12.19
0.750	Displacement	$421	$22.16	$4.38	$12.19	$12.19
1.000	Displacement	$772	$32.27	$4.38	$22.30	$12.19
1.500	Displacement	$1,356	$49.11	$4.38	$39.14	$12.19
2.000	Displacement	$2,057	$69.32	$4.38	$59.35	$12.19
2.500	Displacement	$3,108	$99.64	$4.38	$89.67	$12.19
3.000	Singlet	$3,926	$123.22	$4.38	$113.26	$12.19
3.000	Compound, Class I	$3,926	$123.22	$4.38	$113.26	$12.19
3.000	Turbine, Class I	$4,276	$133.33	$4.38	$123.36	$12.19
4.000	Singlet	$6,028	$183.86	$4.38	$173.89	$12.19
4.000	Compound, Class I	$6,028	$183.86	$4.38	$173.89	$12.19
4.000	Turbine, Class I	$7,430	$224.29	$4.38	$214.32	$12.19
6.000	Singlet	$11,869	$352.31	$4.38	$342.34	$12.19
6.000	Compound, Class I	$11,869	$352.31	$4.38	$342.34	$12.19
6.000	Turbine, Class I	$15,373	$453.37	$4.38	$443.40	$12.19
8.000	Compound, Class I	$18,878	$554.43	$4.38	$544.47	$12.19
8.000	Turbine, Class I	$32,896	$958.69	$4.38	$948.73	$12.19
10.000	Turbine, Class II	$49,250	$1,430.33	$4.38	$1,420.36	$12.19

Special Sewer Customers. Note: If any of the following customers have metered water use, bill them based on their meter size and use, as laid out in the appropriate table above.

Commercial Flat	$48.06	
Wastewater Dump		$84.30
Fike Sewer	$44.54	
Flat Rate	$42.08	
Paintbrush Hotel	$48.06	
Raintree Sewer	$43.62	
WWTP Dump-Sump		$300.95

Closing

I recommend you adopt the rates calculated in the Sewer Model and shown in the two tables immediately above. Bills for some customers will change markedly, on a percentage basis. This marked change in bills occurs because the current rate structure is not in a cost-to-serve structure, while the recommended rate structure is close to such a structure.

As with the water rates, the revenues generated by the new sewer rates are projected to fully fund all expenses included in the Model.

***

Sanitation Rates Discussion

Introduction

Generally, things that were said about the water and sewer systems and rates apply to the sanitation service, too. But, because the nature of the sanitation service is markedly different than water services, the rate structure needs to be different. That necessitated changes to the structure of the analysis model, which will be discussed later.

Also note in Table E, page 45, where I list my rates recommendations, I did not continue the discounted pricing for those who have verified recycling. I discuss that issue in its own subsection later.

Data Issues Affect Rate Setting

As I did for water and sewer rates modeling, I used City-supplied sanitation usage data. That data includes the number of customers using various container sizes, their pick-up frequency and the like. The following explanation is inexact, but illustrative.

In my model, I recreated your billing program by multiplying the number of customers of the various kinds by the rates they are assessed. I summed up all those revenues and compared this calculated basket of user charge fees with what you booked as user charge fees. Normally, the revenues I calculate are quite close to what was booked but yours differed by 12 percent. Therefore, I suggest you think of setting your sanitation fees in a two-step process:

1. Adopt an initial set of rates, just like for water and sewer. Hopefully those will be the rates I recommend. For the next three to six months after adoption, monitor the rate at which those rates bring in revenue.
2. If revenue generation is on track with my projections, you need not do anything else to the rates until it is time for the first across-the-board inflationary increase in about a year. But if the revenues are below what I projected by very much, say ten percent, you should increase all rates across-the-board enough to get revenues back on track and later go back to the annual inflationary increases regimen.
    a. I suspect Ms. Harris can handle such an interim increase calculation quite well but I would be glad to help. You would owe me no additional fee for that help – it's all part of my service to get your rates on track.

So, adopt rates, watch their performance and in a few months, give me a call to tell me how it is going. If sanitation rates need fine tuning then, I will help you do that.

Variable Costs and the Unit Charge Unit of Measure

A bedrock part of rate calculations has to do with variable costs. These costs are related primarily to the volume of trash thrown away, and to a lesser degree, recyclables disposed. Based upon how the City tracks costs, I can classify them into two categories: those incurred to pick up and transport material to the landfill or transfer station; and disposal costs, usually called "tipping fees."

On the water and wastewater service side, we use water meters to calculate service volume. Generally, sanitation customers use larger or multiple trash containers because they dispose of enough material to warrant those containers. Therefore, a good surrogate to "meter" trash volume is container size and frequency of pick-up. One exception to that is for the 20-yard dumpsters that are hauled and weighed at the landfill, one at a time. For those containers you currently charge the tipping fees back to customers. I recommend you continue that practice.

I calculated volume and the related sanitation rates based upon container size. Specifically, I used the volume capacity of the City's most commonly used trash bin, at 90 gallons at the most common pick-up frequency of once per week, as the unit of measure for variable costs. That volume is equal to 0.45 cubic yards. In the Sanitation Model and this narrative report, this unit of measure is called the "0.45 Cu Yd Container Equivalent" or the "90-Gallon Bin Equivalent." Thus, that size bin and that pick-up frequency has one unit of volume. There is one smaller bin size at 45 gallons. That size has one-half container equivalent. The largest container size is a 20-yard dumpster, which contains 44.9 equivalent units. (There is an exception to this pricing methodology. That is billing for 20-yard rolloffs. The City's current structure has each such customer repay the City for tipping fees incurred for each rolloff hauled. I did the same.)

To illustrate the meaning of extra containers or pick-ups, if a customer had two 0.45 Cu Yd (90-gallon) containers that were picked up once per week, that would be two container equivalents of collection service. If another customer had one 0.45 Cu Yd container but it was picked up twice per week, that would also be two container equivalents of collection service. Granted, picking up one container twice per week almost certainly costs the City more than picking up two containers in the same location on the same run of the route. But there are few extra container pick-ups and the City has no data to arrive at cost differentials for the two parts of the service. Therefore, in the interest of simplicity, I assumed the same costs either way.

I will state here that I prefer each customer be assigned their own container(s) rather than share containers. When a container is assigned to one customer, that customer feels a bit of ownership and tends to police it more closely. It is true, commercial customers are often in close proximity to each other and lack the space to station multiple containers for easy pick-up, so shared containers can benefit all. But they invite some people who are not paying for sanitation service themselves to drive behind the strip shopping center and toss their bag of trash in the dumpster for free. And, the strip shopping center store that contributes half of the 3-yard dumpster's volume and the other five contribute the other half gets subsidized by the other five customers.

Assignment of containers to individual customers would not solve all these problems, but it would help.

Model Structure

The Sanitation Model started with the same template as was used for water and sewer. However, I moved many functions around or eliminated unneeded tables in the Sanitation Model, as compared to the water and sewer models:

- Into a revised Table 1 Rates table, I moved the relevant functions served by Table 2 for usage data and Table 10 for rate calculations.
- I hid Table 5 because fleet replacement, the only capital cost, is included in Table 4.
- I eliminated Tables 6 and 7 because repair and replacement items are included in Table 4.
- I eliminated Tables 12 through 16, which deal with system development fees and minimum charge surcharges because they are not relevant in this situation.
- In all of the tables, I substituted the 0.45 Cu Yd Container Equivalent unit of measure for the 1,000-gallon unit of measure.
- Note that Charts 1 and 2 include no data. I left depiction of that data out of the Sanitation Model because the operating ratio is quite high now and there is no debt, from which coverage ratios would be calculated. Thus, those charts would not yield useful information.
- I also eliminated or simply hid some functions of several other tables because they are not relevant for sanitation rate calculations.

Sanitation rates and billing of sanitation rates is done differently than water and sewer. Thus, data that is needed to calculate full cost-to-serve rates with a high degree of revenue certainty is not available in your current sanitation data set. That necessitated making some assumptions that ordinarily would be taken care of by data and calculations.

Assumptions About Costs

The current billing structure includes a simple flat fee for each rate class. I classified costs according to the broad category of costs each is related to – billing and general administration, collection and disposal (tipping fees) – to arrive at minimum, collection and disposal fees, respectively.

The cost called, "388 Landfill Charges" near the middle of Table 4, page 143, is a large percentage of total costs. These are also called, "tipping fees" in this report. Kyle Butterfield, Public Works Director told me the Fremont County Solid Waste Disposal District's tipping fees have been steady for many years and he expects them to remain steady. However, salaries and equipment costs rise over time and these are large landfill expenses, so to be cautious, I assumed tipping fees will rise 1.5 percent each year.

Pricing of Recycling

I do not have data that indicates how much the City saves, or perhaps loses by customers recycling. Of course, recycling has its own costs and generates some revenues. I do not know the net revenue effect of these costs and revenues. The City may not have such data and such data may be irrelevant anyway. It may simply be that the City wants to encourage recycling, so it gives a discount.

The City applied the discount to the whole rate of those who participate. The savings the City gains by recycling is in disposal costs and perhaps to a degree, collection costs. I'm sure the City does not save anything on billing and general administration costs. In fact, administering the recycling program adds cost to the sanitation program.

I am a strong proponent of "reduce, reuse, repurpose and then recycle" strategies to minimize what we send to landfills. However, everything we do is subject to the realities of cost.

You currently assess lower trash service fees for those customers that have "verified recycling." If such pricing causes more recycling and that recycling reduces trash hauling and tipping fee costs enough to offset the net cost of a recycling program, that makes sense simply on a cost basis. In that case, no one needs to debate the "saving the planet" issue. Saving money is the whole point of such recycling.

However, recycling is under strong cost and market pressures now. I do not know the net cost savings effect of reducing trash service costs versus net income or net cost of recycling. In fact, your data does not even tell me how many customers have verified recycling, so I cannot model the costs of continuing a discount program anyway. Your data simply does not enable such analysis. However, I would not be surprised if the current fee reduction for recycling is greater than the net savings you experience by avoiding landfill tipping fees and hauling costs due to recycling.

I suspect the big benefit to many recycling customers is this. When they have verified recycling, they have an additional way of getting rid of more "trash" volume at no additional cost. Getting more volume for disposal at no cost is a great benefit all by itself.

For these reasons, and for the sake of simplicity, I eliminated the preferential pricing for verified recycling.

Capital Improvements, Debt and Repair and Replacement

All such costs are included in Table 4, page 143, rather than individual tables as was done in water and sewer.

System Development Fee and Capacity Surcharge Replacements

The basic notion of assessing system development fees to new customers is relevant to sanitation services generally. But, application to this type of service is difficult because data needed to do definitive calculations is not available. Among sanitation utilities, that is normal. Therefore, I recommend you keep the current flat activation fee in place.

The notion of capacity surcharges also is relevant to this service but carries the same limitations as system development fees. Fortunately, the size of bins and dumpsters serves as a fair and available method for distributing volume-related costs to customers. Quite simply, the more volume of waste a customer can dispose, the more disposal fee they pay. Thus, capacity surcharges to the minimum charge were replaced with disposal charges based on container size.

Recommended Rate Structure

I recommend the same basic rate structure and policies for sanitation as I do for water, with modifications as described above.

All sanitation customers should pay a minimum charge that recovers the fixed costs they cause.

All sanitation customers should pay the same disposal fee ***on a volumetric basis***. The reality is, tipping fees at the landfill are the same regardless of the origin of the trash being disposed. Disposal fees to sanitation utility customers should vary based on container size because volume is the basis upon which disposal costs accrue at the landfill. Actually, it is weight, but at the "retail" customer level, their refuse is collected in containers that correspond to volume. Of course, the 20-yard rolloffs are the exception because disposal costs are charged back to each customer individually.

As to collection charges, conceptually, one can understand that it costs different amounts to collect large versus small containers. That is especially true when comparing large dumpsters that must be handled by specialized trucks and small bins that could be handled by hand, if necessary. Then again, one pick-up of a 3.0 cubic yard dumpster collects the same volume as four 0.45 cubic yard bins. There is more driving involved in collecting the same volume from small bins as from large dumpsters. But it may take more time, overall, to collect and transport volume in large dumpsters compared to small bins.

If you were to divvy collection costs at that level of detail, you should support such rates with data about the costs. That data does not exist, and it would be onerous to collect. Therefore, I recommend that all customers pay the same collection charge on a 0.45 cubic yard container equivalent basis. If you have any out-of-City customers, they should pay that same set of charges, plus an out-of-City premium. It costs more to go farther to pick up trash. And, out-of-City customers are not at risk of being assessed Ad Valorum taxes to support the utility.

Also related to volume is the number of pick-ups a customer gets. It is not data-backed, but I assumed that making extra trips or altering pick-up routes to make extra pick-ups for select customers adds cost to the pick-up function. Therefore, I added a 100 percent premium to the collection cost component for extra pick-ups and extra containers.

As detailed in Table 18, page 148, the modeled rates will result in a 0.45 cubic yard bin, one pick-up per week customer's bill going up modestly. A 3.0 cubic yard dumpster customer's bill would go down about the same percentage. A 20-yard dumpster customer's bill would go up a bit less on a percentage basis. As container size and pick-up frequency vary, the effect of bill changes also varies. One can study Table 18, to see the various bill effects of the recommended rates.

Downsizing to Extra Containers, Smaller Containers and More Pick-ups

Some customers produce a lot of trash. They have need of more than one container or more than one pick-up per week. In those cases, you currently assess an additional full regular fee for additional containers and pick-ups. The new rate structure will encourage some large container customers to switch to a smaller container and add pick-ups to bring their weekly volume capacity back up to what their current container affords. That is fair if they do not need the extra capacity they currently have. But, if downsizing will result in trash spilling out or blowing out on the ground, you should require such a customer to use more or larger containers or increase their pick-up frequency, whichever works for them.

Disposal costs are a large part of total costs. Therefore, if a customer wants to decrease their bill, and if the schedule on which they generate trash will allow it, they could reduce their bill by a few combinations of downsizing their container and keeping the same pick-up frequency. There are also some lower-cost combinations of downsizing container size, adding one or more containers and increasing pick-up frequency. I doubt many could reduce the actual volume of waste they dispose. But some may try to downsize and then pile trash higher in the container or compact the same volume into a smaller container. If that works for them and keeps the trash in the container, that is fair.

I estimated the costs of such changes in customer behavior by including a ten percent disposal fee income loss at the bottom of Table 3, page 142. Thus, the calculated rates were increased to cover this income loss.

In later years, with across the board minimum and collection fee increases modeled at 2.0 percent per year, I assumed volume reduction by customers, due to using smaller bins, would continue at that same rate of loss, 10 percent.

"Snowbird" Billing

"Snowbird" billing for sanitation is a bit different from water and sewer. If a sanitation customer wants to go into "snowbird" status, they should call the City, ask to be put into that status on a certain date. On that date or thereabouts, the City would pick up their trash container(s) and cease billing them until they return. The City would then deliver a container to the customer and billing would resume. However, the customer should also be assessed the cost of picking up and again dropping off their container(s), as well. The cost of those services is likely greater than the cost to the customer of just continuing their service uninterrupted. For that reason, I did not model "snowbird" rates for sanitation customers.

Target Reserve Levels

I recommend you retain the current reserves level ten years into the future, indexed up to account for inflation. Lines on the bottom of Table 17, page 147, and several of the charts at the end of the Sanitation Model show your reserve balances expected for the next ten years. They are now strong, and they will remain strong.

Rate Affordability

In Table 17, near the top, I show the estimated Affordability Index (for a 90-gallon bin, residential customer) for the current rates in the first column, at 0.75 percent, and the modeled rates in the following column, at 0.67 percent. Bill affordability for the subject one bin and one pick-up per week customers is modeled to become more affordable initially, and more affordable over time, too. The same things are shown graphically in Chart 4 of the Sanitation Model.

Below that information in Table 17, I show the affordability of a 45-gallon (half-size) bin for a low-income customer. Even though the bill for the small bin is lower, because such a customer's income is so much lower, their bill is less affordable.

To supplement the Affordability Index, Table 18, page 148, shows how bills for each container size and pick-up frequency will be affected by the recommended rates.

Recommendations for Adjusting Sanitation Rates

The Model contains all my rates-related recommendations and shows what they are built upon. However, the Sanitation Model is complex, components of the rates and fees are calculated and shown in different tables and the Sanitation Model does not spell out policy issues. Therefore, I have summarized most of my recommendations as follows:

1. You should assess the monthly minimum charge, collection charge and disposal charge shown in Table E, that follows this list. These rates will move you as close to a cost-to-serve structure as available data will allow.
2. The calculations assumed you would have made these rate adjustments early enough to enable you to collect at these rates for the September 1, 2019, billing. You would need to satisfy all Statutory requirements for making rate adjustments in advance of the adjustment date. That is coming up soon, so if you want to make that date, you will need to move promptly.
3. I recommend a late payment fee of $10.00 or ten percent of the outstanding total bill amount owed to the City for all services provided, whichever is greater, each month. Note: I do not consider this to be a late payment "penalty." Rather, I consider it to be a fee assessed for providing lending services, extra billing services and taking on the risk of such customers not paying or paying late or in installments. I believe you should refer to it in similar terms, too.
4. If costs, incomes and balances accrue close to those I assumed in the Model, about one year from now and each year for about five years, raise all rates and significant fees by 2.0 percent.
5. If balances do not accrue as shown at the bottom of Table 17, page 147, but they are not egregiously too low, follow the instructions in Chapter 9 of the book, "How to Get Great Rates" for how to make inflationary increases correctly.

Table E: Recommended In-City Sanitation Fees and Charges

Table E: Riverton, WY In-City Sanitation Fees				
Customer Class	Minimum Charge per Month	1 Pick-up Collection Charge This Container Size	1 Pick-up Disposal Charge This Container Size	Total Monthly (or Per Instance) Charge for Customer With This Container Size
Regular Customers				
(Residential) Alley Dumpster Regular Service	$27.73	$0.86	$1.79	$30.37
90 Gallon Rollout Regular Service	$27.73	$2.45	$1.70	$31.48
Regular (90 Gal) Service With Verified Recycling Participation	$27.73	$2.45	$1.70	$31.88
45 Gallon Rollout Economy Service	$27.73	$1.22	$0.85	$29.80
Economy Service With Verified Recycling	$27.73	$1.22	$0.85	$29.80
(Residential) Alley Dumpster Extra Container/Pick-up	$0.00	$1.71	$1.79	$3.50
90 Gallon Extra Container/Pick-up	$0.00	$4.89	$1.70	$6.60
Regular (90 Gal) Service With Verified Recycling Extra Container/Pick-up	$0.00	$4.89	$1.70	$6.60
45 Gallon Extra Container/Pick-up	$0.00	$2.45	$0.85	$3.30
Economy Service With Verified Recycling Extra Container/Pick-up	$0.00	$2.45	$0.85	$3.30
Commercial and Special Customers				
Regular Service Individual Container 3 Cu Yd	$27.73	$16.47	$11.46	$55.66
Regular Service Shared Container 3 Cu Yd*	$27.73	$2.99	$6.24	$36.97
20-Yard Rolloff Delivery	$232.63	$0.00	$0.00	$232.63
20-Yard Rolloff 1 Pick-up per Month Rental	$27.73	$109.82	+ Tip Fee	$137.55
3-Yard Dumpster 1 Pick-up per Month Rental	$27.73	$16.47	$11.46	$55.66
1.5 Yard Dumpster 1 Pick-up per Month Rental	$27.73	$8.24	$5.73	$41.69
Regular Service Individual Container Extra Container/Pick-up 3 Cu Yd	$0.00	$32.95	$11.46	$44.40
Regular Service Shared Container Extra Container/Pick-up 3 Cu Yd*	$0.00	$5.99	$6.24	$12.23
20-Yard Rolloff per Additional Container/Pick-up	$0.00	$219.64	+ Tip Fee	$219.64
3-Yard Dumpster per Additional Container/Pick-up	$0.00	$32.95	$11.46	$44.40
1.5 Yard Dumpster per Additional Container/Pick-up	$0.00	$16.47	$5.73	$22.20
Misc. - Garbage not Placed, per Minute	$0.00	N.A.	N.A.	$0.00
Garbage not Placed and Special Requested Pick-up Landfill Fees, at Landfill Rate	$0.00	N.A.	N.A.	$0.00
Special Requested Pick-up, per Minute, 15 Minute Minimum, Landfill Fees at Landfill Rate	$0.00	N.A.	N.A.	$0.00
Yardwaste Dropped at Facility, per Pick-up or Trailer Load (Waived With Current City of Riverton Utility Bill for In-City Residential Customers)	$0.00	N.A.	N.A.	$0.00
Other Fee Adjustments:				
For customers with more than one container, assess them the appropriate full monthly fee, plus the corresponding extra container fees for each pick-up made during a month.				
For out-of-City customers, increase all fees in the table above by 25 percent.				
For all other services in the current ordinance but with no rates shown in this table, increase the current rates for each of those services by 13.3 percent to match the overall rate increase of all other services.				

Closing

I recommend you adopt the rates calculated in the Sanitation Model and shown in the table immediately above. These rates are in a structure that is close to a cost-to-serve rate structure, at least, as much as that can be accomplished at this time. The current rate structure is not in a cost-to-serve structure, so the recommended rates improve upon structure fairness.

Bills for extra containers and pick-ups will go down markedly. But there are few customers in that situation and the revenue reduction is slight. And it is only fair that fees for service be based on the cost of providing that service. That said, the City should guard against any customer downsizing and creating a sanitation or littering problem.

***

Conclusion

"Conclusion" is a misnomer here. This report provides information upon which the City can make decisions. Thus, it begins the process by which you will initially adjust rates and fees and take other actions. I will continue to help you as you do that. With as many changes as I have recommended you make to rates, billing for sanitation and landfill fees and more, I feel sure you will want to contact me occasionally over the next year or so just to get all the details worked out.

As time passes you will need to adjust rates incrementally as recommended in this report and as described in more detail in my book. Eventually, you will start this cycle over.

As you take on the initial adjustments, keep the following in mind. Everyone impacted by the City's water rates should at least be made aware of the results of this report.

- My default recommendation is that you give any customer as much information as they want. If they want a copy of the full report, give them that.
- Give the media a copy of the full report so they can quote the report directly and accurately rather than be forced to "figure things out." Much of this is very complex. Few people know how to, or have the time to, calculate utility rates. Make it easy for everyone to get the facts right.
- For most customers, what would happen to their water bills is as much as they will care to know about this analysis. To satisfy those information needs, the City can publicize the current and recommended rates and/or the bill comparisons.
- A few customers will want to know more, especially high-volume customers. Give them the full report, if that is what they want.

- A good way to accomplish these things is to post the report on the City's Web site so everyone can see for themselves what the report says. That way, no one would have to print out a very long document, unless they wanted to. Publicize the Web posting widely and publicly. Information is a good thing. ***Being seen as*** trying hard to get information out to folks is also a good thing.

You have engaged me to pay one visit to the Council to discuss my findings and recommendations. That should take care of this part of the rate adjustments task, but if you need me to attend more than one public meeting, we can arrange that.

I look forward to meeting with the Council and helping you get on your way to the next generation of utility rates.

Riverton, WY; Water Rates, Scenario 2019-1

This model depicts rates and major fees in a cost-to-serve structure, with only minor variations.

July 30, 2019

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Note: This document is a print out of the spreadsheet model used to calculate new user charge and other rates and fees for the next 10 years. These calculations are complex and are based upon many conditions and assumtions. These issues, and others, are described in a narrative report that accompanies this model.

Index of Tables and Charts

Note: When a numbered table or chart listed below is not in the package, that was not a mistake. It simply means that table or chart from our master program was not needed in this situation so it was left out to prevent confusion.

Name	What Each is or Does
Definitions (List)	The meaning of terms used in this report and in rate setting generally
Return on Investment (Calculation)	A summary of financial outcomes enabled by the proposed rates
Table 1 - Rates	User rates in effect at the end of the test year. Unless rates were recently changed, these are the current rates.
Table 2 - Test Year Usage	Compilation of actual volume of service used by customers during the test year
Table 3 - Basic User Data and Operating Incomes	Basic user statistics and operating revenues, projected for 10 years, based on the assumption the modeled rates and future inflationary increases will ber adopted
Table 4 - Operating Costs and Net Income	Operating costs projected for 10 years
Table 5 - Capital Improvements Program (CIP)	Capital improvements and how they will be paid over next 10 years, including debt service
Table 6 - Equipment Replacement Schedule - Detailed	Detailed schedule of equipment replacements for next 20 years, if applicable
Table 7 - Equipment Replacement Annuity Calculation	Calculation of the annual annuity (yearly savings amount) needed to pay for all equipment replacements as they come due and ending with the desired balance
Table 8 - Average Cost Classification	Sumation of a target year's costs and calculation of the "cost of service" rate structure basis for recovery of fixed costs and variable costs
Table 9 - Marginal Cost Classification	Calculation of costs incurred to serve a specified type of customer, if applicable
Table 10 - Initial Rate Adjustments and Resulting Revenues	These are the modeled user rates and the resulting "blended" revenues they, and the current rates, will generate during the rate adjustment year
Table 11 - Capacity Costs	Calculation of the various costs to build base and peak flow capacity to serve customers, when such fees will be based on water meter size
Table 12 - AWWA Safe Operating Capacities by Meter Size	This table calculates the meter equivalent ratio, which is used for calculating peak flow capacity-based system development fees, surcharges and revenues in Tables 13 through 16.
Table 13 - System Development Fees	Calculation of meter size-based system development fees needed to recover costs calculated in Table 11, when such fees will be based on water meter size
Table 14 - Revenues From System Development Fees	Calculation of total fee revenues that would be generated during one full year at the fees in Table 13.
Table 15 - Minimum Charge Fees, Including Capacity Surcharges	Calculation of meter size-based capacity surcharges and minimum charges to recover costs calculated in Table 11, when such fees will be based on water meter size
Table 16 - Revenues From Minimum Surcharges	Calculation of total fee revenues that would be generated during one full year at the fees in Table 15.
Table 17 - Financial Capacity Indicators and Reserves	Shows the financial effects of the modeled rates, costs, etc. on the utility and on the benchmark 5,000 gallon per month residential water or sewer customer, as appropriate
Table 18 - Comparison of Bills Before and After Rate Adjustments	Bills at the modeled rates are compared to those under the current rates. Note: the modeled bills do not include capacity surcharges to the minimum charges unless they are included in the minimum charges column of Table 10.
Table 19 - User Statistics	For volume ranges within each rate class, this table shows volumes and percentages of use, revenue generated and other statistics
Chart 1 - Operating Ratio	*Graph of operating ratio for 10 years as a result of the modeled rates and the current rates*
Chart 2 - Coverage Ratio	*Graph of coverage ratios for 10 years of the modeled rates and the current rates*
Chart 3 - 5,000 Gallon Residential User's Bill	*Graph of the bill for the benchmark 5,000 gallon per month residential user, with smallest available meter size (used in grant and loan eligibility determinations) as a result of the modeled rates, and the current rates*
Chart 4 - Affordability Index	*Graph of the affordability index for 10 years of the benchmark residential user's bill (used in grant and loan eligibility determinations)*
Chart 5 - Working Capital vs Goal	*Graph for 10 years of total (unobligated) cash assets at modeled rates compared to the goal for total cash assets*
Chart 6 - Value of Cash Assets Before Inflation	*Graph for 10 years of unobligated cash assets NOT adjusted for inflation at modeled rates and current rates*
Chart 7 - Value of Cash Assets After Inflation	*Graph for 10 years of unobligated cash assets adjusted for inflation at modeled rates and current rates. This is the real buying power of cash reserves.*
Chart 8 - Sum of All Reserves	*Graph of all reserves of all kinds at the modeled rates and at the current rates*

Definitions

Affordability Index	The monthly charge for (typically) 5,000 gallons of residential service divided by the median monthly household income for the area served by the system. An index of 1.0, meaning a household pays one percent of its income to pay its bill for 5,000 gallons of service, is generally considered affordable. Affordability index is often a factor in determining grant and loan eligibility and grant amount.
Analysis Year	The year following the "test year." Generally, rate analysis is done during the year following the "test year" and intial rate adjustments are done later still during the analysis year or sometime during the following year once the analysis shows how rates should be adjusted. See related "test year."
Capital Improvement Plan or Program (CIP)	A schedule of anticipated capital improvements. These are the more expensive items such as treatment plants, lines and other expensive infrastructure that generally requires bond or grant funding.
Capital Improvement Reserves	Cash reserves dedicated to funding the CIP
Comprehensive Rate Analysis	A thorough examination of a system's operating, capital improvement, equipment replacement and other costs, revenues, current rates, number of users and their use of the system, growth rates and all other key issues surrounding the system. This examination will determine how rates and fees should be set in the future to cash-flow the system properly, to build appropriate reserves and to be fair to ratepayers. It also will determine how policies should be adjusted to enable the system to operate well now, operate well in the medium-range future (about 10 years) and prepare for expected and expectable events such as capital improvements and equipment replacement.
Connection Charge	See system development fee
Conservation (Inclining) Rates	Unit charges that go up as the volume used goes up
Cost to Produce	There are several ways to define and calculate cost to produce. Each is acceptable for different purposes. Generally, cost to produce is the total of all variable costs required to get service to a utility's customers during one year divided by the total units of service delivered during that year. This calculation will yield the average cost to produce. In a proportional to use rate structure, this is the unit charge. See "Cost Calculations" at the bottom of Chart 19.
Cost to Serve Rates	Rates where fixed and variable costs generated by each user class are paid by that class with minimum and unit charges, respectively. Similar to and sometimes the same as "proportional to use" rates.
Cost Types; Fixed and Variable	The two main types of costs are fixed - those that are related to the fact that someone is a customer; and variable - those that are related to the volume of the commodity delivered to customers. Generally, fixed costs should be recovered with minimum charges and variable costs with unit charges.
Coverage Ratio (CR)	Incomes available to pay debt divided by the amount of the debt for that year. Most systems should have a CR of 1.25 or higher.
Current Position	For purposes of this report, for one year, the sum of all incomes and undedicated reserves minus all current financial obligations for that year. Future obligations (next year's loan payments) and depreciation are not included. Current position is a good measure of overall financial health.
Declining Rates	Rates where unit charges go down as the volume used goes up
Flat Rates	Rates where all users pay exactly the same fee regardless of the volume of service they use
Equivalent Dwelling Unit (EDU) or Equivalent Residential Unit (ERU)	Based upon number of water using fixtures, average flow, potential flow or similar criteria; the consumption rate of the average single family home is rated at one EDU. All other types of customers are then compared on this measuring basis and the EDUs are calculated. Generally the purpose of this exercise is to calculate fees that each EDU must pay.
Incremental Rate Increases (Inflationary Increases)	Rate increases done, generally annually, following the initial rate adjustment. The usual goal of such increases is to keep the system's incomes on track to meet reserve targets. Rate structure fairness is a small issue, if it is an issue at all. Such increases are usually small, in the two to five percent per year range.
Initial Rate Adjustments	Rate adjustments done in follow up to the comprehensive rate analysis. Generally, the goal of such adjustments is to establish rates that cover the system's short-term expected costs and do it with a structure that is fair to ratepayers. Initial adjustments should be followed in subsequent years with incremental rate increases.
Inflow & Infiltration (I&I)	In a sewer system, water that gets into the collection system by way of illicit connections (inflow) such as gutter downspouts, plus leaks in manholes and sewer lines (infiltration)
Infrastructure	Most commonly thought of as the hard assets, such as buildings, treatment plants and lines needed to provide service to customers connected to the system. In reality, staff, software and other "soft" assets should be thought of as infrastructure, as well.

Definitions

Life-cycle Cost	The total cost to design, build, operate, maintain and eventually dispose of an asset. One asset may cost less to build but it may be more expensive to operate and maintain, yielding a higher total life-cycle cost.
Marginal Costs	The parts of a utility's costs that are unavoidable in the course of serving a particular customer, a group of customers, more volume to all customers or some other marginal use of the system. Such customer(s) or extra use could be added at a discounted but still profitable fee, if desired. Generally marginal costs are less than the average costs but when extra use requires a system upsizing, they can be greater. These costs are especially useful when considering selling service at wholesale or charging "snow birds" while they are away.
Operating Costs	Definitions and calculations vary. For rate setting purposes operating costs are costs incurred because a system is operated. Such costs are usually recovered primarily through unit charges.
Operating Reserves or Working Capital	Analogous to current position, this is the net revenues retained to fund operating costs during times when costs exceed incomes.
Operating Revenues	Revenues collected in the form of user fees and similar operating cost-related fees
Operating Ratio (OR)	Current incomes divided by current expenses, not including debt. An OR of 1.0 is "break even." Most systems should have an OR of 1.25 or higher.
Payback Period	In this case, time required for the investment made to get this analysis to return that investment through increased user and other fees
Potential Demand	The volume of service that a user could demand for a short period of time at full volume use. The potential demand limiting factor is usually the size of the customer's meter or service line.
Proportional to Use Rates	Rates where the minimum charge recovers all fixed costs, the unit charge recovers all variable costs, the unit charge is the same for all volume sold, and there is no usage allowance in the minimum charge. This rate structure is similar to and often the same as cost to serve rates.
Replacement Schedule	A timetable that describes equipment replacement and important repairs that are too infrequent and/or too expensive to cover as annual operating costs but not so expensive that they need to be covered as capital improvements.
Replacement Reserves	Cash reserves used to fund the Replacement Schedule
Return on Investment	In this case, the dollar amount or percentage of revenue gain enabled by this rate analysis. Related to payback period.
Snow Bird	A customer, usually residential, that goes away during part of the year. Most commonly, people of "means" who live in the north who "fly south" for the winter. But, this category includes everyone who is absent for a significant part of the year but returns to their permanent residence.
System Development Charge, or Fee	Fee assessed to pay for at least part of the cost to build system capacity. For purposes of this model, all charges related to connecting new customers will be "rolled together" into a system development charge, usually including a charge that buys a new customer system capacity. This combined charge may be a few hundred dollars for a residential customer, if little or no capacity costs are included, to many thousands of dollars for a large industrial customer with capacity costs included. Similar terms in common use include "tap-on fee," "connection fee or charge," "hook-up fee," "impact fee," "availability charge," and "capacity charge."
Test Year	The one year period from which data was gathered to be the basis of the rate analysis, which is usually the last completed fiscal year. See related "analysis year."
Usage Allowance	The volume, if any, that is "given away" with the minimum charge. Most systems give away no volume. Those that give away an unlimited volume have what are called "flat rates" - a minimum charge only.
User Fee, User Charge, User Rates	Fees assessed to customers for use of the system. Does not system development charges, late payment penalties or other types of charges.
Water Loss	Measured by volume or percent, the part of a water system's net water production that does not reach customers or is not billed to customers. This loss also includes billable volume lost due to under-registering customer meters.
Working Capital, Net Income	The amount left in the operating fund after paying all costs due during that month, year or other time period. Working capital of $0 is "break even." Related to "current position."
Working Capital Goal or Operating Reserves Goal	The desired operating fund reserve, in dollars or percent, at a stated point in time. Small systems (1,000 connections) generally should target 35 percent or greater. Larger systems can target a lower percentage. The goal for each system should be based upon the needs of that system and the risk the customers are willing to take.

Return on Investment

Riverton, WY; Water Rates, Scenario 2019-1

The rates depicted in this model will produce various returns on investment or paybacks. Usually the most important payback, at least to ratepayers, is a rate structure that is demonstrably fair. For the system, however, making sure that revenue will be adequate to pay all expected, expectable and many unexpectable costs is the the most important return. If revenue will increase as a result of this analysis, which is almost always the case, one can calculate a dollar and percentage return on investment.

The following calculations show what was invested and what the returns will be over two periods; five years and 10 years. Five years is a reasonable period for return projections. Ten years is a good basic planning horizon but you should not bank on amounts or returns projected that far out. Besides, most systems should have their analyses redone long before then.

Consider these key points about return on investment. Higher rates will fund more improvements, better repair and replacement and more. Most increases in revenue end up being used for such expenses. Thus, few systems end up with a dramatic increase in their cash reserves but they do markedly improve their financial position. In addition, fairer and higher rates generally enable systems to qualify for grant and loan funding that they otherwise would not. That increases the importation of "other people's money," which is a drain on the state and federal funds, where the money comes from, but it is very desirable at the utility level. The calculation below ignores any "outside" funds the utility may capture.

Also note that rates in this model have been modeled to be adjusted during the year following the test year or even later. That year is included in the first five-year return on investment calculation. Thus, the first year of returns calculated below include most or all of one year where rates will not have been changed yet. Thus, the real rate of return will be greater than the calculation reflects.

Calculations

$6,587	Fees to GettingGreatRates.com
$500	Estimated value of system staff time and incidentals to assemble needed information
$7,087	Total Investment for This Analysis
$3,188,335	Five-year Increase in Revenue Due at Least Partly to This Analysis
44,986%	Five-year Return on Investment (increase in revenues / investment)
$6,952,240	Ten-year Improvement in Cash Position Due at Least Partly to This Analysis
98,094%	Ten-year Return on Investment (increase in revenues / investment)

Table 1 - Rates

Riverton, WY; Water Rates, Scenario 2019-1

Unless rates were recently changed, these are the current rates. At the least, these rates were in effect at the end of the test year. If a volume range was left out of the table, in order to make it shorter, the unit charge that shows for the next lowest volume range also applies to the hidden volume range.

Rates in Effect at End of Test Year

Customer Type, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Billing Cycle Minimum Charge	Usage Allowance in 1,000 Gallons	Unit Charge per 1,000 Gallons
Residential	0	$18.47	0.000	$2.56
	5,000	$18.47	0.000	$2.56
	6,000	$18.47	0.000	$2.63
	145,000	$18.47	0.000	$2.63
Out-of-City Residential	0	$23.09	0.000	$3.19
	5,000	$23.09	0.000	$3.19
	6,000	$23.09	0.000	$3.29
	145,000	$23.09	0.000	$3.29
Commercial	0	$18.47	0.000	$2.56
	5,000	$18.47	0.000	$2.56
	6,000	$18.47	0.000	$2.83
	20,000	$18.47	0.000	$4.03
	145,000	$18.47	0.000	$4.03
Residential Master Meter	0	$18.47	0.000	$2.56
	5,000	$18.47	0.000	$2.56
	6,000	$18.47	0.000	$2.63
	145,000	$18.47	0.000	$2.63
Hydrant flat rate	0	$44.04	0.000	$0.00
	145,000	$44.04	0.000	$0.00
Additional Pads Served by Master Meters	0	$18.47	0.000	$0.00
	1,000	$18.47	0.000	$0.00
	2,000	$18.47	0.000	$0.00
	145,000	$18.47	0.000	$0.00

Table 2 - Test Year Usage
Riverton, WY; Water Rates, Scenario 2019-1

This table shows usage by all customers during the test year.

Residential meter readings per year: 12

Date this scenario created: 1/18/2019

Test year = the one-year period being analyzed starts: 7/1/2017

Other customer meter readings per year: 12

Bills sent per year: 12

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Residential	0	999	1,000	0.781	43,560	34,016,000	9,544	0	795	18.3%	7.2%
	1,000	1,999	1,000	0.910	34,016	30,943,000	3,073	3,073,000	256	5.9%	6.6%
	2,000	2,999	1,000	0.851	30,943	26,322,000	4,621	9,242,000	385	8.9%	5.6%
	3,000	3,999	1,000	0.812	26,322	21,375,000	4,947	14,841,000	412	9.5%	4.6%
	4,000	4,999	1,000	0.806	21,375	17,224,000	4,151	16,604,000	346	8.0%	3.7%
	5,000	5,999	1,000	0.827	17,224	14,246,000	2,978	14,890,000	248	5.7%	3.0%
	6,000	6,999	1,000	0.852	14,246	12,131,000	2,115	12,690,000	176	4.1%	2.6%
	7,000	7,999	1,000	0.871	12,131	10,572,000	1,559	10,913,000	130	3.0%	2.3%
	8,000	8,999	1,000	0.891	10,572	9,417,000	1,155	9,240,000	96	2.2%	2.0%
	9,000	9,999	1,000	0.906	9,417	8,534,000	883	7,947,000	74	1.7%	1.8%
	10,000	14,999	1,000	3.952	8,534	33,723,000	2,776	32,693,000	231	5.3%	7.2%
	15,000	19,999	1,000	4.028	5,758	23,193,000	1,785	30,103,000	149	3.4%	4.9%
	20,000	24,999	1,000	4.011	3,973	15,934,000	1,234	26,919,000	103	2.4%	3.4%
	25,000	29,999	1,000	4.010	2,739	10,984,000	864	23,209,000	72	1.7%	2.3%
	30,000	34,999	1,000	4.036	1,875	7,568,000	559	17,758,000	47	1.1%	1.6%
	35,000	44,999	1,000	7.138	1,316	9,393,000	623	24,268,000	52	1.2%	2.0%
	45,000	54,999	1,000	7.550	693	5,232,000	266	12,932,000	22	0.5%	1.1%
	55,000	64,999	1,000	8.033	427	3,430,000	142	8,390,000	12	0.3%	0.7%
	65,000	74,999	1,000	8.288	285	2,362,000	80	5,512,000	7	0.2%	0.5%
	75,000	84,999	1,000	8.171	205	1,675,000	62	4,895,000	5	0.1%	0.4%
	85,000	94,999	1,000	8.000	143	1,144,000	43	3,799,000	4	0.1%	0.2%
	95,000	104,999	1,000	8.480	100	848,000	26	2,578,000	2	0.0%	0.2%
	105,000	114,999	1,000	8.149	74	603,000	22	2,393,000	2	0.0%	0.1%
	115,000	124,999	1,000	8.712	52	453,000	12	1,433,000	1	0.0%	0.1%
	125,000	134,999	1,000	9.100	40	364,000	8	1,044,000	1	0.0%	0.1%
	135,000	144,999	1,000	8.500	32	272,000	7	967,000	1	0.0%	0.1%
	145,000	477,000	1,000	95.560	25	2,389,000	25	6,014,000	2	0.0%	0.5%
			Monthly and Annual Subtotals:		246,077	304,347,000	43,560	304,347,000	3,630	83.5%	64.8%

Table 2 - Test Year Usage

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Out-of-City Residential	0	999	1,000	0.885	469	415,000	54	0	5	0.1%	0.1%
	1,000	1,999	1,000	0.957	415	397,000	18	18,000	2	0.0%	0.1%
	2,000	2,999	1,000	0.882	397	350,000	47	94,000	4	0.1%	0.1%
	3,000	3,999	1,000	0.834	350	292,000	58	174,000	5	0.1%	0.1%
	4,000	4,999	1,000	0.842	292	246,000	46	184,000	4	0.1%	0.1%
	5,000	5,999	1,000	0.793	246	195,000	51	255,000	4	0.1%	0.0%
	6,000	6,999	1,000	0.805	195	157,000	38	228,000	3	0.1%	0.0%
	7,000	7,999	1,000	0.732	157	115,000	42	294,000	4	0.1%	0.0%
	8,000	8,999	1,000	0.861	115	99,000	16	128,000	1	0.0%	0.0%
	9,000	9,999	1,000	0.798	99	79,000	20	180,000	2	0.0%	0.0%
	10,000	14,999	1,000	3.456	79	273,000	37	433,000	3	0.1%	0.1%
	15,000	19,999	1,000	3.571	42	150,000	16	260,000	1	0.0%	0.0%
	20,000	24,999	1,000	4.154	26	108,000	10	228,000	1	0.0%	0.0%
	25,000	29,999	1,000	3.938	16	63,000	6	163,000	1	0.0%	0.0%
	30,000	34,999	1,000	3.000	10	30,000	7	225,000	1	0.0%	0.0%
	35,000	44,999	1,000	10.000	3	30,000	0	0	0	0.0%	0.0%
	45,000	54,999	1,000	4.667	3	14,000	2	94,000	0	0.0%	0.0%
	55,000	64,999	1,000	1.000	1	1,000	1	56,000	0	0.0%	0.0%
				Monthly and Annual Subtotals:	2,915	3,014,000	469	3,014,000	39	0.9%	0.6%

Table 2 - Test Year Usage

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Commercial	0	999	1,000	0.770	7,140	5,495,000	1,633	0	136	3.1%	1.2%
	1,000	1,999	1,000	0.749	5,495	4,115,000	1,380	1,380,000	115	2.6%	0.9%
	2,000	2,999	1,000	0.813	4,115	3,347,000	768	1,536,000	64	1.5%	0.7%
	3,000	3,999	1,000	0.856	3,347	2,866,000	481	1,443,000	40	0.9%	0.6%
	4,000	4,999	1,000	0.874	2,866	2,506,000	360	1,440,000	30	0.7%	0.5%
	5,000	5,999	1,000	0.887	2,506	2,222,000	284	1,420,000	24	0.5%	0.5%
	6,000	6,999	1,000	0.902	2,222	2,004,000	218	1,308,000	18	0.4%	0.4%
	7,000	7,999	1,000	0.924	2,004	1,851,000	153	1,071,000	13	0.3%	0.4%
	8,000	8,999	1,000	0.944	1,851	1,747,000	104	832,000	9	0.2%	0.4%
	9,000	9,999	1,000	0.936	1,747	1,636,000	111	999,000	9	0.2%	0.3%
	10,000	14,999	1,000	4.312	1,636	7,054,000	379	4,559,000	32	0.7%	1.5%
	15,000	19,999	1,000	4.321	1,257	5,431,000	279	4,726,000	23	0.5%	1.2%
	20,000	24,999	1,000	4.423	978	4,326,000	174	3,786,000	15	0.3%	0.9%
	25,000	29,999	1,000	4.466	804	3,591,000	137	3,681,000	11	0.3%	0.8%
	30,000	34,999	1,000	4.531	667	3,022,000	99	3,152,000	8	0.2%	0.6%
	35,000	44,999	1,000	8.671	568	4,925,000	125	4,870,000	10	0.2%	1.0%
	45,000	54,999	1,000	8.851	443	3,921,000	82	4,001,000	7	0.2%	0.8%
	55,000	64,999	1,000	9.047	361	3,266,000	54	3,166,000	5	0.1%	0.7%
	65,000	74,999	1,000	9.339	307	2,867,000	36	2,497,000	3	0.1%	0.6%
	75,000	84,999	1,000	9.262	271	2,510,000	34	2,690,000	3	0.1%	0.5%
	85,000	94,999	1,000	9.582	237	2,271,000	20	1,801,000	2	0.0%	0.5%
	95,000	104,999	1,000	9.599	217	2,083,000	18	1,803,000	2	0.0%	0.4%
	105,000	114,999	1,000	9.513	199	1,893,000	16	1,743,000	1	0.0%	0.4%
	115,000	124,999	1,000	9.290	183	1,700,000	21	2,495,000	2	0.0%	0.4%
	125,000	134,999	1,000	9.784	162	1,585,000	6	775,000	1	0.0%	0.3%
	135,000	144,999	1,000	9.667	156	1,508,000	11	1,543,000	1	0.0%	0.3%
	145,000	1,087,000	1,000	193.455	145	28,051,000	145	49,076,000	12	0.3%	6.0%
			Monthly and Annual Subtotals:		41,884	107,793,000	7,128	107,793,000	594	13.7%	23.0%

Table 2 - Test Year Usage

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Residential Master Meter	0	999	1,000	1.000	48	48,000	0	0	0	0.0%	0.0%
	1,000	1,999	1,000	1.000	48	48,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	0.958	48	46,000	2	4,000	0	0.0%	0.0%
	3,000	3,999	1,000	0.870	46	40,000	6	18,000	1	0.0%	0.0%
	4,000	4,999	1,000	0.975	40	39,000	1	4,000	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	39	39,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	0.949	39	37,000	2	12,000	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	37	37,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	37	37,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	37	37,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	4.973	37	184,000	1	14,000	0	0.0%	0.0%
	15,000	19,999	1,000	4.917	36	177,000	3	57,000	0	0.0%	0.0%
	20,000	24,999	1,000	3.970	33	131,000	10	216,000	1	0.0%	0.0%
	25,000	29,999	1,000	4.087	23	94,000	5	129,000	0	0.0%	0.0%
	30,000	34,999	1,000	4.056	18	73,000	5	158,000	0	0.0%	0.0%
	35,000	44,999	1,000	7.615	13	99,000	6	239,000	1	0.0%	0.0%
	45,000	54,999	1,000	10.000	7	70,000	0	0	0	0.0%	0.0%
	55,000	64,999	1,000	8.000	7	56,000	3	181,000	0	0.0%	0.0%
	65,000	74,999	1,000	9.000	4	36,000	1	71,000	0	0.0%	0.0%
	75,000	84,999	1,000	5.667	3	17,000	2	157,000	0	0.0%	0.0%
	85,000	94,999	1,000	10.000	1	10,000	0	0	0	0.0%	0.0%
	95,000	104,999	1,000	10.000	1	10,000	0	0	0	0.0%	0.0%
	105,000	114,999	1,000	10.000	1	10,000	0	0	0	0.0%	0.0%
	115,000	124,999	1,000	8.000	1	8,000	1	123,000	0	0.0%	0.0%
	125,000	134,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	135,000	144,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	145,000	477,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
				Monthly and Annual Subtotals:	604	1,383,000	48	1,383,000	4	0.1%	0.3%
Hydrant flat rate	0	999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
				Monthly and Annual Subtotals:	0	0	0	0	0	0.0%	0.0%
Additional Pads Served by Master Meters	0	999	1,000	0.000	948	0	948	0	79	1.8%	0.0%
				Monthly and Annual Subtotals:	948	0	948	0	79	1.8%	0.0%
Data Loss Adjustment	0	299,999,999	1,000	52,959.000	1	52,959,000	1	52,959,000	0	0.0%	11.3%
				Monthly and Annual Subtotals:	1	52,959,000	1	52,959,000	0	0.0%	11.3%
				Grand Totals:	292,429	469,496,000	52,154		4,346	100%	100%

Table 3 - Operating Incomes
(and Basic User Data)
Riverton, WY; Water Rates, Scenario 2019-1

This table depicts user statistics, customer growth, and system incomes and across the board "inflationary" style rate increases through the 10th year.

Annual Median Household Income (AMHI)

$50,645 Census Bureau estimate of AMHI for the year: 2016

$31,531 Census Bureau estimate of AMHI for the year: 2000

$19,114 AMHI growth during this time period

3.79% Simple annual income growth rate during this time period (used to project incomes into the future)

Test Year Growth of Customer Base and Average Tap Fee Paid per Connection

8 Number of new connections made during the test year

$1,483 Average tap or installation fee assessed during the test year

This model is programmed to assume that rates will be reset in the "Analysis (This) Year" column below (heading highlighted blue). Revenues will be collected at the now-current rates for the first part of the analysis year and the modeled rates for the last part of the analysis year. The change-over from the current rates to new rates is modeled to happen on the date near the top of Table 10. Thus, the revenues shown in the last column of that table are "blended" revenues; part collected at the old rates and part collected at the new rates. It was then assumed that all rate adjustments made after the initial (major) adjustment will be done annually on approximately the anniversary of the first adjustment.

Basic User (Customer) Data

(First year balances and incomes are actual, subsequent years are projected.)	Inflation or Deflation (–) Factor	Test Year	Analysis (This) Year	Years Following the Analysis Year (for Which Results Have Been Projected)									
				1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year
		Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting
		7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Rate Increases Projected for Future Years	N.A.	N.A.	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Average Number of Customers for the Year	N.A.	4,346	4,353	4,360	4,367	4,374	4,381	4,388	4,395	4,402	4,409	4,416	4,423
Customers Added or Lost (-) During the Year	N.A.	8.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Customer Growth or Loss (-) Rate	N.A.	0.18%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%
Actual (Test Year) and Projected Volumes, in Gallons	N.A.	469,496,000	470,252,177	471,008,354	471,764,532	472,520,709	473,276,886	474,033,063	474,789,240	475,545,417	476,301,595	477,057,772	477,813,949

The row above shows the rate at which user charge fees should be increased for each year beyond the initial rate adjustment year. Unless stated otherwise, these should be across-the-board increases to all rates and fees and that should continue until a new rate analysis is done.

How User Charge Fees Were Calculated, Accounting for New Customers and Future Rate Increases

Actual or Calculated Sales Revenues		$2,241,157	$2,285,868	$2,519,910	$2,599,674	$2,681,963	$2,766,843	$2,854,402	$2,944,724	$3,037,896	$3,134,008	$3,233,154	$3,335,427
Additional Sales Revenues From New Customers			$10	$4,046	$4,174	$4,292	$4,421	$4,553	$4,690	$4,831	$4,976	$5,125	$5,279
Total Calculated Revenues (User Charge Fees)		$2,241,157	$2,285,878	$2,523,956	$2,603,848	$2,686,255	$2,771,264	$2,858,955	$2,949,414	$3,042,727	$3,138,984	$3,238,278	$3,340,705

Operating Incomes

38100 Water Receipts	N.A.	$2,407,150	$2,455,184	$2,710,895	$2,796,704	$2,885,215	$2,976,520	$3,070,706	$3,167,864	$3,268,089	$3,371,475	$3,478,124	$3,588,137
38180 Penalties and Service Charges	N.A.	$73,488	$70,000	$70,112	$70,225	$70,337	$70,450	$70,562	$70,674	$70,787	$70,899	$71,012	$71,124
38125 Water Tap Fees (Current Rate Structure)	% Above	$11,867	$12,609	$0	$0	$0	$0	$0	$0	$0	$0	$1	$2
Meter Size-based System Development Fees (Table 14)	% Above	$0	$37	$13,481	$13,886	$14,302	$14,732	$15,174	$15,629	$16,098	$16,581	$17,078	$17,590
36100 Interest On Investments	N.A.	$16,309	$5,000	$4,541	$11,624	$11,987	$12,372	$12,694	$13,064	$13,485	$13,838	$14,242	$14,703
33405 WWDC Grant Water Supply Proj	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
33438 WDC Loan-Riverton Water Supply Pro	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
33489 N FEDERAL DWSRF LOAN	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
36310 Spencer Subdivision Assessment	N.A.	$8,427	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200	$5,200
36900 Misc. Reimbursements	N.A.	$87	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381
36979 Transfer to Reserves	N.A.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
36987 Trf from Reserve Assigned Funds	N.A.	$0	$118,875	$118,875	$118,875	$118,875	$118,875	$118,875	$118,875	$118,875	$118,875	$118,875	$118,875
38130 Unapplied Fin. Trans. (Refunds)	N.A.	-$6,658	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
38135 Standpipe	N.A.	$7,700	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000
38140 Transfer Fee	N.A.	$5,260	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500
38190 Water Miscellaneous	N.A.	$4,789	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
38191 Irrigation Fee	N.A.	$30,518	$30,000	$30,000	$33,072	$34,118	$35,198	$36,312	$37,461	$38,647	$39,870	$41,131	$42,432
36988 Trf from Cash	N.A.	$0	$24,423	$24,423	$24,423	$24,423	$24,423	$24,423	$24,423	$24,423	$24,423	$24,423	$24,423
Other Receipts (Formerly Booked as Water Receipts)	N.A.	$111,397	$111,397	$111,397	$114,738	$118,181	$121,726	$125,378	$129,139	$133,013	$137,004	$141,114	$145,347
Revenue Loss Because Rate Adjustments Made # Months Late	2.0	$0	$0	-$39,114	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Loss (-) Due to Conservation	10.0%	$0	-$4,803	-$25,571	-$8,581	-$8,851	-$9,130	-$9,419	-$9,716	-$10,022	-$10,339	-$10,665	-$11,001
Total Operating Incomes		**$2,670,334**	**$2,841,802**	**$3,038,120**	**$3,194,047**	**$3,287,669**	**$3,384,246**	**$3,483,787**	**$3,586,496**	**$3,692,475**	**$3,801,707**	**$3,914,416**	**$4,030,714**

Table 4 - Operating Costs and Net Income
Riverton, WY; Water Rates, Scenario 2019-1

This table depicts expenses during the test year, this year and for the next 10 years. Some future costs will experience inflation. Those costs that go up as use goes up are increased by the cost inflation factor plus the growth rate in users.

(First year costs and net incomes are actual, subsequent years are projected.)

	Inflation or Deflation (–) Factor	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	Years Following the Analysis Year (for Which Results Have Been Projected)									
				1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
109 Salaries and Wages	3.0%	$629,320	$636,655	$655,755	$675,427	$695,690	$716,561	$738,058	$760,199	$783,005	$806,496	$830,690	$855,611
120 Overtime	3.0%	$6,958	$13,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
191 FICA	3.0%	$43,827	$49,725	$51,217	$52,753	$54,336	$55,966	$57,645	$59,374	$61,155	$62,990	$64,880	$66,826
192 Health Insurance	3.0%	$165,332	$142,795	$147,079	$151,491	$156,036	$160,717	$165,539	$170,505	$175,620	$180,888	$186,315	$191,905
193 Retirement	3.0%	$87,974	$92,990	$95,780	$98,653	$101,613	$104,661	$107,801	$111,035	$114,366	$117,797	$121,331	$124,971
196 Workers Compensation	3.0%	$16,356	$20,680	$21,300	$21,939	$22,598	$23,276	$23,974	$24,693	$25,434	$26,197	$26,983	$27,792
211 Office Supplies	3.0%	$3,203	$3,550	$3,657	$3,766	$3,879	$3,996	$4,115	$4,239	$4,366	$4,497	$4,632	$4,771
212 Office Equipment	3.0%	$2,242	$2,000	$2,060	$2,122	$2,185	$2,251	$2,319	$2,388	$2,460	$2,534	$2,610	$2,688
215 Computer Supplies	3.0%	$6,361	$2,595	$2,673	$2,753	$2,836	$2,921	$3,008	$3,099	$3,192	$3,287	$3,386	$3,487
224 Laboratory Supplies	3.0%	$30,993	$61,000	$62,830	$64,715	$66,656	$68,656	$70,716	$72,837	$75,022	$77,273	$79,591	$81,979
229 Uniforms	3.0%	$796	$1,050	$1,082	$1,114	$1,147	$1,182	$1,217	$1,254	$1,291	$1,330	$1,370	$1,411
231 Gas & Oil	3.0%	$7,137	$9,140	$9,414	$9,697	$9,988	$10,287	$10,596	$10,914	$11,241	$11,578	$11,926	$12,283
232 Diesel	3.0%	$2,224	$2,250	$2,318	$2,387	$2,459	$2,532	$2,608	$2,687	$2,767	$2,850	$2,936	$3,024
234 Veh. & Equip. Maintenance	3.0%	$6,082	$7,100	$7,313	$7,532	$7,758	$7,991	$8,231	$8,478	$8,732	$8,994	$9,264	$9,542
241 Tools & Supplies	3.0%	$5,506	$6,250	$6,438	$6,631	$6,830	$7,034	$7,245	$7,463	$7,687	$7,917	$8,155	$8,399
247 Safety Supplies	3.0%	$2,085	$3,400	$3,502	$3,607	$3,715	$3,827	$3,942	$4,060	$4,182	$4,307	$4,436	$4,569
249 Treatment Chemicals	3.0%	$100,051	$100,000	$103,165	$106,431	$109,799	$113,274	$116,858	$120,556	$124,370	$128,304	$132,363	$136,550
312 Postage	3.0%	$6,384	$6,550	$6,757	$6,971	$7,192	$7,419	$7,654	$7,896	$8,146	$8,404	$8,670	$8,944
314 Consumer Confidence	3.0%	$3,950	$4,000	$4,120	$4,244	$4,371	$4,502	$4,637	$4,776	$4,919	$5,067	$5,219	$5,376
333 Dues	3.0%	$709	$390	$402	$414	$426	$439	$452	$466	$480	$494	$509	$524
334 Bank Charges	3.0%	$7,492	$7,500	$7,725	$7,957	$8,195	$8,441	$8,695	$8,955	$9,224	$9,501	$9,786	$10,079
340 Electricity for Water Wells	3.0%	$241,832	$235,000	$242,439	$250,113	$258,028	$266,194	$274,617	$283,306	$292,269	$301,515	$311,053	$320,891
341 Electricity	3.0%	$35,606	$42,800	$44,155	$45,552	$46,994	$48,481	$50,015	$51,598	$53,230	$54,914	$56,651	$58,443
343 Heat	3.0%	$7,417	$8,000	$8,240	$8,487	$8,742	$9,004	$9,274	$9,552	$9,839	$10,134	$10,438	$10,751
344 Carriage Agreement	3.0%	$12,268	$30,000	$30,900	$31,827	$32,782	$33,765	$34,778	$35,822	$36,896	$38,003	$39,143	$40,317
345 Telephone	3.0%	$7,419	$7,800	$8,034	$8,275	$8,523	$8,779	$9,042	$9,314	$9,593	$9,881	$10,177	$10,483
360 Audit	3.0%	$14,200	$14,300	$14,729	$15,171	$15,626	$16,095	$16,578	$17,075	$17,587	$18,115	$18,658	$19,218
361 Professional & Consulting	3.0%	$2,854	$5,000	$5,150	$5,305	$5,464	$5,628	$5,796	$5,970	$6,149	$6,334	$6,524	$6,720
363 Building Maintenance	3.0%	$11,424	$13,100	$13,493	$13,898	$14,315	$14,744	$15,186	$15,642	$16,111	$16,595	$17,093	$17,605
364 General Maintenance	3.0%	$113,500	$100,940	$103,968	$107,087	$110,300	$113,609	$117,017	$120,528	$124,143	$127,868	$131,704	$135,655
371 Travel & Training	3.0%	$6,423	$7,280	$7,498	$7,723	$7,955	$8,194	$8,440	$8,693	$8,953	$9,222	$9,499	$9,784
372 System Maintenance	3.0%	$28,016	$45,000	$46,350	$47,741	$49,173	$50,648	$52,167	$53,732	$55,344	$57,005	$58,715	$60,476
373 Internet Access	3.0%	$962	$1,035	$1,066	$1,098	$1,131	$1,165	$1,200	$1,236	$1,273	$1,311	$1,350	$1,391
375 Software Maint Agreement	3.0%	$5,450	$5,802	$5,976	$6,155	$6,340	$6,530	$6,726	$6,928	$7,136	$7,350	$7,570	$7,797
379 Ditch Maintenance	3.0%	$5,595	$3,500	$3,605	$3,713	$3,825	$3,939	$4,057	$4,179	$4,305	$4,434	$4,567	$4,704
380 Refund of Overpayment	3.0%	$205	$948	$976	$1,006	$1,036	$1,067	$1,099	$1,132	$1,166	$1,201	$1,237	$1,274
391 Advertising	3.0%	$14	$200	$206	$212	$219	$225	$232	$239	$246	$253	$261	$269
392 Drug Testing	3.0%	$616	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672

Table 4 - Operating Costs and Net Income

	Inflation or Deflation (–) Factor	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
394 Recruitment Expenditures	3.0%	$698	$300	$309	$318	$328	$338	$348	$358	$369	$380	$391	$403
405 EPA Sanitary Survey	3.0%	$2,330	$110,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
501 Insurance	3.0%	$38,669	$40,300	$41,509	$42,754	$44,037	$45,358	$46,719	$48,120	$49,564	$51,051	$52,582	$54,160
502 Direct Wtr. Asm't by Irrig Dis	3.0%	$12,253	$15,500	$15,965	$16,444	$16,937	$17,445	$17,969	$18,508	$19,063	$19,635	$20,224	$20,831
503 Water Assm't Taxes Withdrawal	3.0%	$2,814	$3,200	$3,296	$3,395	$3,497	$3,602	$3,710	$3,821	$3,936	$4,054	$4,175	$4,301
825 Administrative Allocation	3.0%	$402,837	$422,964	$435,653	$448,723	$462,184	$476,050	$490,331	$505,041	$520,192	$535,798	$551,872	$568,428
936 New Fire Hydrant Installations	3.0%	$0	$3,000	$3,090	$3,183	$3,278	$3,377	$3,478	$3,582	$3,690	$3,800	$3,914	$4,032
248 Meter Maintenance	3.0%	$0	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
400 Flow Meter Replacement	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
640 SCADA Upgrades	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
663 N. Federal Blvd.	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
735 S. Federal Waterlines	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
736 Riverview Rd Waterline	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
747 Riverton Water Supply Project	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
808 Mapping Printer	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
976 Booster Station Rehabilitation	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
621 Int Exp - DWSRF 019 SLIB Loan	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
633 DWSRF-99 Loan	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
635 JPA-11574-Main Street Booster Loan	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
342 Utility Locate Services	3.0%	$0	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672
923 WTP Maintenance Software	3.0%	$0	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
943 Trench Box	3.0%	$0	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
947 Fleet Management Software	3.0%	$0	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
948 Maintence Shop Compressor	3.0%	$0	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
952 NEOGOV	3.0%	$0	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
969 Master Plan	3.0%	$0	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
One-time Reduction of R&R Annuity	0.0%	-$97,576	-$97,576	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Annual Payment to Repair & Replacement (Table 7)	0.0%	$97,576	$97,576	$97,576	$97,576	$97,576	$97,576	$97,576	$97,576	$97,576	$97,576	$97,576	$97,576
User Charge Analysis Services	5.0%	$0	$6,587	$0	$0	$7,263	$0	$0	$8,007	$0	$0	$8,828	$0
Total, All CIP-related Payouts	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
Total Operating Costs		**$4,186,508**	**$2,296,176**	**$2,329,798**	**$2,397,420**	**$2,474,353**	**$2,538,870**	**$2,612,824**	**$2,697,025**	**$2,767,520**	**$2,848,400**	**$2,940,558**	**$3,017,584**
Net Income (or Loss)		-$1,516,173	$545,626	$708,322	$796,627	$813,317	$845,376	$870,963	$889,470	$924,955	$953,306	$973,858	$1,013,130
Working Capital Goal: 50%	In Dollars, That is:	$2,093,254	$1,148,088	$1,164,899	$1,198,710	$1,237,176	$1,269,435	$1,306,412	$1,348,513	$1,383,760	$1,424,200	$1,470,279	$1,508,792

Notes: The yellow highlighted items above will increase by inflation and by the rate at which the utility connects new customers.

Table 5 - Capital Improvement Program (CIP)

Riverton, WY; Water Rates, Scenario 2019-1

This table depicts capital improvements and their funding. Costs reflect inflation.

			Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)									
	Test Year Starting	Analysis (This) Year Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
	7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Planned Spending, Debt-paid Portion of Projects (CIP costs to be funded with loans are shown in this section.)												
Distribution N. Federal Water	$0	$0	$0	$529,124	$0	$0	$0	$0	$0	$0	$0	$0
Distribution RWS - PH III	$0	$0	$0	$3,862,696	$0	$0	$0	$0	$0	$0	$0	$0
Distribution Meter Replacement	$0	$0	$0	$368,000	$379,040	$0	$0	$0	$0	$0	$0	$0
Distribution South Railroad Waterline	$0	$0	$0	$0	$0	$0	$0	$98,957	$0	$0	$0	$0
Distribution Golf Course Waterline Replacement	$0	$0	$0	$0	$0	$74,284	$0	$0	$0	$0	$0	$0
Distribution Cowboy Lane Waterline	$0	$0	$0	$0	$0	$392,521	$0	$0	$0	$0	$0	$0
Distribution Gannett/Davis Water	$0	$0	$0	$0	$490,498	$0	$0	$0	$0	$0	$0	$0
Distribution Repair/Abandon Sundowner	$0	$0	$0	$0	$0	$0	$73,034	$0	$0	$0	$0	$0
Distribution Valley Circle	$0	$0	$0	$0	$0	$0	$0	$0	$125,309	$0	$0	$0
Distribution Maple Lane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$88,278	$0
Distribution N. 12th E./Pershing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$69,044
Irrigation Adams-North side	$0	$0	$0	$0	$0	$187,397	$0	$0	$0	$0	$0	$0
Irrigation Adams-South side	$0	$0	$0	$0	$0	$0	$191,280	$0	$0	$0	$0	$0
Irrigation Armstromg Ditch Trap/College View	$0	$0	$0	$0	$0	$0	$0	$44,777	$0	$0	$0	$0
Irrigation E Fremont/Main 10th East	$0	$0	$0	$0	$0	$0	$0	$0	$138,361	$0	$0	$0
Irrigation Sand trap to St.Margrets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$152,012	$0	$0
Irrigation 10th E Main to Main/Washington	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$176,144	$0
Irrigation E Washington/Adams 10th-13th	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$120,952
Irrigation Misc. Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
663 N. Federal Blvd.	$201,503	$0	$441,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
735 S. Federal Waterlines	$29,203	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
736 Riverview Rd Waterline	$12	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
747 Riverton Water Supply Project	$0	$1,280,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
976 Booster Station Rehabilitation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Closing Costs, Estimated at: 2.5%	$5,768	$0	$0	$127,023	$30,963	$19,619	$8,542	$29,019	$8,958	$4,814	$9,008	$6,383
Total Debt-paid Portion of Projects	$236,486	$1,280,000	$441,500	$4,916,282	$1,164,394	$716,872	$303,288	$1,001,127	$300,300	$156,827	$285,173	$196,380
Planned Spending, Grant-paid Portion of Projects (CIP costs to be grant-funded are shown here.)												
Distribution N. Federal Water	$0	$0	$251,063	$0	$0	$0	$0	$0	$0	$0	$0	$0
747 Riverton Water Supply Project	$0	$8,576,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
976 Booster Station Rehabilitation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Grant-paid Portion of Projects	$0	$8,576,000	$251,063	$0	$0	$0	$0	$0	$0	$0	$0	$0

Table 5 - Capital Improvement Program (CIP)

This table depicts capital improvements and their funding. Costs reflect inflation.

Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)

	Test Year Starting	Analysis (This) Year Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
	7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Planned Spending, Cash-paid Portion of Projects (CIP costs to be funded from reserves are shown here.)												
Distribution N. Federal Water	$0	$0	$83,688	$176,375	$0	$0	$0	$0	$0	$0	$0	$0
Distribution RWS - PH III	$0	$0	$0	$1,287,565	$0	$0	$0	$0	$0	$0	$0	$0
Distribution Meter Replacement	$0	$0	$0	$122,667	$126,347	$0	$0	$0	$0	$0	$0	$0
Distribution South Railroad Waterline	$0	$0	$0	$0	$0	$0	$0	$32,986	$0	$0	$0	$0
Distribution Golf Course Waterline Replacement	$0	$0	$0	$0	$0	$24,761	$0	$0	$0	$0	$0	$0
Distribution Cowboy Lane Waterline	$0	$0	$0	$0	$0	$130,840	$0	$0	$0	$0	$0	$0
Distribution Gannett/Davis Water	$0	$0	$0	$0	$163,499	$0	$0	$0	$0	$0	$0	$0
Distribution Repair/Abandon Sundowner	$0	$0	$0	$0	$0	$0	$24,345	$0	$0	$0	$0	$0
Distribution Valley Circle	$0	$0	$0	$0	$0	$0	$0	$0	$41,770	$0	$0	$0
Distribution Maple Lane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,426	$0
Distribution N. 12th E./Pershing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$23,015
Irrigation Adams-North side	$0	$0	$0	$0	$0	$62,466	$0	$0	$0	$0	$0	$0
Irrigation Adams-South side	$0	$0	$0	$0	$0	$0	$63,760	$0	$0	$0	$0	$0
Irrigation Armstromg Ditch Trap/College View	$0	$0	$0	$0	$0	$0	$0	$14,926	$0	$0	$0	$0
Irrigation E Fremont/Main 10th East	$0	$0	$0	$0	$0	$0	$0	$0	$46,120	$0	$0	$0
Irrigation Sand trap to St.Margrets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,671	$0	$0
Irrigation 10th E Main to Main/Washington	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$58,715	$0
Irrigation E Washington/Adams 10th-13th	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,317
Irrigation Misc. Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Water Production Old Pump House Roof Removal	$0	$0	$0	$9,813	$0	$0	$0	$0	$0	$0	$0	$0
Water Production Replace Pressure Valve at MSBS	$0	$0	$0	$0	$12,293	$0	$0	$0	$0	$0	$0	$0
Water Production Well - Electrical Disconnect	$0	$0	$0	$0	$16,391	$0	$0	$0	$0	$0	$0	$0
Water Production Paint CWC Water Tank	$0	$0	$0	$0	$24,586	$0	$0	$0	$0	$0	$0	$0
Water Production Well Pump 15	$0	$0	$0	$0	$9,561	$0	$0	$0	$0	$0	$0	$0
Water Production In Line Turbidimeter x4	$0	$0	$0	$0	$3,278	$0	$0	$0	$0	$0	$0	$0
Water Production WR Altitude Valve	$0	$0	$0	$0	$4,098	$0	$0	$0	$0	$0	$0	$0
Water Production SCADA and PLC Equipment	$0	$0	$0	$0	$8,195	$0	$0	$0	$0	$0	$0	$0
Water Production SCADA Computers	$0	$0	$0	$0	$9,561	$4,221	$0	$0	$0	$0	$0	$0
Water Production Streaming Current Monitor	$0	$0	$0	$0	$0	$4,221	$0	$0	$0	$0	$0	$0
Water Production HVAC	$0	$0	$0	$0	$0	$5,909	$0	$0	$0	$0	$0	$0
Water Production WTP Gate	$0	$0	$0	$0	$0	$0	$5,796	$0	$0	$0	$0	$0
Water Production Gear Reducer x4	$0	$0	$0	$0	$0	$0	$4,347	$0	$0	$0	$0	$0
Water Production Data Radios x15	$0	$0	$0	$0	$0	$0	$0	$31,344	$0	$0	$0	$0
Water Production WTP Influent Valve x3	$0	$0	$0	$0	$0	$0	$0	$17,911	$0	$0	$0	$0
Water Production Filter Media	$0	$0	$0	$0	$0	$0	$0	$31,344	$0	$0	$0	$0
Water Production Filter Drain Valve x3	$0	$0	$0	$0	$0	$0	$0	$31,344	$0	$0	$0	$0
Water Production BW Valve x3	$0	$0	$0	$0	$0	$0	$0	$31,344	$0	$0	$0	$0
Water Production Filter Eff Valves x3	$0	$0	$0	$0	$0	$0	$0	$31,344	$0	$0	$0	$0
Water Production Blower Valves x3	$0	$0	$0	$0	$0	$0	$0	$31,344	$0	$0	$0	$0
Water Production Filter to Waste Valves x3	$0	$0	$0	$0	$0	$0	$0	$31,344	$0	$0	$0	$0
Water Production Filter to waste valve	$0	$0	$0	$0	$0	$0	$0	$10,448	$0	$0	$0	$0

Table 5 - Capital Improvement Program (CIP)

This table depicts capital improvements and their funding. Costs reflect inflation.

Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)

	Test Year Starting	Analysis (This) Year Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
	7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Water Production BW Rate Valve	$0	$0	$0	$0	$0	$0	$0	$10,448	$0	$0	$0	$0
Water Production Raw Water Valve	$0	$0	$0	$0	$0	$0	$0	$7,463	$0	$0	$0	$0
Water Production BW Reclaim Valve	$0	$0	$0	$0	$0	$0	$0	$10,448	$0	$0	$0	$0
Water Production BW Rec Pump x2	$0	$0	$0	$0	$0	$0	$0	$0	$9,224	$0	$0	$0
Water Production W 14 Booster Pump	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,914	$0
Grant Acquisition Costs, Estimated at: 2.5%	$0	$214,400	$6,465	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Cash-paid Portion of Projects	$0	$214,400	$90,152	$1,596,420	$377,810	$232,418	$98,248	$324,036	$97,114	$50,671	$92,055	$63,332
Total CIP Costs	**$236,486**	**$10,070,400**	**$782,715**	**$6,512,702**	**$1,542,205**	**$949,289**	**$401,536**	**$1,325,162**	**$397,414**	**$207,497**	**$377,228**	**$259,712**
Debt Repayment												
Existing Debt Payments (Following is debt that was initiated during the test year or earlier.)												
621 Int Exp - DWSRF 019 SLIB Loan	$48,102	$48,102	$48,102	$48,102	$48,102	$48,102	$48,102	$48,102	$48,102	$48,102	$48,102	$48,102
633 DWSRF-99 Loan	$64,147	$64,147	$64,147	$64,147	$64,147	$64,147	$64,147	$64,147	$64,147	$64,147	$64,147	$64,147
635 JPA-11574-Main Street Booster Loan	$24,228	$24,228	$24,228	$24,228	$24,228	$24,228	$24,228	$24,228	$24,228	$24,228	$24,228	$24,228
New Debt Payments (Following are payments for projects to be paid with new debt. It is assumed these will be loan/lease-financed for a term of: 20 years at a 2.0% interest rate.)												
Loan Originated in Test Year		$14,463	$14,463	$14,463	$14,463	$14,463	$14,463	$14,463	$14,463	$14,463	$14,463	$14,463
747 Riverton Water Supply Project			$94,185	$94,185	$94,185	$94,185	$94,185	$94,185	$94,185	$94,185	$94,185	$94,185
Loan Originated in 1st Year				$28,321	$28,321	$28,321	$28,321	$28,321	$28,321	$28,321	$28,321	$28,321
Loan Originated in 2nd Year					$300,664	$300,664	$300,664	$300,664	$300,664	$300,664	$300,664	$300,664
Loan Originated in 3rd Year						$71,211	$71,211	$71,211	$71,211	$71,211	$71,211	$71,211
Loan Originated in 4th Year							$43,842	$43,842	$43,842	$43,842	$43,842	$43,842
Loan Originated in 5th Year								$18,548	$18,548	$18,548	$18,548	$18,548
Loan Originated in 6th Year									$61,226	$61,226	$61,226	$61,226
Loan Originated in 7th Year										$18,365	$18,365	$18,365
Loan Originated in 8th Year											$9,591	$9,591
Loan Originated in 9th Year												$17,440
Total Debt Payments	$136,477	$150,940	$245,125	$273,446	$574,109	$645,320	$689,161	$707,709	$768,935	$787,300	$796,891	$814,332
Total, All CIP-related Payouts	**$372,963**	**$10,221,340**	**$1,027,839**	**$6,786,148**	**$2,116,314**	**$1,594,609**	**$1,090,697**	**$2,032,872**	**$1,166,348**	**$994,798**	**$1,174,120**	**$1,074,043**

(This is the total cash required for this CIP and debt payment schedule. These amounts must come from utility income, reserves or outside sources, as shown in the next section.)

Table 5 - Capital Improvement Program (CIP)

This table depicts capital improvements and their funding. Costs reflect inflation.

Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)

	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
CIP Fund Sources (Following are the sources and amounts of funds expected to pay for the above CIP schedule.)												
Cash Reserves (Internal Funds)												
Debt and CIP Reserves Starting Balance	$1,943,990	$1,818,194	$2,510,079	$2,225,003	$1,159,931	$1,006,061	$961,562	$1,027,369	$863,541	$904,470	$997,454	$1,056,236
Working Capital Transferred in	$0	$0	$0	$760,293	$774,851	$813,117	$833,985	$847,370	$889,707	$912,866	$927,779	$974,616
Debt and CIP Reserves Interest Earned (or Paid)	$0	$36,364	$50,202	$44,500	$23,199	$20,121	$19,231	$20,547	$17,271	$18,089	$19,949	$21,125
Total Available Internal Funds	$1,943,990	$1,854,558	$2,560,280	$3,029,796	$1,957,980	$1,839,299	$1,814,778	$1,895,286	$1,770,519	$1,835,426	$1,945,183	$2,051,978
Grant and Loan Proceeds (External Funds)												
33405 WWDC Grant Water Supply Proj	$9,294	$698,810	$251,063	$0	$0	$0	$0	$0	$0	$0	$0	$0
33438 WDC Loan-Riverton Water Supply Pro	$1,387	$104,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
33489 N FEDERAL DWSRF LOAN	$0	$217,750	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
747 Riverton Water Supply Project Grant	$0	$8,576,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in Test Year	$236,486	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
747 Riverton Water Supply Project		$1,280,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 1st Year			$441,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 2nd Year				$4,916,282	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 3rd Year					$1,164,394	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 4th Year						$716,872	$0	$0	$0	$0	$0	$0
Loan Originated in 5th Year							$303,288	$0	$0	$0	$0	$0
Loan Originated in 6th Year								$1,001,127	$0	$0	$0	$0
Loan Originated in 7th Year									$300,300	$0	$0	$0
Loan Originated in 8th Year										$156,827	$0	$0
Loan Originated in 9th Year											$285,173	$0
Loan Originated in 10th Year												$196,380
Total Available External Funds	$247,167	$10,876,860	$692,563	$4,916,282	$1,164,394	$716,872	$303,288	$1,001,127	$300,300	$156,827	$285,173	$196,380
Total Available Funds	**$2,191,157**	**$12,731,418**	**$3,252,843**	**$7,946,079**	**$3,122,374**	**$2,556,171**	**$2,118,066**	**$2,896,412**	**$2,070,818**	**$1,992,252**	**$2,230,356**	**$2,248,357**
Outcomes (This CIP spending and funding plan will result in the following cash needs and ending balances each year.)												
Total Available Funds	**$2,191,157**	**$12,731,418**	**$3,252,843**	**$7,946,079**	**$3,122,374**	**$2,556,171**	**$2,118,066**	**$2,896,412**	**$2,070,818**	**$1,992,252**	**$2,230,356**	**$2,248,357**
Total, All CIP-related Payouts	**$372,963**	**$10,221,340**	**$1,027,839**	**$6,786,148**	**$2,116,314**	**$1,594,609**	**$1,090,697**	**$2,032,872**	**$1,166,348**	**$994,798**	**$1,174,120**	**$1,074,043**
Debt and CIP Reserves Ending Balances	**$1,818,194**	**$2,510,079**	**$2,225,003**	**$1,159,931**	**$1,006,061**	**$961,562**	**$1,027,369**	**$863,541**	**$904,470**	**$997,454**	**$1,056,236**	**$1,174,314**

Notes: Many improvement projects are needed, mainly to replace and upgrade existing water and sewer lines under and along streets. Doing both water and sewer line replacements at the same time is usually a best management practice for infrastructure management. To be somewhat conservative, it was assumed that most projects would be paid for mainly with loans and a small percentage of reserves.

Table 6 - Equipment Replacement Schedule - Detailed

Riverton, WY; Water Rates, Scenario 2019-1

Year Beginning	Misc R&R	Trench Box	CM Operations Pickup	WTP Pickup	WTP Pickup	WTP Lawn Mower	400 Flow Meter Replacement	640 SCADA Upgrades	808 Mapping Printer	WTP Maintenance Software	Total Annual Replacement Costs
7/1/18	$50,000	$0	$0	$0	$0	$0	$55,634	$0	$3,448	$0	$109,083
7/1/19	$50,000	$12,500	$0	$0	$0	$0	$0	$0	$0	$8,500	$71,000
7/1/20	$50,000	$0	$15,500	$0	$0	$0	$0	$0	$0	$0	$65,500
7/1/21	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/22	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/23	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/24	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/25	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/26	$50,000	$0	$0	$35,000	$0	$0	$0	$0	$0	$0	$85,000
7/1/27	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/28	$50,000	$0	$0	$0	$0	$0	$55,634	$0	$3,448	$0	$109,083
7/1/29	$50,000	$12,500	$0	$0	$0	$0	$0	$0	$0	$0	$62,500
7/1/30	$50,000	$0	$15,500	$0	$0	$15,000	$0	$0	$0	$0	$80,500
7/1/31	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/32	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/33	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/34	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$8,500	$58,500
7/1/35	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/36	$50,000	$0	$0	$35,000	$0	$0	$0	$0	$0	$0	$85,000
7/1/37	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/38	$50,000	$0	$0	$0	$0	$0	$55,634	$0	$3,448	$0	$109,083
7/1/39	$50,000	$12,500	$0	$0	$0	$0	$0	$0	$0	$0	$62,500
7/1/40	$50,000	$0	$15,500	$0	$0	$15,000	$0	$0	$0	$0	$80,500
7/1/41	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/42	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000

Table 7 - Equipment Replacement Annuity Calculation

Riverton, WY; Water Rates, Scenario 2019-1

This table calculates the annual annuity (savings deposit) needed to build replacement (R&R) reserves. This annuity amount should actually be deposited in a savings account. The annuity amount, called the "Required Annual Deposit (Annuity) to Replacement Account" below, should be included in the utility's general budget as a cost. As a result, all replacement and refurbishment scheduled in Table 6, the detailed replacement schedule, would be paid for out of R&R reserves and not out of the utility's general budget.

In simple terms, the annuity at the bottom of this table should be deposited into an account each year and R&R projects should be paid for out of that account.

3.00% Average Inflation Rate for the Following Water System Equipment for the Term of This Replacement Schedule

2.00% Average Interest Rate on Balances Invested for the Term of This Replacement Schedule

2.00% Average Interest Rate on Amounts Borrowed for the Term of This Replacement Schedule

Year Beginning	Schedule Year	This Year's Costs in Current Dollars	Future Annual Inflated Net Costs	Interest Earned on Prior Balance	End of Year Balance in Future Dollars	Minimum Desired End of Year Balance in Future Dollars
7/1/18	Analysis Year	$109,083	$109,083	$0	-$109,083	$233,417
7/1/19	1st Year	$71,000	$73,130	-$2,182	-$86,819	$240,419
7/1/20	2nd Year	$65,500	$69,489	-$1,736	-$60,468	$247,632
7/1/21	3rd Year	$50,000	$54,636	-$1,209	-$18,738	$255,061
7/1/22	4th Year	$50,000	$56,275	-$375	$22,187	$262,712
7/1/23	5th Year	$50,000	$57,964	$444	$62,243	$270,594
7/1/24	6th Year	$50,000	$59,703	$1,245	$101,361	$278,712
7/1/25	7th Year	$50,000	$61,494	$2,027	$139,471	$287,073
7/1/26	8th Year	$85,000	$107,675	$2,789	$132,160	$295,685
7/1/27	9th Year	$50,000	$65,239	$2,643	$167,141	$304,556
7/1/28	10th Year	$109,083	$146,598	$3,343	$121,461	$313,692
7/1/29	11th Year	$62,500	$86,515	$2,429	$134,952	$323,103
7/1/30	12th Year	$80,500	$114,774	$2,699	$120,453	$332,796
7/1/31	13th Year	$50,000	$73,427	$2,409	$147,011	$342,780
7/1/32	14th Year	$50,000	$75,629	$2,940	$171,897	$353,063
7/1/33	15th Year	$50,000	$77,898	$3,438	$195,013	$363,655
7/1/34	16th Year	$58,500	$93,875	$3,900	$202,613	$374,565
7/1/35	17th Year	$50,000	$82,642	$4,052	$221,599	$385,802
7/1/36	18th Year	$85,000	$144,707	$4,432	$178,900	$397,376
7/1/37	19th Year	$50,000	$87,675	$3,578	$192,378	$409,297

Notes: There is currently no R&R schedule. Average R&R costs were instead estimated. A Discretionary Annuity amount was added so that at the end of the 20-year modeling period, the balance will equal the average of the annual replacement cost amounts, less interest paid for borrowing during the negative balance years.

Starting Account Balance	$0	$233,417
Minimum Annual Annuity	$89,153	Minimum Desired Balance in Today's Dollars
Discretionary Annuity	$8,423	

Required Annual Deposit (Annuity) to Replacement Account **$97,576**

(This amount is included in Table 4 as an operating cost.)

Table 8 - Average Cost Classification

Riverton, WY; Water Rates, Scenario 2019-1

This table distributes costs from a representative year (the "average rate structure basis year) to fixed and variable categories (see Definitions) in order to calculate the "cost of service" rate structure for that year.

The average rate structure basis year runs from: 7/1/2022 through 6/30/2023

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Variable Cost Percentage	Average Fixed Cost	Average Variable Cost
109 Salaries and Wages	$716,561	33.3%	66.7%	$238,830	$477,731
120 Overtime	$0	33.3%	66.7%	$0	$0
191 FICA	$55,966	33.3%	66.7%	$18,653	$37,312
192 Health Insurance	$160,717	33.3%	66.7%	$53,567	$107,150
193 Retirement	$104,661	33.3%	66.7%	$34,884	$69,778
196 Workers Compensation	$23,276	33.3%	66.7%	$7,758	$15,518
211 Office Supplies	$3,996	100.0%	0.0%	$3,996	$0
212 Office Equipment	$2,251	100.0%	0.0%	$2,251	$0
215 Computer Supplies	$2,921	100.0%	0.0%	$2,921	$0
224 Laboratory Supplies	$68,656	100.0%	0.0%	$68,656	$0
229 Uniforms	$1,182	100.0%	0.0%	$1,182	$0
231 Gas & Oil	$10,287	33.3%	66.7%	$3,429	$6,858
232 Diesel	$2,532	33.3%	66.7%	$844	$1,688
234 Veh. & Equip. Maintenance	$7,991	33.3%	66.7%	$2,663	$5,328
241 Tools & Supplies	$7,034	33.3%	66.7%	$2,345	$4,690
247 Safety Supplies	$3,827	33.3%	66.7%	$1,275	$2,551
249 Treatment Chemicals	$113,274	0.0%	100.0%	$0	$113,274
312 Postage	$7,419	100.0%	0.0%	$7,419	$0
314 Consumer Confidence	$4,502	100.0%	0.0%	$4,502	$0
333 Dues	$439	33.3%	66.7%	$146	$293
334 Bank Charges	$8,441	100.0%	0.0%	$8,441	$0
340 Electricity for Water Wells	$266,194	0.0%	100.0%	$0	$266,194
341 Electricity	$48,481	0.0%	100.0%	$0	$48,481
343 Heat	$9,004	33.3%	66.7%	$3,001	$6,003
344 Carriage Agreement	$33,765	100.0%	0.0%	$33,765	$0
345 Telephone	$8,779	100.0%	0.0%	$8,779	$0
360 Audit	$16,095	100.0%	0.0%	$16,095	$0
361 Professional & Consulting	$5,628	100.0%	0.0%	$5,628	$0
363 Building Maintenance	$14,744	33.3%	66.7%	$4,914	$9,830
364 General Maintenance	$113,609	33.3%	66.7%	$37,866	$75,743
371 Travel & Training	$8,194	33.3%	66.7%	$2,731	$5,463
372 System Maintenance	$50,648	33.3%	66.7%	$16,881	$33,767
373 Internet Access	$1,165	100.0%	0.0%	$1,165	$0
375 Software Maint Agreement	$6,530	100.0%	0.0%	$6,530	$0
379 Ditch Maintenance	$3,939	33.3%	66.7%	$1,313	$2,626
380 Refund of Overpayment	$1,067	100.0%	0.0%	$1,067	$0
391 Advertising	$225	100.0%	0.0%	$225	$0

Table 8 - Average Cost Classification

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Variable Cost Percentage	Average Fixed Cost	Average Variable Cost
392 Drug Testing	$563	33.3%	66.7%	$188	$375
394 Recruitment Expenditures	$338	33.3%	66.7%	$113	$225
405 EPA Sanitary Survey	$0	100.0%	0.0%	$0	$0
501 Insurance	$45,358	100.0%	0.0%	$45,358	$0
502 Direct Wtr. Asm't by Irrig Dis	$17,445	33.3%	66.7%	$5,815	$11,631
503 Water Assm't Taxes Withdrawal	$3,602	33.3%	66.7%	$1,200	$2,401
825 Administrative Allocation	$476,050	100.0%	0.0%	$476,050	$0
936 New Fire Hydrant Installations	$3,377	100.0%	0.0%	$3,377	$0
248 Meter Maintenance	$0	0.0%	100.0%	$0	$0
400 Flow Meter Replacement	$0	0.0%	100.0%	$0	$0
640 SCADA Upgrades	$0	100.0%	0.0%	$0	$0
663 N. Federal Blvd.	$0	33.3%	66.7%	$0	$0
735 S. Federal Waterlines	$0	33.3%	66.7%	$0	$0
736 Riverview Rd Waterline	$0	33.3%	66.7%	$0	$0
747 Riverton Water Supply Project	$0	33.3%	66.7%	$0	$0
808 Mapping Printer	$0	33.3%	66.7%	$0	$0
976 Booster Station Rehabilitation	$0	33.3%	66.7%	$0	$0
621 Int Exp - DWSRF 019 SLIB Loan	$0	33.3%	66.7%	$0	$0
633 DWSRF-99 Loan	$0	33.3%	66.7%	$0	$0
635 JPA-11574-Main Street Booster Loan	$0	33.3%	66.7%	$0	$0
342 Utility Locate Services	$563	33.3%	66.7%	$188	$375
923 WTP Maintenance Software	$0	33.3%	66.7%	$0	$0
943 Trench Box	$0	33.3%	66.7%	$0	$0
Annual Payment to Repair & Replacement (Table 7)	$97,576	33.3%	66.7%	$32,522	$65,054
User Charge Analysis Services	$0	42.9%	57.1%	$0	$0
Total, All CIP-related Payouts	$1,594,609	33.3%	66.7%	$531,483	$1,063,126
Grand Total Costs, Weighted Avg Percentages	$4,133,479	41.1%	58.9%	$1,700,014	$2,433,465

Bases for Cost to Serve Rate Structure

		100%	$4,133,479
Number of Customers During Year Defined Above =	4,381	Unbilled-for Water is Estimated at	34%
Billed Volume, in Gallons, During Year Defined Above =	473,276,886	Unbilled-for Water is Estimated at This Percentage of Average Cost	44%
Average Fixed Cost per User per Month During Year Defined Above =	$32.34	Resulting Cost of Unbilled-for Water	$539,852
Average Variable Cost to Produce per 1,000 Gallons During Year Defined Above =	$5.14	Test Year Customer Metered Volume, in Gallons	469,496,000
Gallons per Billing Cycle Used by Average Residential Customer =	6,987	+ Test Year Unbilled-for Water, in Gallons	237,830,000
		Total Test Year Volume, in Gallons, From Master Meter Readings	707,326,000

Table 9 - Marginal Cost Classification

Riverton, WY; Water Rates, Scenario 2019-1

The utility incurs "marginal" costs. These costs are unavoidable. Thus, the utility must collect minimal fees from various customers to "break even" on a marginal cost basis. Costs vary by customer type and volume used.

In the calculations below, it is assumed that marginal fixed costs are being calculated for: Snowbirds and Extra Units

In the calculations below, it is assumed that marginal costs are being calculated for: High-volume Customers

The marginal rate structure basis year runs from: 7/1/2022 through 6/30/2023

Cost Items	Average Fixed Cost	Average Variable Cost	Marginal Fixed Cost Percentage	Marginal Variable Cost Percentage	Marginal Fixed Cost	Marginal Variable Cost
109 Salaries and Wages	$238,830	$477,731	33%	33%	$79,602	$159,228
120 Overtime	$0	$0	33%	33%	$0	$0
191 FICA	$18,653	$37,312	33%	33%	$6,217	$12,436
192 Health Insurance	$53,567	$107,150	33%	33%	$17,854	$35,713
193 Retirement	$34,884	$69,778	33%	33%	$11,627	$23,257
196 Workers Compensation	$7,758	$15,518	33%	33%	$2,586	$5,172
211 Office Supplies	$3,996	$0	33%	33%	$1,332	$0
212 Office Equipment	$2,251	$0	33%	33%	$750	$0
215 Computer Supplies	$2,921	$0	50%	50%	$1,460	$0
224 Laboratory Supplies	$68,656	$0	33%	33%	$22,883	$0
229 Uniforms	$1,182	$0	50%	50%	$591	$0
231 Gas & Oil	$3,429	$6,858	50%	50%	$1,714	$3,429
232 Diesel	$844	$1,688	50%	50%	$422	$844
234 Veh. & Equip. Maintenance	$2,663	$5,328	50%	50%	$1,332	$2,664
241 Tools & Supplies	$2,345	$4,690	33%	33%	$781	$1,563
247 Safety Supplies	$1,275	$2,551	33%	33%	$425	$850
249 Treatment Chemicals	$0	$113,274	33%	33%	$0	$37,754
312 Postage	$7,419	$0	33%	33%	$2,473	$0
314 Consumer Confidence	$4,502	$0	33%	33%	$1,501	$0
333 Dues	$146	$293	33%	33%	$49	$98
334 Bank Charges	$8,441	$0	33%	33%	$2,813	$0
340 Electricity for Water Wells	$0	$266,194	100%	100%	$0	$266,194
341 Electricity	$0	$48,481	100%	100%	$0	$48,481
343 Heat	$3,001	$6,003	100%	100%	$3,001	$6,003
344 Carriage Agreement	$33,765	$0	33%	33%	$11,254	$0
345 Telephone	$8,779	$0	33%	33%	$2,926	$0
360 Audit	$16,095	$0	33%	33%	$5,364	$0
361 Professional & Consulting	$5,628	$0	33%	33%	$1,876	$0
363 Building Maintenance	$4,914	$9,830	50%	50%	$2,457	$4,915
364 General Maintenance	$37,866	$75,743	50%	50%	$18,933	$37,872
371 Travel & Training	$2,731	$5,463	33%	33%	$910	$1,821
372 System Maintenance	$16,881	$33,767	100%	100%	$16,881	$33,767
373 Internet Access	$1,165	$0	33%	33%	$388	$0
375 Software Maint Agreement	$6,530	$0	33%	33%	$2,177	$0
379 Ditch Maintenance	$1,313	$2,626	100%	100%	$1,313	$2,626
380 Refund of Overpayment	$1,067	$0	33%	33%	$356	$0
391 Advertising	$225	$0	33%	33%	$75	$0

Table 9 - Marginal Cost Classification

Cost Items	Average Fixed Cost	Average Variable Cost	Marginal Fixed Cost Percentage	Marginal Variable Cost Percentage	Marginal Fixed Cost	Marginal Variable Cost
392 Drug Testing	$188	$375	33%	33%	$63	$125
394 Recruitment Expenditures	$113	$225	33%	33%	$38	$75
405 EPA Sanitary Survey	$0	$0	100%	100%	$0	$0
501 Insurance	$45,358	$0	33%	33%	$15,118	$0
502 Direct Wtr. Asm't by Irrig Dis	$5,815	$11,631	33%	33%	$1,938	$3,877
503 Water Assm't Taxes Withdrawal	$1,200	$2,401	33%	33%	$400	$800
825 Administrative Allocation	$476,050	$0	33%	33%	$158,667	$0
936 New Fire Hydrant Installations	$3,377	$0	33%	33%	$1,125	$0
248 Meter Maintenance	$0	$0	33%	33%	$0	$0
400 Flow Meter Replacement	$0	$0	33%	33%	$0	$0
640 SCADA Upgrades	$0	$0	33%	33%	$0	$0
663 N. Federal Blvd.	$0	$0	33%	33%	$0	$0
735 S. Federal Waterlines	$0	$0	33%	33%	$0	$0
736 Riverview Rd Waterline	$0	$0	33%	33%	$0	$0
747 Riverton Water Supply Project	$0	$0	33%	33%	$0	$0
808 Mapping Printer	$0	$0	33%	33%	$0	$0
976 Booster Station Rehabilitation	$0	$0	33%	33%	$0	$0
621 Int Exp - DWSRF 019 SLIB Loan	$0	$0	33%	33%	$0	$0
633 DWSRF-99 Loan	$0	$0	33%	33%	$0	$0
635 JPA-11574-Main Street Booster Loan	$0	$0	33%	33%	$0	$0
342 Utility Locate Services	$188	$375	33%	33%	$63	$125
923 WTP Maintenance Software	$0	$0	33%	33%	$0	$0
943 Trench Box	$0	$0	33%	33%	$0	$0
947 Fleet Management Software	$0	$0	33%	33%	$0	$0
948 Maintence Shop Compressor	$0	$0	33%	33%	$0	$0
952 NEOGOV	$0	$0	33%	33%	$0	$0
969 Master Plan	$0	$0	33%	33%	$0	$0
Annual Payment to Repair & Replacement (Table 7)	$32,522	$65,054	33%	33%	$10,840	$21,682
User Charge Analysis Services	$0	$0	33%	33%	$0	$0
Total, All CIP-related Payouts	$531,483	$1,063,126	33%	33%	$177,143	$354,340
Grand Total All Costs	$1,700,014	$2,433,465			$589,717	$1,065,711
	$4,133,479				$1,655,428	

Marginal Fixed and Variable Cost Bases
(For the Customer Type Listed Above)

	Monthly Marginal Fixed Cost per Customer	Marginal Variable Cost per 1,000 Gallons
	$11.22	
Marginal Fixed Cost as a Percent of Total Fixed Cost:	35%	$2.25
Marginal Variable Cost as a Percent of Total Variable Cost:		44%

Table 10 - Initial Rate Adjustments and Resulting Revenues

Riverton, WY; Water Rates, Scenario 2019-1

This table calculates a new set of user charge rates and the revenues they would generate.

Out of City Multiplier 125% **Conservation Rate Block Multiplier** 115% **Other Multiplier** 100%

After rate adjustments are made, customers will be billed monthly.

Sales to be billed this year: Sales at the current (Test Year) rates (gray highlighted column) will apply until rates are adjusted. Sales at the modeled rates (yellow highlighted column) would apply if the modeled rates are adopted. The grand total "blended" sales revenues are the total revenues generated by the two different sets of rates. Those revenues show in the right-most column.

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
	0	999	$262,637	795	$20.69	0.000	$2.61	$784	$263,421
	1,000	1,999	$135,600	256	$20.69	0.000	$2.61	$395	$135,995
	2,000	2,999	$152,316	385	$20.69	0.000	$2.61	$450	$152,766
	3,000	3,999	$145,691	412	$20.69	0.000	$2.61	$433	$146,124
	4,000	4,999	$120,432	346	$20.69	0.000	$2.61	$358	$120,790
	5,000	5,999	$91,223	248	$20.69	0.000	$2.61	$271	$91,493
	6,000	6,999	$70,774	176	$20.69	0.000	$3.00	$220	$70,994
	7,000	7,999	$56,444	130	$20.69	0.000	$3.00	$175	$56,619
	8,000	8,999	$45,973	96	$20.69	0.000	$3.00	$143	$46,116
	9,000	9,999	$38,647	74	$20.69	0.000	$3.00	$120	$38,767
	10,000	14,999	$139,581	231	$20.69	0.000	$3.00	$435	$140,015
	15,000	19,999	$93,709	149	$20.69	0.000	$3.00	$292	$94,001
	20,000	24,999	$64,521	103	$20.69	0.000	$3.00	$201	$64,722
Residential	25,000	29,999	$44,723	72	$20.69	0.000	$3.00	$139	$44,862
	30,000	34,999	$30,146	47	$20.69	0.000	$3.00	$94	$30,240
	35,000	44,999	$36,111	52	$20.69	0.000	$3.00	$113	$36,224
	45,000	54,999	$18,622	22	$20.69	0.000	$3.00	$58	$18,680
	55,000	64,999	$11,612	12	$20.69	0.000	$3.00	$36	$11,648
	65,000	74,999	$7,669	7	$20.69	0.000	$3.00	$24	$7,693
	75,000	84,999	$5,535	5	$20.69	0.000	$3.00	$17	$5,552
	85,000	94,999	$3,793	4	$20.69	0.000	$3.00	$12	$3,804
	95,000	104,999	$2,703	2	$20.69	0.000	$3.00	$8	$2,711
	105,000	114,999	$1,987	2	$20.69	0.000	$3.00	$6	$1,993
	115,000	124,999	$1,409	1	$20.69	0.000	$3.00	$4	$1,414
	125,000	134,999	$1,102	1	$20.69	0.000	$3.00	$3	$1,105
	135,000	144,999	$842	1	$20.69	0.000	$3.00	$3	$845
	145,000	477,000	$6,726	2	$20.69	0.000	$3.00	$21	$6,747

Table 10 - Initial Rate Adjustments and Resulting Revenues

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
Out-of-City Residential	0	999	$2,564	5	$25.86	0.000	$3.26	$8	$2,571
	1,000	1,999	$1,677	2	$25.86	0.000	$3.26	$5	$1,682
	2,000	2,999	$2,196	4	$25.86	0.000	$3.26	$6	$2,202
	3,000	3,999	$2,264	5	$25.86	0.000	$3.26	$7	$2,271
	4,000	4,999	$1,842	4	$25.86	0.000	$3.26	$5	$1,847
	5,000	5,999	$1,795	4	$25.86	0.000	$3.26	$5	$1,800
	6,000	6,999	$1,390	3	$25.86	0.000	$3.75	$4	$1,394
	7,000	7,999	$1,344	4	$25.86	0.000	$3.75	$4	$1,349
	8,000	8,999	$693	1	$25.86	0.000	$3.75	$2	$695
	9,000	9,999	$720	2	$25.86	0.000	$3.75	$2	$722
	10,000	14,999	$1,748	3	$25.86	0.000	$3.75	$5	$1,753
	15,000	19,999	$861	1	$25.86	0.000	$3.75	$3	$863
	20,000	24,999	$585	1	$25.86	0.000	$3.75	$2	$586
	25,000	29,999	$345	1	$25.86	0.000	$3.75	$1	$346
	30,000	34,999	$260	1	$25.86	0.000	$3.75	$1	$260
	35,000	44,999	$98	0	$25.86	0.000	$3.75	$0	$99
	45,000	54,999	$92	0	$25.86	0.000	$3.75	$0	$92
	55,000	64,999	$26	0	$25.86	0.000	$3.75	$0	$26
	65,000	74,999	$0	0	$25.86	0.000	$3.75	$0	$0
	75,000	84,999	$0	0	$25.86	0.000	$3.75	$0	$0
	85,000	94,999	$0	0	$25.86	0.000	$3.75	$0	$0
	95,000	104,999	$0	0	$25.86	0.000	$3.75	$0	$0
	105,000	114,999	$0	0	$25.86	0.000	$3.75	$0	$0
	115,000	124,999	$0	0	$25.86	0.000	$3.75	$0	$0
	125,000	134,999	$0	0	$25.86	0.000	$3.75	$0	$0
	135,000	144,999	$0	0	$25.86	0.000	$3.75	$0	$0
	145,000	477,000	$0	0	$25.86	0.000	$3.75	$0	$0
Commercial	0	999	$44,108	136	$20.69	0.000	$2.61	$132	$44,239
	1,000	1,999	$35,924	115	$20.69	0.000	$2.61	$108	$36,032
	2,000	2,999	$22,691	64	$20.69	0.000	$2.61	$67	$22,758
	3,000	3,999	$16,177	40	$20.69	0.000	$2.61	$48	$16,224
	4,000	4,999	$13,029	30	$20.69	0.000	$2.61	$38	$13,067
	5,000	5,999	$10,904	24	$20.69	0.000	$2.61	$32	$10,936
	6,000	6,999	$9,671	18	$20.69	0.000	$3.00	$29	$9,700
	7,000	7,999	$8,042	13	$20.69	0.000	$3.00	$24	$8,066
	8,000	8,999	$6,846	9	$20.69	0.000	$3.00	$20	$6,866
	9,000	9,999	$6,662	9	$20.69	0.000	$3.00	$20	$6,681
	10,000	14,999	$26,889	32	$20.69	0.000	$3.00	$79	$26,969
	15,000	19,999	$20,467	23	$20.69	0.000	$3.00	$60	$20,527
	20,000	24,999	$20,591	15	$20.69	0.000	$3.00	$45	$20,636
	25,000	29,999	$16,956	11	$20.69	0.000	$3.00	$37	$16,993
	30,000	34,999	$13,969	8	$20.69	0.000	$3.00	$30	$13,999
	35,000	44,999	$22,096	10	$20.69	0.000	$3.00	$48	$22,143
	45,000	54,999	$17,269	7	$20.69	0.000	$3.00	$37	$17,306
	55,000	64,999	$14,121	5	$20.69	0.000	$3.00	$30	$14,150
	65,000	74,999	$12,185	3	$20.69	0.000	$3.00	$26	$12,211
	75,000	84,999	$10,714	3	$20.69	0.000	$3.00	$23	$10,736
	85,000	94,999	$9,495	2	$20.69	0.000	$3.00	$20	$9,515
	95,000	104,999	$8,703	2	$20.69	0.000	$3.00	$18	$8,721
	105,000	114,999	$7,903	1	$20.69	0.000	$3.00	$16	$7,919
	115,000	124,999	$7,219	2	$20.69	0.000	$3.00	$15	$7,234
	125,000	134,999	$6,481	1	$20.69	0.000	$3.00	$13	$6,494
	135,000	144,999	$6,263	1	$20.69	0.000	$3.00	$13	$6,276
	145,000	1,087,000	$115,407	12	$20.69	0.000	$3.00	$239	$115,646

Table 10 - Initial Rate Adjustments and Resulting Revenues

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
Residential Master Meter	0	999	$123	0	$20.69	0.000	$2.61	$0	$123
	1,000	1,999	$123	0	$20.69	0.000	$2.61	$0	$123
	2,000	2,999	$154	0	$20.69	0.000	$2.61	$0	$155
	3,000	3,999	$213	1	$20.69	0.000	$2.61	$1	$213
	4,000	4,999	$118	0	$20.69	0.000	$2.61	$0	$118
	5,000	5,999	$100	0	$20.69	0.000	$2.61	$0	$100
	6,000	6,999	$134	0	$20.69	0.000	$3.00	$0	$134
	7,000	7,999	$97	0	$20.69	0.000	$3.00	$0	$97
	8,000	8,999	$97	0	$20.69	0.000	$3.00	$0	$97
	9,000	9,999	$97	0	$20.69	0.000	$3.00	$0	$97
	10,000	14,999	$501	0	$20.69	0.000	$3.00	$2	$503
	15,000	19,999	$519	0	$20.69	0.000	$3.00	$2	$521
	20,000	24,999	$528	1	$20.69	0.000	$3.00	$2	$529
	25,000	29,999	$339	0	$20.69	0.000	$3.00	$1	$340
	30,000	34,999	$284	0	$20.69	0.000	$3.00	$1	$284
	35,000	44,999	$370	1	$20.69	0.000	$3.00	$1	$371
	45,000	54,999	$184	0	$20.69	0.000	$3.00	$1	$184
	55,000	64,999	$202	0	$20.69	0.000	$3.00	$1	$203
	65,000	74,999	$113	0	$20.69	0.000	$3.00	$0	$113
	75,000	84,999	$81	0	$20.69	0.000	$3.00	$0	$82
	85,000	94,999	$26	0	$20.69	0.000	$3.00	$0	$26
	95,000	104,999	$26	0	$20.69	0.000	$3.00	$0	$26
	105,000	114,999	$26	0	$20.69	0.000	$3.00	$0	$26
	115,000	124,999	$39	0	$20.69	0.000	$3.00	$0	$40
	125,000	134,999	$0	0	$20.69	0.000	$3.00	$0	$0
	135,000	144,999	$0	0	$20.69	0.000	$3.00	$0	$0
	145,000	477,000	$0	0	$20.69	0.000	$3.00	$0	$0
Hydrant flat rate	0	999	$0	0	$49.33	0.000	$0.00	$0	$0
	145,000	477,000	$0	0	$49.33	0.000	$0.00	$0	$0
Additional Pads Served by Master Meters	0	999	$17,462	79	$0.00	0.000	$0.00	$0	$17,462
	1,000	1,999	$0	0	$0.00	0.000	$0.00	$0	$0
	145,000	477,000	$0	0	$0.00	0.000	$0.00	$0	$0
Data Loss Adjustment	0	299,999,999	$135,204	0	$0.00	0.000	$2.61	$379	$135,582
Total Rate Revenue at Current Rates			$2,278,964		Total Rate Revenue at Modeled Rates			$6,540	
Prorated capacity surcharges from Table 16 (minimum charges above do not include them)									$364
Total Blended Rate Revenues for the Year [2]									$2,285,868

Note 1, New Minimum Charge Base Rates: If meter or connection size-based minimum charges are to be used, and the user classes modeled above include meter or connection sizes, the amounts shown in this column include meter or connection size surcharges as calculated in Table 16. Either way, the narrative report includes the rates and surcharges to assess.

Note 2, Blended Rate Revenues: During the year when rates will be adjusted, rate revenues generated will be "blended" revenues - part collected at the current rates and part collected at the adjusted rates. The table above calculates both kinds of revenue and totals them in the right-most column. Therefore, the anticipated timing of rate adjustment shown at the top of this table will cause rates to be charged as follows:

12.0	months at the old user charge rates	and	0.0	months at the new user charge rates.

Table 11 - Capacity Costs

Riverton, WY; Water Rates, Scenario 2019-1

System capacity and connection costs WILL be recovered in one way by default, or a combination of ways by design. That could be through regular user fees, in which case existing customers pay the costs to bring on new customers. It could be through system development or connection fees, in which case new customers pay "up front" for the capacity they are granted. It could be through on-going capacity surcharges added to minimum charges, preferably based on meter or connection size, in which case each customer pays for the capacity they are granted over time. Or, it could be by a combination of these. This table shows capacity costs to expect. From these costs, system development fees and surcharges were developed in Tables 13 through 16.

Peak and Base Flow Capacity Costs

	Fixed Assets Original Value (Capacity Cost)	% of Value Attributable to Peak Flow Capacity	Peak Flow Capacity Cost	Annual Peak Flow Capacity Cost (40-year Depreciation)	% of Value Attributable to Base Flow Capacity	Base Flow Capacity Cost	Annual Base Flow Capacity Cost (40-year Depreciation)
	$21,716,075	50.0%	$10,858,037	$632,786	50.0%	$10,858,037	$632,786
Totals	$21,716,075		$10,858,037	$632,786		$10,858,037	$632,786

How Capacity Costs Will Be Recovered

These costs are modeled to be recovered from system development fees in Table 14

Peak Flow Capacity Costs to be Recovered by System Development Fees

1.970%	Target Percentage of Costs to Recover
$12,466	Target Portion of Costs to Recover
$473	Cost per Peak Flow Capacity Share

Base Flow Capacity Costs to be Recovered by System Development Fees

0.0%	Target Percentage of Costs to Recover
$0	Target Portion of Costs to Recover
$0	Base Capacity Cost per New Customer Connected

In addition to calculation of the capacity cost for each new connection based on the unit cost above, the system development fee for each new connection should also include recovery of the following costs:

$100	Average Field Cost per New Connection
$50	Average Administration Cost per New Connection
$150	Field and Admin Cost per New Connection
$150	Base Cost to Recover per New Connection

These costs are modeled to be recovered from minimum charge surcharges in Table 16

Peak Flow Capacity Costs to be Recovered by Minimum Charge Surcharges

50.0%	Target Percentage of Costs to Recover
$316,393	Target Portion of Costs to Recover in One Full Year
$26,366	Target Portion of Costs to Recover in Monthly Surcharges
$4.28	Monthly Surcharge per Peak Flow Capacity Share

Base Flow Capacity Costs to be Recovered by Minimum Charge Surcharges

0.0%	Target Percentage of Costs to Recover
$0	Target Portion of Costs to Recover in One Full Year
$0	Target Portion of Costs to Recover in Monthly Surcharges
$0.00	Monthly Base Flow Surcharge per Bill

Note: Non-capital costs, such as field costs for inspection of connections and administration costs, should be recovered by fees charged for providing the services involved. These costs are in addition to peak flow capacity costs. If your system's basic costs to sign up and connect new customers is different than assumed above, adjust your final fees accordingly.

Table 12 - AWWA Safe Operating Capacities by Meter Size

Riverton, WY; Water Rates, Scenario 2019-1

Data source: Table VII.2-5, page 338, AWWA Manual M1 Principles of Water Rates, Fees and Charges, Seventh Edition

This table calculates the meter equivalent ratio, which is used for calculating peak flow capacity-based system development fees, surcharges and revenues in Tables 13 through 16.

Meter Size, in Inches	Meter Type	Maximum-Rated Safe Operating Flow, in gallons per minute	Meter Equivalent Ratio (Capacity Shares)
Five Eighths	Displacement	20	1.0
Three Quarters	Displacement	30	1.5
One Inch	Displacement	50	2.5
One & a Half Inch	Displacement	100	5.0
Two Inch	Displacement	160	8.0
Three	Singlet	320	16.0
Three	Compound, Class I	320	16.0
Three	Turbine, Class I	350	17.5
Four	Singlet	500	25.0
Four	Compound, Class I	500	25.0
Four	Turbine, Class I	630	31.0
Six	Singlet	1,000	50.0
Six	Compound, Class I	1,000	50.0
Six	Turbine, Class I	1,300	65.0
Eight	Compound, Class I	1,600	80.0
Eight	Turbine, Class I	2,800	140.0
Ten	Turbine, Class II	4,200	210.0
Twelve	Turbine, Class II	5,300	265.0

Table 13 - System Development Fees

Riverton, WY; Water Rates, Scenario 2019-1

This table calculates system development fees to charge each meter size.

Note: Larger meter sizes are available in two or more types, each having different peak flow capacities. To be conservative when projecting revenues, it was assumed all meters in use are of the lowest capacity types. However, when setting fees, they should be based upon the type of meter in use at each location.

Meter Size	Meter Type	Foot Notes	Capacity Shares, Including Out of City Multiplier and Economy of Scale Adjustments	Adjusted Peak Capacity Cost Each Meter Size	Base Capacity Cost per New Customer Connected, as Adjusted by the Out of City Multiplier	Capacity-only Cost (Fee)	Field and Admin Cost per New Connection	Uniform Adjustment to Field and Admin Costs	Adjusted Field and Admin Costs (Fee) per New Connection	System Development Fee
In-City Meters										
Five Eighths	Displacement		1.0	$473	$0	$473	$150	$0.00	$150	$623
Three Quarters	Displacement	1	1.0	$473	$0	$473	$150	$0.00	$150	$623
One Inch	Displacement		2.5	$1,182	$0	$1,182	$150	$0.00	$150	$1,332
One & a Half Inch	Displacement		5.0	$2,363	$0	$2,363	$150	$0.00	$150	$2,513
Two Inch	Displacement		8.0	$3,781	$0	$3,781	$150	$0.00	$150	$3,931
Two & a Half Inch	Displacement	2	12.5	$5,908	$0	$5,908	$150	$0.00	$150	$6,058
Three Inch	Singlet		16.0	$7,562	$0	$7,562	$150	$0.00	$150	$7,712
Three Inch	Compound, Class I		16.0	$7,562	$0	$7,562	$150	$0.00	$150	$7,712
Three Inch	Turbine, Class I		17.5	$8,271	$0	$8,271	$150	$0.00	$150	$8,421
Four Inch	Singlet		25.0	$11,816	$0	$11,816	$150	$0.00	$150	$11,966
Four Inch	Compound, Class I		25.0	$11,816	$0	$11,816	$150	$0.00	$150	$11,966
Four Inch	Turbine, Class I		31.0	$14,652	$0	$14,652	$150	$0.00	$150	$14,802
Six Inch	Singlet		50.0	$23,632	$0	$23,632	$150	$0.00	$150	$23,782
Six Inch	Compound, Class I		50.0	$23,632	$0	$23,632	$150	$0.00	$150	$23,782
Six Inch	Turbine, Class I		65.0	$30,721	$0	$30,721	$150	$0.00	$150	$30,871
Eight Inch	Compound, Class I		80.0	$37,811	$0	$37,811	$150	$0.00	$150	$37,961
Eight Inch	Turbine, Class I		140.0	$66,169	$0	$66,169	$150	$0.00	$150	$66,319
Ten Inch	Turbine, Class II		210.0	$99,254	$0	$99,254	$150	$0.00	$150	$99,404
Out of City Meters										
Five Eighths	Displacement		1.0	$591	$0	$591	$188	$0.00	$188	$778
Three Quarters	Displacement	1	1.0	$591	$0	$591	$188	$0.00	$188	$778
One Inch	Displacement		2.5	$1,477	$0	$1,477	$188	$0.00	$188	$1,664
One & a Half Inch	Displacement		5.0	$2,954	$0	$2,954	$188	$0.00	$188	$3,141
Two Inch	Displacement		8.0	$4,726	$0	$4,726	$188	$0.00	$188	$4,914
Two & a Half Inch	Displacement	2	12.5	$7,385	$0	$7,385	$188	$0.00	$188	$7,572
Three Inch	Singlet		16.0	$9,453	$0	$9,453	$188	$0.00	$188	$9,640
Three Inch	Compound, Class I		16.0	$9,453	$0	$9,453	$188	$0.00	$188	$9,640
Three Inch	Turbine, Class I		17.5	$10,339	$0	$10,339	$188	$0.00	$188	$10,526
Four Inch	Singlet		25.0	$14,770	$0	$14,770	$188	$0.00	$188	$14,957
Four Inch	Compound, Class I		25.0	$14,770	$0	$14,770	$188	$0.00	$188	$14,957
Four Inch	Turbine, Class I		31.0	$18,315	$0	$18,315	$188	$0.00	$188	$18,502
Six Inch	Singlet		50.0	$29,540	$0	$29,540	$188	$0.00	$188	$29,727
Six Inch	Compound, Class I		50.0	$29,540	$0	$29,540	$188	$0.00	$188	$29,727
Six Inch	Turbine, Class I		65.0	$38,402	$0	$38,402	$188	$0.00	$188	$38,589
Eight Inch	Compound, Class I		80.0	$47,264	$0	$47,264	$188	$0.00	$188	$47,451
Eight Inch	Turbine, Class I		140.0	$82,711	$0	$82,711	$188	$0.00	$188	$82,899
Ten Inch	Turbine, Class II		210.0	$124,067	$0	$124,067	$188	$0.00	$188	$124,255

Foot Notes, which apply to Tables 14, 15 and 16, as well:

[1] The Three-Quarter-Inch meter capacity share factor is 1.5. However, it was set equal to the Five-eighths-Inch meter because these two sizes are used rather interchangeably and most such meters are used for residential connections. This enables a uniform system development fee for almost all residential customers.

[2] These meter sizes were not included in AWWA study results, so these values are interpolated.

Economy of Scale Adjustments: As meter size rises, capacity to pass peak flow rises. However, costs to build flow capacity to serve those meters do not rise as rapidly. Therefore, if there are many such meters, peak flow capacity shares may have been adjusted downward by an estimated cost savings factor to account for that savings. Economy of scale savings do not apply to base costs because all connections are afforded the same level of base flow capacity.

Table 14 - Revenues From System Development Fees

Riverton, WY; Water Rates, Scenario 2019-1

This table calculates total fee revenues that would be generated during one full year at the fees in Table 13.

Meter Size	Meter Type	Mix of New Taps in a Typical Year	Projected Annual Growth in Capacity Shares, Adjusted for Economy of Scale	Adjusted Peak Capacity Cost Fees for One Full Year	Base Capacity Cost Fees for One Full Year	Combined Capacity-only Fee Revenues to Collect in One Year	Adjusted Admin and Field Cost Fees to Collect in One Year	**System Development Fee Revenues for One Full Year**
In-City Meters								
Five Eighths	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	2.4	2.4	$1,134	$0	$1,134	$360	**$1,494**
One Inch	Displacement	2.4	6.0	$2,836	$0	$2,836	$360	**$3,196**
One & a Half Inch	Displacement	0.1	0.4	$194	$0	$194	$12	**$207**
Two Inch	Displacement	2.1	16.8	$7,940	$0	$7,940	$315	**$8,255**
Two & a Half Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	0.4	$211	$0	$211	$4	**$215**
Three Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	0.2	$92	$0	$92	$1	**$93**
Four Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	0.1	$59	$0	$59	$0	**$59**
Eight Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	7.0	26.4	$12,466	$0	$12,466	$1,053	**$13,519**
Out of City Meters								
Five Eighths	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
One Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
One & a Half Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Two Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Two & a Half Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	0.0	0.0	$0	$0	$0	$0	**$0**
	Total:	7.0	26.4	$12,466	$0	$12,466	$1,053	**$13,519**

This is the amount used to calculate the "Meter Size-based System Development Fees" income in Table 3.

Table 15 - Minimum Charge Fees, Including Capacity Surcharges

Riverton, WY; Water Rates, Scenario 2019-1

This table does, essentially, the same thing as Table 13, except costs are recovered over time as minimum charge surcharges.

Meter Size	Meter Type	Capacity-only Cost (Fee)	Cost to Serve Minimum Calculated in Table 10	Monthly Minimum Charge	Monthly Snowbird Fee
In-City Meters					
Five Eighths	Displacement	$4.28	$16.41	$20.69	$9.97
Three Quarters	Displacement	$4.28	$16.41	$20.69	$9.97
One Inch	Displacement	$10.69	$16.41	$27.10	$16.38
One & a Half Inch	Displacement	$21.38	$16.41	$37.79	$27.07
Two Inch	Displacement	$34.20	$16.41	$50.61	$39.89
Two & a Half Inch	Displacement	$53.44	$16.41	$69.85	$59.13
Three Inch	Singlet	$68.40	$16.41	$84.81	$74.09
Three Inch	Compound, Class I	$68.40	$16.41	$84.81	$74.09
Three Inch	Turbine, Class I	$74.81	$16.41	$91.23	$80.51
Four Inch	Singlet	$106.88	$16.41	$123.29	$112.57
Four Inch	Compound, Class I	$106.88	$16.41	$123.29	$112.57
Four Inch	Turbine, Class I	$132.53	$16.41	$148.94	$138.22
Six Inch	Singlet	$213.75	$16.41	$230.16	$219.44
Six Inch	Compound, Class I	$213.75	$16.41	$230.16	$219.44
Six Inch	Turbine, Class I	$277.88	$16.41	$294.29	$283.57
Eight Inch	Compound, Class I	$342.00	$16.41	$358.41	$347.69
Eight Inch	Turbine, Class I	$598.50	$16.41	$614.91	$604.19
Ten Inch	Turbine, Class II	$897.75	$16.41	$914.17	$903.45
Out of City Meters					
Five Eighths	Displacement	$5.34	$20.52	$25.86	$12.46
Three Quarters	Displacement	$5.34	$20.52	$25.86	$12.46
One Inch	Displacement	$13.36	$20.52	$33.88	$20.48
One & a Half Inch	Displacement	$26.72	$20.52	$47.24	$33.84
Two Inch	Displacement	$42.75	$20.52	$63.27	$49.87
Two & a Half Inch	Displacement	$66.80	$20.52	$87.31	$73.91
Three Inch	Singlet	$85.50	$20.52	$106.02	$92.62
Three Inch	Compound, Class I	$85.50	$20.52	$106.02	$92.62
Three Inch	Turbine, Class I	$93.52	$20.52	$114.03	$100.63
Four Inch	Singlet	$133.59	$20.52	$154.11	$140.71
Four Inch	Compound, Class I	$133.59	$20.52	$154.11	$140.71
Four Inch	Turbine, Class I	$165.66	$20.52	$186.17	$172.77
Six Inch	Singlet	$267.19	$20.52	$287.71	$274.31
Six Inch	Compound, Class I	$267.19	$20.52	$287.71	$274.31
Six Inch	Turbine, Class I	$347.34	$20.52	$367.86	$354.46
Eight Inch	Compound, Class I	$427.50	$20.52	$448.02	$434.62
Eight Inch	Turbine, Class I	$748.13	$20.52	$768.64	$755.24
Ten Inch	Turbine, Class II	$1,122.19	$20.52	$1,142.71	$1,129.31

Table 16 - Revenues From Minimum Surcharges

Riverton, WY; Water Rates, Scenario 2019-1

This table calculates total minimum charge surcharge revenues that would be generated during one full year at the fees in Table 15.

Meter Size	Meter Type	Capacity Shares, Including Out of City Multiplier and Economy of Scale Adjustments	Current Number Meters This Size	Total Adjusted Capacity Shares	Adjusted Annual Peak Capacity-only Surcharge Revenues	Annual Base Capacity-only Surcharge Revenues	Capacity Surcharges for One Full Year
In-City Meters							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	4,113	4,113	$210,997	$0	$210,997
One Inch	Displacement	2.5	237	593	$30,395	$0	$30,395
One & a Half Inch	Displacement	5.0	53	265	$13,595	$0	$13,595
Two Inch	Displacement	8.0	88	704	$36,115	$0	$36,115
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	18	288	$14,774	$0	$14,774
Three Inch	Compound, Class I	16.0	0	0	$0	$0	$0
Three Inch	Turbine, Class I	17.5	0	0	$0	$0	$0
Four Inch	Singlet	25.0	5	125	$6,413	$0	$6,413
Four Inch	Compound, Class I	25.0	0	0	$0	$0	$0
Four Inch	Turbine, Class I	31.0	0	0	$0	$0	$0
Six Inch	Singlet	50.0	0	0	$0	$0	$0
Six Inch	Compound, Class I	50.0	0	0	$0	$0	$0
Six Inch	Turbine, Class I	65.0	0	0	$0	$0	$0
Eight Inch	Compound, Class I	80.0	1	80	$4,104	$0	$4,104
Eight Inch	Turbine, Class I	140.0	0	0	$0	$0	$0
Ten Inch	Turbine, Class II	210.0	0	0	$0	$0	$0
		Subtotal:	4,515	6,168	$316,393	$0	$316,393
Out of City Meters							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	0	0	$263,747	$0	$263,747
One Inch	Displacement	2.5	0	0	$37,994	$0	$37,994
One & a Half Inch	Displacement	5.0	0	0	$16,993	$0	$16,993
Two Inch	Displacement	8.0	0	0	$45,144	$0	$45,144
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	0	0	$18,468	$0	$18,468
Three Inch	Compound, Class I	16.0	0	0	$0	$0	$0
Three Inch	Turbine, Class I	17.5	0	0	$0	$0	$0
Four Inch	Singlet	25.0	0	0	$8,016	$0	$8,016
Four Inch	Compound, Class I	25.0	0	0	$0	$0	$0
Four Inch	Turbine, Class I	31.0	0	0	$0	$0	$0
Six Inch	Singlet	50.0	0	0	$0	$0	$0
Six Inch	Compound, Class I	50.0	0	0	$0	$0	$0
Six Inch	Turbine, Class I	65.0	0	0	$0	$0	$0
Eight Inch	Compound, Class I	80.0	0	0	$5,130	$0	$5,130
Eight Inch	Turbine, Class I	140.0	0	0	$0	$0	$0
Ten Inch	Turbine, Class II	210.0	0	0	$0	$0	$0
		Subtotal:	0	0	$395,492	$0	$395,492
		Total:	4,515	6,168	$711,885	$0	$711,885

Table 17 - Financial Capacity Indicators and Reserves

Riverton, WY; Water Rates, Scenario 2019-1

This table depicts the affordability of future rates, the financial health of the system and the ending balances in various (assumed) accounts for the test year and the next 10 years.

Capacity Indicators	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
Equivalent Final Monthly Bill for a 5,000 gal per Month Residential Customer	$31.27	$33.74	$33.74	$34.75	$35.79	$36.87	$37.97	$39.11	$40.29	$41.49	$42.74	$44.02
Annual Median Household Income (AMHI) Within Service Area (Projected from last available Census survey or estimated income data)	$54,555	$56,622	$58,768	$60,994	$63,305	$65,703	$68,193	$70,776	$73,458	$76,241	$79,130	$82,128
Affordability Index: Current Rates First Column, Then Proposed Rates	0.69%	0.72%	0.69%	0.68%	0.68%	0.67%	0.67%	0.66%	0.66%	0.65%	0.65%	0.64%

Affordability Index (AI) goes to the willingness and ability of customers to pay. AI is the percent of AMHI needed by a 5,000 gallon per month residential user to pay their bill. Rates near 1.0% are common in the U.S. and are generally considered affordable. Federal grant agencies generally will not consider awarding grants if this indicator is less than 2.0%. The above index is only for a 1 share customers but it should be fairly representative of all residential customers.

Equivalent Final Monthly Bill for a 2,000 gal per Month, Low-income Residential Customer	$23.59	$25.91	$25.91	$26.69	$27.49	$28.31	$29.16	$30.04	$30.94	$31.86	$32.82	$33.81
Income at One-half the AMHI Above	$27,278	$27,794	$28,321	$28,857	$29,404	$29,961	$30,529	$31,107	$31,696	$32,297	$32,909	$33,532
Affordability for Low-income, Low-volume: Current Rates First Column, Then Proposed Rates	1.04%	1.12%	1.10%	1.11%	1.12%	1.13%	1.15%	1.16%	1.17%	1.18%	1.20%	1.21%

This additional indicator of affordability assumes a residential customer with income at one-half of the median household income above, that income is growing at one-half the rate of the median household income and the customer uses 2,000 gallons per month. Such a customer is likely either a minimum wage, or near-minimum wage worker or is living on Social Security-only.

Estimated Operating Ratio: Current Rates First Column, Then Proposed Rates	0.64	1.24	1.30	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.34

Operating ratio (OR) goes to the ability of the utility to pay its operating expenses. A 1.0 OR is break even. Below 1.0 indicates operating in the "red." Generally, the OR should be at least 1.15 for large systems, 1.30 or more for medium systems and perhaps as high as 2.0 for small systems. Note: If the utility has or will have reserves (below,) it has more ability to pay its operating costs than the OR implies.

Estimated Coverage Ratio: Current Rates First Column, Then Proposed Rates	0.00	0.00	0.00	2.78	1.35	1.26	1.21	1.20	1.16	1.16	1.16	1.20

Coverage Ratio (CR) goes to the ability of the utility to pay its debt payments. OR applies only to years with debt service. 1.0 is break even. Generally, the CR should be at least 1.25. Note: If the utility has or will have reserves (below,) it has more ability to make debt payments than the CR implies.

Reserves	Balance Ending on 6/30/17	Balance Ending on 6/30/18	Balance Ending on 6/30/19	Balance Ending on 6/30/20	Balance Ending on 6/30/21	Balance Ending on 6/30/22	Balance Ending on 6/30/23	Balance Ending on 6/30/24	Balance Ending on 6/30/25	Balance Ending on 6/30/26	Balance Ending on 6/30/27	Balance Ending on 6/30/28	Balance Ending on 6/30/29
Cash and Cash Equivalents	$1,424,602	-$91,571	$454,055	$1,162,376	$1,198,710	$1,237,176	$1,269,435	$1,306,412	$1,348,513	$1,383,760	$1,424,200	$1,470,279	$1,508,792
Other Liquid Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Undedicated Cash Assets	$1,424,602	-$91,571	$454,055	$1,162,376	$1,198,710	$1,237,176	$1,269,435	$1,306,412	$1,348,513	$1,383,760	$1,424,200	$1,470,279	$1,508,792
Total Cash Assets Discounted for Inflation (Future Unrestricted Purchasing Power)	$1,424,602	-$91,571	$454,055	$1,127,505	$1,127,866	$1,129,137	$1,123,822	$1,121,860	$1,123,273	$1,118,055	$1,116,207	$1,117,752	$1,147,031
Repair & Replacement	$0	-$109,083	-$86,819	-$60,468	-$18,738	$22,187	$62,243	$101,361	$139,471	$132,160	$167,141	$121,461	$134,952
Debt and CIP Reserves	$1,943,990	$1,818,194	$2,510,079	$2,225,003	$1,159,931	$1,006,061	$961,562	$1,027,369	$863,541	$904,470	$997,454	$1,056,236	$1,174,314
Sum of All Reserves	$3,368,592	$1,617,540	$2,877,315	$3,326,911	$2,339,903	$2,265,424	$2,293,240	$2,435,142	$2,351,524	$2,420,390	$2,588,795	$2,647,977	$2,818,058

Table 18 - Comparison of Bills Before and After Rate Adjustments

Riverton, WY; Water Rates, Scenario 2019-1

The weighted-average revenue (bill) increase for all customers combined will be 10.3%

Note: the bill increase rate above also includes the effect of meter size-based minimum charges calculated in Table 13.

Changes to the bills for customer classes and example volumes of use shown below are only for 5/8 or 3/4-Inch meter customers. Most customers are served by 3/4-Inch meters. Those with larger meters would have higher minimum charges, thus, their bills would go up more. And, master metered customers' bills would only include one minimum charge, rather than the current one minimum charge for each residential or other "unit" beyond the meter.

Customer or Rate Class, or Meter Size	Gallons of Use	Customers at or Above This Volume and Below Next	Cumulative Customers	Current Bill for This Volume	Modeled Bill for This Volume	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
	0	795	795	$18.47	$20.69	$2.22	12%
	1,000	256	1,051	$21.03	$23.30	$2.27	11%
	2,000	385	1,437	$23.59	$25.91	$2.32	10%
	3,000	412	1,849	$26.15	$28.52	$2.37	9%
	4,000	346	2,195	$28.71	$31.13	$2.42	8%
	5,000	248	2,443	$31.27	$33.74	$2.47	8%
	6,000	176	2,619	$33.90	$36.74	$2.84	8%
	7,000	130	2,749	$36.53	$39.74	$3.21	9%
	8,000	96	2,845	$39.16	$42.74	$3.58	9%
	9,000	74	2,919	$41.79	$45.74	$3.95	9%
	10,000	231	3,150	$44.42	$48.75	$4.33	10%
	15,000	149	3,299	$57.57	$63.75	$6.18	11%
	20,000	103	3,402	$70.72	$78.76	$8.04	11%
Residential	25,000	72	3,474	$83.87	$93.77	$9.90	12%
	30,000	47	3,520	$97.02	$108.78	$11.76	12%
	35,000	52	3,572	$110.17	$123.78	$13.61	12%
	45,000	22	3,594	$136.47	$153.80	$17.33	13%
	55,000	12	3,606	$162.77	$183.81	$21.04	13%
	65,000	7	3,613	$189.07	$213.83	$24.76	13%
	75,000	5	3,618	$215.37	$243.84	$28.47	13%
	85,000	4	3,622	$241.67	$273.86	$32.19	13%
	95,000	2	3,624	$267.97	$303.87	$35.90	13%
	105,000	2	3,626	$294.27	$333.89	$39.62	13%
	115,000	1	3,627	$320.57	$363.90	$43.33	14%
	125,000	1	3,627	$346.87	$393.92	$47.05	14%
	135,000	1	3,628	$373.17	$423.93	$50.76	14%
	145,000	2	3,630	$399.47	$453.95	$54.48	14%

Table 18 - Comparison of Bills Before and After Rate Adjustments

Customer or Rate Class, or Meter Size	Gallons of Use	Customers at or Above This Volume and Below Next	Cumulative Customers	Current Bill for This Volume	Modeled Bill for This Volume	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
Out-of-City Residential	0	5	5	$23.09	$25.86	$2.77	12%
	1,000	2	6	$26.28	$29.12	$2.84	11%
	2,000	4	10	$29.47	$32.39	$2.92	10%
	3,000	5	15	$32.66	$35.65	$2.99	9%
	4,000	4	19	$35.85	$38.91	$3.06	9%
	5,000	4	23	$39.04	$42.17	$3.13	8%
	6,000	3	26	$42.33	$45.93	$3.60	8%
	7,000	4	30	$45.62	$49.68	$4.06	9%
	8,000	1	31	$48.91	$53.43	$4.52	9%
	9,000	2	33	$52.20	$57.18	$4.98	10%
	10,000	3	36	$55.49	$60.93	$5.44	10%
	15,000	1	37	$71.94	$79.69	$7.75	11%
	20,000	1	38	$88.39	$98.45	$10.06	11%
	25,000	1	38	$104.84	$117.21	$12.37	12%
	30,000	1	39	$121.29	$135.97	$14.68	12%
	145,000	0	39	$499.64	$567.44	$67.80	14%
Commercial	0	136	136	$18.47	$20.69	$2.22	12%
	1,000	115	251	$21.03	$23.30	$2.27	11%
	2,000	64	315	$23.59	$25.91	$2.32	10%
	3,000	40	355	$26.15	$28.52	$2.37	9%
	4,000	30	385	$28.71	$31.13	$2.42	8%
	5,000	24	409	$31.27	$33.74	$2.47	8%
	6,000	18	427	$34.10	$36.74	$2.64	8%
	7,000	13	440	$36.93	$39.74	$2.81	8%
	8,000	9	448	$39.76	$42.74	$2.98	8%
	9,000	9	458	$42.59	$45.74	$3.15	7%
	10,000	32	489	$45.42	$48.75	$3.33	7%
	15,000	23	513	$59.57	$63.75	$4.18	7%
	20,000	15	527	$79.72	$78.76	-$0.96	-1%
	25,000	11	538	$99.87	$93.77	-$6.10	-6%
	30,000	8	547	$120.02	$108.78	-$11.24	-9%
	35,000	10	557	$140.17	$123.78	-$16.39	-12%
	45,000	7	564	$180.47	$153.80	-$26.67	-15%
	55,000	5	568	$220.77	$183.81	-$36.96	-17%
	65,000	3	571	$261.07	$213.83	-$47.24	-18%
	75,000	3	574	$301.37	$243.84	-$57.53	-19%
	85,000	2	576	$341.67	$273.86	-$67.81	-20%
	95,000	2	577	$381.97	$303.87	-$78.10	-20%
	105,000	1	579	$422.27	$333.89	-$88.38	-21%
	115,000	2	581	$462.57	$363.90	-$98.67	-21%
	125,000	1	581	$502.87	$393.92	-$108.95	-22%
	135,000	1	582	$543.17	$423.93	-$119.24	-22%
	145,000	12	594	$583.47	$453.95	-$129.52	-22%

Table 18 - Comparison of Bills Before and After Rate Adjustments

Customer or Rate Class, or Meter Size	Gallons of Use	Customers at or Above This Volume and Below Next	Cumulative Customers	Current Bill for This Volume	Modeled Bill for This Volume	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
Residential Master Meter	0	0	0	$18.47	$20.69	$2.22	12%
	1,000	0	0	$21.03	$23.30	$2.27	11%
	2,000	0	0	$23.59	$25.91	$2.32	10%
	3,000	1	1	$26.15	$28.52	$2.37	9%
	4,000	0	1	$28.71	$31.13	$2.42	8%
	5,000	0	1	$31.27	$33.74	$2.47	8%
	6,000	0	1	$33.90	$36.74	$2.84	8%
	7,000	0	1	$36.53	$39.74	$3.21	9%
	8,000	0	1	$39.16	$42.74	$3.58	9%
	9,000	0	1	$41.79	$45.74	$3.95	9%
	10,000	0	1	$44.42	$48.75	$4.33	10%
	15,000	0	1	$57.57	$63.75	$6.18	11%
	20,000	1	2	$70.72	$78.76	$8.04	11%
	25,000	0	3	$83.87	$93.77	$9.90	12%
	30,000	0	3	$97.02	$108.78	$11.76	12%
	35,000	1	3	$110.17	$123.78	$13.61	12%
	145,000	0	4	$399.47	$453.95	$54.48	14%
Hydrant flat rate	0	0	0	$44.04	$49.33	$5.29	12%
	145,000	0	0	$44.04	$49.33	$5.29	12%
Additional Pads Served by Master Meters	0	79	79	$18.47	$0.00	-$18.47	-100%
	1,000	0	79	$18.47	$0.00	-$18.47	-100%
	145,000	0	79	$18.47	$0.00	-$18.47	-100%

Table 19 - User Statistics

Riverton, WY; Water Rates, Scenario 2019-1

This table shows measures of equitability, or "fairness," of the rates as modeled in Table 10. If system development fees or capacity surcharges were also calculated but not included in Table 10, this table does not take those fees into account.

If your rates are absolutely proportional to use on a volumetric basis, your % of usage and % of revenues figures will be the same within all the classes. That is not possible if you have any minimum charge and having no minimum charge is almost unheard of.

Normally, the % of usage figure will be lower than the % of revenue for the lower volumes of use. That will switch for the higher volumes of use. Even for declining rate structures, this switch should occur near the volume of the average residential user, typically near 5,000 gallons/month (668 cu ft).

In urban and suburban areas the average monthly use for residential or general customers can be twice that used by their rural and "old town" counterparts. Use is largely dependent upon who lives in a community. Older people living in longer established neighborhoods tend to use less volume than younger people living in more recently developed areas. As you make comparisons between different customers and customer classes, keep that, and the following in mind:

6,987 Gallons: This is the average residential customer's usage per Monthly billing cycle.

Usage allowance is the volume "given away" with the minimum charge. The higher the allowance, the less volume the utility can sell to generate income.

469,496,000 Gallons: This is the volume metered through customer meters that was available to be sold by the utility during the test year.

0 Gallons: This is the volume metered through customer meters that was given away as a usage allowance during the test year.

$0 Loss: At the unit charge rate in effect during the test year, the utility failed to collect this much revenue due to the usage allowance.

$0 Loss: At the modeled (recommended) unit charge rates and usage allowance (if any), over a full year this is the amount of revenue the utility would fail to collect due to the usage allowance as modeled (if any).

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Avg. Use in Each Volume Range in 1,000 Gallons	Total Annual Use in Each Volume Range in Gallons	Customers Within This Volume Range	% Users	% Usage	Cumulative Use in This Class From Low to High Volume	Cumulative Use in This Class From High to Low Volume	% Revenue at Current Rates	% Revenue at Modeled Rates
	0	999	0.781	34,016,000.0	795.3	18.3%	7.2%	11.2%	100.0%	11.5%	12.0%
	1,000	1,999	0.910	30,943,000.0	256.1	5.9%	6.6%	21.3%	88.8%	6.0%	6.0%
	2,000	2,999	0.851	26,322,000.0	385.1	8.9%	5.6%	30.0%	78.7%	6.7%	6.9%
	3,000	3,999	0.812	21,375,000.0	412.3	9.5%	4.6%	37.0%	70.0%	6.4%	6.6%
	4,000	4,999	0.806	17,224,000.0	345.9	8.0%	3.7%	42.7%	63.0%	5.3%	5.5%
	5,000	5,999	0.827	14,246,000.0	248.2	5.7%	3.0%	47.4%	57.3%	4.0%	4.1%
	6,000	6,999	0.852	12,131,000.0	176.3	4.1%	2.6%	51.3%	52.6%	3.1%	3.4%
	7,000	7,999	0.871	10,572,000.0	129.9	3.0%	2.3%	54.8%	48.7%	2.5%	2.7%
	8,000	8,999	0.891	9,417,000.0	96.3	2.2%	2.0%	57.9%	45.2%	2.0%	2.2%
	9,000	9,999	0.906	8,534,000.0	73.6	1.7%	1.8%	60.7%	42.1%	1.7%	1.8%
	10,000	14,999	3.952	33,723,000.0	231.3	5.3%	7.2%	71.8%	39.3%	6.1%	6.6%
	15,000	19,999	4.028	23,193,000.0	148.8	3.4%	4.9%	79.4%	28.2%	4.1%	4.5%
	20,000	24,999	4.011	15,934,000.0	102.8	2.4%	3.4%	84.7%	20.6%	2.8%	3.1%
Residential	25,000	29,999	4.010	10,984,000.0	72.0	1.7%	2.3%	88.3%	15.3%	2.0%	2.1%
	30,000	34,999	4.036	7,568,000.0	46.6	1.1%	1.6%	90.7%	11.7%	1.3%	1.4%
	35,000	44,999	7.138	9,393,000.0	51.9	1.2%	2.0%	93.8%	9.3%	1.6%	1.7%
	45,000	54,999	7.550	5,232,000.0	22.2	0.5%	1.1%	95.6%	6.2%	0.8%	0.9%
	55,000	64,999	8.033	3,430,000.0	11.8	0.3%	0.7%	96.7%	4.4%	0.5%	0.6%
	65,000	74,999	8.288	2,362,000.0	6.7	0.2%	0.5%	97.5%	3.3%	0.3%	0.4%
	75,000	84,999	8.171	1,675,000.0	5.2	0.1%	0.4%	98.0%	2.5%	0.2%	0.3%
	85,000	94,999	8.000	1,144,000.0	3.6	0.1%	0.2%	98.4%	2.0%	0.2%	0.2%
	95,000	104,999	8.480	848,000.0	2.2	0.0%	0.2%	98.7%	1.6%	0.1%	0.1%
	105,000	114,999	8.149	603,000.0	1.8	0.0%	0.1%	98.9%	1.3%	0.1%	0.1%
	115,000	124,999	8.712	453,000.0	1.0	0.0%	0.1%	99.0%	1.1%	0.1%	0.1%
	125,000	134,999	9.100	364,000.0	0.7	0.0%	0.1%	99.1%	1.0%	0.0%	0.1%
	135,000	144,999	8.500	272,000.0	0.6	0.0%	0.1%	99.2%	0.9%	0.0%	0.0%
	145,000	477,000	95.560	2,389,000.0	2.1	0.0%	0.5%	100.0%	0.8%	0.3%	0.3%
	Totals for Class			304,347,000.0	3,630.0	83.5%	64.8%			69.8%	73.7%

Table 19 - User Statistics

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Avg. Use in Each Volume Range in 1,000 Gallons	Total Annual Use in Each Volume Range in Gallons	Customers Within This Volume Range	% Users	% Usage	Cumulative Use in This Class From Low to High Volume	Cumulative Use in This Class From High to Low Volume	% Revenue at Current Rates	% Revenue at Modeled Rates
Out-of-City Residential	0	999	0.885	415,000.0	4.5	0.1%	0.1%	13.8%	100.0%	0.1%	0.1%
	1,000	1,999	0.957	397,000.0	1.5	0.0%	0.1%	26.9%	86.2%	0.1%	0.1%
	2,000	2,999	0.882	350,000.0	3.9	0.1%	0.1%	38.6%	73.1%	0.1%	0.1%
	3,000	3,999	0.834	292,000.0	4.8	0.1%	0.1%	48.2%	61.4%	0.1%	0.1%
	4,000	4,999	0.842	246,000.0	3.8	0.1%	0.1%	56.4%	51.8%	0.1%	0.1%
	5,000	5,999	0.793	195,000.0	4.3	0.1%	0.0%	62.9%	43.6%	0.1%	0.1%
	6,000	6,999	0.805	157,000.0	3.2	0.1%	0.0%	68.1%	37.1%	0.1%	0.1%
	7,000	7,999	0.732	115,000.0	3.5	0.1%	0.0%	71.9%	31.9%	0.1%	0.1%
	8,000	8,999	0.861	99,000.0	1.3	0.0%	0.0%	75.2%	28.1%	0.0%	0.0%
	9,000	9,999	0.798	79,000.0	1.7	0.0%	0.0%	77.8%	24.8%	0.0%	0.0%
	10,000	14,999	3.456	273,000.0	3.1	0.1%	0.1%	86.9%	22.2%	0.1%	0.1%
	15,000	19,999	3.571	150,000.0	1.3	0.0%	0.0%	91.8%	13.1%	0.0%	0.0%
	20,000	24,999	4.154	108,000.0	0.8	0.0%	0.0%	95.4%	8.2%	0.0%	0.0%
	25,000	29,999	3.938	63,000.0	0.5	0.0%	0.0%	97.5%	4.6%	0.0%	0.0%
	30,000	34,999	3.000	30,000.0	0.6	0.0%	0.0%	98.5%	2.5%	0.0%	0.0%
	35,000	44,999	10.000	30,000.0	0.0	0.0%	0.0%	99.5%	1.5%	0.0%	0.0%
	45,000	54,999	4.667	14,000.0	0.2	0.0%	0.0%	100.0%	0.5%	0.0%	0.0%
	55,000	64,999	1.000	1,000.0	0.1	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			3,014,000.0	39.1	0.9%	0.6%			0.9%	0.9%
Commercial	0	999	0.770	5,495,000.0	136.1	3.1%	1.2%	5.1%	100.0%	1.9%	2.0%
	1,000	1,999	0.749	4,115,000.0	115.0	2.6%	0.9%	8.9%	94.9%	1.6%	1.6%
	2,000	2,999	0.813	3,347,000.0	64.0	1.5%	0.7%	12.0%	91.1%	1.0%	1.0%
	3,000	3,999	0.856	2,866,000.0	40.1	0.9%	0.6%	14.7%	88.0%	0.7%	0.7%
	4,000	4,999	0.874	2,506,000.0	30.0	0.7%	0.5%	17.0%	85.3%	0.6%	0.6%
	5,000	5,999	0.887	2,222,000.0	23.7	0.5%	0.5%	19.1%	83.0%	0.5%	0.5%
	6,000	6,999	0.902	2,004,000.0	18.2	0.4%	0.4%	20.9%	80.9%	0.4%	0.4%
	7,000	7,999	0.924	1,851,000.0	12.8	0.3%	0.4%	22.6%	79.1%	0.4%	0.4%
	8,000	8,999	0.944	1,747,000.0	8.7	0.2%	0.4%	24.3%	77.4%	0.3%	0.3%
	9,000	9,999	0.936	1,636,000.0	9.3	0.2%	0.3%	25.8%	75.7%	0.3%	0.3%
	10,000	14,999	4.312	7,054,000.0	31.6	0.7%	1.5%	32.3%	74.2%	1.2%	1.2%
	15,000	19,999	4.321	5,431,000.0	23.3	0.5%	1.2%	37.4%	67.7%	0.9%	0.9%
	20,000	24,999	4.423	4,326,000.0	14.5	0.3%	0.9%	41.4%	62.6%	0.9%	0.7%
	25,000	29,999	4.466	3,591,000.0	11.4	0.3%	0.8%	44.7%	58.6%	0.7%	0.6%
	30,000	34,999	4.531	3,022,000.0	8.3	0.2%	0.6%	47.5%	55.3%	0.6%	0.5%
	35,000	44,999	8.671	4,925,000.0	10.4	0.2%	1.0%	52.1%	52.5%	1.0%	0.7%
	45,000	54,999	8.851	3,921,000.0	6.8	0.2%	0.8%	55.7%	47.9%	0.8%	0.6%
	55,000	64,999	9.047	3,266,000.0	4.5	0.1%	0.7%	58.7%	44.3%	0.6%	0.5%
	65,000	74,999	9.339	2,867,000.0	3.0	0.1%	0.6%	61.4%	41.3%	0.5%	0.4%
	75,000	84,999	9.262	2,510,000.0	2.8	0.1%	0.5%	63.7%	38.6%	0.5%	0.3%
	85,000	94,999	9.582	2,271,000.0	1.7	0.0%	0.5%	65.8%	36.3%	0.4%	0.3%
	95,000	104,999	9.599	2,083,000.0	1.5	0.0%	0.4%	67.8%	34.2%	0.4%	0.3%
	105,000	114,999	9.513	1,893,000.0	1.3	0.0%	0.4%	69.5%	32.2%	0.3%	0.3%
	115,000	124,999	9.290	1,700,000.0	1.8	0.0%	0.4%	71.1%	30.5%	0.3%	0.2%
	125,000	134,999	9.784	1,585,000.0	0.5	0.0%	0.3%	72.6%	28.9%	0.3%	0.2%
	135,000	144,999	9.667	1,508,000.0	0.9	0.0%	0.3%	74.0%	27.4%	0.3%	0.2%
	145,000	1,087,000	193.455	28,051,000.0	12.1	0.3%	6.0%	100.0%	26.0%	5.1%	3.7%
	Totals for Class			107,793,000.0	594.0	13.7%	23.0%			22.4%	19.4%

Table 19 - User Statistics

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Avg. Use in Each Volume Range in 1,000 Gallons	Total Annual Use in Each Volume Range in Gallons	Customers Within This Volume Range	% Users	% Usage	Cumulative Use in This Class From Low to High Volume	Cumulative Use in This Class From High to Low Volume	% Revenue at Current Rates	% Revenue at Modeled Rates
Residential Master Meter	0	999	1.000	48,000.0	0.0	0.0%	0.0%	3.5%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	48,000.0	0.0	0.0%	0.0%	6.9%	96.5%	0.0%	0.0%
	2,000	2,999	0.958	46,000.0	0.2	0.0%	0.0%	10.3%	93.1%	0.0%	0.0%
	3,000	3,999	0.870	40,000.0	0.5	0.0%	0.0%	13.2%	89.7%	0.0%	0.0%
	4,000	4,999	0.975	39,000.0	0.1	0.0%	0.0%	16.0%	86.8%	0.0%	0.0%
	5,000	5,999	1.000	39,000.0	0.0	0.0%	0.0%	18.8%	84.0%	0.0%	0.0%
	6,000	6,999	0.949	37,000.0	0.2	0.0%	0.0%	21.5%	81.2%	0.0%	0.0%
	7,000	7,999	1.000	37,000.0	0.0	0.0%	0.0%	24.2%	78.5%	0.0%	0.0%
	8,000	8,999	1.000	37,000.0	0.0	0.0%	0.0%	26.8%	75.8%	0.0%	0.0%
	9,000	9,999	1.000	37,000.0	0.0	0.0%	0.0%	29.5%	73.2%	0.0%	0.0%
	10,000	14,999	4.973	184,000.0	0.1	0.0%	0.0%	42.8%	70.5%	0.0%	0.0%
	15,000	19,999	4.917	177,000.0	0.3	0.0%	0.0%	55.6%	57.2%	0.0%	0.0%
	20,000	24,999	3.970	131,000.0	0.8	0.0%	0.0%	65.1%	44.4%	0.0%	0.0%
	25,000	29,999	4.087	94,000.0	0.4	0.0%	0.0%	71.9%	34.9%	0.0%	0.0%
	30,000	34,999	4.056	73,000.0	0.4	0.0%	0.0%	77.2%	28.1%	0.0%	0.0%
	35,000	44,999	7.615	99,000.0	0.5	0.0%	0.0%	84.3%	22.8%	0.0%	0.0%
	45,000	54,999	10.000	70,000.0	0.0	0.0%	0.0%	89.4%	15.7%	0.0%	0.0%
	55,000	64,999	8.000	56,000.0	0.3	0.0%	0.0%	93.4%	10.6%	0.0%	0.0%
	65,000	74,999	9.000	36,000.0	0.1	0.0%	0.0%	96.0%	6.6%	0.0%	0.0%
	75,000	84,999	5.667	17,000.0	0.2	0.0%	0.0%	97.3%	4.0%	0.0%	0.0%
	85,000	94,999	10.000	10,000.0	0.0	0.0%	0.0%	98.0%	2.7%	0.0%	0.0%
	95,000	104,999	10.000	10,000.0	0.0	0.0%	0.0%	98.7%	2.0%	0.0%	0.0%
	105,000	114,999	10.000	10,000.0	0.0	0.0%	0.0%	99.4%	1.3%	0.0%	0.0%
	115,000	124,999	8.000	8,000.0	0.1	0.0%	0.0%	100.0%	0.6%	0.0%	0.0%
	125,000	134,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	135,000	144,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	145,000	477,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			1,383,000.0	4.0	0.1%	0.3%			0.2%	0.2%
Hydrant flat rate	0	999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	145,000	477,000	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	0.0	0.0%	0.0%			0.0%	0.0%
Additional Pads Served by Master Meters	0	999	0.000	0.0	79.0	1.8%	0.0%	0.0%	100.0%	0.8%	0.0%
	145,000	477,000	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	79.0	1.8%	0.0%			0.8%	0.0%
Data Loss Adjustment	0	#########	52,959.000	52,959,000.0	0.1	0.0%	11.3%	100.0%	100.0%	5.9%	5.8%
	Totals for Class			52,959,000.0	0.1	0.0%	11.3%			5.9%	5.8%
	Grand Totals			469,496,000.0		100.00%	100.00%			100.00%	100.00%

Chart 1 - Operating Ratio

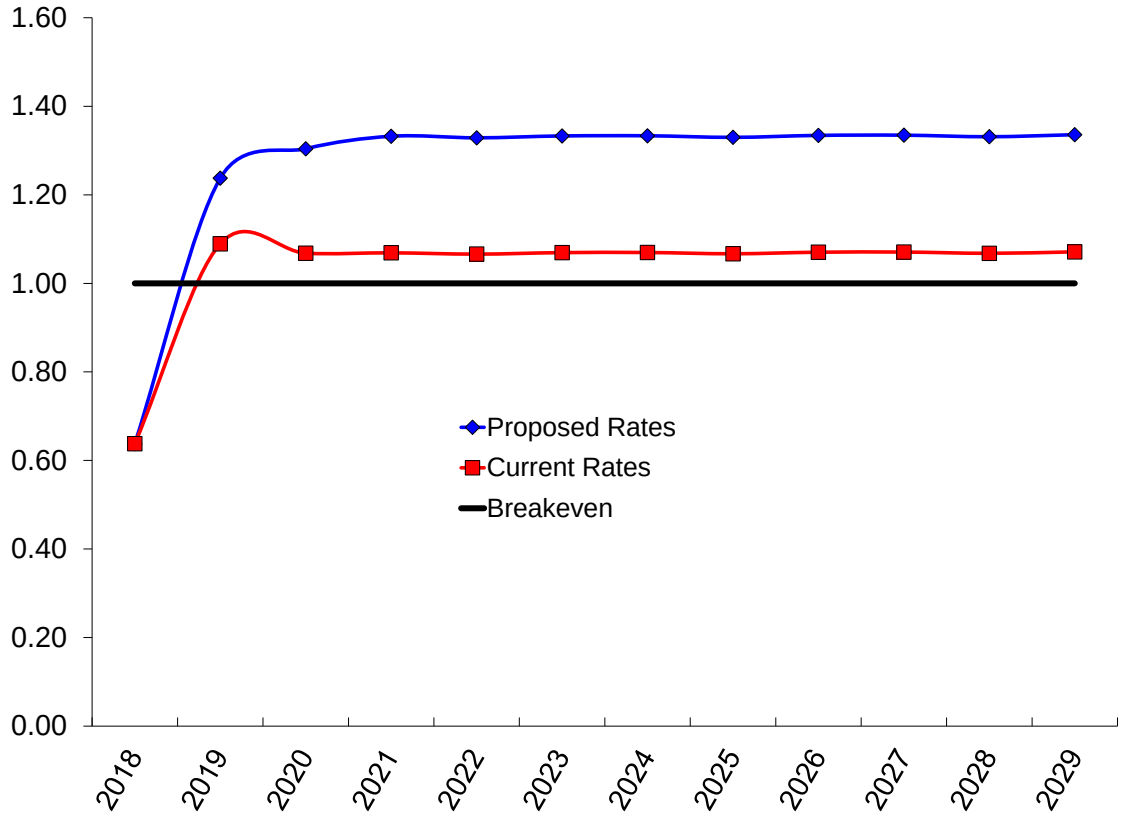


Chart 2 - Coverage Ratio

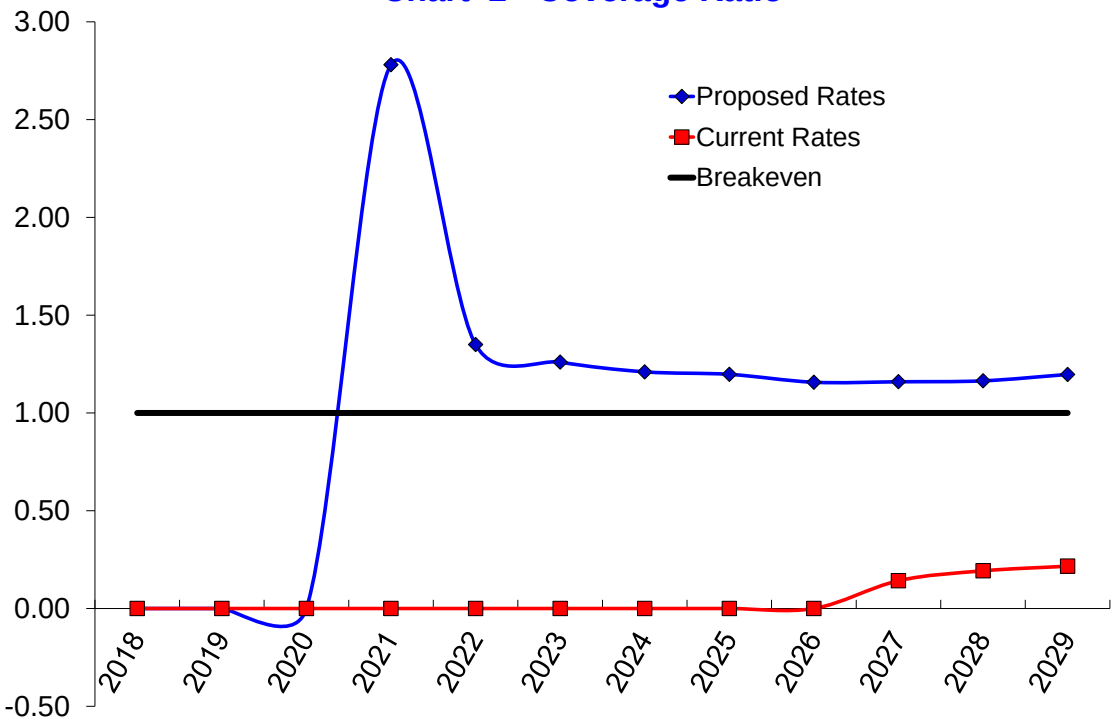


Chart 3 - Residential Users' Bills

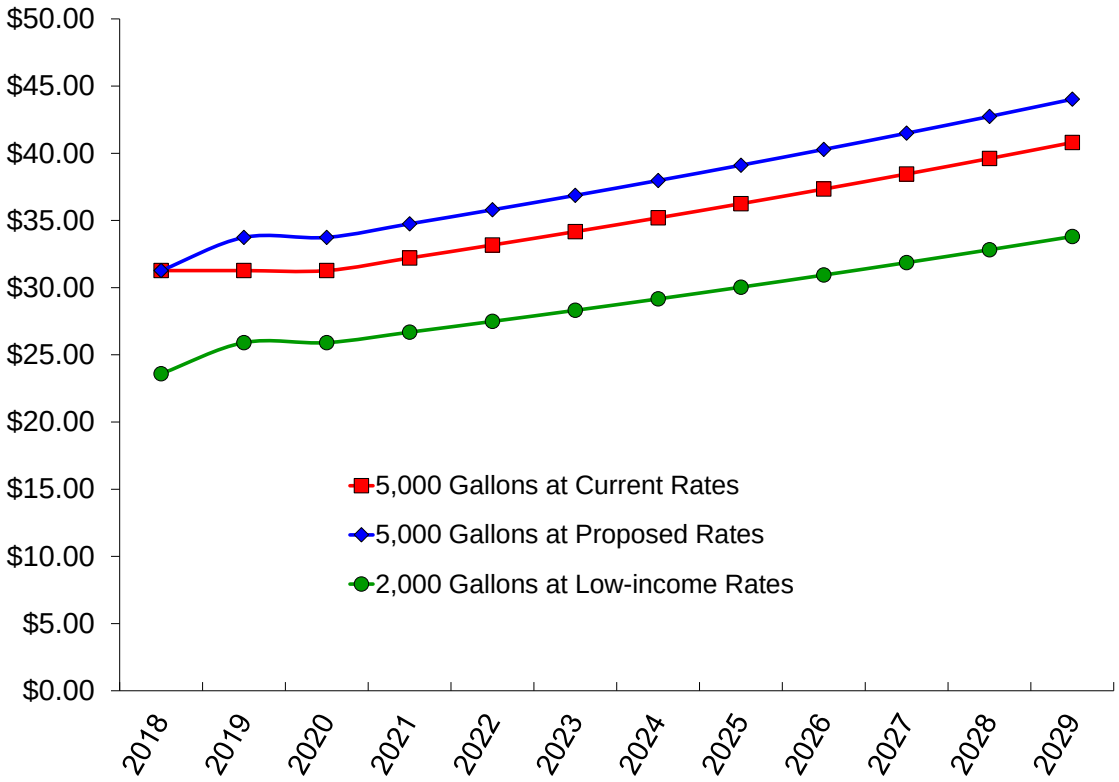


Chart 4 - Affordability

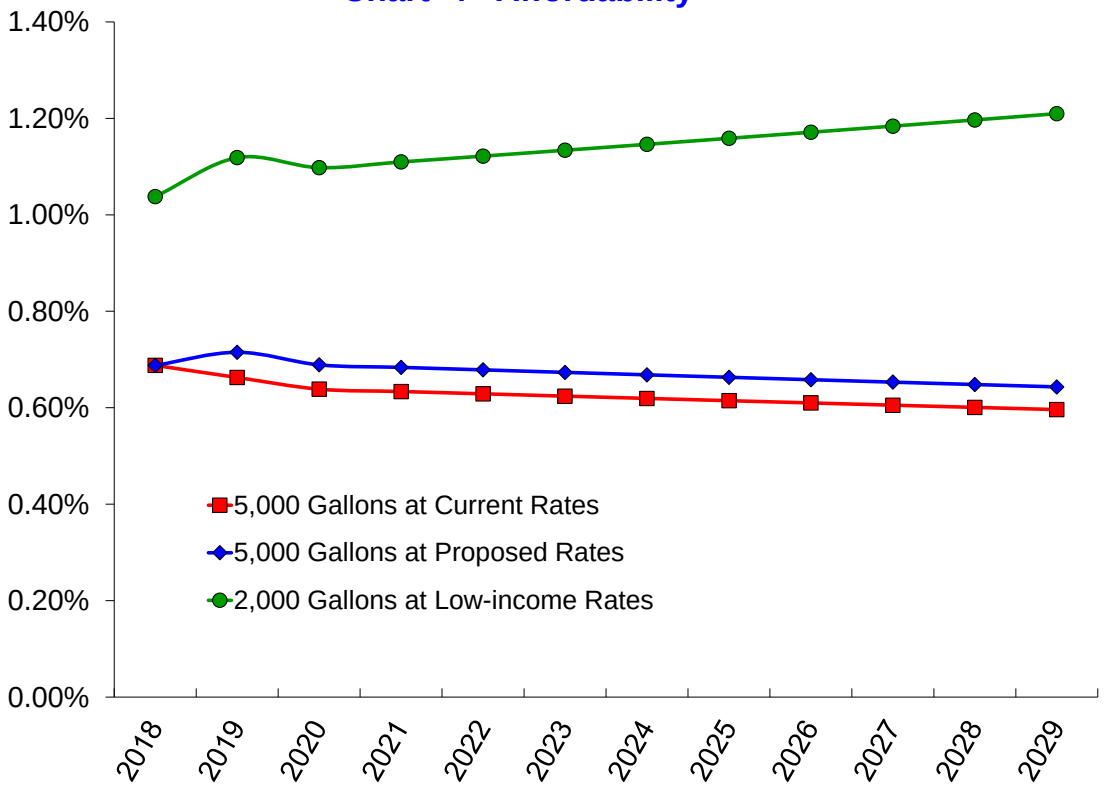


Chart 5 - Working Capital vs Goal

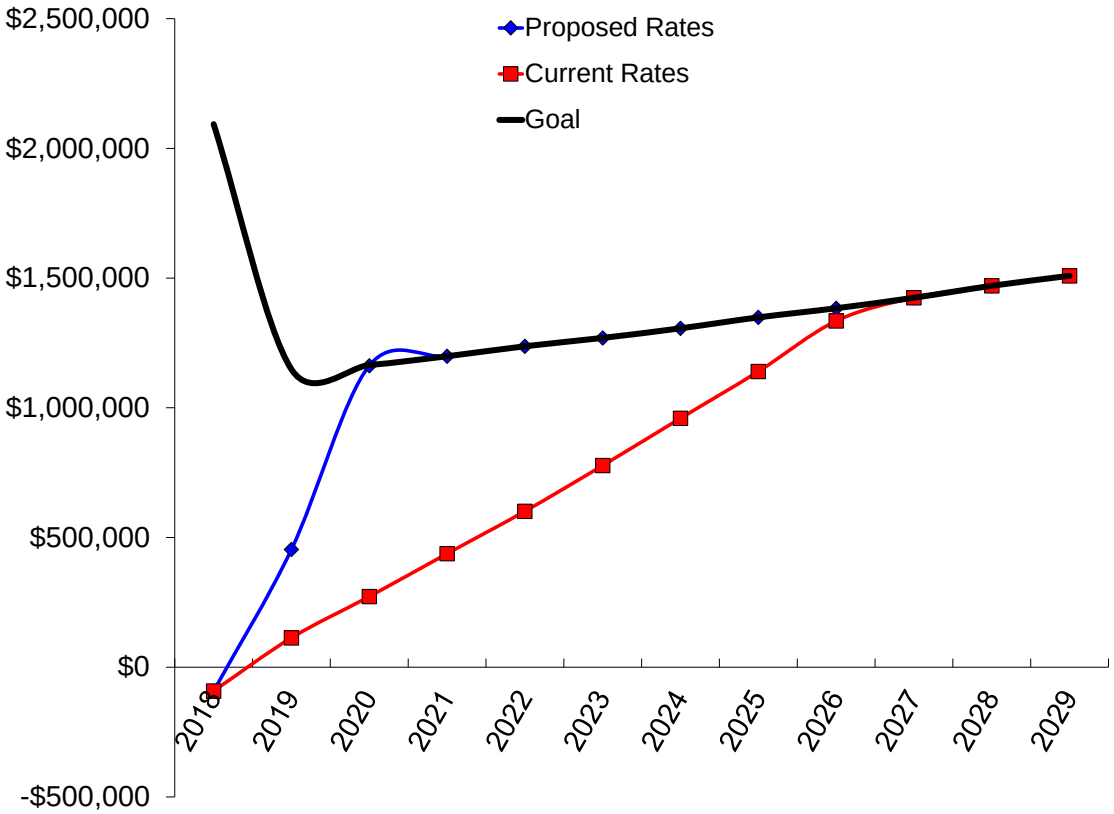


Chart 6 - Value of Cash Assets Before Inflation

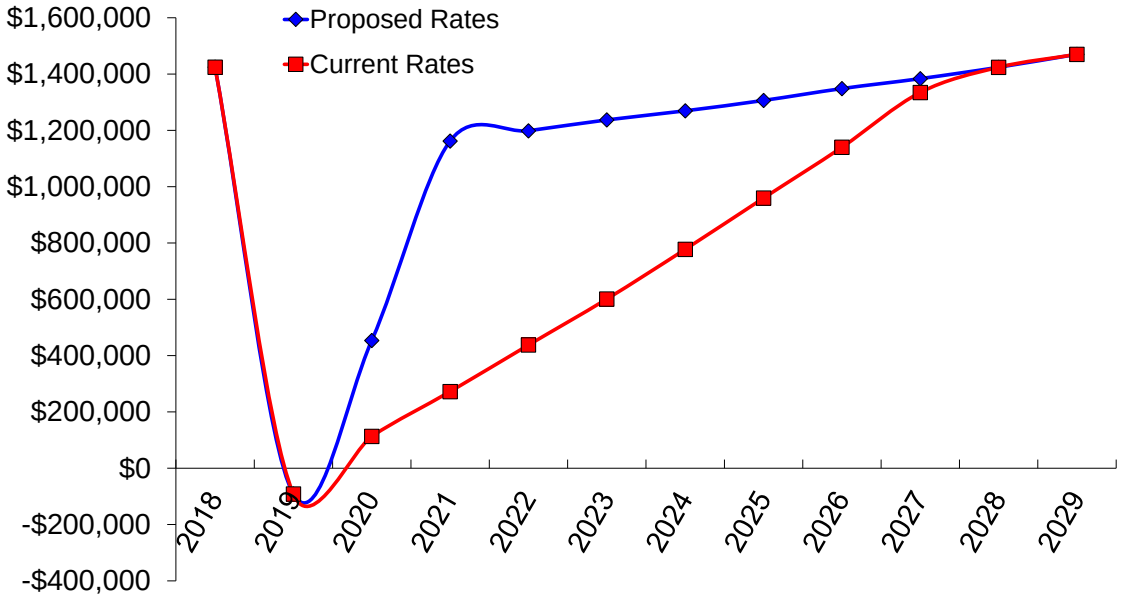


Chart 7 - Value of Cash Assets After Inflation

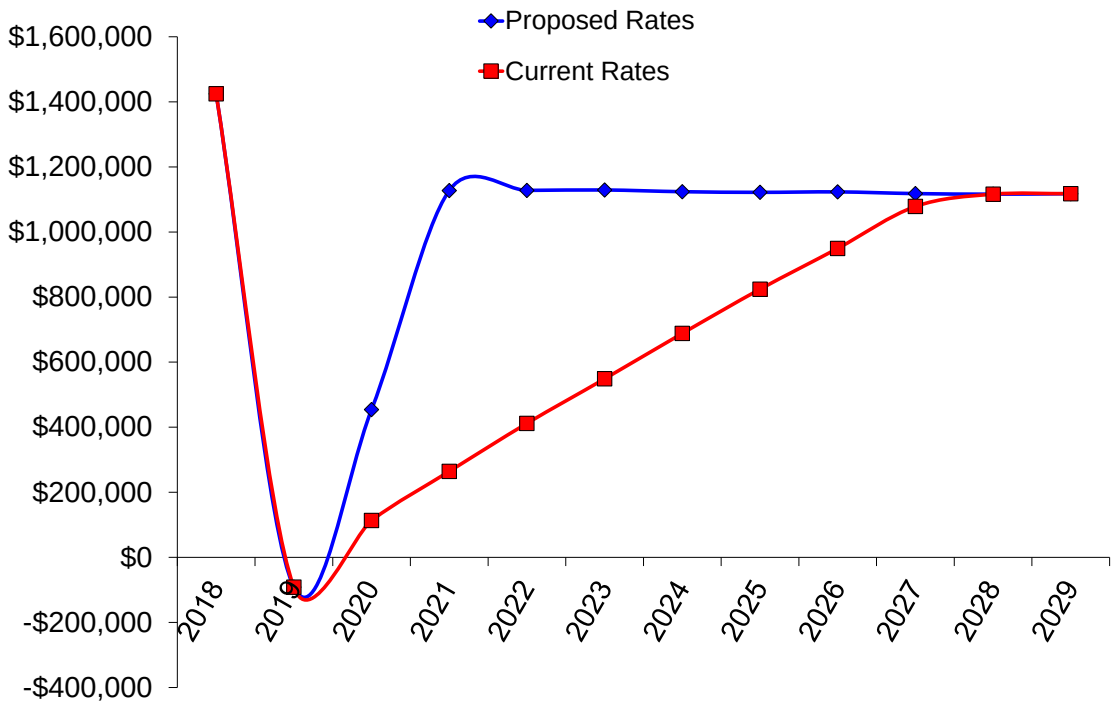
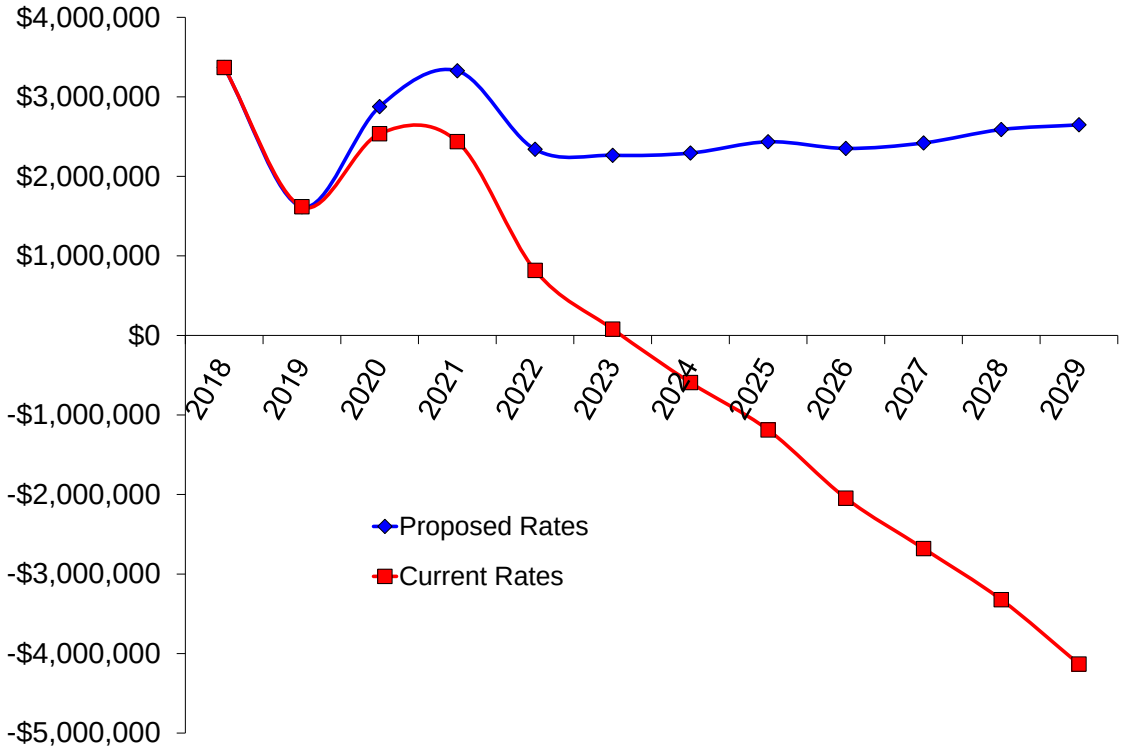


Chart 8 - Sum of All Reserves



Riverton, WY; Sewer Rates, Scenario 2019-2

This model depicts rates and major fees in a cost-to-serve structure, with only minor variations.

July 30, 2019

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Note: This document is a print out of the spreadsheet model used to calculate new user charge and other rates and fees for the next 10 years. These calculations are complex and are based upon many conditions and assumtions. These issues, and others, are described in a narrative report that accompanies this model.

Return on Investment

Riverton, WY; Sewer Rates, Scenario 2019-2

The rates depicted in this model will produce various returns on investment or paybacks. Usually the most important payback, at least to ratepayers, is a rate structure that is demonstrably fair. For the system, however, making sure that revenue will be adequate to pay all expected, expectable and many unexpectable costs is the the most important return. If revenue will increase as a result of this analysis, which is almost always the case, one can calculate a dollar and percentage return on investment.

The following calculations show what was invested and what the returns will be over two periods; five years and 10 years. Five years is a reasonable period for return projections. Ten years is a good basic planning horizon but you should not bank on amounts or returns projected that far out. Besides, most systems should have their analyses redone long before then.

Consider these key points about return on investment. Higher rates will fund more improvements, better repair and replacement and more. Most increases in revenue end up being used for such expenses. Thus, few systems end up with a dramatic increase in their cash reserves but they do markedly improve their financial position. In addition, fairer and higher rates generally enable systems to qualify for grant and loan funding that they otherwise would not. That increases the importation of "other people's money," which is a drain on the state and federal funds, where the money comes from, but it is very desirable at the utility level. The calculation below ignores any "outside" funds the utility may capture.

Also note that rates in this model have been modeled to be adjusted during the year following the test year or even later. That year is included in the first five-year return on investment calculation. Thus, the first year of returns calculated below include most or all of one year where rates will not have been changed yet. Thus, the real rate of return will be greater than the calculation reflects.

Calculations

$5,997	Fees to GettingGreatRates.com
$500	Estimated value of system staff time and incidentals to assemble needed information
$6,497	Total Investment for This Analysis
$3,359,540	Five-year Increase in Revenue Due at Least Partly to This Analysis
51,706%	Five-year Return on Investment (increase in revenues / investment)
$7,456,782	Ten-year Improvement in Cash Position Due at Least Partly to This Analysis
114,767%	Ten-year Return on Investment (increase in revenues / investment)

Table 1 - Rates

Riverton, WY; Sewer Rates, Scenario 2019-2

Unless rates were recently changed, these are the current rates. At the least, these rates were in effect at the end of the test year. If a volume range was left out of the table, in order to make it shorter, the unit charge that shows for the next lowest volume range also applies to the hidden volume range.

Rates in Effect at End of Test Year

Customer Type, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Billing Cycle Minimum Charge	Usage Allowance in 1,000 Gallons	Unit Charge per 1,000 Gallons
Residential	0	$17.70	4.000	$4.96
	145,000	$17.70	4.000	$4.96
Master Meter	0	$22.64	4.000	$4.96
	145,000	$22.64	4.000	$4.96
Commercial	0	$15.94	0.000	$0.90
	5,000	$15.94	0.000	$4.16
	6,000	$15.94	0.000	$4.16
	7,000	$15.94	0.000	$5.22
	145,000	$15.94	0.000	$5.22
Commercial Flat	0	$37.21	0.000	$0.00
	145,000	$37.21	0.000	$0.00
Hospital	0	$34.47	8.000	$4.30
	145,000	$34.47	8.000	$4.30
Honor Farm	0	$59.71	8.000	$7.44
	145,000	$59.71	8.000	$7.44
Low Strength Sewer	0	$39.95	8.000	$2.59
	385,000	$39.95	8.000	$2.59
Wastewater Dump	0	$0.00	0.000	$65.26
	870,000	$0.00	0.000	$65.26
Fike Sewer	0	$34.48	0.000	$0.00
	870,000	$34.48	0.000	$0.00
Flat Rate	0	$32.58	0.000	$0.00
	870,000	$32.58	0.000	$0.00
Paintbrush Hotel	0	$37.21	0.000	$0.00
	870,000	$37.21	0.000	$0.00
Raintree Sewer	0	$33.77	0.000	$0.00
	870,000	$33.77	0.000	$0.00
WWTP Dump-Sump	0	$0.00	0.000	$232.99
Data Loss Adjustment	0	$0.00	0.000	$4.96

Table 2 - Test Year Usage

Riverton, WY; Sewer Rates, Scenario 2019-2

This table shows usage by all customers during the test year.

Residential meter readings per year: 12

Date this scenario created: 11/19/2018

Test year = the one-year period being analyzed starts: 7/1/2017

Other customer meter readings per year: 12

Bills sent per year: 12

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Residential	0	999	1,000	0.827	41,964	34,724,000	7,240	0	603	13.4%	13.2%
	1,000	1,999	1,000	0.848	34,724	29,436,000	5,288	5,288,000	441	9.8%	11.2%
	2,000	2,999	1,000	0.730	29,436	21,500,000	7,936	15,872,000	661	14.7%	8.2%
	3,000	3,999	1,000	0.672	21,500	14,456,000	7,044	21,132,000	587	13.0%	5.5%
	4,000	4,999	1,000	0.646	14,456	9,340,000	5,116	20,464,000	426	9.5%	3.6%
	5,000	5,999	1,000	0.656	9,340	6,128,000	3,212	16,060,000	268	5.9%	2.3%
	6,000	6,999	1,000	0.663	6,128	4,064,000	2,064	12,384,000	172	3.8%	1.5%
	7,000	7,999	1,000	0.705	4,064	2,864,000	1,200	8,400,000	100	2.2%	1.1%
	8,000	8,999	1,000	0.753	2,864	2,156,000	708	5,664,000	59	1.3%	0.8%
	9,000	9,999	1,000	0.755	2,156	1,628,000	528	4,752,000	44	1.0%	0.6%
	10,000	14,999	1,000	3.211	1,628	5,228,000	836	9,628,000	70	1.5%	2.0%
	15,000	19,999	1,000	4.101	792	3,248,000	252	4,328,000	21	0.5%	1.2%
	20,000	24,999	1,000	4.348	540	2,348,000	108	2,348,000	9	0.2%	0.9%
	25,000	29,999	1,000	4.278	432	1,848,000	100	2,688,000	8	0.2%	0.7%
	30,000	34,999	1,000	4.349	332	1,444,000	80	2,584,000	7	0.1%	0.6%
	35,000	44,999	1,000	8.032	252	2,024,000	92	3,644,000	8	0.2%	0.8%
	45,000	54,999	1,000	7.750	160	1,240,000	56	2,720,000	5	0.1%	0.5%
	55,000	64,999	1,000	7.115	104	740,000	44	2,560,000	4	0.1%	0.3%
	65,000	74,999	1,000	9.800	60	588,000	4	288,000	0	0.0%	0.2%
	75,000	84,999	1,000	8.286	56	464,000	20	1,604,000	2	0.0%	0.2%
	85,000	94,999	1,000	6.889	36	248,000	20	1,788,000	2	0.0%	0.1%
	95,000	104,999	1,000	8.500	16	136,000	4	396,000	0	0.0%	0.1%
	105,000	114,999	1,000	8.333	12	100,000	4	440,000	0	0.0%	0.0%
	115,000	124,999	1,000	10.000	8	80,000	0	0	0	0.0%	0.0%
	125,000	134,999	1,000	10.000	8	80,000	0	0	0	0.0%	0.0%
	135,000	144,999	1,000	10.000	8	80,000	0	0	0	0.0%	0.0%
	145,000	204,000	1,000	42.500	8	340,000	8	1,500,000	1	0.0%	0.1%
			Monthly and Annual Subtotals:		171,084	146,532,000	41,964	146,532,000	3,497	77.6%	55.8%

Table 2 - Test Year Usage

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Master Meter	0	2,999	1,000	2.762	84	232,000	84	232,000	7	0.2%	0.1%
			Monthly and Annual Subtotals:		84	232,000	128	232,000	11	0.2%	0.1%
Commercial	0	999	1,000	0.783	6,564	5,140,000	1,424	0	119	2.6%	2.0%
	1,000	1,999	1,000	0.746	5,140	3,835,000	1,305	1,305,000	109	2.4%	1.5%
	2,000	2,999	1,000	0.816	3,835	3,129,000	706	1,412,000	59	1.3%	1.2%
	3,000	3,999	1,000	0.858	3,129	2,685,000	444	1,332,000	37	0.8%	1.0%
	4,000	4,999	1,000	0.878	2,685	2,357,000	328	1,312,000	27	0.6%	0.9%
	5,000	5,999	1,000	0.887	2,357	2,090,000	267	1,335,000	22	0.5%	0.8%
	6,000	6,999	1,000	0.903	2,090	1,887,000	203	1,218,000	17	0.4%	0.7%
	7,000	7,999	1,000	0.923	1,887	1,741,000	146	1,022,000	12	0.3%	0.7%
	8,000	8,999	1,000	0.946	1,741	1,647,000	94	752,000	8	0.2%	0.6%
	9,000	9,999	1,000	0.939	1,647	1,547,000	100	900,000	8	0.2%	0.6%
	10,000	14,999	1,000	4.332	1,547	6,702,000	350	4,217,000	29	0.6%	2.6%
	15,000	19,999	1,000	4.295	1,197	5,141,000	279	4,736,000	23	0.5%	2.0%
	20,000	24,999	1,000	4.405	918	4,044,000	169	3,679,000	14	0.3%	1.5%
	25,000	29,999	1,000	4.446	749	3,330,000	134	3,605,000	11	0.2%	1.3%
	30,000	34,999	1,000	4.496	615	2,765,000	99	3,155,000	8	0.2%	1.1%
	35,000	44,999	1,000	8.552	516	4,413,000	123	4,788,000	10	0.2%	1.7%
	45,000	54,999	1,000	8.725	393	3,429,000	81	3,954,000	7	0.1%	1.3%
	55,000	64,999	1,000	8.897	312	2,776,000	54	3,166,000	5	0.1%	1.1%
	65,000	74,999	1,000	9.248	258	2,386,000	35	2,431,000	3	0.1%	0.9%
	75,000	84,999	1,000	9.103	223	2,030,000	34	2,690,000	3	0.1%	0.8%
	85,000	94,999	1,000	9.476	189	1,791,000	20	1,801,000	2	0.0%	0.7%
	95,000	104,999	1,000	9.485	169	1,603,000	18	1,803,000	2	0.0%	0.6%
	105,000	114,999	1,000	9.411	151	1,421,000	15	1,636,000	1	0.0%	0.5%
	115,000	124,999	1,000	9.044	136	1,230,000	21	2,495,000	2	0.0%	0.5%
	125,000	134,999	1,000	9.817	115	1,129,000	4	519,000	0	0.0%	0.4%
	135,000	144,999	1,000	9.532	111	1,058,000	11	1,543,000	1	0.0%	0.4%
	145,000	1,083,000	1,000	113.230	100	11,323,000	100	25,823,000	8	0.2%	4.3%
			Monthly and Annual Subtotals:		38,774	82,629,000	6,564	82,629,000	547	12.1%	31.5%
Commercial Flat	0	999	1,000	0.000	384	0	384	0	32	0.7%	0.0%
			Monthly and Annual Subtotals:		384	0	384	0	32	0.7%	0.0%

Table 2 - Test Year Usage

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Hospital	0	999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	1,000	1,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	15,000	19,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	20,000	24,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	25,000	29,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	30,000	34,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	35,000	44,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	45,000	54,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	55,000	64,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	65,000	74,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	75,000	84,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	85,000	94,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	95,000	104,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	105,000	114,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	115,000	124,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	125,000	134,999	1,000	9.667	12	116,000	1	131,000	0	0.0%	0.0%
	135,000	144,999	1,000	10.000	11	110,000	0	0	0	0.0%	0.0%
	145,000	457,000	1,000	122.273	11	1,345,000	11	2,940,000	1	0.0%	0.5%
			Monthly and Annual Subtotals:		322	3,071,000	12	3,071,000	1	0.0%	1.2%

Table 2 - Test Year Usage

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Honor Farm	0	999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	1,000	1,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	15,000	19,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	20,000	24,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	25,000	29,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	30,000	34,999	1,000	5.000	12	60,000	0	0	0	0.0%	0.0%
	35,000	44,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	45,000	54,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	55,000	64,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	65,000	74,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	75,000	84,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	85,000	94,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	95,000	104,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	105,000	114,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	115,000	124,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	125,000	134,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	135,000	144,999	1,000	10.000	12	120,000	0	0	0	0.0%	0.0%
	145,000	1,087,000	1,000	763.583	12	9,163,000	12	10,903,000	1	0.0%	3.5%
			Monthly and Annual Subtotals:		324	10,903,000	12	10,903,000	1	0.0%	4.2%
Low Strength Sewer	0	999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
			Monthly and Annual Subtotals:		0	0	0	0	0	0.0%	0.0%

Table 2 - Test Year Usage

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Conversion Factor for Billable Units	Avg. Use in Each Volume Range in 1,000 Gallons	Count of Bills With ANY Volume in Each Range	Total Annual Use in Each Volume Range in Gallons	Count of Bills Where Volume "Maxed Out" in Each Range	Volume of Bills Where Volume "Maxed Out" in Each Range	# of Customers With Volume That "Maxed Out" in Each Range	% of Customers That Averaged This Volume of Use	% of Total Use at This Average Volume
Wastewater Dump	0	999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
			Monthly and Annual Subtotals:		0	0	0	0	0	0.0%	0.0%
Fike Sewer	0	999	1,000	0.000	516	0	516	0	43	1.0%	0.0%
			Monthly and Annual Subtotals:		516	0	516	0	43	1.0%	0.0%
Flat Rate	0	999	1,000	0.000	4,464	0	4,464	0	372	8.3%	0.0%
			Monthly and Annual Subtotals:		4,464	0	4,464	0	372	8.3%	0.0%
Paintbrush Hotel	0	999	1,000	0.000	12	0	12	0	1	0.0%	0.0%
			Monthly and Annual Subtotals:		12	0	12	0	1	0.0%	0.0%
Raintree Sewer	0	999	1,000	0.000	12	0	12	0	1	0.0%	0.0%
			Monthly and Annual Subtotals:		12	0	12	0	1	0.0%	0.0%
WWTP Dump-Sump	0	999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	870,000	99,999,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
			Monthly and Annual Subtotals:		0	0	0	0	0	0.0%	0.0%
Data Loss Adjustment	0	39,999,999	1,000	19,150.000	1	19,150,000	1	19,150,000	0	0.0%	7.3%
			Monthly and Annual Subtotals:		1	19,150,000	1	19,150,000	0	0.0%	7.3%
				Grand Totals:	215,977	262,517,000	54,069		4,506	100%	100%

Table 3 - Operating Incomes
(and Basic User Data)
Riverton, WY; Sewer Rates, Scenario 2019-2

This table depicts user statistics, customer growth, and system incomes and across the board "inflationary" style rate increases through the 10th year.

Annual Median Household Income (AMHI)

$50,645 Census Bureau estimate of AMHI for the year: 2016

$31,531 Census Bureau estimate of AMHI for the year: 2000

$19,114 AMHI growth during this time period

3.79% Simple annual income growth rate during this time period (used to project incomes into the future)

Test Year Growth of Customer Base and Average Tap Fee Paid per Connection

7 Number of new connections made during the test year

$604 Average tap or installation fee assessed during the test year

This model is programmed to assume that rates will be reset in the "Analysis (This) Year" column below (heading highlighted blue). Revenues will be collected at the now-current rates for the first part of the analysis year and the modeled rates for the last part of the analysis year. The change-over from the current rates to new rates is modeled to happen on the date near the top of Table 10. Thus, the revenues shown in the last column of that table are "blended" revenues; part collected at the old rates and part collected at the new rates. It was then assumed that all rate adjustments made after the initial (major) adjustment will be done annually on approximately the anniversary of the first adjustment.

Basic User (Customer) Data

(First year balances and incomes are actual, subsequent years are projected.)	Inflation or Deflation (–) Factor	Test Year	Analysis (This) Year	Years Following the Analysis Year (for Which Results Have Been Projected)									
				1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year
		Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting	Starting
		7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Rate Increases Projected for Future Years	N.A.	N.A.	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Average Number of Customers for the Year	N.A.	4,506	4,514	4,522	4,530	4,538	4,546	4,554	4,562	4,570	4,578	4,586	4,594
Customers Added or Lost (-) During the Year	N.A.	7.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Customer Growth or Loss (-) Rate	N.A.	0.16%	0.18%	0.18%	0.18%	0.18%	0.18%	0.18%	0.18%	0.18%	0.17%	0.17%	0.17%
Actual (Test Year) and Projected Volumes, in Gallons	N.A.	262,517,000	262,983,101	263,449,203	263,915,304	264,381,405	264,847,507	265,313,608	265,779,709	266,245,811	266,711,912	267,178,013	267,644,114

The row above shows the rate at which user charge fees should be increased for each year beyond the initial rate adjustment year. Unless stated otherwise, these should be across-the-board increases to all rates and fees and that should continue until a new rate analysis is done.

How User Charge Fees Were Calculated, Accounting for New Customers and Future Rate Increases

Actual or Calculated Sales Revenues		$1,767,034	$1,803,360	$2,311,201	$2,384,748	$2,460,636	$2,538,924	$2,619,694	$2,703,025	$2,788,998	$2,877,697	$2,969,208	$3,063,619
Additional Sales Revenues From New Customers			$9	$4,089	$4,219	$4,338	$4,468	$4,602	$4,740	$4,883	$5,029	$5,180	$5,335
Total Calculated Revenues (User Charge Fees)		$1,767,034	$1,803,369	$2,315,290	$2,388,967	$2,464,974	$2,543,392	$2,624,296	$2,707,765	$2,793,881	$2,882,726	$2,974,388	$3,068,955

Operating Incomes

38300 Sewer Receipts	N.A.	$1,844,772	$1,882,707	$2,417,148	$2,494,068	$2,573,418	$2,655,286	$2,739,749	$2,826,891	$2,916,795	$3,009,549	$3,105,243	$3,203,970
Late Payment Charge	N.A.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
38325 Sewer Tap Fees	% Above	$4,226	$5,650	$0	$0	$0	$0	$0	$0	$0	$0	$1	$2
Meter Size-based System Development Fees (Table 14)	% Above	$0	$9	$3,242	$3,340	$3,440	$3,543	$3,649	$3,759	$3,872	$3,988	$4,107	$4,231
36100 Interest On Investments	N.A.	$11,009	$5,000	$9,312	$10,312	$10,600	$10,932	$11,204	$11,519	$11,882	$12,179	$12,524	$12,921
36306 FIKE/Webbwood SID Assessment	N.A.	$10,352	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
36307 Gardens North SID Assessment	N.A.	$747	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300
36308 Raintree SID Assessment	N.A.	$13,183	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000
38320 Sewer Assessment-General	N.A.	$199	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
38326 Septic Dumps (Est BOD 2,000 - 20,000 mg/ml)	N.A.	$64,973	$60,000	$60,000	$76,896	$79,343	$81,868	$84,473	$87,160	$89,933	$92,793	$95,744	$98,789
38330 Bio-Solids Sales	N.A.	$2,378	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500
33482 N Federal MRG Grant	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
33483 N Federal CWSRF Loan	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
33494 Master Plan BRC Grant	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
36900 Misc. Reimbursements	N.A.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
36987 Trf from Reserve Assigned Funds	N.A.	$0	$118,875	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
36988 Trf from Cash	N.A.	$0	$25,137	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Loss Because Rate Adjustments Made # Months Late	2.0	$0	$0	-$84,873	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Incomes		**$1,951,840**	**$2,112,177**	**$2,419,630**	**$2,599,416**	**$2,681,602**	**$2,766,429**	**$2,853,876**	**$2,944,129**	**$3,037,281**	**$3,133,309**	**$3,232,420**	**$3,334,713**

Table 4 - Operating Costs
(and Net Income)

Riverton, WY; Sewer Rates, Scenario 2019-2

This table depicts expenses during the test year, this year and for the next 10 years. Some future costs will experience inflation. Those costs that go up as use goes up are increased by the cost inflation factor plus the growth rate in users.

(First year costs and net incomes are actual, subsequent years are projected.)

	Inflation or Deflation (–) Factor	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	Years Following the Analysis Year (for Which Results Have Been Projected)									
				1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
109 Salaries and wages	3.0%	$570,530	$585,100	$602,653	$620,733	$639,355	$658,535	$678,291	$698,640	$719,599	$741,187	$763,423	$786,325
120 Overtime	3.0%	$4,825	$9,250	$9,528	$9,813	$10,108	$10,411	$10,723	$11,045	$11,376	$11,718	$12,069	$12,431
191 FICA	3.0%	$39,784	$45,480	$46,844	$48,250	$49,697	$51,188	$52,724	$54,305	$55,935	$57,613	$59,341	$61,121
192 Health Insurance	3.0%	$148,732	$146,835	$151,240	$155,777	$160,451	$165,264	$170,222	$175,329	$180,589	$186,006	$191,586	$197,334
193 Retirement	3.0%	$79,530	$84,975	$87,524	$90,150	$92,854	$95,640	$98,509	$101,465	$104,509	$107,644	$110,873	$114,199
196 Workers Compensation	3.0%	$14,561	$18,620	$19,179	$19,754	$20,347	$20,957	$21,586	$22,233	$22,900	$23,587	$24,295	$25,024
211 Office Supplies	3.0%	$3,770	$4,450	$4,584	$4,721	$4,863	$5,009	$5,159	$5,314	$5,473	$5,637	$5,806	$5,980
212 Office Equipment	3.0%	$2,247	$2,000	$2,060	$2,122	$2,185	$2,251	$2,319	$2,388	$2,460	$2,534	$2,610	$2,688
215 Computer Supplies	3.0%	$5,189	$2,565	$2,642	$2,721	$2,803	$2,887	$2,974	$3,063	$3,155	$3,249	$3,347	$3,447
224 Laboratory Supplies	3.0%	$33,715	$35,000	$36,050	$37,132	$38,245	$39,393	$40,575	$41,792	$43,046	$44,337	$45,667	$47,037
229 Uniforms	3.0%	$1,974	$3,050	$3,142	$3,236	$3,333	$3,433	$3,536	$3,642	$3,751	$3,864	$3,980	$4,099
231 Gas & Oil	3.0%	$5,253	$6,075	$6,257	$6,445	$6,638	$6,837	$7,043	$7,254	$7,471	$7,696	$7,926	$8,164
232 Diesel	3.0%	$6,461	$6,750	$6,953	$7,161	$7,376	$7,597	$7,825	$8,060	$8,302	$8,551	$8,807	$9,071
234 Veh. & Equip. Maintenance	3.0%	$11,616	$9,500	$9,785	$10,079	$10,381	$10,692	$11,013	$11,343	$11,684	$12,034	$12,395	$12,767
241 Tools & Supplies	3.0%	$3,106	$3,250	$3,348	$3,448	$3,551	$3,658	$3,768	$3,881	$3,997	$4,117	$4,241	$4,368
247 Safety Supplies	3.0%	$1,630	$2,750	$2,833	$2,917	$3,005	$3,095	$3,188	$3,284	$3,382	$3,484	$3,588	$3,696
249 Treatment Chemicals	3.0%	$60,473	$62,388	$64,362	$66,400	$68,501	$70,669	$72,905	$75,212	$77,591	$80,046	$82,578	$85,190
312 Postage	3.0%	$6,298	$6,497	$6,703	$6,915	$7,134	$7,360	$7,593	$7,833	$8,081	$8,336	$8,600	$8,872
315 Tank License	3.0%	$700	$200	$206	$212	$219	$225	$232	$239	$246	$253	$261	$269
333 Dues	3.0%	$709	$1,090	$1,123	$1,156	$1,191	$1,227	$1,264	$1,302	$1,341	$1,381	$1,422	$1,465
334 Bank Charges	3.0%	$7,492	$7,500	$7,725	$7,957	$8,195	$8,441	$8,695	$8,955	$9,224	$9,501	$9,786	$10,079
341 Electricity	3.0%	$130,943	$135,088	$139,364	$143,776	$148,326	$153,020	$157,862	$162,857	$168,009	$173,324	$178,807	$184,463
343 Heat	3.0%	$36,860	$37,000	$38,110	$39,253	$40,431	$41,644	$42,893	$44,180	$45,505	$46,870	$48,277	$49,725
345 Telephone	3.0%	$6,537	$7,100	$7,313	$7,532	$7,758	$7,991	$8,231	$8,478	$8,732	$8,994	$9,264	$9,542
350 Eclipse	3.0%	$8,708	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
360 Audit	3.0%	$14,200	$14,300	$14,729	$15,171	$15,626	$16,095	$16,578	$17,075	$17,587	$18,115	$18,658	$19,218
361 Professional & Consulting	3.0%	$1,205	$5,000	$5,150	$5,305	$5,464	$5,628	$5,796	$5,970	$6,149	$6,334	$6,524	$6,720
363 Building Maintenance	3.0%	$8,214	$11,000	$11,330	$11,670	$12,020	$12,381	$12,752	$13,135	$13,529	$13,934	$14,353	$14,783
364 General Maintenance	3.0%	$30,448	$37,150	$38,265	$39,412	$40,595	$41,813	$43,067	$44,359	$45,690	$47,061	$48,472	$49,926
371 Travel & Training	3.0%	$4,409	$6,500	$6,695	$6,896	$7,103	$7,316	$7,535	$7,761	$7,994	$8,234	$8,481	$8,735
372 System Maintenance	3.0%	$68,356	$70,000	$72,100	$74,263	$76,491	$78,786	$81,149	$83,584	$86,091	$88,674	$91,334	$94,074
373 Internet Access	3.0%	$360	$360	$371	$382	$393	$405	$417	$430	$443	$456	$470	$484
375 Software Maint Agreement	3.0%	$5,450	$6,100	$6,283	$6,471	$6,666	$6,866	$7,072	$7,284	$7,502	$7,727	$7,959	$8,198
380 Refund of Overpayment	3.0%	$0	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672
391 Advertising	3.0%	$14	$200	$206	$212	$219	$225	$232	$239	$246	$253	$261	$269
392 Drug Testing	3.0%	$175	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672
394 Recruitment Expenditures	3.0%	$223	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672

Table 4 - Operating Costs
(and Net Income)

	Inflation or Deflation (–) Factor	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
501 Insurance	3.0%	$26,886	$29,500	$30,385	$31,297	$32,235	$33,203	$34,199	$35,225	$36,281	$37,370	$38,491	$39,646
628 Principal CWSRF-063	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
631 CWSRF 108	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
632 CWSRF 118	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
670 Lift Station Maintenance	3.0%	$27,405	$40,000	$41,200	$42,436	$43,709	$45,020	$46,371	$47,762	$49,195	$50,671	$52,191	$53,757
803 Centrifuge Scroll Rebuild	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
808 Mapping Printer	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
825 Administrative Allocation	3.0%	$385,074	$404,893	$417,040	$429,551	$442,438	$455,711	$469,382	$483,463	$497,967	$512,906	$528,294	$544,142
909 Riverview Rd Sewer Lines	3.0%	$16	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
342 Utility Locate Services	3.0%	$0	$500	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672
663 N. Federal Blvd.	3.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
926 Bell Street Sewer Replacement	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
939 UV Inlet Valves	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
943 Trench Box	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
947 Fleet Management Software	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
948 Maintence Shop Compressor	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
952 NEOGOV	3.0%	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
969 Master Plan	3.0%	$0	$6,600	$6,798	$7,002	$7,212	$7,428	$7,651	$7,881	$8,117	$8,361	$8,612	$8,870
One-time Reduction of R&R Annuity	0.0%	-$150,223	-$150,223	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Annual Payment to Repair & Replacement (Table 7)	0.0%	$150,223	$150,223	$150,223	$150,223	$150,223	$150,223	$150,223	$150,223	$150,223	$150,223	$150,223	$150,223
772 Utility Rate Study	5.0%	$0	$6,194	$0	$0	$6,829	$0	$0	$7,529	$0	$0	$8,301	$0
Total, All CIP-related Payouts	N.A.	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
Total Operating Costs		**$1,764,075**	**$1,862,310**	**$2,062,360**	**$2,120,072**	**$2,186,355**	**$2,240,773**	**$2,303,870**	**$2,376,399**	**$2,435,832**	**$2,504,815**	**$2,584,181**	**$2,649,090**
Net Income (or Loss)		$187,765	$249,867	$357,269	$479,343	$495,248	$525,656	$550,006	$567,730	$601,449	$628,494	$648,239	$685,623
Working Capital Goal: 50% ollars, That is:		$882,037	$931,155	$1,031,180	$1,060,036	$1,093,177	$1,120,387	$1,151,935	$1,188,199	$1,217,916	$1,252,408	$1,292,090	$1,324,545

Notes: The yellow highlighted items above will increase by inflation and by the rate at which the utility connects new customers.

Table 5 - Capital Improvement Program (CIP)

Riverton, WY; Sewer Rates, Scenario 2019-2

This table depicts capital improvements and their funding. Costs reflect inflation.

	Test Year Starting	Analysis (This) Year Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
			Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)									
	7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Planned Spending, Debt-paid Portion of Projects (CIP costs to be funded with loans are shown in this section.)												
803 Centrifuge Scroll Rebuild	$13,862	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
663 N. Federal Blvd.	$0	$334,125	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
N. Federal Sewer	$0	$0	$251,063	$278,486	$0	$0	$0	$0	$0	$0	$0	$0
Bell Street Sewer	$0	$0	$64,890	$79,568	$0	$0	$0	$0	$0	$0	$0	$0
Armstrong Sewer	$0	$0	$0	$89,116	$0	$0	$0	$0	$0	$0	$0	$0
Honor Farm lining	$0	$0	$0	$193,349	$0	$0	$0	$0	$0	$0	$0	$0
Meter Replacement	$0	$0	$0	$368,000	$379,040	$0	$0	$0	$0	$0	$0	$0
A&T Lift Station Eng. Study	$0	$0	$0	$0	$61,466	$0	$0	$0	$0	$0	$0	$0
Gannett & Big Bend/Davis	$0	$0	$0	$0	$428,622	$0	$0	$0	$0	$0	$0	$0
A&T Lift Station Replacement	$0	$0	$0	$0	$0	$422,066	$0	$0	$0	$0	$0	$0
Lift Station Alt Power & Security	$0	$0	$0	$0	$0	$0	$56,515	$0	$0	$0	$0	$0
Cactus/Mesquite/Sage	$0	$0	$0	$0	$0	$0	$0	$201,290	$0	$0	$0	$0
Aspen/Cheryl Sue Alleys	$0	$0	$0	$0	$0	$0	$0	$0	$592,369	$0	$0	$0
Monroe/3rd-Alley to Alley	$0	$0	$0	$0	$0	$0	$0	$0	$0	$176,002	$0	$0
Westwood	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$205,453	$0
Misc. Sewer Line	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$226,786
UV Inlet Valves	$0	$0	$9,270	$0	$0	$0	$0	$0	$0	$0	$0	$0
Aerator Gear Drive Rebuild	$0	$0	$0	$5,570	$0	$0	$0	$0	$0	$0	$0	$0
Influent Pump VFD's	$0	$0	$0	$4,774	$0	$0	$0	$0	$0	$0	$0	$0
Rebuild - replace clarifier sump	$0	$0	$0	$8,752	$0	$0	$0	$0	$0	$0	$0	$0
Centrifuge Scheduled Maintenance	$0	$0	$0	$39,784	$0	$0	$0	$0	$0	$0	$0	$0
Aerator Gear Drive Rebuild	$0	$0	$0	$0	$32,782	$0	$0	$0	$0	$0	$0	$0
Clarifier Headgate valves	$0	$0	$0	$0	$32,782	$0	$0	$0	$0	$0	$0	$0
Septic Dump Station	$0	$0	$0	$0	$23,767	$0	$0	$0	$0	$0	$0	$0
Replace parking lot & drives	$0	$0	$0	$0	$49,173	$0	$0	$0	$0	$0	$0	$0
Headworks heating and ventilation	$0	$0	$0	$0	$0	$506,479	$0	$0	$0	$0	$0	$0
Ultraviolet disinfection units	$0	$0	$0	$0	$0	$0	$2,217,112	$0	$0	$0	$0	$0
Loan Closing Costs, Estimated at: 2.5%	$0	$0	$0	$0	$0	$0	$13,042	$0	$0	$0	$0	$0
Total Debt-paid Portion of Projects	$13,862	$334,125	$325,223	$1,067,398	$1,007,631	$928,545	$2,286,668	$201,290	$592,369	$176,002	$205,453	$226,786

Table 5 - Capital Improvement Program (CIP)

This table depicts capital improvements and their funding. Costs reflect inflation.

	Test Year Starting	Analysis (This) Year Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
			Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)									
	7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Planned Spending, Cash-paid Portion of Projects (CIP costs to be funded from reserves are shown here.)												
803 Centrifuge Scroll Rebuild	$4,621	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
663 N. Federal Blvd.	$0	$111,375	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
N. Federal Sewer	$0	$0	$83,688	$92,829	$0	$0	$0	$0	$0	$0	$0	$0
Bell Street Sewer	$0	$0	$21,630	$26,523	$0	$0	$0	$0	$0	$0	$0	$0
Armstrong Sewer	$0	$0	$0	$29,705	$0	$0	$0	$0	$0	$0	$0	$0
Honor Farm lining	$0	$0	$0	$64,450	$0	$0	$0	$0	$0	$0	$0	$0
Meter Replacement	$0	$0	$0	$122,667	$126,347	$0	$0	$0	$0	$0	$0	$0
A&T Lift Station Eng. Study	$0	$0	$0	$0	$20,489	$0	$0	$0	$0	$0	$0	$0
Gannett & Big Bend/Davis	$0	$0	$0	$0	$142,874	$0	$0	$0	$0	$0	$0	$0
A&T Lift Station Replacement	$0	$0	$0	$0	$0	$140,689	$0	$0	$0	$0	$0	$0
Lift Station Alt Power & Security	$0	$0	$0	$0	$0	$0	$18,838	$0	$0	$0	$0	$0
Cactus/Mesquite/Sage	$0	$0	$0	$0	$0	$0	$0	$67,097	$0	$0	$0	$0
Aspen/Cheryl Sue Alleys	$0	$0	$0	$0	$0	$0	$0	$0	$197,456	$0	$0	$0
Monroe/3rd-Alley to Alley	$0	$0	$0	$0	$0	$0	$0	$0	$0	$58,667	$0	$0
Westwood	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$68,484	$0
Misc. Sewer Line	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$75,595
UV Inlet Valves	$0	$0	$3,090	$0	$0	$0	$0	$0	$0	$0	$0	$0
Aerator Gear Drive Rebuild	$0	$0	$0	$0	$0	$0	$17,389	$0	$0	$0	$0	$0
Influent Pump VFD's	$0	$0	$0	$0	$0	$0	$2,174	$0	$0	$0	$0	$0
Rebuild - replace clarifier sump	$0	$0	$0	$0	$0	$0	$0	$14,926	$0	$0	$0	$0
Centrifuge Scheduled Maintenance	$0	$0	$0	$0	$0	$0	$0	$1,791	$0	$0	$0	$0
Aerator Gear Drive Rebuild	$0	$0	$0	$0	$0	$0	$0	$17,911	$0	$0	$0	$0
Clarifier Headgate valves	$0	$0	$0	$0	$0	$0	$0	$1,493	$0	$0	$0	$0
Septic Dump Station	$0	$0	$0	$0	$0	$0	$0	$0	$46,120	$0	$0	$0
Replace parking lot & drives	$0	$0	$0	$0	$0	$0	$0	$0	$46,120	$0	$0	$0
Headworks heating and ventilation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,750	$0	$0
Ultraviolet disinfection units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$190,016	$0	$0
Grant Acquisition Costs, Estimated at: 2.5%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Cash-paid Portion of Projects	$4,621	$111,375	$108,408	$336,173	$289,709	$140,689	$38,401	$103,217	$289,697	$253,433	$68,484	$75,595
Total CIP Costs	**$18,482**	**$445,500**	**$433,630**	**$1,403,571**	**$1,297,340**	**$1,069,233**	**$2,325,069**	**$304,507**	**$882,066**	**$429,435**	**$273,937**	**$302,381**

Table 5 - Capital Improvement Program (CIP)

This table depicts capital improvements and their funding. Costs reflect inflation.

			Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)									
	Test Year Starting	Analysis (This) Year Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
	7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Debt Repayment												
Existing Debt Payments (Following is debt that was initiated during the test year or earlier.)												
628 Principal CWSRF-063	$17,888	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000
631 CWSRF 108	$18,450	$18,500	$18,500	$18,500	$18,500	$18,500	$18,500	$18,500	$18,500	$18,500	$18,500	$18,500
632 CWSRF 118	$12,320	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500
CWSRF 162 (N. Fed. Blvd. Reconstruction)	$0	$0	$0	$140,219	$140,219	$140,219	$140,219	$140,219	$140,219	$140,219	$140,219	$140,219
New Debt Payments (Following are payments for projects to be paid with new debt. It is assumed these will be loan/lease-financed for a term of: 20 years at a 2.0% interest rate.)												
Loan Originated in Test Year		$848	$848	$848	$848	$848	$848	$848	$848	$848	$848	$848
Loan Originated in Analysis (This) Year			$20,434	$20,434	$20,434	$20,434	$20,434	$20,434	$20,434	$20,434	$20,434	$20,434
Loan Originated in 1st Year				$19,890	$19,890	$19,890	$19,890	$19,890	$19,890	$19,890	$19,890	$19,890
Loan Originated in 2nd Year					$65,279	$65,279	$65,279	$65,279	$65,279	$65,279	$65,279	$65,279
Loan Originated in 3rd Year						$61,623	$61,623	$61,623	$61,623	$61,623	$61,623	$61,623
Loan Originated in 4th Year							$56,787	$56,787	$56,787	$56,787	$56,787	$56,787
Loan Originated in 5th Year								$139,845	$139,845	$139,845	$139,845	$139,845
Loan Originated in 6th Year									$12,310	$12,310	$12,310	$12,310
Loan Originated in 7th Year										$36,227	$36,227	$36,227
Loan Originated in 8th Year											$10,764	$10,764
Loan Originated in 9th Year												$12,565
Total Debt Payments	$48,658	$49,848	$70,282	$230,390	$295,669	$357,292	$414,079	$553,924	$566,234	$602,462	$613,225	$625,790
Total, All CIP-related Payouts	**$67,140**	**$495,348**	**$503,912**	**$1,633,961**	**$1,593,009**	**$1,426,526**	**$2,739,148**	**$858,431**	**$1,448,300**	**$1,031,897**	**$887,162**	**$928,171**

(This is the total cash required for this CIP and debt payment schedule. These amounts must come from utility income, reserves or outside sources, as shown in the next section.)

Table 5 - Capital Improvement Program (CIP)

This table depicts capital improvements and their funding. Costs reflect inflation.

	Test Year Starting	Analysis (This) Year Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
			Years Following the Analysis Year (for Which Improvement Projects, Costs, Funding, etc. Have Been Projected)									
	7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
CIP Fund Sources (Following are the sources and amounts of funds expected to pay for the above CIP schedule.)												
Cash Reserves (Internal Funds)												
Debt and CIP Reserves Starting Balance	$879,397	$1,159,709	$1,552,354	$1,661,957	$1,579,120	$1,487,431	$1,517,645	$1,613,976	$1,520,580	$1,266,793	$1,030,236	$977,688
Working Capital Transferred in	$333,590	$200,749	$257,244	$450,487	$462,107	$498,446	$518,458	$531,466	$571,732	$594,002	$608,556	$653,168
Debt and CIP Reserves Interest Earned (or Paid)	$0	$23,194	$31,047	$33,239	$31,582	$29,749	$30,353	$32,280	$30,412	$25,336	$20,605	$19,554
Total Available Internal Funds	$1,212,987	$1,383,652	$1,840,646	$2,145,683	$2,072,809	$2,015,626	$2,066,456	$2,177,721	$2,122,724	$1,886,131	$1,659,397	$1,650,410
Grant and Loan Proceeds (External Funds)												
33482 N Federal MRG Grant	$0	$108,875	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
33483 N Federal CWSRF Loan	$0	$217,750	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
33494 Master Plan BRC Grant	$0	$3,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in Test Year	$13,862	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in Analysis (This) Year		$334,125	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 1st Year			$325,223	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 2nd Year				$1,067,398	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 3rd Year					$1,007,631	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 4th Year						$928,545	$0	$0	$0	$0	$0	$0
Loan Originated in 5th Year							$2,286,668	$0	$0	$0	$0	$0
Loan Originated in 6th Year								$201,290	$0	$0	$0	$0
Loan Originated in 7th Year									$592,369	$0	$0	$0
Loan Originated in 8th Year										$176,002	$0	$0
Loan Originated in 9th Year											$205,453	$0
Loan Originated in 10th Year												$226,786
Total Available External Funds	$13,862	$664,050	$325,223	$1,067,398	$1,007,631	$928,545	$2,286,668	$201,290	$592,369	$176,002	$205,453	$226,786
Total Available Funds	**$1,226,849**	**$2,047,702**	**$2,165,868**	**$3,213,081**	**$3,080,440**	**$2,944,170**	**$4,353,124**	**$2,379,011**	**$2,715,093**	**$2,062,133**	**$1,864,850**	**$1,877,195**
Outcomes (This CIP spending and funding plan will result in the following cash needs and ending balances each year.)												
Total Available Funds	**$1,226,849**	**$2,047,702**	**$2,165,868**	**$3,213,081**	**$3,080,440**	**$2,944,170**	**$4,353,124**	**$2,379,011**	**$2,715,093**	**$2,062,133**	**$1,864,850**	**$1,877,195**
Total, All CIP-related Payouts	**$67,140**	**$495,348**	**$503,912**	**$1,633,961**	**$1,593,009**	**$1,426,526**	**$2,739,148**	**$858,431**	**$1,448,300**	**$1,031,897**	**$887,162**	**$928,171**
Debt and CIP Reserves Ending Balances	**$1,159,709**	**$1,552,354**	**$1,661,957**	**$1,579,120**	**$1,487,431**	**$1,517,645**	**$1,613,976**	**$1,520,580**	**$1,266,793**	**$1,030,236**	**$977,688**	**$949,024**

Notes: Many improvement projects are needed, mainly to replace and upgrade existing water and sewer lines under and along streets. Doing both water and sewer line replacements at the same time is usually a best management practice for infrastructure management. To be somewhat conservative, it was assumed that most projects would be paid for mainly with loans and a small percentage of reserves.

Table 6 - Equipment Replacement Schedule - Detailed

Riverton, WY; Sewer Rates, Scenario 2019-2

Year Beginning	Misc R&R	808 Mapping Printer	Polymer Pumps Replacement	OD Cleaning	OD Cleaning	Blower Rebuild	CM Operations Pickup	Grit Pump Room Unit Heater	Grit pump room entry door	Headworks Basement Door	Clarifier Entry Doors	RAS Valve Actuators	Replace Mower
7/1/18	$20,000	$3,448	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/19	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/20	$20,000	$0	$0	$0	$0	$0	$15,500	$1,000	$1,000	$1,000	$2,000	$4,000	$15,000
7/1/21	$20,000	$0	$3,000	$4,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/22	$20,000	$0	$0	$0	$0	$4,000	$0	$0	$0	$0	$0	$0	$0
7/1/23	$20,000	$3,448	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/24	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/25	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/26	$20,000	$0	$3,000	$4,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/27	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$20,000	$3,448	$0	$0	$4,000	$4,000	$0	$0	$0	$0	$0	$0	$0
7/1/29	$20,000	$0	$0	$0	$0	$0	$15,500	$1,000	$1,000	$1,000	$2,000	$4,000	$15,000
7/1/30	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/31	$20,000	$0	$3,000	$4,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/32	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/33	$20,000	$3,448	$0	$0	$4,000	$0	$0	$0	$0	$0	$0	$0	$0
7/1/34	$20,000	$0	$0	$0	$0	$4,000	$0	$0	$0	$0	$0	$0	$0
7/1/35	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/36	$20,000	$0	$3,000	$4,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/37	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/38	$20,000	$3,448	$0	$0	$4,000	$0	$15,500	$1,000	$1,000	$1,000	$2,000	$4,000	$15,000
7/1/39	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/40	$20,000	$0	$0	$0	$0	$4,000	$0	$0	$0	$0	$0	$0	$0
7/1/41	$20,000	$0	$3,000	$4,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/42	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Table 6 - Equipment Replacement Schedule - Detailed

Year Beginning	Headworks Garage Door Paint	Desktop and Counters in operations	Admin Interior Paint	Lawn Mower - WWTP	939 UV Inlet Valves	943 Trench Box	947 Fleet Management Software	948 Maintence Shop Compressor	952 NEOGOV	Centrifuge Scheduled Maintenance	Aerator Gear Drive Rebuild	Aerator Gear Drive Rebuild	Aerator Gear Drive Rebuild
7/1/18	$0	$0	$0	$0	$12,000	$12,500	$2,750	$3,750	$2,250	$0	$0	$0	$0
7/1/19	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/21	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$29,000	$60,000	$0	$0
7/1/22	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/23	$0	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$60,000	$0
7/1/24	$0	$0	$0	$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$60,000
7/1/25	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/26	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/27	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$0	$0	$0	$0	$12,000	$12,500	$2,750	$3,750	$2,250	$0	$0	$0	$0
7/1/29	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/30	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/31	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$29,000	$60,000	$0	$0
7/1/32	$0	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/33	$0	$0	$0	$15,000	$0	$0	$0	$0	$0	$0	$0	$60,000	$0
7/1/34	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$60,000
7/1/35	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/36	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/37	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/38	$0	$0	$0	$0	$12,000	$12,500	$2,750	$3,750	$2,250	$0	$0	$0	$0
7/1/39	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/40	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/41	$0	$0	$3,000	$0	$0	$0	$0	$0	$0	$29,000	$60,000	$0	$0
7/1/42	$0	$0	$0	$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$0

Table 6 - Equipment Replacement Schedule - Detailed

Year Beginning	Centrifuge Scheduled Maintenance	Centrifuge Scheduled Maintenance	Centrifuge Scheduled Maintenance	Influent Pump Replacement	Admin Front Entry Door Replacement	Flow Meter Data Recorders	Influent Pump Mounting Shoes	Aerator Gear Drive Rebuild	Sludge building Heating - ventilation	Influent Pump VFD's	Rebuild - replace clarifier sump	Headworks heating and ventilation	Clarifier heating - ventilation
7/1/18	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/19	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/20	$0	$0	$0	$0	$7,000	$6,000	$11,000	$50,000	$0	$0	$0	$0	$0
7/1/21	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/22	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/23	$0	$0	$0	$0	$0	$0	$0	$0	$15,000	$7,500	$0	$0	$0
7/1/24	$6,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000	$0	$0
7/1/25	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/26	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$15,000	$0
7/1/27	$0	$9,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$0	$0	$0	$127,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/29	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,000
7/1/30	$0	$0	$9,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/31	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/32	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/33	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/34	$6,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/35	$0	$0	$0	$0	$7,000	$6,000	$11,000	$50,000	$0	$0	$0	$0	$0
7/1/36	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/37	$0	$9,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/38	$0	$0	$0	$127,000	$0	$0	$0	$0	$15,000	$7,500	$0	$0	$0
7/1/39	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000	$0	$0
7/1/40	$0	$0	$9,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/41	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$15,000	$0
7/1/42	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Table 6 - Equipment Replacement Schedule - Detailed

Year Beginning	Dewatering heating - ventilation	Headworks Basement Rollup Door	Replace 2010 Pickup	926 Bell Street Sewer Replacement	Demo upper level of headworks	RAS pump controllers & VFD	Clarifier Headgate valves	Replace 2002 Pickup	Replace Loader	Headgate Valves in Headworks	Replace John Deere Tractor - Loader	**Total Annual Replacement Costs**
7/1/18	$0	$0	$0	$84,000	$0	$0	$0	$0	$0	$0	$0	$140,698
7/1/19	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20,000
7/1/20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$133,500
7/1/21	$0	$0	$0	$0	$40,000	$40,000	$0	$0	$0	$0	$0	$197,000
7/1/22	$0	$0	$0	$0	$0	$0	$0	$30,000	$0	$0	$0	$62,000
7/1/23	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$111,948
7/1/24	$0	$0	$0	$0	$0	$0	$5,000	$0	$0	$0	$0	$156,000
7/1/25	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20,000
7/1/26	$0	$0	$40,000	$0	$0	$0	$0	$0	$0	$0	$0	$82,000
7/1/27	$0	$0	$0	$0	$0	$0	$0	$0	$150,000	$3,000	$0	$182,000
7/1/28	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$191,698
7/1/29	$35,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$35,000	$159,500
7/1/30	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$35,000
7/1/31	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$119,000
7/1/32	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$23,000
7/1/33	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$102,448
7/1/34	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$90,000
7/1/35	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$94,000
7/1/36	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$27,000
7/1/37	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,000
7/1/38	$0	$3,000	$0	$84,000	$0	$0	$0	$0	$0	$0	$0	$341,698
7/1/39	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$71,000
7/1/40	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$41,000
7/1/41	$0	$0	$40,000	$0	$40,000	$40,000	$0	$0	$0	$0	$0	$254,000
7/1/42	$0	$0	$0	$0	$0	$0	$0	$30,000	$0	$0	$0	$65,000

Table 7 - Equipment Replacement Annuity Calculation

Riverton, WY; Sewer Rates, Scenario 2019-2

This table calculates the annual annuity (savings deposit) needed to build replacement (R&R) reserves. This annuity amount should actually be deposited in a savings account. The annuity amount, called the "Required Annual Deposit (Annuity) to Replacement Account" below, should be included in the utility's general budget as a cost. As a result, all replacement and refurbishment scheduled in Table 6, the detailed replacement schedule, would be paid for out of R&R reserves and not out of the utility's general budget.

In simple terms, the annuity at the bottom of this table should be deposited into an account each year and R&R projects should be paid for out of that account.

3.00% Average Inflation Rate for the Following Sewer System Equipment for the Term of This Replacement Schedule

2.00% Average Interest Rate on Balances Invested for the Term of This Replacement Schedule

2.00% Average Interest Rate on Amounts Borrowed for the Term of This Replacement Schedule

Year Beginning	Schedule Year	This Year's Costs in Current Dollars	Future Annual Inflated Net Costs	Interest Earned on Prior Balance	End of Year Balance in Future Dollars	Minimum Desired End of Year Balance in Future Dollars
7/1/18	Analysis Year	$140,698	$140,698	$0	-$140,698	$367,019
7/1/19	1st Year	$20,000	$20,600	-$2,814	-$13,889	$378,030
7/1/20	2nd Year	$133,500	$141,630	-$278	-$5,574	$389,370
7/1/21	3rd Year	$197,000	$215,267	-$111	-$70,729	$401,052
7/1/22	4th Year	$62,000	$69,782	-$1,415	$8,298	$413,083
7/1/23	5th Year	$111,948	$129,779	$166	$28,908	$425,476
7/1/24	6th Year	$156,000	$186,272	$578	-$6,563	$438,240
7/1/25	7th Year	$20,000	$24,597	-$131	$118,932	$451,387
7/1/26	8th Year	$82,000	$103,875	$2,379	$167,658	$464,929
7/1/27	9th Year	$182,000	$237,469	$3,353	$83,766	$478,877
7/1/28	10th Year	$191,698	$257,627	$1,675	-$21,962	$493,243
7/1/29	11th Year	$159,500	$220,785	-$439	-$92,963	$508,040
7/1/30	12th Year	$35,000	$49,902	-$1,859	$5,499	$523,281
7/1/31	13th Year	$119,000	$174,756	$110	-$18,924	$538,980
7/1/32	14th Year	$23,000	$34,790	-$378	$96,132	$555,149
7/1/33	15th Year	$102,448	$159,611	$1,923	$88,666	$571,804
7/1/34	16th Year	$90,000	$144,424	$1,773	$96,239	$588,958
7/1/35	17th Year	$94,000	$155,368	$1,925	$93,019	$606,626
7/1/36	18th Year	$27,000	$45,966	$1,860	$199,137	$624,825
7/1/37	19th Year	$29,000	$50,852	$3,983	$302,492	$643,570

Notes: There is currently no R&R schedule. Average R&R costs were instead estimated. A Discretionary Annuity amount was added so that at the end of the 20-year modeling period, the balance will equal the average of the annual replacement cost amounts, less interest paid for borrowing during the negative balance years.

Starting Account Balance	$0	$367,019
Minimum Annual Annuity	$136,980	Minimum Desired Balance in Today's Dollars
Discretionary Annuity	$13,244	

Required Annual Deposit (Annuity) to Replacement Account **$150,223**

(This amount is included in Table 4 as an operating cost.)

Table 8 - Average Cost Classification

Riverton, WY; Sewer Rates, Scenario 2019-2

This table distributes costs from a representative year (the "average rate structure basis year) to fixed and variable categories (see Definitions) in order to calculate the "cost of service" rate structure for that year.

The average rate structure basis year runs from: 7/1/2022 through 6/30/2023

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Variable Cost Percentage	Average Fixed Cost	Average Variable Cost
109 Salaries and wages	$658,535	33.3%	66.7%	$219,490	$439,045
120 Overtime	$10,411	33.3%	66.7%	$3,470	$6,941
191 FICA	$51,188	33.3%	66.7%	$17,061	$34,127
192 Health Insurance	$165,264	33.3%	66.7%	$55,083	$110,182
193 Retirement	$95,640	33.3%	66.7%	$31,877	$63,763
196 Workers Compensation	$20,957	33.3%	66.7%	$6,985	$13,972
211 Office Supplies	$5,009	100.0%	0.0%	$5,009	$0
212 Office Equipment	$2,251	100.0%	0.0%	$2,251	$0
215 Computer Supplies	$2,887	100.0%	0.0%	$2,887	$0
224 Laboratory Supplies	$39,393	100.0%	0.0%	$39,393	$0
229 Uniforms	$3,433	33.3%	66.7%	$1,144	$2,289
231 Gas & Oil	$6,837	33.3%	66.7%	$2,279	$4,559
232 Diesel	$7,597	33.3%	66.7%	$2,532	$5,065
234 Veh. & Equip. Maintenance	$10,692	33.3%	66.7%	$3,564	$7,129
241 Tools & Supplies	$3,658	33.3%	66.7%	$1,219	$2,439
247 Safety Supplies	$3,095	33.3%	66.7%	$1,032	$2,064
249 Treatment Chemicals	$70,669	0.0%	100.0%	$0	$70,669
312 Postage	$7,360	100.0%	0.0%	$7,360	$0
315 Tank License	$225	100.0%	0.0%	$225	$0
333 Dues	$1,227	33.3%	66.7%	$409	$818
334 Bank Charges	$8,441	100.0%	0.0%	$8,441	$0
341 Electricity	$153,020	0.0%	100.0%	$0	$153,020
343 Heat	$41,644	33.3%	66.7%	$13,880	$27,764
345 Telephone	$7,991	100.0%	0.0%	$7,991	$0
350 Eclipse	$0	33.3%	66.7%	$0	$0
360 Audit	$16,095	100.0%	0.0%	$16,095	$0
361 Professional & Consulting	$5,628	100.0%	0.0%	$5,628	$0
363 Building Maintenance	$12,381	33.3%	66.7%	$4,126	$8,254
364 General Maintenance	$41,813	33.3%	66.7%	$13,936	$27,876
371 Travel & Training	$7,316	33.3%	66.7%	$2,438	$4,877
372 System Maintenance	$78,786	33.3%	66.7%	$26,259	$52,526
373 Internet Access	$405	100.0%	0.0%	$405	$0
375 Software Maint Agreement	$6,866	100.0%	0.0%	$6,866	$0
380 Refund of Overpayment	$563	100.0%	0.0%	$563	$0
391 Advertising	$225	100.0%	0.0%	$225	$0

Table 8 - Average Cost Classification

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Variable Cost Percentage	Average Fixed Cost	Average Variable Cost
392 Drug Testing	$563	33.3%	66.7%	$188	$375
394 Recruitment Expenditures	$563	33.3%	66.7%	$188	$375
501 Insurance	$33,203	100.0%	0.0%	$33,203	$0
628 Principal CWSRF-063	$0	33.3%	66.7%	$0	$0
631 CWSRF 108	$0	33.3%	66.7%	$0	$0
632 CWSRF 118	$0	33.3%	66.7%	$0	$0
670 Lift Station Maintenance	$45,020	33.3%	66.7%	$15,005	$30,015
803 Centrifuge Scroll Rebuild	$0	33.3%	66.7%	$0	$0
808 Mapping Printer	$0	33.3%	66.7%	$0	$0
825 Administrative Allocation	$455,711	100.0%	0.0%	$455,711	$0
909 Riverview Rd Sewer Lines	$0	33.3%	66.7%	$0	$0
342 Utility Locate Services	$563	33.3%	66.7%	$188	$375
663 N. Federal Blvd.	$0	33.3%	66.7%	$0	$0
926 Bell Street Sewer Replacement	$0	33.3%	66.7%	$0	$0
939 UV Inlet Valves	$0	0.0%	100.0%	$0	$0
943 Trench Box	$0	33.3%	66.7%	$0	$0
947 Fleet Management Software	$0	33.3%	66.7%	$0	$0
948 Maintence Shop Compressor	$0	33.3%	66.7%	$0	$0
952 NEOGOV	$0	33.3%	66.7%	$0	$0
969 Master Plan	$7,428	33.3%	66.7%	$2,476	$4,952
Annual Payment to Repair & Replacement (Table 7)	$150,223	33.3%	66.7%	$50,069	$100,154
772 Utility Rate Study	$0	33.3%	66.7%	$0	$0
Total, All CIP-related Payouts	$1,426,526	33.3%	66.7%	$475,461	$951,065
Grand Total Costs, Weighted Avg Percentages	$3,667,299	42.1%	57.9%	$1,542,609	$2,124,690

Bases for Cost to Serve Rate Structure

Number of Customers During Year Defined Above =	4,546
Billed Volume, in Gallons, During Year Defined Above =	264,847,507
Average Fixed Cost per User per Month During Year Defined Above =	$28.28
Average Variable Cost to Produce per 1,000 Gallons During Year Defined Above =	$8.02
Gallons per Billing Cycle Used by Average Residential Customer =	3,492

100%		$3,667,299	
Inflow and Infiltration is Estimated at			61%
Inflow and Infiltration is Estimated at This Percentage of Average Cost			41%
Resulting Cost of Inflow and Infiltration			$1,342,377
Test Year Customer Metered Volume, in Gallons			262,517,000
+ Test Year Inflow and Infiltration, in Gallons			406,511,000
Total Test Year Volume, in Gallons, From Master Meter Readings			669,028,000

Table 9 - Marginal Cost Classification

Riverton, WY; Sewer Rates, Scenario 2019-2

The utility incurs "marginal" costs. These costs are unavoidable. Thus, the utility must collect minimal fees from various customers to "break even" on a marginal cost basis. Costs vary by customer type and volume used.

In the calculations below, it is assumed that marginal fixed costs are being calculated for: Snowbirds and Extra Units

In the calculations below, it is assumed that marginal costs are being calculated for: High-volume Customers

The marginal rate structure basis year runs from: 7/1/2022 through 6/30/2023

Cost Items	Average Fixed Cost	Average Variable Cost	Marginal Fixed Cost Percentage	Marginal Variable Cost Percentage	Marginal Fixed Cost	Marginal Variable Cost
109 Salaries and wages	$219,490	$439,045	33%	33%	$73,156	$146,334
120 Overtime	$3,470	$6,941	33%	33%	$1,157	$2,313
191 FICA	$17,061	$34,127	33%	33%	$5,686	$11,375
192 Health Insurance	$55,083	$110,182	33%	33%	$18,359	$36,724
193 Retirement	$31,877	$63,763	33%	33%	$10,625	$21,252
196 Workers Compensation	$6,985	$13,972	33%	33%	$2,328	$4,657
211 Office Supplies	$5,009	$0	33%	33%	$1,669	$0
212 Office Equipment	$2,251	$0	33%	33%	$750	$0
215 Computer Supplies	$2,887	$0	50%	50%	$1,443	$0
224 Laboratory Supplies	$39,393	$0	33%	33%	$13,130	$0
229 Uniforms	$1,144	$2,289	50%	50%	$572	$1,144
231 Gas & Oil	$2,279	$4,559	50%	50%	$1,139	$2,279
232 Diesel	$2,532	$5,065	50%	50%	$1,266	$2,533
234 Veh. & Equip. Maintenance	$3,564	$7,129	50%	50%	$1,782	$3,564
241 Tools & Supplies	$1,219	$2,439	33%	33%	$406	$813
247 Safety Supplies	$1,032	$2,064	33%	33%	$344	$688
249 Treatment Chemicals	$0	$70,669	33%	33%	$0	$23,554
312 Postage	$7,360	$0	33%	33%	$2,453	$0
315 Tank License	$225	$0	33%	33%	$75	$0
333 Dues	$409	$818	33%	33%	$136	$273
334 Bank Charges	$8,441	$0	33%	33%	$2,813	$0
341 Electricity	$0	$153,020	100%	100%	$0	$153,020
343 Heat	$13,880	$27,764	100%	100%	$13,880	$27,764
345 Telephone	$7,991	$0	50%	50%	$3,996	$0
350 Eclipse	$0	$0	50%	50%	$0	$0
360 Audit	$16,095	$0	33%	33%	$5,364	$0
361 Professional & Consulting	$5,628	$0	33%	33%	$1,876	$0
363 Building Maintenance	$4,126	$8,254	33%	33%	$1,375	$2,751
364 General Maintenance	$13,936	$27,876	33%	33%	$4,645	$9,291
371 Travel & Training	$2,438	$4,877	33%	33%	$813	$1,626
372 System Maintenance	$26,259	$52,526	100%	100%	$26,259	$52,526
373 Internet Access	$405	$0	33%	33%	$135	$0
375 Software Maint Agreement	$6,866	$0	50%	50%	$3,433	$0
380 Refund of Overpayment	$563	$0	33%	33%	$188	$0
391 Advertising	$225	$0	33%	33%	$75	$0

Table 9 - Marginal Cost Classification

Cost Items	Average Fixed Cost	Average Variable Cost	Marginal Fixed Cost Percentage	Marginal Variable Cost Percentage	Marginal Fixed Cost	Marginal Variable Cost
392 Drug Testing	$188	$375	33%	33%	$63	$125
394 Recruitment Expenditures	$188	$375	33%	33%	$63	$125
501 Insurance	$33,203	$0	33%	33%	$11,066	$0
628 Principal CWSRF-063	$0	$0	33%	33%	$0	$0
631 CWSRF 108	$0	$0	33%	33%	$0	$0
632 CWSRF 118	$0	$0	33%	33%	$0	$0
670 Lift Station Maintenance	$15,005	$30,015	33%	33%	$5,001	$10,004
803 Centrifuge Scroll Rebuild	$0	$0	33%	33%	$0	$0
808 Mapping Printer	$0	$0	33%	33%	$0	$0
825 Administrative Allocation	$455,711	$0	33%	33%	$151,888	$0
909 Riverview Rd Sewer Lines	$0	$0	33%	33%	$0	$0
342 Utility Locate Services	$188	$375	33%	33%	$63	$125
663 N. Federal Blvd.	$0	$0	33%	33%	$0	$0
926 Bell Street Sewer Replacement	$0	$0	33%	33%	$0	$0
939 UV Inlet Valves	$0	$0	33%	33%	$0	$0
943 Trench Box	$0	$0	33%	33%	$0	$0
947 Fleet Management Software	$0	$0	33%	33%	$0	$0
948 Maintence Shop Compressor	$0	$0	33%	33%	$0	$0
952 NEOGOV	$0	$0	33%	33%	$0	$0
969 Master Plan	$2,476	$4,952	33%	33%	$825	$1,651
Annual Payment to Repair & Replacement (Table 7)	$50,069	$100,154	33%	33%	$16,688	$33,381
772 Utility Rate Study	$0	$0	33%	33%	$0	$0
Total, All CIP-related Payouts	$475,461	$951,065	33%	33%	$158,471	$316,990
Grand Total All Costs	$1,542,609	$2,124,690			$545,457	$866,881
	$3,667,299				$1,412,338	

Marginal Fixed and Variable Cost Bases
(For the Customer Type Listed Above)

	Monthly Marginal Fixed Cost per Customer	Marginal Variable Cost per 1,000 Gallons
	$10.00	
Marginal Fixed Cost as a Percent of Total Fixed Cost:	35%	$3.27
Marginal Variable Cost as a Percent of Total Variable Cost:		41%

Table 10 - Initial Rate Adjustments and Resulting Revenues

Riverton, WY; Sewer Rates, Scenario 2019-2

This table calculates a new set of user charge rates and the revenues they would generate.

Out of City Multiplier 125% **Conservation Rate Block Multiplier** 100% **Other Multiplier** 100%

After rate adjustments are made, customers will be billed monthly.

Sales to be billed this year: Sales at the current (Test Year) rates (gray highlighted column) will apply until rates are adjusted. Sales at the modeled rates (yellow highlighted column) would apply if the modeled rates are adopted. The grand total "blended" sales revenues are the total revenues generated by the two different sets of rates. Those revenues show in the right-most column.

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
	0	999	$127,797	603	$17.73	0.000	$3.50	$685	$128,482
	1,000	1,999	$93,341	441	$17.73	0.000	$3.50	$539	$93,880
	2,000	2,999	$140,082	661	$17.73	0.000	$3.50	$592	$140,674
	3,000	3,999	$124,337	587	$17.73	0.000	$3.50	$481	$124,818
	4,000	4,999	$136,505	426	$17.73	0.000	$3.50	$338	$136,843
	5,000	5,999	$87,008	268	$17.73	0.000	$3.50	$215	$87,223
	6,000	6,999	$56,535	172	$17.73	0.000	$3.50	$139	$56,674
	7,000	7,999	$35,348	100	$17.73	0.000	$3.50	$86	$35,434
	8,000	8,999	$23,162	59	$17.73	0.000	$3.50	$55	$23,217
	9,000	9,999	$17,373	44	$17.73	0.000	$3.50	$41	$17,414
	10,000	14,999	$40,616	70	$17.73	0.000	$3.50	$91	$40,707
	15,000	19,999	$20,514	21	$17.73	0.000	$3.50	$43	$20,558
	20,000	24,999	$13,521	9	$17.73	0.000	$3.50	$28	$13,548
Residential	25,000	29,999	$10,906	8	$17.73	0.000	$3.50	$23	$10,929
	30,000	34,999	$8,555	7	$17.73	0.000	$3.50	$18	$8,572
	35,000	44,999	$11,635	8	$17.73	0.000	$3.50	$24	$11,659
	45,000	54,999	$7,122	5	$17.73	0.000	$3.50	$15	$7,137
	55,000	64,999	$4,437	4	$17.73	0.000	$3.50	$9	$4,446
	65,000	74,999	$2,979	0	$17.73	0.000	$3.50	$6	$2,985
	75,000	84,999	$2,648	2	$17.73	0.000	$3.50	$5	$2,654
	85,000	94,999	$1,580	2	$17.73	0.000	$3.50	$3	$1,583
	95,000	104,999	$743	0	$17.73	0.000	$3.50	$1	$745
	105,000	114,999	$565	0	$17.73	0.000	$3.50	$1	$566
	115,000	124,999	$396	0	$17.73	0.000	$3.50	$1	$396
	125,000	134,999	$396	0	$17.73	0.000	$3.50	$1	$396
	135,000	144,999	$396	0	$17.73	0.000	$3.50	$1	$396
	145,000	204,000	$1,823	1	$17.73	0.000	$3.50	$4	$1,827

Table 10 - Initial Rate Adjustments and Resulting Revenues

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
Master Meter	0	2,999	$2,629	7	$17.73	0.000	$3.50	$6	$2,635
	3,000	1,999	$0	0	$17.73	0.000	$3.50	$0	$0
	2,000	2,999	$0	0	$17.73	0.000	$3.50	$0	$0
	3,000	3,999	$181	1	$17.73	0.000	$3.50	$0	$181
	4,000	4,999	$0	0	$17.73	0.000	$3.50	$0	$0
	5,000	5,999	$0	0	$17.73	0.000	$3.50	$0	$0
	6,000	6,999	$0	0	$17.73	0.000	$3.50	$0	$0
	7,000	7,999	$0	0	$17.73	0.000	$3.50	$0	$0
	8,000	8,999	$0	0	$17.73	0.000	$3.50	$0	$0
	9,000	9,999	$0	0	$17.73	0.000	$3.50	$0	$0
	10,000	14,999	$90	0	$17.73	0.000	$3.50	$0	$91
	15,000	19,999	$90	0	$17.73	0.000	$3.50	$0	$91
	20,000	24,999	$181	1	$17.73	0.000	$3.50	$0	$181
	25,000	29,999	$181	1	$17.73	0.000	$3.50	$0	$181
	30,000	34,999	$90	0	$17.73	0.000	$3.50	$0	$91
	35,000	44,999	$90	0	$17.73	0.000	$3.50	$0	$91
	45,000	54,999	$0	0	$17.73	0.000	$3.50	$0	$0
	55,000	64,999	$90	0	$17.73	0.000	$3.50	$0	$91
Commercial	0	999	$27,250	119	$17.73	0.000	$3.50	$118	$27,368
	1,000	1,999	$24,187	109	$17.73	0.000	$3.50	$100	$24,287
	2,000	2,999	$14,031	59	$17.73	0.000	$3.50	$64	$14,095
	3,000	3,999	$9,468	37	$17.73	0.000	$3.50	$47	$9,515
	4,000	4,999	$7,329	27	$17.73	0.000	$3.50	$39	$7,368
	5,000	5,999	$12,915	22	$17.73	0.000	$3.50	$33	$12,948
	6,000	6,999	$11,055	17	$17.73	0.000	$3.50	$28	$11,083
	7,000	7,999	$11,384	12	$17.73	0.000	$3.50	$24	$11,408
	8,000	8,999	$10,068	8	$17.73	0.000	$3.50	$20	$10,088
	9,000	9,999	$9,643	8	$17.73	0.000	$3.50	$20	$9,663
	10,000	14,999	$40,452	29	$17.73	0.000	$3.50	$81	$40,534
	15,000	19,999	$31,198	23	$17.73	0.000	$3.50	$63	$31,260
	20,000	24,999	$23,738	14	$17.73	0.000	$3.50	$47	$23,785
	25,000	29,999	$19,465	11	$17.73	0.000	$3.50	$38	$19,504
	30,000	34,999	$15,967	8	$17.73	0.000	$3.50	$31	$15,999
	35,000	44,999	$24,928	10	$17.73	0.000	$3.50	$48	$24,976
	45,000	54,999	$19,138	7	$17.73	0.000	$3.50	$37	$19,175
	55,000	64,999	$15,309	5	$17.73	0.000	$3.50	$29	$15,339
	65,000	74,999	$12,977	3	$17.73	0.000	$3.50	$25	$13,002
	75,000	84,999	$11,108	3	$17.73	0.000	$3.50	$21	$11,129
	85,000	94,999	$9,641	2	$17.73	0.000	$3.50	$18	$9,659
	95,000	104,999	$8,631	2	$17.73	0.000	$3.50	$16	$8,647
	105,000	114,999	$7,636	1	$17.73	0.000	$3.50	$14	$7,650
	115,000	124,999	$6,737	2	$17.73	0.000	$3.50	$13	$6,750
	125,000	134,999	$5,941	0	$17.73	0.000	$3.50	$11	$5,952
	135,000	144,999	$5,682	1	$17.73	0.000	$3.50	$11	$5,693
	145,000	1,083,000	$60,534	8	$17.73	0.000	$3.50	$113	$60,647

Table 10 - Initial Rate Adjustments and Resulting Revenues

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
Commercial Flat	0	999	$14,249	32	$48.06	0.000	$0.00	$51	$14,300
	145,000	123,000	$0	0	$48.06	0.000	$0.00	$0	$0
Hospital	0	999	$0	0	$17.73	0.000	$3.50	$0	$0
	1,000	1,999	$0	0	$17.73	0.000	$3.50	$0	$0
	2,000	2,999	$0	0	$17.73	0.000	$3.50	$0	$0
	3,000	3,999	$0	0	$17.73	0.000	$3.50	$0	$0
	4,000	4,999	$0	0	$17.73	0.000	$3.50	$0	$0
	5,000	5,999	$0	0	$17.73	0.000	$3.50	$0	$0
	6,000	6,999	$0	0	$17.73	0.000	$3.50	$0	$0
	7,000	7,999	$0	0	$17.73	0.000	$3.50	$0	$0
	8,000	8,999	$51	0	$17.73	0.000	$3.50	$0	$52
	9,000	9,999	$51	0	$17.73	0.000	$3.50	$0	$52
	10,000	14,999	$257	0	$17.73	0.000	$3.50	$1	$258
	15,000	19,999	$257	0	$17.73	0.000	$3.50	$1	$258
	20,000	24,999	$257	0	$17.73	0.000	$3.50	$1	$258
	25,000	29,999	$257	0	$17.73	0.000	$3.50	$1	$258
	30,000	34,999	$257	0	$17.73	0.000	$3.50	$1	$258
	35,000	44,999	$515	0	$17.73	0.000	$3.50	$1	$516
	45,000	54,999	$515	0	$17.73	0.000	$3.50	$1	$516
	55,000	64,999	$515	0	$17.73	0.000	$3.50	$1	$516
	65,000	74,999	$515	0	$17.73	0.000	$3.50	$1	$516
	75,000	84,999	$515	0	$17.73	0.000	$3.50	$1	$516
	85,000	94,999	$515	0	$17.73	0.000	$3.50	$1	$516
	95,000	104,999	$515	0	$17.73	0.000	$3.50	$1	$516
	105,000	114,999	$515	0	$17.73	0.000	$3.50	$1	$516
	115,000	124,999	$515	0	$17.73	0.000	$3.50	$1	$516
	125,000	134,999	$532	0	$17.73	0.000	$3.50	$1	$533
	135,000	144,999	$472	0	$17.73	0.000	$3.50	$1	$473
	145,000	457,000	$6,146	1	$17.73	0.000	$3.50	$13	$6,159

Table 10 - Initial Rate Adjustments and Resulting Revenues

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
Honor Farm	0	999	$0	0	$17.73	0.000	$3.50	$0	$0
	1,000	1,999	$0	0	$17.73	0.000	$3.50	$0	$0
	2,000	2,999	$0	0	$17.73	0.000	$3.50	$0	$0
	3,000	3,999	$0	0	$17.73	0.000	$3.50	$0	$0
	4,000	4,999	$0	0	$17.73	0.000	$3.50	$0	$0
	5,000	5,999	$0	0	$17.73	0.000	$3.50	$0	$0
	6,000	6,999	$0	0	$17.73	0.000	$3.50	$0	$0
	7,000	7,999	$0	0	$17.73	0.000	$3.50	$0	$0
	8,000	8,999	$89	0	$17.73	0.000	$3.50	$0	$89
	9,000	9,999	$89	0	$17.73	0.000	$3.50	$0	$89
	10,000	14,999	$445	0	$17.73	0.000	$3.50	$1	$446
	15,000	19,999	$445	0	$17.73	0.000	$3.50	$1	$446
	20,000	24,999	$445	0	$17.73	0.000	$3.50	$1	$446
	25,000	29,999	$445	0	$17.73	0.000	$3.50	$1	$446
	30,000	34,999	$445	0	$17.73	0.000	$3.50	$1	$446
	35,000	44,999	$890	0	$17.73	0.000	$3.50	$1	$892
	45,000	54,999	$890	0	$17.73	0.000	$3.50	$1	$892
	55,000	64,999	$890	0	$17.73	0.000	$3.50	$1	$892
	65,000	74,999	$890	0	$17.73	0.000	$3.50	$1	$892
	75,000	84,999	$890	0	$17.73	0.000	$3.50	$1	$892
	85,000	94,999	$890	0	$17.73	0.000	$3.50	$1	$892
	95,000	104,999	$890	0	$17.73	0.000	$3.50	$1	$892
	105,000	114,999	$890	0	$17.73	0.000	$3.50	$1	$892
	115,000	124,999	$890	0	$17.73	0.000	$3.50	$1	$892
	125,000	134,999	$890	0	$17.73	0.000	$3.50	$1	$892
	135,000	144,999	$890	0	$17.73	0.000	$3.50	$1	$892
	145,000	1,087,000	$68,701	1	$17.73	0.000	$3.50	$88	$68,789
Low Strength Sewer	0	999	$0	0	$17.73	0.000	$3.50	$0	$0
	385,000	99,999,999	$0	0	$17.73	0.000	$3.50	$0	$0
Wastewater Dump	0	999	$0	0	$0.00	0.000	$84.30	$0	$0
	870,000	99,999,999	$0	0	$0.00	0.000	$84.30	$0	$0
Fike Sewer	0	999	$17,743	43	$44.54	0.000	$0.00	$63	$17,806
	870,000	99,999,999	$0	0	$44.54	0.000	$0.00	$0	$0
Flat Rate	0	999	$145,039	372	$42.08	0.000	$0.00	$515	$145,553
	870,000	99,999,999	$0	0	$42.08	0.000	$0.00	$0	$0
Paintbrush Hotel	0	999	$445	1	$48.06	0.000	$0.00	$2	$447
	870,000	99,999,999	$0	0	$48.06	0.000	$0.00	$0	$0

Table 10 - Initial Rate Adjustments and Resulting Revenues

Customer Class, Rate Class or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Sales This Year at Current Rates	Customers Within This Volume Range	Minimum Charge for Calculation Purposes	New Usage Allowance in 1,000 Gallons	New Unit Charge per 1,000 Gallons	Sales This Year at Modeled Rates	Grand Total "Blended" Sales This Year
Raintree Sewer	0	999	$404	1	$43.62	0.000	$0.00	$1	$406
	870,000	99,999,999	$0	0	$43.62	0.000	$0.00	$0	$0
WWTP Dump-Sump	0	999	$0	0	$0.00	0.000	$300.95	$0	$0
	870,000	99,999,999	$0	0	$0.00	0.000	$300.95	$0	$0
Data Loss Adjustment	0	39,999,999	$94,724	0	$0.00	0.000	$3.50	$184	$94,907
Total Rate Revenue at Current Rates			$1,797,028			Total Rate Revenue at Modeled Rates		$5,513	
Prorated capacity surcharges from Table 16 (minimum charges above do not include them)									$819
Total Blended Rate Revenues for the Year [2]									$1,803,360

Note 1, New Minimum Charge Base Rates: If meter or connection size-based minimum charges are to be used, and the user classes modeled above include meter or connection sizes, the amounts shown in this column include meter or connection size surcharges as calculated in Table 16. Either way, the narrative report includes the rates and surcharges to assess.

Note 2, Blended Rate Revenues: During the year when rates will be adjusted, rate revenues generated will be "blended" revenues - part collected at the current rates and part collected at the adjusted rates. The table above calculates both kinds of revenue and totals them in the right-most column. Therefore, the anticipated timing of rate adjustment shown at the top of this table will cause rates to be charged as follows:

12.0	months at the old user charge rates	and	0.0	months at the new user charge rates.

Table 11 - Capacity Costs

Riverton, WY; Sewer Rates, Scenario 2019-2

System capacity and connection costs WILL be recovered in one way by default, or a combination of ways by design. That could be through regular user fees, in which case existing customers pay the costs to bring on new customers. It could be through system development or connection fees, in which case new customers pay "up front" for the capacity they are granted. It could be through on-going capacity surcharges added to minimum charges, preferably based on meter or connection size, in which case each customer pays for the capacity they are granted over time. Or, it could be by a combination of these. This table shows capacity costs to expect. From these costs, system development fees and surcharges were developed in Tables 13 through 16.

Peak and Base Flow Capacity Costs

	Fixed Assets Original Value (Capacity Cost)	% of Value Attributable to Peak Flow Capacity	Peak Flow Capacity Cost	Annual Peak Flow Capacity Cost (40-year Depreciation)	% of Value Attributable to Base Flow Capacity	Base Flow Capacity Cost	Annual Base Flow Capacity Cost (40-year Depreciation)
	$27,380,636	50.0%	$13,690,318	$797,847	50.0%	$13,690,318	$797,847
Totals	$27,380,636		$13,690,318	$797,847		$13,690,318	$797,847

How Capacity Costs Will Be Recovered

These costs are modeled to be recovered from system development fees in Table 14

Peak Flow Capacity Costs to be Recovered by System Development Fees

0.256%	Target Percentage of Costs to Recover
$2,042	Target Portion of Costs to Recover
$187	Cost per Peak Flow Capacity Share

Base Flow Capacity Costs to be Recovered by System Development Fees

0.0%	Target Percentage of Costs to Recover
$0	Target Portion of Costs to Recover
$0	Base Capacity Cost per New Customer Connected

In addition to calculation of the capacity cost for each new connection based on the unit cost above, the system development fee for each new connection should also include recovery of the following costs:

$100	Average Field Cost per New Connection
$50	Average Administration Cost per New Connection
$150	Field and Admin Cost per New Connection
$150	Base Cost to Recover per New Connection

These costs are modeled to be recovered from minimum charge surcharges in Table 16

Peak Flow Capacity Costs to be Recovered by Minimum Charge Surcharges

50.0%	Target Percentage of Costs to Recover
$398,923	Target Portion of Costs to Recover in One Full Year
$33,244	Target Portion of Costs to Recover in Monthly Surcharges
$5.39	Monthly Surcharge per Peak Flow Capacity Share

Base Flow Capacity Costs to be Recovered by Minimum Charge Surcharges

0.0%	Target Percentage of Costs to Recover
$0	Target Portion of Costs to Recover in One Full Year
$0	Target Portion of Costs to Recover in Monthly Surcharges
$0.00	Monthly Base Flow Surcharge per Bill

Note: Non-capital costs, such as field costs for inspection of connections and administration costs, should be recovered by fees charged for providing the services involved. These costs are in addition to peak flow capacity costs. If your system's basic costs to sign up and connect new customers is different than assumed above, adjust your final fees accordingly.

Table 13 - System Development Fees

Riverton, WY; Sewer Rates, Scenario 2019-2

This table calculates system development fees to charge each meter size.

Note: Larger meter sizes are available in two or more types, each having different peak flow capacities. To be conservative when projecting revenues, it was assumed all meters in use are of the lowest capacity types. However, when setting fees, they should be based upon the type of meter in use at each location.

Meter Size	Meter Type	Foot Notes	Capacity Shares, Including Out of City Multiplier and Economy of Scale Adjustments	Adjusted Peak Capacity Cost Each Meter Size	Base Capacity Cost per New Customer Connected, as Adjusted by the Out of City Multiplier	Capacity-only Cost (Fee)	Field and Admin Cost per New Connection	Uniform Adjustment to Field and Admin Costs	Adjusted Field and Admin Costs (Fee) per New Connection	System Development Fee
In-City Meters										
Five Eighths	Displacement		1.0	$187	$0	$187	$150	$0.00	$150	$337
Three Quarters	Displacement	1	1.0	$187	$0	$187	$150	$0.00	$150	$337
One Inch	Displacement		2.5	$467	$0	$467	$150	$0.00	$150	$617
One & a Half Inch	Displacement		5.0	$935	$0	$935	$150	$0.00	$150	$1,085
Two Inch	Displacement		8.0	$1,495	$0	$1,495	$150	$0.00	$150	$1,645
Two & a Half Inch	Displacement	2	12.5	$2,336	$0	$2,336	$150	$0.00	$150	$2,486
Three Inch	Singlet		16.0	$2,990	$0	$2,990	$150	$0.00	$150	$3,140
Three Inch	Compound, Class I		16.0	$2,990	$0	$2,990	$150	$0.00	$150	$3,140
Three Inch	Turbine, Class I		17.5	$3,271	$0	$3,271	$150	$0.00	$150	$3,421
Four Inch	Singlet		25.0	$4,673	$0	$4,673	$150	$0.00	$150	$4,823
Four Inch	Compound, Class I		25.0	$4,673	$0	$4,673	$150	$0.00	$150	$4,823
Four Inch	Turbine, Class I		31.0	$5,794	$0	$5,794	$150	$0.00	$150	$5,944
Six Inch	Singlet		50.0	$9,345	$0	$9,345	$150	$0.00	$150	$9,495
Six Inch	Compound, Class I		50.0	$9,345	$0	$9,345	$150	$0.00	$150	$9,495
Six Inch	Turbine, Class I		65.0	$12,149	$0	$12,149	$150	$0.00	$150	$12,299
Eight Inch	Compound, Class I		80.0	$14,952	$0	$14,952	$150	$0.00	$150	$15,102
Eight Inch	Turbine, Class I		140.0	$26,167	$0	$26,167	$150	$0.00	$150	$26,317
Ten Inch	Turbine, Class II		210.0	$39,250	$0	$39,250	$150	$0.00	$150	$39,400
Out of City Meters										
Five Eighths	Displacement		1.0	$234	$0	$234	$188	$0.00	$188	$421
Three Quarters	Displacement	1	1.0	$234	$0	$234	$188	$0.00	$188	$421
One Inch	Displacement		2.5	$584	$0	$584	$188	$0.00	$188	$772
One & a Half Inch	Displacement		5.0	$1,168	$0	$1,168	$188	$0.00	$188	$1,356
Two Inch	Displacement		8.0	$1,869	$0	$1,869	$188	$0.00	$188	$2,057
Two & a Half Inch	Displacement	2	12.5	$2,920	$0	$2,920	$188	$0.00	$188	$3,108
Three Inch	Singlet		16.0	$3,738	$0	$3,738	$188	$0.00	$188	$3,926
Three Inch	Compound, Class I		16.0	$3,738	$0	$3,738	$188	$0.00	$188	$3,926
Three Inch	Turbine, Class I		17.5	$4,089	$0	$4,089	$188	$0.00	$188	$4,276
Four Inch	Singlet		25.0	$5,841	$0	$5,841	$188	$0.00	$188	$6,028
Four Inch	Compound, Class I		25.0	$5,841	$0	$5,841	$188	$0.00	$188	$6,028
Four Inch	Turbine, Class I		31.0	$7,243	$0	$7,243	$188	$0.00	$188	$7,430
Six Inch	Singlet		50.0	$11,681	$0	$11,681	$188	$0.00	$188	$11,869
Six Inch	Compound, Class I		50.0	$11,681	$0	$11,681	$188	$0.00	$188	$11,869
Six Inch	Turbine, Class I		65.0	$15,186	$0	$15,186	$188	$0.00	$188	$15,373
Eight Inch	Compound, Class I		80.0	$18,690	$0	$18,690	$188	$0.00	$188	$18,878
Eight Inch	Turbine, Class I		140.0	$32,708	$0	$32,708	$188	$0.00	$188	$32,896
Ten Inch	Turbine, Class II		210.0	$49,062	$0	$49,062	$188	$0.00	$188	$49,250

Foot Notes, which apply to Tables 14, 15 and 16, as well:

[1] The Three-Quarter-Inch meter capacity share factor is 1.5. However, it was set equal to the Five-eighths-Inch meter because most such meters are used for residential connections. This enables a uniform system development fee for almost all residential customers.

[2] These meter sizes were not included in AWWA study results, so these values are estimates.

Economy of Scale Adjustments: As meter size rises, capacity to pass peak flow rises. However, costs to build flow capacity to serve those meters do not rise as rapidly. Therefore, if there are many such meters, peak flow capacity shares may have been adjusted downward by an estimated cost savings factor to account for that savings. Economy of scale savings do not apply to base costs because all connections are afforded the same level of base flow capacity.

Table 14 - Revenues From System Development Fees

Riverton, WY; Sewer Rates, Scenario 2019-2

This table calculates total fee revenues that would be generated during one full year at the fees in Table 13.

Meter Size	Meter Type	Mix of New Taps in a Typical Year	Projected Annual Growth in Capacity Shares, Adjusted for Economy of Scale	Adjusted Peak Capacity Cost Fees for One Full Year	Base Capacity Cost Fees for One Full Year	Combined Capacity-only Fee Revenues to Collect in One Year	Adjusted Admin and Field Cost Fees to Collect in One Year	**System Development Fee Revenues for One Full Year**
In-City Meters								
Five Eighths	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	7.3	7.3	$1,362	$0	$1,362	$1,093	**$2,455**
One Inch	Displacement	0.4	1.0	$196	$0	$196	$63	**$259**
One & a Half Inch	Displacement	0.1	0.5	$88	$0	$88	$14	**$102**
Two Inch	Displacement	0.2	1.2	$233	$0	$233	$23	**$257**
Two & a Half Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	0.5	$95	$0	$95	$5	**$100**
Three Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	0.2	$41	$0	$41	$1	**$43**
Four Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	0.1	$26	$0	$26	$0	**$27**
Eight Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	0.0	$0	$0	$0	$0	**$0**
Twelve Inch	Turbine, Class II	0.0	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	8.0	10.9	$2,042	$0	$2,042	$1,200	**$3,242**
Out of City Meters								
Five Eighths	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
One Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
One & a Half Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Two Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Two & a Half Inch	Displacement	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Turbine, Class I	0.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	0.0	$0	$0	$0	$0	**$0**
Twelve Inch	Turbine, Class II	0.0	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	0.0	0.0	$0	$0	$0	$0	**$0**
	Total:	8.0	10.9	$2,042	$0	$2,042	$1,200	**$3,242**

This is the amount used to calculate the "Meter Size-based System Development Fees" income in Table 3.

Table 15 - Minimum Charge Fees, Including Capacity Surcharges

Riverton, WY; Sewer Rates, Scenario 2019-2

This table does, essentially, the same thing as Table 13, except costs are recovered over time as minimum charge surcharges.

Meter Size	Meter Type	Capacity-only Cost (Fee)	Cost to Serve Minimum Calculated in Table 10	Monthly Minimum Charge	Monthly Snowbird Fee
In-City Meters					
Five Eighths	Displacement	$5.39	$12.34	$17.73	$9.75
Three Quarters	Displacement	$5.39	$12.34	$17.73	$9.75
One Inch	Displacement	$13.48	$12.34	$25.81	$17.84
One & a Half Inch	Displacement	$26.95	$12.34	$39.29	$31.31
Two Inch	Displacement	$43.12	$12.34	$55.46	$47.48
Two & a Half Inch	Displacement	$67.38	$12.34	$79.71	$71.74
Three Inch	Singlet	$86.24	$12.34	$98.58	$90.60
Three Inch	Compound, Class I	$86.24	$12.34	$98.58	$90.60
Three Inch	Turbine, Class I	$94.33	$12.34	$106.67	$98.69
Four Inch	Singlet	$134.75	$12.34	$147.09	$139.12
Four Inch	Compound, Class I	$134.75	$12.34	$147.09	$139.12
Four Inch	Turbine, Class I	$167.09	$12.34	$179.43	$171.46
Six Inch	Singlet	$269.51	$12.34	$281.84	$273.87
Six Inch	Compound, Class I	$269.51	$12.34	$281.84	$273.87
Six Inch	Turbine, Class I	$350.36	$12.34	$362.70	$354.72
Eight Inch	Compound, Class I	$431.21	$12.34	$443.55	$435.57
Eight Inch	Turbine, Class I	$754.62	$12.34	$766.96	$758.98
Ten Inch	Turbine, Class II	$1,131.93	$12.34	$1,144.26	$1,136.29
Out of City Meters					
Five Eighths	Displacement	$6.74	$15.42	$22.16	$12.19
Three Quarters	Displacement	$6.74	$15.42	$22.16	$12.19
One Inch	Displacement	$16.84	$15.42	$32.27	$22.30
One & a Half Inch	Displacement	$33.69	$15.42	$49.11	$39.14
Two Inch	Displacement	$53.90	$15.42	$69.32	$59.35
Two & a Half Inch	Displacement	$84.22	$15.42	$99.64	$89.67
Three Inch	Singlet	$107.80	$15.42	$123.22	$113.26
Three Inch	Compound, Class I	$107.80	$15.42	$123.22	$113.26
Three Inch	Turbine, Class I	$117.91	$15.42	$133.33	$123.36
Four Inch	Singlet	$168.44	$15.42	$183.86	$173.89
Four Inch	Compound, Class I	$168.44	$15.42	$183.86	$173.89
Four Inch	Turbine, Class I	$208.87	$15.42	$224.29	$214.32
Six Inch	Singlet	$336.88	$15.42	$352.31	$342.34
Six Inch	Compound, Class I	$336.88	$15.42	$352.31	$342.34
Six Inch	Turbine, Class I	$437.95	$15.42	$453.37	$443.40
Eight Inch	Compound, Class I	$539.01	$15.42	$554.43	$544.47
Eight Inch	Turbine, Class I	$943.27	$15.42	$958.69	$948.73
Ten Inch	Turbine, Class II	$1,414.91	$15.42	$1,430.33	$1,420.36

Table 16 - Revenues From Minimum Surcharges

Riverton, WY; Sewer Rates, Scenario 2019-2

This table calculates total minimum charge surcharge revenues that would be generated during one full year at the fees in Table 15.

Meter Size	Meter Type	Capacity Shares, Including Out of City Multiplier and Economy of Scale Adjustments	Current Number Meters This Size	Total Adjusted Capacity Shares	Adjusted Annual Peak Capacity-only Surcharge Revenues	Annual Base Capacity-only Surcharge Revenues	Capacity Surcharges for One Full Year
In-City Meters							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	4,113	4,113	$266,035	$0	$266,035
One Inch	Displacement	2.5	237	593	$38,324	$0	$38,324
One & a Half Inch	Displacement	5.0	53	265	$17,141	$0	$17,141
Two Inch	Displacement	8.0	88	704	$45,536	$0	$45,536
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	18	288	$18,628	$0	$18,628
Three Inch	Compound, Class I	16.0	0	0	$0	$0	$0
Three Inch	Turbine, Class I	17.5	0	0	$0	$0	$0
Four Inch	Singlet	25.0	5	125	$8,085	$0	$8,085
Four Inch	Compound, Class I	25.0	0	0	$0	$0	$0
Four Inch	Turbine, Class I	31.0	0	0	$0	$0	$0
Six Inch	Singlet	50.0	0	0	$0	$0	$0
Six Inch	Compound, Class I	50.0	0	0	$0	$0	$0
Six Inch	Turbine, Class I	65.0	0	0	$0	$0	$0
Eight Inch	Compound, Class I	80.0	1	80	$5,175	$0	$5,175
Eight Inch	Turbine, Class I	140.0	0	0	$0	$0	$0
Ten Inch	Turbine, Class II	210.0	0	0	$0	$0	$0
		Subtotal:	4,515	6,168	$398,923	$0	$398,923
Out of City Meters							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	0	0	$332,544	$0	$332,544
One Inch	Displacement	2.5	0	0	$47,905	$0	$47,905
One & a Half Inch	Displacement	5.0	0	0	$21,426	$0	$21,426
Two Inch	Displacement	8.0	0	0	$56,920	$0	$56,920
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	0	0	$23,285	$0	$23,285
Three Inch	Compound, Class I	16.0	0	0	$0	$0	$0
Three Inch	Turbine, Class I	17.5	0	0	$0	$0	$0
Four Inch	Singlet	25.0	0	0	$10,106	$0	$10,106
Four Inch	Compound, Class I	25.0	0	0	$0	$0	$0
Four Inch	Turbine, Class I	31.0	0	0	$0	$0	$0
Six Inch	Singlet	50.0	0	0	$0	$0	$0
Six Inch	Compound, Class I	50.0	0	0	$0	$0	$0
Six Inch	Turbine, Class I	65.0	0	0	$0	$0	$0
Eight Inch	Compound, Class I	80.0	0	0	$6,468	$0	$6,468
Eight Inch	Turbine, Class I	140.0	0	0	$0	$0	$0
Ten Inch	Turbine, Class II	210.0	0	0	$0	$0	$0
		Subtotal:	0	0	$498,654	$0	$498,654
		Total:	4,515	6,168	$897,577	$0	$897,577

Table 17 - Financial Capacity Indicators and Reserves

Riverton, WY; Sewer Rates, Scenario 2019-2

This table depicts the affordability of future rates, the financial health of the system and the ending balances in various (assumed) accounts for the test year and the next 10 years.

Capacity Indicators	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
Equivalent Final Monthly Bill for a 5,000 gal per Month Residential Customer	$22.66	$35.23	$35.23	$36.28	$37.37	$38.49	$39.65	$40.84	$42.06	$43.33	$44.63	$45.96
Annual Median Household Income (AMHI) Within Service Area (Projected from last available Census survey or estimated income data)	$54,555	$56,622	$58,768	$60,994	$63,305	$65,703	$68,193	$70,776	$73,458	$76,241	$79,130	$82,128
Affordability Index: Current Rates First Column, Then Proposed Rates	0.50%	0.75%	0.72%	0.71%	0.71%	0.70%	0.70%	0.69%	0.69%	0.68%	0.68%	0.67%

Affordability Index (AI) goes to the willingness and ability of customers to pay. AI is the percent of AMHI needed by a 5,000 gallon per month residential user to pay their bill. Rates near 1.0% are common in the U.S. and are generally considered affordable. Federal grant agencies generally will not consider awarding grants if this indicator is less than 2.0%. The above index is only for a 1 share customers but it should be fairly representative of all residential customers.

Equivalent Final Monthly Bill for a 2,000 gal per Month, Low-income Residential Customer	$17.70	$24.73	$24.73	$25.47	$26.23	$27.02	$27.83	$28.67	$29.53	$30.41	$31.32	$32.26
Income at One-half the AMHI Above	$27,278	$27,794	$28,321	$28,857	$29,404	$29,961	$30,529	$31,107	$31,696	$32,297	$32,909	$33,532
Affordability for Low-income, Low-volume: Current Rates First Column, Then Proposed Rates	0.78%	1.07%	1.05%	1.06%	1.07%	1.08%	1.09%	1.11%	1.12%	1.13%	1.14%	1.15%

This additional indicator of affordability assumes a residential customer with income at one-half of the median household income above, that income is growing at one-half the rate of the median household income and the customer uses 2,000 gallons per month. Such a customer is likely either a minimum wage, or near-minimum wage worker or is living on Social Security-only.

Estimated Operating Ratio: Current Rates First Column, Then Proposed Rates	1.11	1.13	1.17	1.23	1.23	1.23	1.24	1.24	1.25	1.25	1.25	1.26

Operating ratio (OR) goes to the ability of the utility to pay its operating expenses. A 1.0 OR is break even. Below 1.0 indicates operating in the "red." Generally, the OR should be at least 1.15 for large systems, 1.30 or more for medium systems and perhaps as high as 2.0 for small systems. Note: If the utility has or will have reserves (below,) it has more ability to pay its operating costs than the OR implies.

Estimated Coverage Ratio: Current Rates First Column, Then Proposed Rates	6.86	4.03	3.66	1.96	1.56	1.40	1.25	0.96	1.01	0.99	0.99	1.04

Coverage Ratio (CR) goes to the ability of the utility to pay its debt payments. OR applies only to years with debt service. 1.0 is break even. Generally, the CR should be at least 1.25. Note: If the utility has or will have reserves (below,) it has more ability to make debt payments than the CR implies.

Reserves	Balance Ending on 6/30/17	Balance Ending on 6/30/18	Balance Ending on 6/30/19	Balance Ending on 6/30/20	Balance Ending on 6/30/21	Balance Ending on 6/30/22	Balance Ending on 6/30/23	Balance Ending on 6/30/24	Balance Ending on 6/30/25	Balance Ending on 6/30/26	Balance Ending on 6/30/27	Balance Ending on 6/30/28	Balance Ending on 6/30/29
Cash and Cash Equivalents	$1,027,862	$882,037	$931,155	$1,031,180	$1,060,036	$1,093,177	$1,120,387	$1,151,935	$1,188,199	$1,217,916	$1,252,408	$1,292,090	$1,324,545
Other Liquid Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Undedicated Cash Assets	$1,027,862	$882,037	$931,155	$1,031,180	$1,060,036	$1,093,177	$1,120,387	$1,151,935	$1,188,199	$1,217,916	$1,252,408	$1,292,090	$1,324,545
Total Cash Assets Discounted for Inflation (Future Unrestricted Purchasing Power)	$1,027,862	$882,037	$931,155	$1,000,245	$997,388	$997,713	$991,870	$989,206	$989,737	$984,055	$981,566	$982,287	$1,006,960
Repair & Replacement	$0	-$140,698	-$13,889	-$5,574	-$70,729	$8,298	$28,908	-$6,563	$118,932	$167,658	$83,766	-$21,962	-$92,963
Debt and CIP Reserves	$879,397	$1,159,709	$1,552,354	$1,661,957	$1,579,120	$1,487,431	$1,517,645	$1,613,976	$1,520,580	$1,266,793	$1,030,236	$977,688	$949,024
Sum of All Reserves	$1,907,259	$1,901,048	$2,469,620	$2,687,563	$2,568,427	$2,588,906	$2,666,939	$2,759,348	$2,827,711	$2,652,367	$2,366,410	$2,247,816	$2,180,606

Table 18 - Comparison of Bills Before and After Rate Adjustments

Riverton, WY; Sewer Rates, Scenario 2019-2

The weighted-average revenue (bill) increase for all customers combined will be 28.3%

Note: the bill increase rate above also includes the effect of meter size-based minimum charges calculated in Table 13.

Changes to the bills for customer classes and example volumes of use shown below are only for 5/8 or 3/4-Inch meter customers. Most customers are served by 3/4-Inch meters. Those with larger meters would have higher minimum charges, thus, their bills would go up more. And, master metered customers' bills would only include one minimum charge, rather than the current one minimum charge for each residential or other "unit" beyond the meter.

Customer or Rate Class, or Meter Size	Gallons of Use	Customers at or Above This Volume and Below Next	Cumulative Customers	Current Bill for This Volume	Modeled Bill for This Volume	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
	0	603	603	$17.70	$17.73	$0.03	0%
	1,000	441	1,044	$17.70	$21.23	$3.53	20%
	2,000	661	1,705	$17.70	$24.73	$7.03	40%
	3,000	587	2,292	$17.70	$28.23	$10.53	59%
	4,000	426	2,719	$17.70	$31.73	$14.03	79%
	5,000	268	2,986	$22.66	$35.23	$12.57	55%
	6,000	172	3,158	$27.62	$38.73	$11.11	40%
	7,000	100	3,258	$32.58	$42.23	$9.65	30%
	8,000	59	3,317	$37.54	$45.73	$8.19	22%
	9,000	44	3,361	$42.50	$49.23	$6.73	16%
	10,000	70	3,431	$47.46	$52.73	$5.27	11%
	15,000	21	3,452	$72.26	$70.23	-$2.03	-3%
	20,000	9	3,461	$97.06	$87.73	-$9.33	-10%
Residential	25,000	8	3,469	$121.86	$105.23	-$16.63	-14%
	30,000	7	3,476	$146.66	$122.73	-$23.93	-16%
	35,000	8	3,484	$171.46	$140.23	-$31.23	-18%
	45,000	5	3,488	$221.06	$175.23	-$45.83	-21%
	55,000	4	3,492	$270.66	$210.23	-$60.43	-22%
	65,000	0	3,492	$320.26	$245.23	-$75.03	-23%
	75,000	2	3,494	$369.86	$280.23	-$89.63	-24%
	85,000	2	3,496	$419.46	$315.23	-$104.23	-25%
	95,000	0	3,496	$469.06	$350.23	-$118.83	-25%
	105,000	0	3,496	$518.66	$385.23	-$133.43	-26%
	115,000	0	3,496	$568.26	$420.23	-$148.03	-26%
	125,000	0	3,496	$617.86	$455.23	-$162.63	-26%
	135,000	0	3,496	$667.46	$490.23	-$177.23	-27%
	145,000	1	3,497	$717.06	$525.23	-$191.83	-27%

Table 18 - Comparison of Bills Before and After Rate Adjustments

Customer or Rate Class, or Meter Size	Gallons of Use	Customers at or Above This Volume and Below Next	Cumulative Customers	Current Bill for This Volume	Modeled Bill for This Volume	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
Master Meter	0	7	7	$22.64	$17.73	-$4.91	-22%
	3,000	0	7	$22.64	$28.23	$5.59	25%
	2,000	0	7	$22.64	$24.73	$2.09	9%
	3,000	1	8	$22.64	$28.23	$5.59	25%
	4,000	0	8	$22.64	$31.73	$9.09	40%
	5,000	0	8	$27.60	$35.23	$7.63	28%
	6,000	0	8	$32.56	$38.73	$6.17	19%
	7,000	0	8	$37.52	$42.23	$4.71	13%
	8,000	0	8	$42.48	$45.73	$3.25	8%
	9,000	0	8	$47.44	$49.23	$1.79	4%
	10,000	0	8	$52.40	$52.73	$0.33	1%
	15,000	0	8	$77.20	$70.23	-$6.97	-9%
	20,000	1	9	$102.00	$87.73	-$14.27	-14%
	25,000	1	10	$126.80	$105.23	-$21.57	-17%
	30,000	0	10	$151.60	$122.73	-$28.87	-19%
	35,000	0	10	$176.40	$140.23	-$36.17	-21%
	45,000	0	10	$226.00	$175.23	-$50.77	-22%
	55,000	0	11	$275.60	$210.23	-$65.37	-24%
	145,000	0	11	$722.00	$525.23	-$196.77	-27%
Commercial	0	119	119	$15.94	$17.73	$1.79	11%
	1,000	109	227	$16.84	$21.23	$4.39	26%
	2,000	59	286	$17.74	$24.73	$6.99	39%
	3,000	37	323	$18.64	$28.23	$9.59	51%
	4,000	27	351	$19.54	$31.73	$12.19	62%
	5,000	22	373	$23.70	$35.23	$11.53	49%
	6,000	17	390	$27.86	$38.73	$10.87	39%
	7,000	12	402	$33.08	$42.23	$9.15	28%
	8,000	8	410	$38.30	$45.73	$7.43	19%
	9,000	8	418	$43.52	$49.23	$5.71	13%
	10,000	29	447	$48.74	$52.73	$3.99	8%
	15,000	23	471	$74.84	$70.23	-$4.61	-6%
	20,000	14	485	$100.94	$87.73	-$13.21	-13%
	25,000	11	496	$127.04	$105.23	-$21.81	-17%
	30,000	8	504	$153.14	$122.73	-$30.41	-20%
	35,000	10	514	$179.24	$140.23	-$39.01	-22%
	45,000	7	521	$231.44	$175.23	-$56.21	-24%
	55,000	5	526	$283.64	$210.23	-$73.41	-26%
	65,000	3	528	$335.84	$245.23	-$90.61	-27%
	75,000	3	531	$388.04	$280.23	-$107.81	-28%
	85,000	2	533	$440.24	$315.23	-$125.01	-28%
	95,000	2	534	$492.44	$350.23	-$142.21	-29%
	105,000	1	536	$544.64	$385.23	-$159.41	-29%
	115,000	2	537	$596.84	$420.23	-$176.61	-30%
	125,000	0	538	$649.04	$455.23	-$193.81	-30%
	135,000	1	539	$701.24	$490.23	-$211.01	-30%
	145,000	8	547	$753.44	$525.23	-$228.21	-30%

Table 18 - Comparison of Bills Before and After Rate Adjustments

Customer or Rate Class, or Meter Size	Gallons of Use	Customers at or Above This Volume and Below Next	Cumulative Customers	Current Bill for This Volume	Modeled Bill for This Volume	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
Commercial Flat	0	32	32	$37.21	$48.06	$10.85	29%
	145,000	0	32	$37.21	$48.06	$10.85	29%
Hospital	0	0	0	$34.47	$17.73	-$16.74	-49%
	6,000	0	0	$34.47	$38.73	$4.26	12%
	7,000	0	0	$34.47	$42.23	$7.76	23%
	8,000	0	0	$34.47	$45.73	$11.26	33%
	9,000	0	0	$38.77	$49.23	$10.46	27%
	10,000	0	0	$43.07	$52.73	$9.66	22%
	15,000	0	0	$64.57	$70.23	$5.66	9%
	20,000	0	0	$86.07	$87.73	$1.66	2%
	25,000	0	0	$107.57	$105.23	-$2.34	-2%
	145,000	1	1	$623.57	$525.23	-$98.34	-16%
Honor Farm	0	0	0	$59.71	$17.73	-$41.98	-70%
	8,000	0	0	$59.71	$45.73	-$13.98	-23%
	30,000	0	0	$223.39	$122.73	-$100.66	-45%
	145,000	1	1	$1,078.99	$525.23	-$553.76	-51%
Low Strength Sewer	0	0	0	$39.95	$17.73	-$22.22	-56%
	9,000	0	0	$42.54	$49.23	$6.69	16%
	120,000	0	0	$330.03	$437.73	$107.70	33%
	385,000	0	0	$1,016.38	$1,365.23	$348.85	34%
Wastewater Dump	0	0	0	$0.00	$0.00	$0.00	N.A.
	1,000	0	0	$65.26	$84.30	$19.04	29%
	2,000	0	0	$130.52	$168.59	$38.07	29%
Fike Sewer	0	43	43	$34.48	$44.54	$10.06	29%
	870,000	0	43	$34.48	$44.54	$10.06	29%
Flat Rate	0	372	372	$32.58	$42.08	$9.50	29%
	870,000	0	372	$32.58	$42.08	$9.50	29%
Paintbrush Hotel	0	1	1	$37.21	$48.06	$10.85	29%
	870,000	0	1	$37.21	$48.06	$10.85	29%
Raintree Sewer	0	1	1	$33.77	$43.62	$9.85	29%
	870,000	0	1	$33.77	$43.62	$9.85	29%
WWTP Dump-Sump	0	0	0	$0.00	$0.00	$0.00	N.A.
	1,000	0	0	$232.99	$300.95	$67.96	29%
	2,000	0	0	$465.98	$601.90	$135.92	29%

Table 19 - User Statistics

Riverton, WY; Sewer Rates, Scenario 2019-2

This table shows measures of equitability, or "fairness," of the rates as modeled in Table 10. If system development fees or capacity surcharges were also calculated but not included in Table 10, this table does not take those fees into account.

If your rates are absolutely proportional to use on a volumetric basis, your % of usage and % of revenues figures will be the same within all the classes. That is not possible if you have any minimum charge and having no minimum charge is almost unheard of.

Normally, the % of usage figure will be lower than the % of revenue for the lower volumes of use. That will switch for the higher volumes of use. Even for declining rate structures, this switch should occur near the volume of the average residential user, typically near 5,000 gallons/month (668 cu ft).

In urban and suburban areas the average monthly use for residential or general customers can be twice that used by their rural and "old town" counterparts. Use is largely dependent upon who lives in a community. Older people living in longer established neighborhoods tend to use less volume than younger people living in more recently developed areas. As you make comparisons between different customers and customer classes, keep that, and the following in mind:

3,492 Gallons: This is the average residential customer's usage per Monthly billing cycle.

Usage allowance is the volume "given away" with the minimum charge. The higher the allowance, the less volume the utility can sell to generate income.

262,517,000 Gallons: This is the volume metered through customer meters that was available to be sold by the utility during the test year.

100,392,000 Gallons: This is the volume metered through customer meters that was given away as a usage allowance during the test year.

$488,083 Loss: At the unit charge rate in effect during the test year, the utility failed to collect this much revenue due to the usage allowance.

$0 Loss: At the modeled (recommended) unit charge rates and usage allowance (if any), over a full year this is the amount of revenue the utility would fail to collect due to the usage allowance as modeled (if any).

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Avg. Use in Each Volume Range in 1,000 Gallons	Total Annual Use in Each Volume Range in Gallons	Customers Within This Volume Range	% Users	% Usage	Cumulative Use in This Class From Low to High Volume	Cumulative Use in This Class From High to Low Volume	% Revenue at Current Rates	% Revenue at Modeled Rates
	0	999	0.827	34,724,000.0	603.3	13.4%	13.2%	23.7%	100.0%	7.1%	12.4%
	1,000	1,999	0.848	29,436,000.0	440.7	9.8%	11.2%	43.8%	76.3%	5.2%	9.8%
	2,000	2,999	0.730	21,500,000.0	661.3	14.7%	8.2%	58.5%	56.2%	7.8%	10.7%
	3,000	3,999	0.672	14,456,000.0	587.0	13.0%	5.5%	68.3%	41.5%	6.9%	8.7%
	4,000	4,999	0.646	9,340,000.0	426.3	9.5%	3.6%	74.7%	31.7%	7.6%	6.1%
	5,000	5,999	0.656	6,128,000.0	267.7	5.9%	2.3%	78.9%	25.3%	4.8%	3.9%
	6,000	6,999	0.663	4,064,000.0	172.0	3.8%	1.5%	81.7%	21.1%	3.1%	2.5%
	7,000	7,999	0.705	2,864,000.0	100.0	2.2%	1.1%	83.6%	18.3%	2.0%	1.6%
	8,000	8,999	0.753	2,156,000.0	59.0	1.3%	0.8%	85.1%	16.4%	1.3%	1.0%
	9,000	9,999	0.755	1,628,000.0	44.0	1.0%	0.6%	86.2%	14.9%	1.0%	0.7%
	10,000	14,999	3.211	5,228,000.0	69.7	1.5%	2.0%	89.8%	13.8%	2.3%	1.6%
	15,000	19,999	4.101	3,248,000.0	21.0	0.5%	1.2%	92.0%	10.2%	1.1%	0.8%
	20,000	24,999	4.348	2,348,000.0	9.0	0.2%	0.9%	93.6%	8.0%	0.8%	0.5%
Residential	25,000	29,999	4.278	1,848,000.0	8.3	0.2%	0.7%	94.8%	6.4%	0.6%	0.4%
	30,000	34,999	4.349	1,444,000.0	6.7	0.1%	0.6%	95.8%	5.2%	0.5%	0.3%
	35,000	44,999	8.032	2,024,000.0	7.7	0.2%	0.8%	97.2%	4.2%	0.6%	0.4%
	45,000	54,999	7.750	1,240,000.0	4.7	0.1%	0.5%	98.1%	2.8%	0.4%	0.3%
	55,000	64,999	7.115	740,000.0	3.7	0.1%	0.3%	98.6%	1.9%	0.2%	0.2%
	65,000	74,999	9.800	588,000.0	0.3	0.0%	0.2%	99.0%	1.4%	0.2%	0.1%
	75,000	84,999	8.286	464,000.0	1.7	0.0%	0.2%	99.3%	1.0%	0.1%	0.1%
	85,000	94,999	6.889	248,000.0	1.7	0.0%	0.1%	99.4%	0.7%	0.1%	0.1%
	95,000	104,999	8.500	136,000.0	0.3	0.0%	0.1%	99.5%	0.6%	0.0%	0.0%
	105,000	114,999	8.333	100,000.0	0.3	0.0%	0.0%	99.6%	0.5%	0.0%	0.0%
	115,000	124,999	10.000	80,000.0	0.0	0.0%	0.0%	99.7%	0.4%	0.0%	0.0%
	125,000	134,999	10.000	80,000.0	0.0	0.0%	0.0%	99.7%	0.3%	0.0%	0.0%
	135,000	144,999	10.000	80,000.0	0.0	0.0%	0.0%	99.8%	0.3%	0.0%	0.0%
	145,000	204,000	42.500	340,000.0	0.7	0.0%	0.1%	100.0%	0.2%	0.1%	0.1%
		Totals for Class		146,532,000.0	3,497.0	77.6%	55.8%			54.0%	62.5%

Table 19 - User Statistics

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Avg. Use in Each Volume Range in 1,000 Gallons	Total Annual Use in Each Volume Range in Gallons	Customers Within This Volume Range	% Users	% Usage	Cumulative Use in This Class From Low to High Volume	Cumulative Use in This Class From High to Low Volume	% Revenue at Current Rates	% Revenue at Modeled Rates
Master Meter	0	2,999	2.762	232,000.0	7.0	0.2%	0.1%	100.0%	100.0%	0.1%	0.1%
	3,000	1,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2,000	2,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	3,000	3,999	0.000	0.0	0.7	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	4,000	4,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	5,000	5,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	6,000	6,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	7,000	7,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	8,000	8,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	9,000	9,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	10,000	14,999	0.000	0.0	0.3	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	15,000	19,999	0.000	0.0	0.3	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	20,000	24,999	0.000	0.0	0.7	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	25,000	29,999	0.000	0.0	0.7	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	30,000	34,999	0.000	0.0	0.3	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	35,000	44,999	0.000	0.0	0.3	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	45,000	54,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	55,000	64,999	0.000	0.0	0.3	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			232,000.0	10.7	0.2%	0.1%			0.2%	0.2%
Commercial	0	999	0.783	5,140,000.0	118.7	2.6%	2.0%	6.2%	100.0%	1.5%	2.1%
	1,000	1,999	0.746	3,835,000.0	108.8	2.4%	1.5%	10.9%	93.8%	1.3%	1.8%
	2,000	2,999	0.816	3,129,000.0	58.8	1.3%	1.2%	14.6%	89.1%	0.8%	1.2%
	3,000	3,999	0.858	2,685,000.0	37.0	0.8%	1.0%	17.9%	85.4%	0.5%	0.9%
	4,000	4,999	0.878	2,357,000.0	27.3	0.6%	0.9%	20.8%	82.1%	0.4%	0.7%
	5,000	5,999	0.887	2,090,000.0	22.3	0.5%	0.8%	23.3%	79.2%	0.7%	0.6%
	6,000	6,999	0.903	1,887,000.0	16.9	0.4%	0.7%	25.6%	76.7%	0.6%	0.5%
	7,000	7,999	0.923	1,741,000.0	12.2	0.3%	0.7%	27.7%	74.4%	0.6%	0.4%
	8,000	8,999	0.946	1,647,000.0	7.8	0.2%	0.6%	29.7%	72.3%	0.6%	0.4%
	9,000	9,999	0.939	1,547,000.0	8.3	0.2%	0.6%	31.5%	70.3%	0.5%	0.4%
	10,000	14,999	4.332	6,702,000.0	29.2	0.6%	2.6%	39.6%	68.5%	2.3%	1.5%
	15,000	19,999	4.295	5,141,000.0	23.3	0.5%	2.0%	45.9%	60.4%	1.7%	1.1%
	20,000	24,999	4.405	4,044,000.0	14.1	0.3%	1.5%	50.8%	54.1%	1.3%	0.9%
	25,000	29,999	4.446	3,330,000.0	11.2	0.2%	1.3%	54.8%	49.2%	1.1%	0.7%
	30,000	34,999	4.496	2,765,000.0	8.3	0.2%	1.1%	58.1%	45.2%	0.9%	0.6%
	35,000	44,999	8.552	4,413,000.0	10.3	0.2%	1.7%	63.5%	41.9%	1.4%	0.9%
	45,000	54,999	8.725	3,429,000.0	6.8	0.1%	1.3%	67.6%	36.5%	1.1%	0.7%
	55,000	64,999	8.897	2,776,000.0	4.5	0.1%	1.1%	71.0%	32.4%	0.9%	0.5%
	65,000	74,999	9.248	2,386,000.0	2.9	0.1%	0.9%	73.9%	29.0%	0.7%	0.4%
	75,000	84,999	9.103	2,030,000.0	2.8	0.1%	0.8%	76.3%	26.1%	0.6%	0.4%
	85,000	94,999	9.476	1,791,000.0	1.7	0.0%	0.7%	78.5%	23.7%	0.5%	0.3%
	95,000	104,999	9.485	1,603,000.0	1.5	0.0%	0.6%	80.4%	21.5%	0.5%	0.3%
	105,000	114,999	9.411	1,421,000.0	1.3	0.0%	0.5%	82.2%	19.6%	0.4%	0.3%
	115,000	124,999	9.044	1,230,000.0	1.8	0.0%	0.5%	83.6%	17.8%	0.4%	0.2%
	125,000	134,999	9.817	1,129,000.0	0.3	0.0%	0.4%	85.0%	16.4%	0.3%	0.2%
	135,000	144,999	9.532	1,058,000.0	0.9	0.0%	0.4%	86.3%	15.0%	0.3%	0.2%
	145,000	1,083,000	113.230	11,323,000.0	8.3	0.2%	4.3%	100.0%	13.7%	3.4%	2.1%
	Totals for Class			82,629,000.0	547.0	12.1%	31.5%			25.4%	20.2%
Commercial Flat	0	999	0.000	0.0	32.0	0.7%	0.0%	0.0%	100.0%	0.8%	0.9%
	145,000	123,000	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	32.0	0.7%	0.0%			0.8%	0.9%

Table 19 - User Statistics

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Avg. Use in Each Volume Range in 1,000 Gallons	Total Annual Use in Each Volume Range in Gallons	Customers Within This Volume Range	% Users	% Usage	Cumulative Use in This Class From Low to High Volume	Cumulative Use in This Class From High to Low Volume	% Revenue at Current Rates	% Revenue at Modeled Rates
	0	999	1.000	12,000.0	0.0	0.0%	0.0%	0.4%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	12,000.0	0.0	0.0%	0.0%	0.8%	99.6%	0.0%	0.0%
	2,000	2,999	1.000	12,000.0	0.0	0.0%	0.0%	1.2%	99.2%	0.0%	0.0%
	3,000	3,999	1.000	12,000.0	0.0	0.0%	0.0%	1.6%	98.8%	0.0%	0.0%
	4,000	4,999	1.000	12,000.0	0.0	0.0%	0.0%	2.0%	98.4%	0.0%	0.0%
	5,000	5,999	1.000	12,000.0	0.0	0.0%	0.0%	2.3%	98.0%	0.0%	0.0%
	6,000	6,999	1.000	12,000.0	0.0	0.0%	0.0%	2.7%	97.7%	0.0%	0.0%
	7,000	7,999	1.000	12,000.0	0.0	0.0%	0.0%	3.1%	97.3%	0.0%	0.0%
	8,000	8,999	1.000	12,000.0	0.0	0.0%	0.0%	3.5%	96.9%	0.0%	0.0%
	9,000	9,999	1.000	12,000.0	0.0	0.0%	0.0%	3.9%	96.5%	0.0%	0.0%
	10,000	14,999	5.000	60,000.0	0.0	0.0%	0.0%	5.9%	96.1%	0.0%	0.0%
	15,000	19,999	5.000	60,000.0	0.0	0.0%	0.0%	7.8%	94.1%	0.0%	0.0%
	20,000	24,999	5.000	60,000.0	0.0	0.0%	0.0%	9.8%	92.2%	0.0%	0.0%
Hospital	25,000	29,999	5.000	60,000.0	0.0	0.0%	0.0%	11.7%	90.2%	0.0%	0.0%
	30,000	34,999	5.000	60,000.0	0.0	0.0%	0.0%	13.7%	88.3%	0.0%	0.0%
	35,000	44,999	10.000	120,000.0	0.0	0.0%	0.0%	17.6%	86.3%	0.0%	0.0%
	45,000	54,999	10.000	120,000.0	0.0	0.0%	0.0%	21.5%	82.4%	0.0%	0.0%
	55,000	64,999	10.000	120,000.0	0.0	0.0%	0.0%	25.4%	78.5%	0.0%	0.0%
	65,000	74,999	10.000	120,000.0	0.0	0.0%	0.0%	29.3%	74.6%	0.0%	0.0%
	75,000	84,999	10.000	120,000.0	0.0	0.0%	0.0%	33.2%	70.7%	0.0%	0.0%
	85,000	94,999	10.000	120,000.0	0.0	0.0%	0.0%	37.1%	66.8%	0.0%	0.0%
	95,000	104,999	10.000	120,000.0	0.0	0.0%	0.0%	41.0%	62.9%	0.0%	0.0%
	105,000	114,999	10.000	120,000.0	0.0	0.0%	0.0%	44.9%	59.0%	0.0%	0.0%
	115,000	124,999	10.000	120,000.0	0.0	0.0%	0.0%	48.8%	55.1%	0.0%	0.0%
	125,000	134,999	9.667	116,000.0	0.1	0.0%	0.0%	52.6%	51.2%	0.0%	0.0%
	135,000	144,999	10.000	110,000.0	0.0	0.0%	0.0%	56.2%	47.4%	0.0%	0.0%
	145,000	457,000	122.273	1,345,000.0	0.9	0.0%	0.5%	100.0%	43.8%	0.3%	0.2%
	Totals for Class			3,071,000.0	1.0	0.0%	1.2%			0.7%	0.5%
	0	999	1.000	12,000.0	0.0	0.0%	0.0%	0.1%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	12,000.0	0.0	0.0%	0.0%	0.2%	99.9%	0.0%	0.0%
	2,000	2,999	1.000	12,000.0	0.0	0.0%	0.0%	0.3%	99.8%	0.0%	0.0%
	3,000	3,999	1.000	12,000.0	0.0	0.0%	0.0%	0.4%	99.7%	0.0%	0.0%
	4,000	4,999	1.000	12,000.0	0.0	0.0%	0.0%	0.6%	99.6%	0.0%	0.0%
	5,000	5,999	1.000	12,000.0	0.0	0.0%	0.0%	0.7%	99.4%	0.0%	0.0%
	6,000	6,999	1.000	12,000.0	0.0	0.0%	0.0%	0.8%	99.3%	0.0%	0.0%
	7,000	7,999	1.000	12,000.0	0.0	0.0%	0.0%	0.9%	99.2%	0.0%	0.0%
	8,000	8,999	1.000	12,000.0	0.0	0.0%	0.0%	1.0%	99.1%	0.0%	0.0%
	9,000	9,999	1.000	12,000.0	0.0	0.0%	0.0%	1.1%	99.0%	0.0%	0.0%
	10,000	14,999	5.000	60,000.0	0.0	0.0%	0.0%	1.7%	98.9%	0.0%	0.0%
	15,000	19,999	5.000	60,000.0	0.0	0.0%	0.0%	2.2%	98.3%	0.0%	0.0%
	20,000	24,999	5.000	60,000.0	0.0	0.0%	0.0%	2.8%	97.8%	0.0%	0.0%
Honor Farm	25,000	29,999	5.000	60,000.0	0.0	0.0%	0.0%	3.3%	97.2%	0.0%	0.0%
	30,000	34,999	5.000	60,000.0	0.0	0.0%	0.0%	3.9%	96.7%	0.0%	0.0%
	35,000	44,999	10.000	120,000.0	0.0	0.0%	0.0%	5.0%	96.1%	0.0%	0.0%
	45,000	54,999	10.000	120,000.0	0.0	0.0%	0.0%	6.1%	95.0%	0.0%	0.0%
	55,000	64,999	10.000	120,000.0	0.0	0.0%	0.0%	7.2%	93.9%	0.0%	0.0%
	65,000	74,999	10.000	120,000.0	0.0	0.0%	0.0%	8.3%	92.8%	0.0%	0.0%
	75,000	84,999	10.000	120,000.0	0.0	0.0%	0.0%	9.4%	91.7%	0.0%	0.0%
	85,000	94,999	10.000	120,000.0	0.0	0.0%	0.0%	10.5%	90.6%	0.0%	0.0%
	95,000	104,999	10.000	120,000.0	0.0	0.0%	0.0%	11.6%	89.5%	0.0%	0.0%
	105,000	114,999	10.000	120,000.0	0.0	0.0%	0.0%	12.7%	88.4%	0.0%	0.0%
	115,000	124,999	10.000	120,000.0	0.0	0.0%	0.0%	13.8%	87.3%	0.0%	0.0%
	125,000	134,999	10.000	120,000.0	0.0	0.0%	0.0%	14.9%	86.2%	0.0%	0.0%
	135,000	144,999	10.000	120,000.0	0.0	0.0%	0.0%	16.0%	85.1%	0.0%	0.0%
	145,000	1,087,000	763.583	9,163,000.0	1.0	0.0%	3.5%	100.0%	84.0%	3.8%	1.6%
	Totals for Class			10,903,000.0	1.0	0.0%	4.2%			4.5%	1.9%

Table 19 - User Statistics

Customer or Rate Class, or Meter Size	Volume Range Bottom (in Gallons)	Volume Range Top (in Gallons)	Avg. Use in Each Volume Range in 1,000 Gallons	Total Annual Use in Each Volume Range in Gallons	Customers Within This Volume Range	% Users	% Usage	Cumulative Use in This Class From Low to High Volume	Cumulative Use in This Class From High to Low Volume	% Revenue at Current Rates	% Revenue at Modeled Rates
Low Strength Sewer	0	999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	385,000	99,999,999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	0.0	0.0%	0.0%			0.0%	0.0%
Wastewater Dump	0	999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	870,000	99,999,999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	0.0	0.0%	0.0%			0.0%	0.0%
Fike Sewer	0	999	0.000	0.0	43.0	1.0%	0.0%	0.0%	100.0%	1.0%	1.1%
	870,000	99,999,999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	43.0	1.0%	0.0%			1.0%	1.1%
Flat Rate	0	999	0.000	0.0	372.0	8.3%	0.0%	0.0%	100.0%	8.1%	9.3%
	870,000	99,999,999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	372.0	8.3%	0.0%			8.1%	9.3%
Paintbrush Hotel	0	999	0.000	0.0	1.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	870,000	99,999,999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	1.0	0.0%	0.0%			0.0%	0.0%
Raintree Sewer	0	999	0.000	0.0	1.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	870,000	99,999,999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	1.0	0.0%	0.0%			0.0%	0.0%
WWTP Dump-Sump	0	999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	870,000	99,999,999	0.000	0.0	0.0	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	Totals for Class			0.0	0.0	0.0%	0.0%			0.0%	0.0%
Data Loss Adjustment	0	39,999,999	19,150.000	19,150,000.0	0.1	0.0%	7.3%	100.0%	100.0%	5.3%	3.3%
	Totals for Class			19,150,000.0	0.1	0.0%	7.3%			5.3%	3.3%
	Grand Totals			262,517,000.0		100.00%	100.00%			100.00%	100.00%

Chart 1 - Operating Ratio

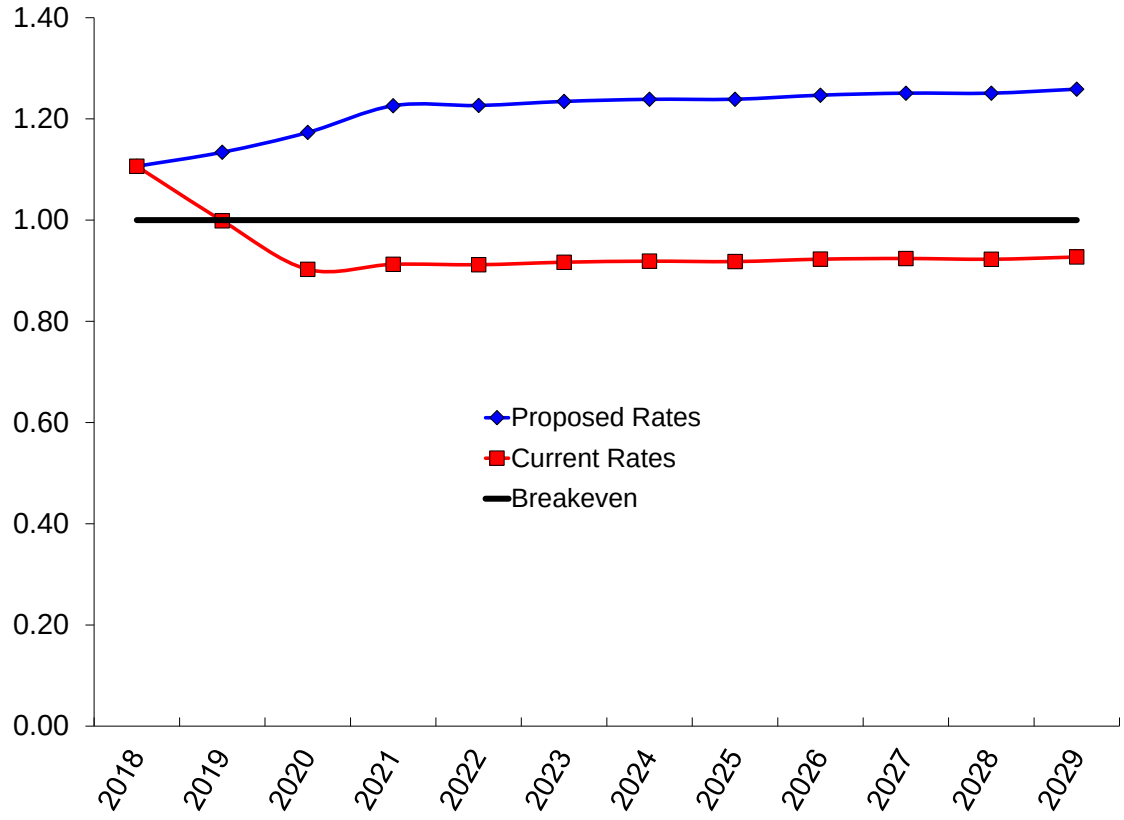


Chart 2 - Coverage Ratio

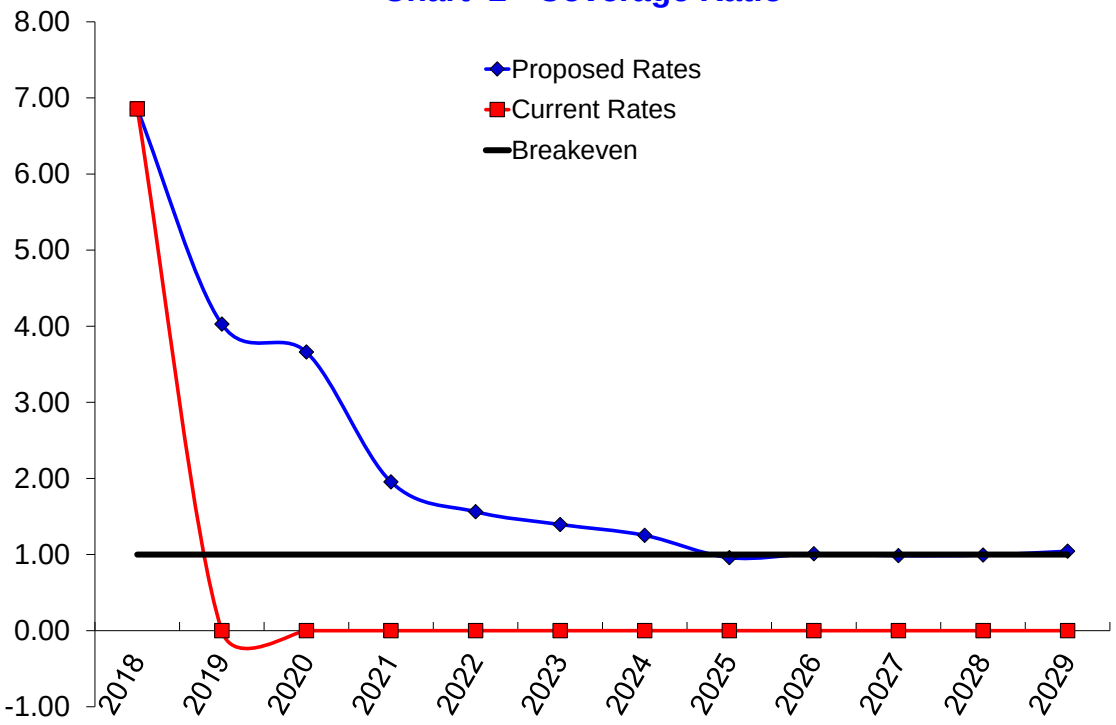


Chart 3 - Residential Users' Bills

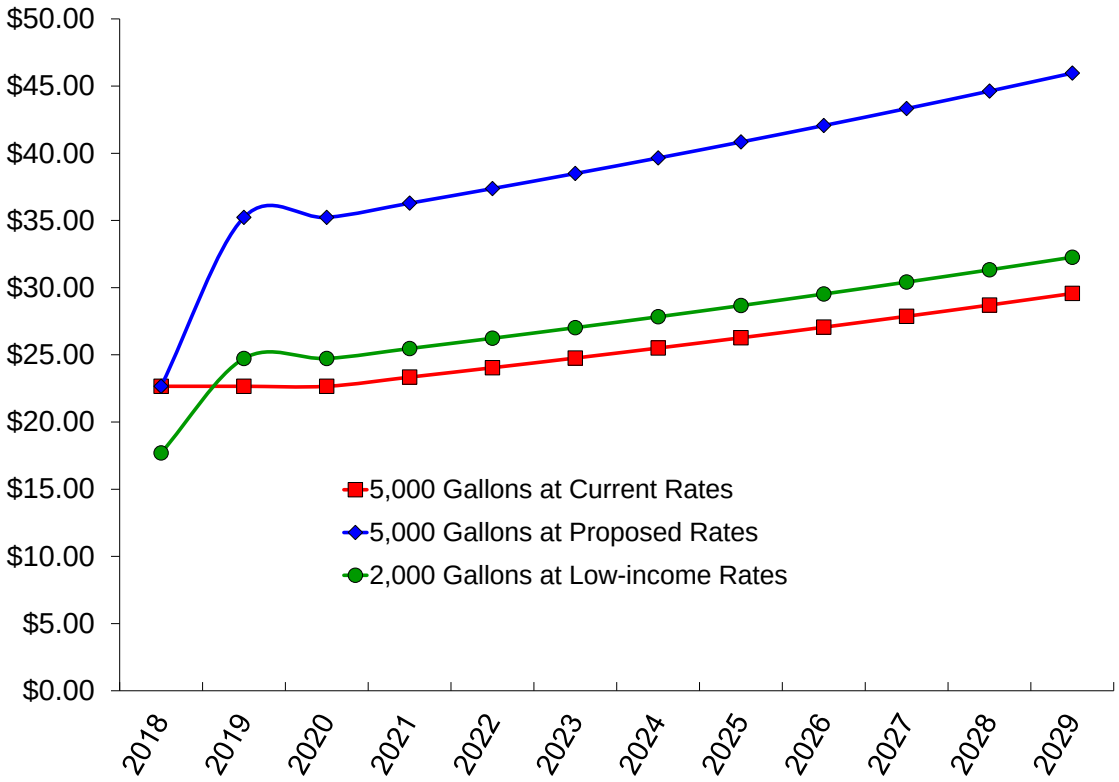


Chart 4 - Affordability

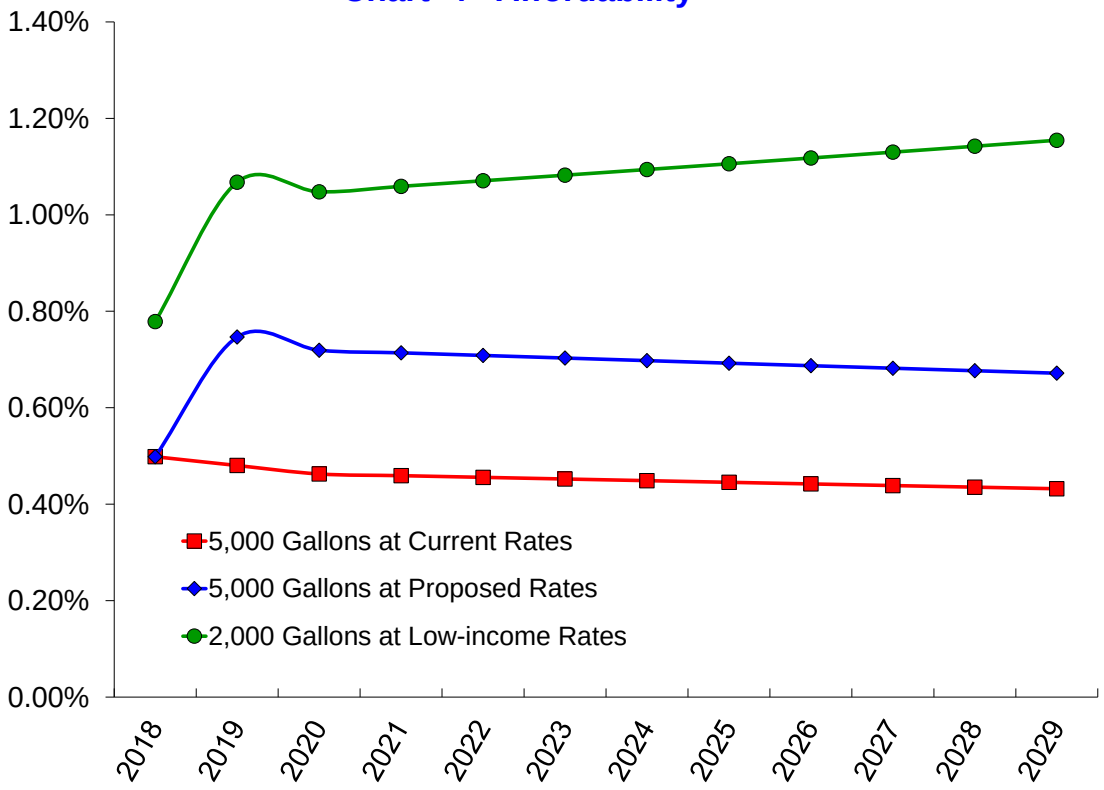


Chart 5 - Working Capital vs Goal

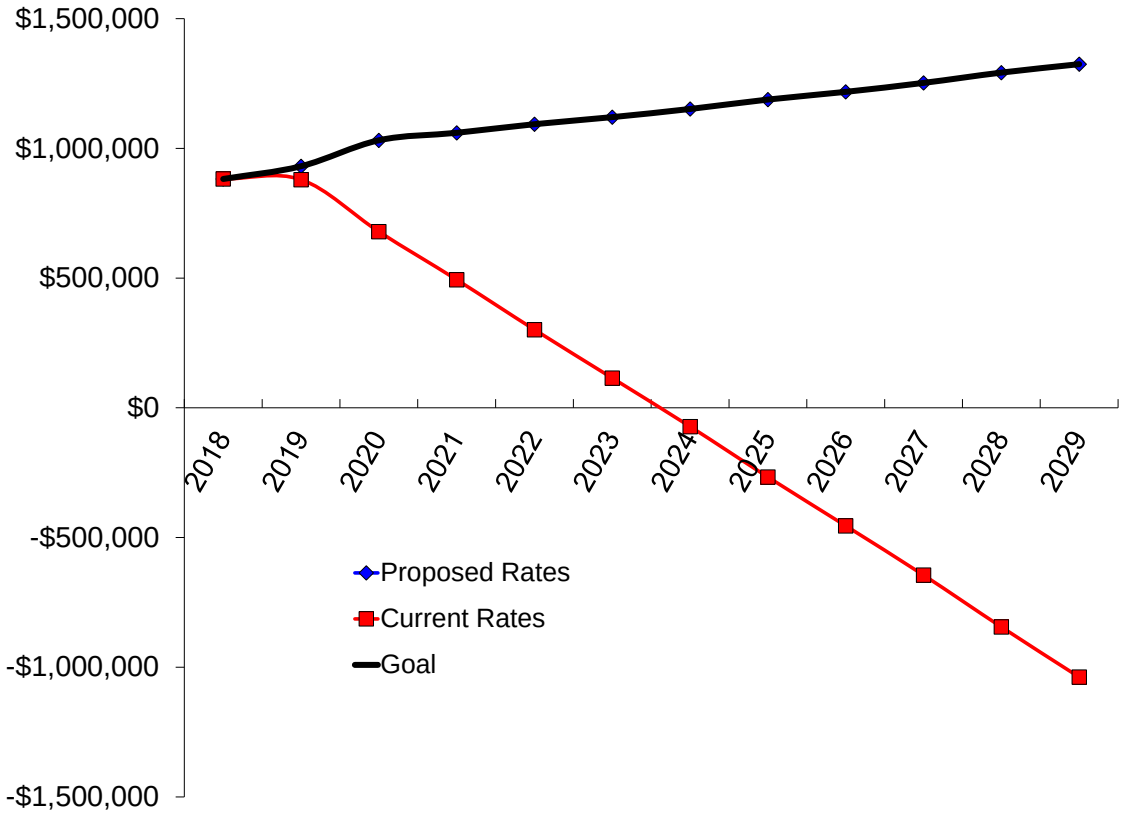


Chart 6 - Value of Cash Assets Before Inflation

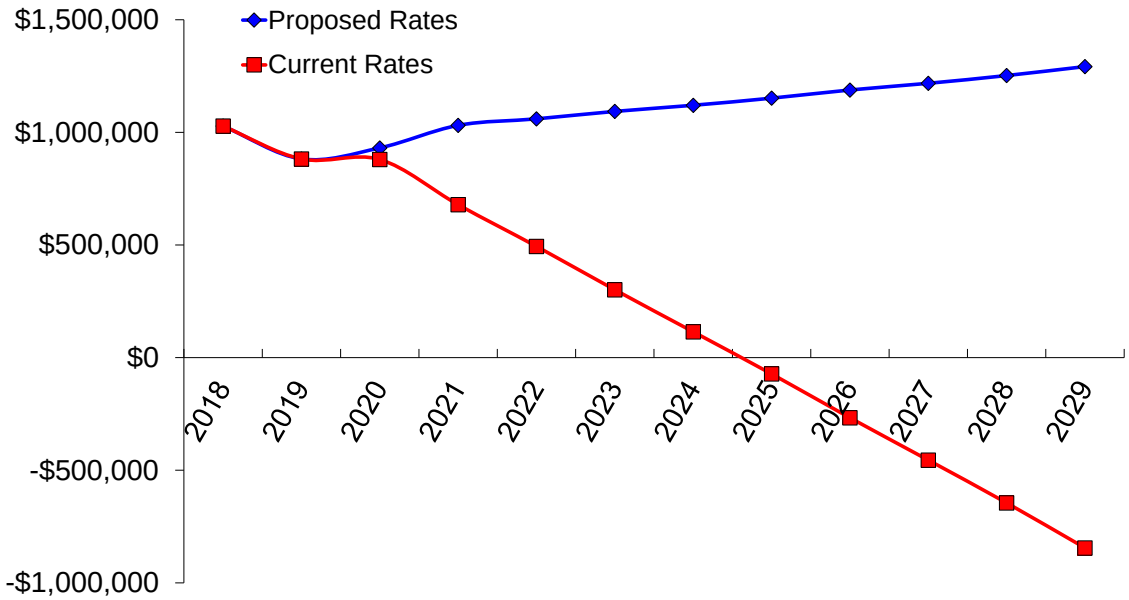


Chart 7 - Value of Cash Assets After Inflation

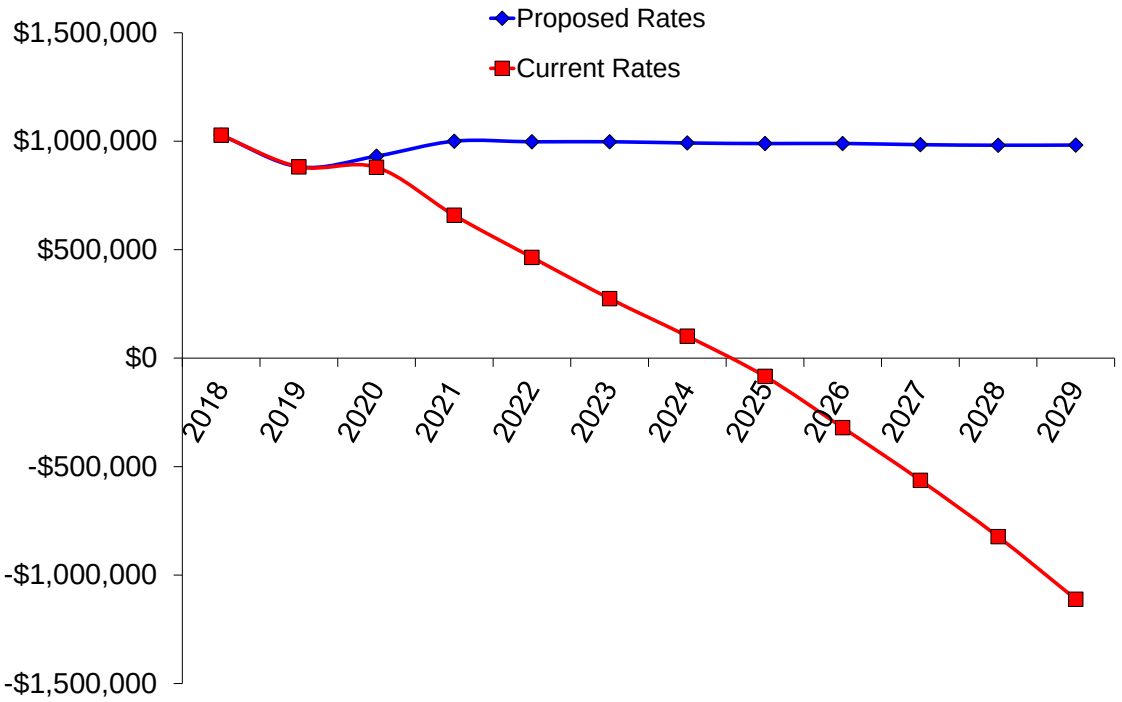
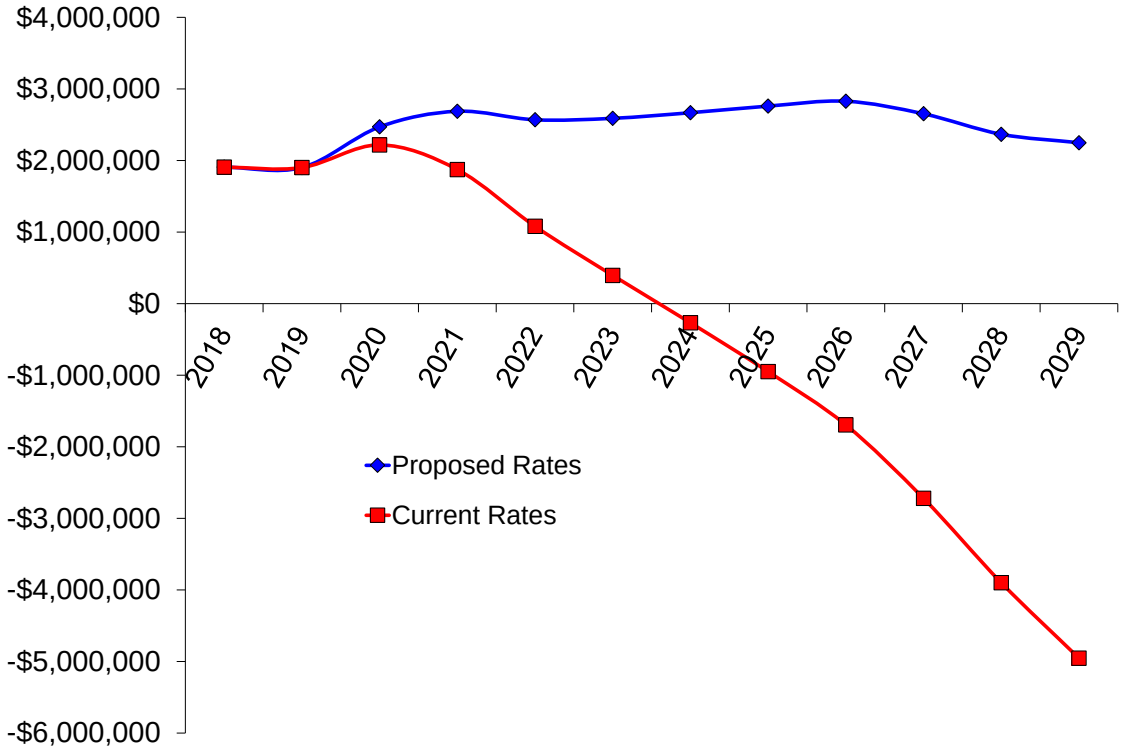


Chart 8 - Sum of All Reserves



Riverton, WY; Sanitation Rates, Model 2019-3

(This model moves the rates close to a cost-to-serve structure. The lack of some data and an attempt to reduce rate shock limited rate restructuring somewhat.)

July 30, 2019

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Note: This document is a print out of the spreadsheet model used to calculate new user charge and other rates and fees for the next 10 years. These calculations are complex and are based upon many conditions and assumtions. These issues, and others, are described in a narrative report that accompanies this model.

Return on Investment

Riverton, WY; Sanitation Rates, Model 2019-3

The rates depicted in this model will produce various returns on investment or paybacks. Usually the most important payback, at least to ratepayers, is a rate structure that is demonstrably fair. For the system, however, making sure that revenue will be adequate to pay all expected, expectable and many unexpectable costs is the the most important return. If revenue will increase as a result of this analysis, which is almost always the case, one can calculate a dollar and percentage return on investment.

The following calculations show what was invested and what the returns will be over two periods; five years and 10 years. Five years is a reasonable period for return projections. Ten years is a good basic planning horizon but you should not bank on amounts or returns projected that far out. Besides, most systems should have their analyses redone long before then.

Consider these key points about return on investment. Higher rates will fund more improvements, better repair and replacement and more. Most increases in revenue end up being used for such expenses. Thus, few systems end up with a dramatic increase in their cash reserves but they do markedly improve their financial position. In addition, fairer and higher rates generally enable systems to qualify for grant and loan funding that they otherwise would not. That increases the importation of "other people's money," which is a drain on the state and federal funds, where the money comes from, but it is very desirable at the utility level. The calculation below ignores any "outside" funds the utility may capture.

Also note that rates in this model have been modeled to be adjusted during the year following the test year or even later. That year is included in the first five-year return on investment calculation. Thus, the first year of returns calculated below include most or all of one year where rates will not have been changed yet. Thus, the real rate of return will be greater than the calculation reflects.

Calculations

$5,997	Fees to GettingGreatRates.com
$500	Estimated value of system staff time and incidentals to assemble needed information
$6,497	Total Investment for This Analysis
$1,304,484	Five-year Increase in Revenue Due at Least Partly to This Analysis
20077%	Five-year Return on Investment (increase in revenues / investment)
$2,756,269	Ten-year Improvement in Cash Position Due at Least Partly to This Analysis
42,422%	Ten-year Return on Investment (increase in revenues / investment)

Table 1 - Rates

Riverton, WY; Sanitation Rates, Model 2019-3

Below are the recommended rates calculated by this model. Extra container Pick-ups are assessed a 50 percent premium over the first Pick-up to cover collection cost of additiona/extra Pick-ups.

Rates Calculated by This Model, Assumed to become effective in July, 2019

Rate Class	Customer Count	% of Customers	% of Total Volume	Count of Container/ Pick-ups	Container Pick-ups per Month	Extra Pick-ups	0.45 Cu Yd (90 Gallon) Equivalent Factor	Minimum Charge per Month	Total Annual Minimum and One-time Charges	Annual Volume in 90 Gallon Equivalents	Collection Charge per 90 Gallon Equivalent	1 Pick-up Collection Charge This Container Size	Total Collection Charges This Class	Disposal Charge per 90 Gallon Equivalent	1 Pick-up Disposal Charge This Container Size	Total Disposal Charges This Class	Total Monthly (or Per Instance) Charge for Customer With This Container Size	Total Annual Revenue From Customers With This Container Size	Current Rates	Current Revenues
Regular Customers																				
(Residential) Alley Dumpster Regular Service	8	0.2%	0.1%	416	4.3		1.049	$27.73	$2,662	436	$2.05	$0.86	$356	$1.70	$1.79	$743	$30.37	$3,761	$35.72	$3,429
90 Gallon Rollout Regular Service	1,537	35.9%	20.9%	79,898	4.3		1.0	$27.73	$511,274	79,898	$2.05	$2.45	$195,504	$1.70	$1.70	$135,990	$31.48	$842,768	$34.04	$627,630
Regular (90 Gal) Service With Verified Recycling Participation	1,537	35.9%	20.9%	79,898	4.3		1.0	$27.73	$511,274	79,898	$2.05	$2.45	$195,504	$1.70	$1.70	$135,990	$31.88	$842,768	$28.18	$519,583
45 Gallon Rollout Economy Service	262	6.1%	1.8%	13,598	4.3		0.5	$27.73	$87,015	6,799	$2.05	$1.22	$16,637	$1.70	$0.85	$11,572	$29.80	$115,224	$30.33	$95,176
Economy Service With Verified Recycling	262	6.1%	1.8%	13,598	4.3		0.5	$27.73	$87,015	6,799	$2.05	$1.22	$16,637	$1.70	$0.85	$11,572	$29.80	$115,224	$25.11	$78,795
(Residential) Alley Dumpster Extra Container/Pick-up	0	0.0%	0.0%		N.A.	3	1.049	$0.00	$0	3	$4.09	$1.71	$5	$1.70	$1.79	$5	$3.50	$10	$35.72	$107
90 Gallon Extra Container/Pick-up	0	0.0%	0.0%		N.A.	103	1.0	$0.00	$0	103	$4.09	$4.89	$504	$1.70	$1.70	$175	$6.60	$679	$34.04	$3,506
Regular (90 Gal) Service With Verified Recycling Extra Container/Pick-up	0	0.0%	0.0%		N.A.	0	1.0	$0.00	$0	0	$4.09	$4.89	$0	$1.70	$1.70	$0	$6.60	$0	$28.18	$0
45 Gallon Extra Container/Pick-up	0	0.0%	0.0%		N.A.	39	0.5	$0.00	$0	20	$4.09	$2.45	$95	$1.70	$0.85	$33	$3.30	$129	$30.33	$1,183
Economy Service With Verified Recycling Extra Container/Pick-up	0	0.0%	0.0%		N.A.	0	0.5	$0.00	$0	0	$4.09	$2.45	$0	$1.70	$0.85	$0	$3.30	$0	$25.11	$0
	3,604	84.2%	45.5%	187,408		145			$1,199,239	173,956			$425,243			$296,081		$1,920,563		$1,329,408
Commercial and Special Customers																				
Regular Service Individual Container 3 Cu Yd	472	11.0%	43.2%	24,544	4.3		6.7	$27.73	$157,059	165,230	$2.05	$16.47	$404,306	$1.70	$11.46	$281,229	$55.66	$842,594	$63.63	$360,400
Regular Service Shared Container 3 Cu Yd*	154	3.6%	7.7%	8,008	4.3		3.7	$27.73	$51,244	29,381	$2.05	$2.99	$23,964	$1.70	$6.24	$50,008	$36.97	$125,216	$34.69	$64,107
20-Yard Rolloff Delivery	34	0.8%	0.0%	N.A.	N.A.		44.9	$232.63	$94,915	0	$0.00	$0.00	$0	$0.00	$0.00	$0	$232.63	$94,915	$194.51	$79,360
20-Yard Rolloff 1 Pick-up per Month Rental	17	0.4%	2.4%	202	16.8		44.9	$27.73	$5,601	9,066	$2.05	$109.82	$22,183	+ Tip Fee	+ Tip Fee	$0	$137.55	$27,785	$126.88	$25,630
3-Yard Dumpster 1 Pick-up per Month Rental	0	0.0%	0.0%	0	4.3		6.7	$27.73	$0	0	$2.05	$16.47	$0	$1.70	$11.46	$0	$55.66	$0	$57.36	$0
1.5 Yard Dumpster 1 Pick-up per Month Rental	0	0.0%	0.0%	0	4.3		3.4	$27.73	$0	0	$2.05	$8.24	$0	$1.70	$5.73	$0	$41.69	$0	$43.40	$0
Regular Service Individual Container Extra Container/Pick-up 3 Cu Yd	0	0.0%	1.1%		N.A.	601	6.7	$0.00	$0	4,046	$4.09	$32.95	$19,800	$1.70	$11.46	$6,886	$44.40	$26,687	$63.63	$38,242
Regular Service Shared Container Extra Container/Pick-up 3 Cu Yd*	0	0.0%	0.0%		N.A.	4	3.7	$0.00	$0	15	$4.09	$5.99	$24	$1.70	$6.24	$25	$12.23	$49	$34.69	$139
20-Yard Rolloff per Additional Container/Pick-up	0	0.0%	0.1%		N.A.	12.0	44.9	$0.00	$0	539	$4.09	$219.64	$2,636	+ Tip Fee	+ Tip Fee	$0	$219.64	$2,636	$126.88	$1,523
3-Yard Dumpster per Additional Container/Pick-up	0	0.0%	0.0%		N.A.	0.0	6.7	$0.00	$0	0	$4.09	$32.95	$0	$1.70	$11.46	$0	$44.40	$0	$46.11	$0
1.5 Yard Dumpster per Additional Container/Pick-up	0	0.0%	0.0%		N.A.	N.A.	3.4	$0.00	$0	0	$4.09	$16.47	$0	$1.70	$5.73	$0	$22.20	$0	$23.90	$0
	677	15.8%	54.5%	32,754		617			$308,819	208,276			$472,913			$338,148		$1,119,880		$569,400
Totals	4,281	100.0%	100.0%	220,162		762			$1,508,058	382,232			$898,156			$634,228	$1,080	$3,040,443		$1,898,809

Table 3 - Operating Incomes (and User Base Data)

Riverton, WY; Sanitation Rates, Model 2019-3

This table depicts user statistics, customer growth, and system incomes and across the board "inflationary" style rate increases through the 10th year.

Annual Median Household Income (AMHI)

$50,645 Census Bureau estimate of AMHI for the year: 2016

$31,531 Census Bureau estimate of AMHI for the year: 2000

$19,114 AMHI growth during this time period

3.79% Simple annual income growth rate during this time period (used to project incomes into the future)

This model is programmed to assume that rates will be reset in the "Analysis (This) Year" column below (heading highlighted blue). Revenues will be collected at the now-current rates for the first part of the analysis year and the modeled rates for the last part of the analysis year. The change-over from the current rates to new rates is modeled to happen on the date near the top of Table 10. Thus, the revenues shown in the last column of that table are "blended" revenues; part collected at the old rates and part collected at the new rates. It was then assumed that all rate adjustments made after the initial (major) adjustment will be done annually on approximately the anniversary of the first adjustment.

User (Customer) Basic Data

(First year balances and incomes are actual, subsequent years are projected.)	Inflation or Deflation (–) Factor	Test Year	Analysis (This) Year	Years Following the Analysis Year (for Which Results Have Been Projected)									
		Starting	Starting	1st Year Starting	2nd Year Starting	3rd Year Starting	4th Year Starting	5th Year Starting	6th Year Starting	7th Year Starting	8th Year Starting	9th Year Starting	10th Year Starting
		7/1/17	7/1/18	7/1/19	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25	7/1/26	7/1/27	7/1/28
Average Number of Customers for the Year	N.A.	4,281	4,288	4,295	4,302	4,309	4,316	4,323	4,330	4,337	4,344	4,351	4,358
Actual (Test Year) and Projected 0.45 Cu Yd (90 Gallon) Bin Equivalents	N.A.	382,232	382,857	383,482	384,107	384,732	385,357	385,982	386,607	387,232	387,857	388,482	389,107
Customers Added or Lost (-) During the Year	N.A.	8.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Customer Growth or Loss (-) Rate	N.A.	0.19%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%
Rate Increases Projected for Future Years	N.A.	N.A.	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

The row above shows the rate at which user charge fees should be increased for each year beyond the initial rate adjustment year. Unless stated otherwise, these should be across-the-board increases to all rates and fees and that should continue until a new rate analysis is done.

How User Charge Fees Were Calculated, Accounting for New Customers and Future Rate Increases

Actual or Calculated Sales Revenues		$2,313,631	$2,317,408	$2,625,621	$2,682,498	$2,740,608	$2,799,961	$2,860,593	$2,922,529	$2,985,799	$3,050,431	$3,116,454	$3,183,897
Additional Sales Revenues From New Customers			$3,783	$4,279	$4,372	$4,452	$4,541	$4,632	$4,725	$4,819	$4,916	$5,014	$5,114
Total Calculated Revenues (User Charge Fees)		$2,313,631	$2,321,191	$2,629,900	$2,686,870	$2,745,060	$2,804,503	$2,865,225	$2,927,254	$2,990,619	$3,055,347	$3,121,468	$3,189,011

Operating Incomes

Sanitation Receipts Except Other Sanitation Receipts Below	N.A.	$1,898,809	$1,905,013	$2,154,860	$2,201,540	$2,249,219	$2,297,924	$2,347,678	$2,398,503	$2,450,422	$2,503,458	$2,557,636	$2,612,979
Late Payment Charge	N.A.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest On Investments	N.A.	$5,750	$2,500	$10,828	$11,732	$12,330	$13,261	$13,578	$13,939	$14,345	$14,689	$15,024	$15,090
Misc. Reimbursements	N.A.	$308	$308	$308	$308	$308	$308	$308	$308	$308	$308	$308	$308
Sale of Property	N.A.	$2,000	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500
Mulch Sales	N.A.	$14,688	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Solids Handling Charge (Rolloffs Material Charge)	N.A.	$36,215	$38,000	$38,000	$38,000	$38,000	$38,000	$38,000	$38,000	$38,000	$38,000	$38,000	$38,000
Sanitation Other (Rolloffs Haul Charge)	N.A.	$44,834	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
33494 Master Plan BRC Grant	N.A.	$0	$3,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
36979 Transfer to Reserves	N.A.	$0	-$28,376	-$28,376	-$28,376	-$28,376	-$28,376	-$28,376	-$28,376	-$28,376	-$28,376	-$28,376	-$28,376
Other Sanitation Receipts	N.A.	$414,822	$414,822	$414,822	$421,044	$427,360	$433,771	$440,277	$446,881	$453,584	$460,388	$467,294	$474,303
Loss Due to Customers Downsizing Container Size	10.0%	$0	$0	$0	-$69,439	-$1,389	-$1,389	-$1,389	-$1,389	-$1,389	-$1,389	-$1,389	-$1,389
Revenue Loss Because Rate Adjustments Made # Months Late	2.0	$0	$0	-$51,452	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Incomes		**$2,417,426**	**$2,398,068**	**$2,601,491**	**$2,637,309**	**$2,759,953**	**$2,815,999**	**$2,872,577**	**$2,930,366**	**$2,989,395**	**$3,049,579**	**$3,110,998**	**$3,173,415**

Table 4 - Operating Costs (and Net Income)

Riverton, WY; Sanitation Rates, Model 2019-3

This table depicts expenses during the test year, this year and for the next 10 years. Some future costs will experience inflation. Those costs that go up as use goes up are increased by the cost inflation factor plus the growth rate in users.

(First year costs and net incomes are actual, subsequent years are projected.)

	Inflation or Deflation (–) Factor	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	Years Following the Analysis Year (for Which Results Have Been Projected) 1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
109 Salaries and wages	3.0%	$505,418	$471,490	$485,635	$500,204	$515,210	$530,666	$546,586	$562,984	$579,873	$597,269	$615,188	$633,643
120 Overtime	3.0%	$468	$1,700	$1,751	$1,804	$1,858	$1,913	$1,971	$2,030	$2,091	$2,154	$2,218	$2,285
191 FICA	3.0%	$36,235	$37,285	$38,404	$39,556	$40,742	$41,965	$43,224	$44,520	$45,856	$47,232	$48,648	$50,108
192 Health Insurance	3.0%	$129,744	$148,150	$152,595	$157,172	$161,888	$166,744	$171,746	$176,899	$182,206	$187,672	$193,302	$199,101
193 Retirement	3.0%	$63,393	$66,935	$68,943	$71,011	$73,142	$75,336	$77,596	$79,924	$82,322	$84,791	$87,335	$89,955
196 Workers Compensation	3.0%	$11,963	$15,060	$15,512	$15,977	$16,456	$16,950	$17,459	$17,982	$18,522	$19,078	$19,650	$20,239
197 Unemployment	3.0%	$287	$2,000	$2,060	$2,122	$2,185	$2,251	$2,319	$2,388	$2,460	$2,534	$2,610	$2,688
211 Office Supplies	3.0%	$3,134	$3,400	$3,502	$3,607	$3,715	$3,827	$3,942	$4,060	$4,182	$4,307	$4,436	$4,569
212 Office Equipment	3.0%	$2,237	$2,000	$2,060	$2,122	$2,185	$2,251	$2,319	$2,388	$2,460	$2,534	$2,610	$2,688
215 Computer Supplies	3.0%	$1,336	$1,050	$1,082	$1,114	$1,147	$1,182	$1,217	$1,254	$1,291	$1,330	$1,370	$1,411
229 Uniforms	3.0%	$2,507	$3,500	$3,605	$3,713	$3,825	$3,939	$4,057	$4,179	$4,305	$4,434	$4,567	$4,704
231 Gas & Oil	3.0%	$7,728	$10,600	$10,918	$11,246	$11,583	$11,930	$12,288	$12,657	$13,037	$13,428	$13,831	$14,246
232 Diesel	3.0%	$58,134	$54,200	$55,826	$57,501	$59,226	$61,003	$62,833	$64,718	$66,659	$68,659	$70,719	$72,840
234 Veh. & Equip. Maintenance	3.0%	$108,110	$140,000	$144,200	$148,526	$152,982	$157,571	$162,298	$167,167	$172,182	$177,348	$182,668	$188,148
241 Tools & Supplies	3.0%	$2,409	$2,250	$2,318	$2,387	$2,459	$2,532	$2,608	$2,687	$2,767	$2,850	$2,936	$3,024
247 Safety Supplies	3.0%	$618	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159	$1,194	$1,230	$1,267	$1,305	$1,344
250 Container Maintenance	3.0%	$6,934	$8,500	$8,769	$9,047	$9,334	$9,629	$9,934	$10,249	$10,573	$10,908	$11,253	$11,610
251 Containers-Rollouts	3.0%	$7,125	$7,500	$7,738	$7,983	$8,236	$8,496	$8,765	$9,043	$9,329	$9,625	$9,929	$10,244
257 Yard Waste Recycling Cont	3.0%	$4,675	$6,000	$6,190	$6,386	$6,588	$6,797	$7,012	$7,234	$7,463	$7,700	$7,943	$8,195
312 Postage	3.0%	$6,377	$6,650	$6,861	$7,078	$7,302	$7,533	$7,772	$8,018	$8,272	$8,534	$8,804	$9,083
333 Dues	3.0%	$92	$140	$144	$149	$153	$158	$162	$167	$172	$177	$183	$188
334 Bank Charges	0.0%	$7,492	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
337 Bio-Solids Screening	3.0%	$0	$4,862	$5,008	$5,158	$5,313	$5,472	$5,636	$5,805	$5,980	$6,159	$6,344	$6,534
341 Electricity	3.0%	$2,789	$2,400	$2,472	$2,546	$2,623	$2,701	$2,782	$2,866	$2,952	$3,040	$3,131	$3,225
343 Heat	3.0%	$1,750	$2,600	$2,678	$2,758	$2,841	$2,926	$3,014	$3,105	$3,198	$3,294	$3,392	$3,494
345 Telephone	3.0%	$2,447	$2,500	$2,575	$2,652	$2,732	$2,814	$2,898	$2,985	$3,075	$3,167	$3,262	$3,360
360 Audit	3.0%	$14,200	$14,300	$14,729	$15,171	$15,626	$16,095	$16,578	$17,075	$17,587	$18,115	$18,658	$19,218
363 Building Maintenance	3.0%	$8,816	$4,000	$4,120	$4,244	$4,371	$4,502	$4,637	$4,776	$4,919	$5,067	$5,219	$5,376
364 General Maintenance	3.0%	$4,500	$5,000	$5,150	$5,305	$5,464	$5,628	$5,796	$5,970	$6,149	$6,334	$6,524	$6,720
371 Travel & Training	3.0%	$312	$1,100	$1,133	$1,167	$1,202	$1,238	$1,275	$1,313	$1,353	$1,393	$1,435	$1,478
373 Internet Access	3.0%	$360	$360	$371	$382	$393	$405	$417	$430	$443	$456	$470	$484
375 Software Maint Agreement	3.0%	$4,428	$5,000	$5,150	$5,305	$5,464	$5,628	$5,796	$5,970	$6,149	$6,334	$6,524	$6,720
380 Refund of Overpayment	3.0%	$0	$500	$516	$532	$549	$566	$584	$603	$622	$642	$662	$683
384 Monitor Wells	3.0%	$26,477	$30,000	$30,900	$31,827	$32,782	$33,765	$34,778	$35,822	$36,896	$38,003	$39,143	$40,317
388 Landfill Charges	1.5%	$596,934	$650,000	$660,825	$671,831	$683,016	$694,386	$705,943	$717,690	$729,632	$741,770	$754,107	$766,648

Table 4 - Operating Costs (and Net Income)

	Inflation or Deflation (–) Factor	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
391 Advertising	3.0%	$1,137	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159	$1,194	$1,230	$1,267	$1,305	$1,344
392 Drug Testing	3.0%	$635	$550	$567	$583	$601	$619	$638	$657	$676	$697	$718	$739
393 Landfill Remediation	3.0%	$32,285	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
394 Recruitment Expenditures	3.0%	$1,240	$738	$760	$783	$806	$831	$856	$881	$908	$935	$963	$992
501 Insurance	3.0%	$8,253	$9,420	$9,703	$9,994	$10,293	$10,602	$10,920	$11,248	$11,585	$11,933	$12,291	$12,660
772 Utility Rate Study	3.0%	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below
825 Administrative Allocation	3.0%	$379,734	$399,948	$411,946	$424,305	$437,034	$450,145	$463,649	$477,559	$491,886	$506,642	$521,841	$537,497
947 Fleet Management Software	3.0%	$0	$3,100	$3,193	$3,289	$3,387	$3,489	$3,594	$3,702	$3,813	$3,927	$4,045	$4,166
948 Maintence Shop Compressor	3.0%	$0	$3,400	$3,502	$3,607	$3,715	$3,827	$3,942	$4,060	$4,182	$4,307	$4,436	$4,569
952 NEOGOV	3.0%	$0	$2,250	$2,318	$2,387	$2,459	$2,532	$2,608	$2,687	$2,767	$2,850	$2,936	$3,024
967 Fleet Capital	3.0%	$221,730	$300,000	$309,000	$318,270	$327,818	$337,653	$347,782	$358,216	$368,962	$380,031	$391,432	$403,175
969 Master Plan	3.0%	$0	$6,600	$6,798	$7,002	$7,212	$7,428	$7,651	$7,881	$8,117	$8,361	$8,612	$8,870
User Charge Analysis Services	5.0%	$0	$5,997	$0	$0	$6,612	$0	$0	$7,290	$0	$0	$8,037	$0
Total Operating Costs		**$2,274,441**	**$2,452,535**	**$2,511,083**	**$2,577,422**	**$2,652,214**	**$2,715,678**	**$2,787,704**	**$2,869,026**	**$2,937,832**	**$3,016,051**	**$3,104,491**	**$3,179,105**
Net Income (or Loss)		$142,986	-$54,468	$90,407	$59,887	$107,739	$100,321	$84,873	$61,341	$51,563	$33,528	$6,506	-$5,689
Working Capital Goal: 50%	In Dollars, That is:	$1,137,220	$1,226,268	$1,255,542	$1,288,711	$1,326,107	$1,357,839	$1,393,852	$1,434,513	$1,468,916	$1,508,025	$1,552,246	$1,589,552

Notes: The City includes individual capital and equipment replacement costs in its operating budget, which is normal. We retained those costs in this table. As to future costs, they were increased by an inflation factor. Those costs that are related to the number of customers served are also increased by the growth rate each year. Those are highlighted yellow.

Table 8 - Average Cost Classification

Riverton, WY; Sanitation Rates, Model 2019-3

This table distributes costs from a representative year (the "average rate structure basis year) to fixed and variable categories (see Definitions) in order to calculate the "cost of service" rate structure for that year.

The average rate structure basis year runs from: 7/1/2022 through 6/30/2023

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Disposal Cost Percentage	Collection Cost Percentage	Fixed Cost	Disposal Cost	Collection Cost
109 Salaries and wages	$530,666	50.0%	0.0%	50.0%	$265,333	$0	$265,333
120 Overtime	$1,913	50.0%	0.0%	50.0%	$957	$0	$957
191 FICA	$41,965	50.0%	0.0%	50.0%	$20,982	$0	$20,982
192 Health Insurance	$166,744	50.0%	0.0%	50.0%	$83,372	$0	$83,372
193 Retirement	$75,336	50.0%	0.0%	50.0%	$37,668	$0	$37,668
196 Workers Compensation	$16,950	50.0%	0.0%	50.0%	$8,475	$0	$8,475
197 Unemployment	$2,251	50.0%	0.0%	50.0%	$1,126	$0	$1,126
211 Office Supplies	$3,827	100.0%	0.0%	0.0%	$3,827	$0	$0
212 Office Equipment	$2,251	100.0%	0.0%	0.0%	$2,251	$0	$0
215 Computer Supplies	$1,182	100.0%	0.0%	0.0%	$1,182	$0	$0
229 Uniforms	$3,939	50.0%	0.0%	50.0%	$1,970	$0	$1,970
231 Gas & Oil	$11,930	0.0%	0.0%	100.0%	$0	$0	$11,930
232 Diesel	$0	0.0%	0.0%	100.0%	$0	$0	$0
234 Veh. & Equip. Maintenance	$157,571	50.0%	0.0%	50.0%	$78,786	$0	$78,786
241 Tools & Supplies	$2,532	50.0%	0.0%	50.0%	$1,266	$0	$1,266
247 Safety Supplies	$1,126	50.0%	0.0%	50.0%	$563	$0	$563
250 Container Maintenance	$9,629	50.0%	0.0%	50.0%	$4,815	$0	$4,815
251 Containers-Rollouts	$8,496	50.0%	0.0%	50.0%	$4,248	$0	$4,248
257 Yard Waste Recycling Cont	$6,797	50.0%	0.0%	50.0%	$3,399	$0	$3,399
312 Postage	$7,533	100.0%	0.0%	0.0%	$7,533	$0	$0
333 Dues	$0	50.0%	0.0%	50.0%	$0	$0	$0
334 Bank Charges	$7,500	100.0%	0.0%	0.0%	$7,500	$0	$0
337 Bio-Solids Screening	$5,472	46.7%	27.4%	25.9%	$2,556	$1,499	$1,417
341 Electricity	$2,701	100.0%	0.0%	0.0%	$2,701	$0	$0
343 Heat	$2,926	100.0%	0.0%	0.0%	$2,926	$0	$0
345 Telephone	$2,814	100.0%	0.0%	0.0%	$2,814	$0	$0
360 Audit	$16,095	100.0%	0.0%	0.0%	$16,095	$0	$0
363 Building Maintenance	$4,502	100.0%	0.0%	0.0%	$4,502	$0	$0
364 General Maintenance	$5,628	100.0%	0.0%	0.0%	$5,628	$0	$0
371 Travel & Training	$1,238	50.0%	0.0%	50.0%	$619	$0	$619
373 Internet Access	$405	100.0%	0.0%	0.0%	$405	$0	$0
375 Software Maint Agreement	$5,628	100.0%	0.0%	0.0%	$5,628	$0	$0
380 Refund of Overpayment	$566	46.7%	27.4%	25.9%	$265	$155	$147
384 Monitor Wells	$33,765	100.0%	0.0%	0.0%	$33,765	$0	$0
388 Landfill Charges	$694,386	0.0%	100.0%	0.0%	$0	$694,386	$0
391 Advertising	$1,126	100.0%	0.0%	0.0%	$1,126	$0	$0

Table 8 - Average Cost Classification

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Disposal Cost Percentage	Collection Cost Percentage	Fixed Cost	Disposal Cost	Collection Cost
392 Drug Testing	$619	100.0%	0.0%	0.0%	$619	$0	$0
393 Landfill Remediation	$0	0.0%	100.0%	0.0%	$0	$0	$0
394 Recruitment Expenditures	$831	100.0%	0.0%	0.0%	$831	$0	$0
501 Insurance	$10,602	100.0%	0.0%	0.0%	$10,602	$0	$0
772 Utility Rate Study	Below	46.7%	27.4%	25.9%	$0	$0	$0
825 Administrative Allocation	$450,145	100.0%	0.0%	0.0%	$450,145	$0	$0
947 Fleet Management Software	$3,489	50.0%	0.0%	50.0%	$1,745	$0	$1,745
948 Maintence Shop Compressor	$3,827	50.0%	0.0%	50.0%	$1,913	$0	$1,913
952 NEOGOV	$2,532	100.0%	0.0%	0.0%	$2,532	$0	$0
967 Fleet Capital	$337,653	50.0%	0.0%	50.0%	$168,826	$0	$168,826
969 Master Plan	$7,428	100.0%	0.0%	0.0%	$7,428	$0	$0
User Charge Analysis Services	$0	46.7%	27.4%	25.9%	$0	$0	$0
Grand Total Costs, Weighted Avg Percentages	$2,654,518	47.4%	26.2%	26.4%	$1,258,921	$696,040	$699,556

Bases for Cost to Serve Rate Structure

Number of Customers During Year Defined Above =	4,316
Billed Volume, in 90 gallon Bin Equivalents During Year Defined Above =	385,357
Fixed Cost per Customer per Month During Year Defined Above =	$24.31
Fixed Cost per Customer per Month Discounted to the Present =	$22.91
Disposal Cost per 90 Gallon Bin Equivalent During Year Defined Above =	$1.81
Disposal Cost per 90 Gallon Bin Equivalent Discounted to the Present =	$1.70
Collection Cost per 90 Gallon Bin Equivalent During Year Defined Above =	$1.82
Collection Cost per 90 Gallon Bin Equivalent Discounted to the Present =	$1.71

100%	$2,654,518
90 Gallon Rollout Regular Service	$27.93
90 Gallon Rollout Regular Service, Discounted to Present	$26.32
Extra Bin Collection Cost Differential:	200%
Extra Bin Collection Cost per 90 Gallon Bin, Including Differential =	$3.42

Table 17 - Financial Capacity Indicators and Reserves

Riverton, WY; Sanitation Rates, Model 2019-3

This table depicts the affordability of future rates, the financial health of the system and the ending balances in various (assumed) accounts for the test year and the next 10 years.

Capacity Indicators	Test Year Starting 7/1/17	Analysis (This) Year Starting 7/1/18	1st Year Starting 7/1/19	2nd Year Starting 7/1/20	3rd Year Starting 7/1/21	4th Year Starting 7/1/22	5th Year Starting 7/1/23	6th Year Starting 7/1/24	7th Year Starting 7/1/25	8th Year Starting 7/1/26	9th Year Starting 7/1/27	10th Year Starting 7/1/28
Monthly Bill for a 90 Gallon Rollout Regular Service Customer	$34.04	$31.48	$31.48	$32.11	$32.75	$33.40	$34.07	$34.75	$35.45	$36.16	$36.88	$37.62
Annual Median Household Income (AMHI) Within Service Area	$54,555	$56,622	$58,768	$60,994	$63,305	$65,703	$68,193	$70,776	$73,458	$76,241	$79,130	$82,128
Affordability Index: Current Rates First Column, Then Proposed Rates	0.75%	0.67%	0.64%	0.63%	0.62%	0.61%	0.60%	0.59%	0.58%	0.57%	0.56%	0.55%

Affordability Index (AI) goes to the willingness and ability of customers to pay. AI is the percent of AMHI needed by a 5,000 gallon per month residential user to pay their bill. Rates near 1.0% are common in the U.S. and are generally considered affordable. Federal grant agencies generally will not consider awarding grants if this indicator is less than 2.0%. The above index is only for a 1 share customers but it should be fairly representative of all residential customers.

Monthly Bill for a 45 Gallon Rollout Economy Service Low-income Customer	$30.33	$29.80	$29.80	$30.40	$31.01	$31.63	$32.26	$32.91	$33.56	$34.24	$34.92	$35.62
Income at One-half the AMHI Above	$27,278	$27,794	$28,321	$28,857	$29,404	$29,961	$30,529	$31,107	$31,696	$32,297	$32,909	$33,532
Bill Affordability for Low-income Customer for Same Service: Current Rates First Column, Then Proposed Rates	1.33%	1.29%	1.26%	1.26%	1.27%	1.27%	1.27%	1.27%	1.27%	1.27%	1.27%	1.27%

This additional indicator of affordability assumes a residential customer with income at one-half of the median household income above, that income is growing at one-half the rate of the median household income and the customer uses 2,000 gallons per month. Such a customer is likely either a minimum wage, or near-minimum wage worker or is living on Social Security-only.

Reserves	Balance Ending on 6/30/17	Balance Ending on 6/30/18	Balance Ending on 6/30/19	Balance Ending on 6/30/20	Balance Ending on 6/30/21	Balance Ending on 6/30/22	Balance Ending on 6/30/23	Balance Ending on 6/30/24	Balance Ending on 6/30/25	Balance Ending on 6/30/26	Balance Ending on 6/30/27	Balance Ending on 6/30/28	Balance Ending on 6/30/29
Cash and Cash Equivalents	$2,182,530	$1,137,220	$1,082,752	$1,173,160	$1,233,047	$1,326,107	$1,357,839	$1,393,852	$1,434,513	$1,468,916	$1,502,444	$1,508,950	$1,503,261
Other Liquid Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Undedicated Cash Assets, Before Inflation	$2,182,530	$1,137,220	$1,082,752	$1,173,160	$1,233,047	$1,326,107	$1,357,839	$1,393,852	$1,434,513	$1,468,916	$1,502,444	$1,508,950	$1,503,261
Total Cash Assets Discounted for Inflation (Future Unrestricted Purchasing Power)	$2,182,530	$1,137,220	$1,082,752	$1,137,965	$1,160,174	$1,210,302	$1,202,085	$1,196,948	$1,194,909	$1,186,859	$1,177,530	$1,147,151	$1,142,826
Repair & Replacement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Debt and CIP Reserves	$0	$1,188,295	$1,212,061	$1,236,302	$1,261,029	$1,300,928	$1,395,536	$1,472,307	$1,522,432	$1,570,041	$1,601,442	$1,633,471	$1,666,140
Sum of All Reserves	$2,182,530	$2,325,516	$2,294,814	$2,409,462	$2,494,075	$2,627,035	$2,753,374	$2,866,158	$2,956,945	$3,038,957	$3,103,886	$3,142,421	$3,169,401

Table 18 - Comparison of Bills Before and After Rate Adjustments

Riverton, WY; Sanitation Rates, Model 2019-3

The weighted-average revenue (bill) increase for all customers combined, including container downsizing losses, will be 13.3%

Changes to bills for customer classes are shown below. These assume no container downsizing and they do not include the various combinations of extra containers any customer might be using. The City should expect those customers with unnecessary container volume to downsize to reduce their bills.

Rate Class	0.45 Cu Yd (90 Gallon) Equivalent Factor	Container Pick-ups per Month	Customers in This Class	Current Bill for This Customer Class	Modeled Bill for This Customer Class	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
Regular Customers							
(Residential) Alley Dumpster Regular Service	1.05	4.3	8	$35.72	$30.37	-$5.35	-15%
90 Gallon Rollout Regular Service	1.0	4.3	1,537	$34.04	$31.48	-$2.56	-8%
Regular (90 Gal) Service With Verified Recycling Participation	1.0	4.3	1,537	$28.18	$31.88	$3.70	13%
45 Gallon Rollout Economy Service	0.5	4.3	262	$30.33	$29.80	-$0.53	-2%
Economy Service With Verified Recycling	0.5	4.3	262	$25.11	$29.80	$4.69	19%
(Residential) Alley Dumpster Extra Container/Pick-up	1.0	N.A.	0	$35.72	$3.50	-$32.22	-90%
90 Gallon Extra Container/Pick-up	1.0	N.A.	0	$34.04	$6.60	-$27.44	-81%
Regular (90 Gal) Service With Verified Recycling Extra Container/Pick-up	1.0	N.A.	0	$28.18	$6.60	-$21.58	-77%
45 Gallon Extra Container/Pick-up	0.5	N.A.	0	$30.33	$3.30	-$27.03	-89%
Economy Service With Verified Recycling Extra Container/Pick-up	0.5	N.A.	0	$25.11	$3.30	-$21.81	-87%
Commercial and Special Customers							
Regular Service Individual Container 3 Cu Yd	6.7	4.3	472	$63.63	$55.66	-$7.97	-13%
Regular Service Shared Container 3 Cu Yd*	3.7	4.3	154	$34.69	$36.97	$2.28	7%
20-Yard Rolloff Delivery	44.9	N.A.	34	$194.51	$232.63	$38.12	20%
20-Yard Rolloff per Additional Container/Pick-up	44.9	N.A.	0	$194.51	$219.64	$25.13	13%
3-Yard Dumpster 1 Pick-up per Month Rental	6.7	4.3	0	$63.63	$55.66	-$7.97	-13%
1.5 Yard Dumpster 1 Pick-up per Month Rental	3.4	4.3	0	$34.69	$41.69	$7.00	20%
Regular Service Individual Container Extra Container/Pick-up 3 Cu Yd	6.7	N.A.	0	$63.63	$44.40	-$19.23	-30%
Regular Service Shared Container Extra Container/Pick-up 3 Cu Yd*	3.7	N.A.	0	$34.69	$12.23	-$22.46	-65%
20-Yard Rolloff 1 Pick-up per Month Rental	44.9	16.8	17	$126.88	$137.55	$10.67	8%
3-Yard Dumpster per Additional Container/Pick-up	6.7	N.A.	0	$63.63	$44.40	-$19.23	-30%
1.5 Yard Dumpster per Additional Container/Pick-up	3.4	N.A.	0	$34.69	$22.20	-$12.49	-36%

Chart 1 - Operating Ratio

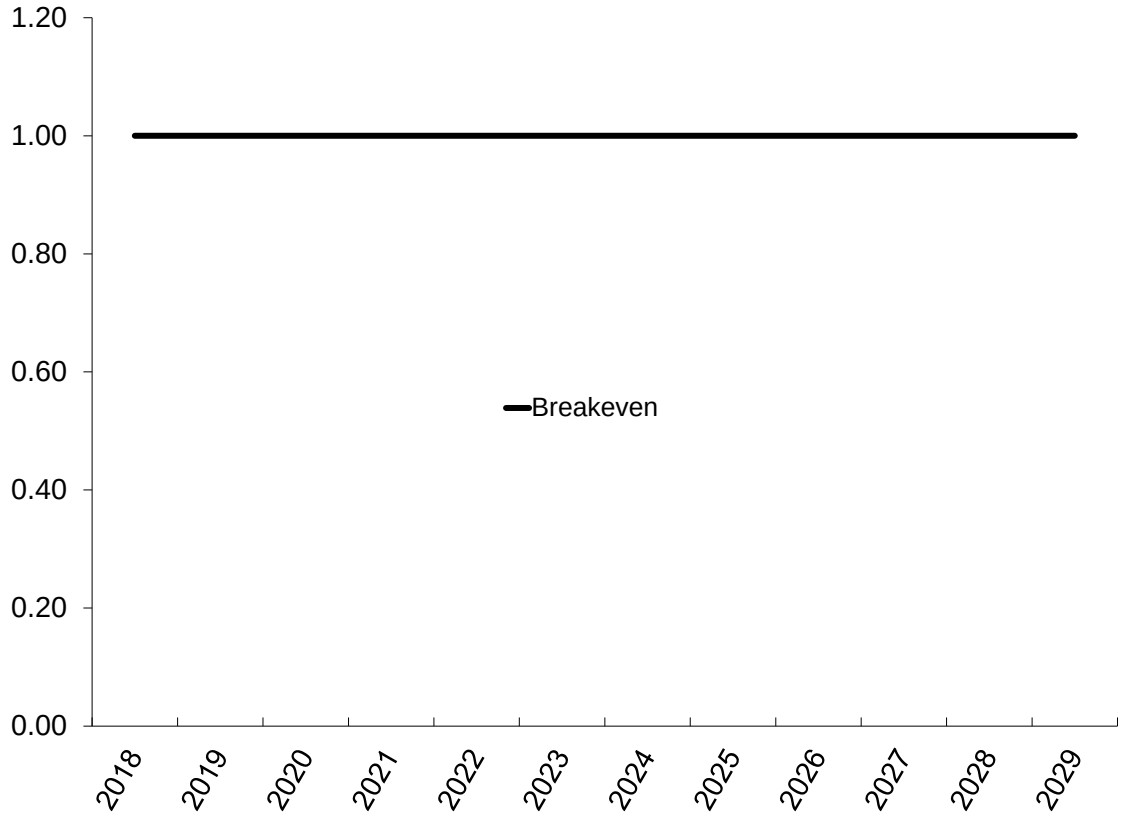

Chart 2 - Coverage Ratio

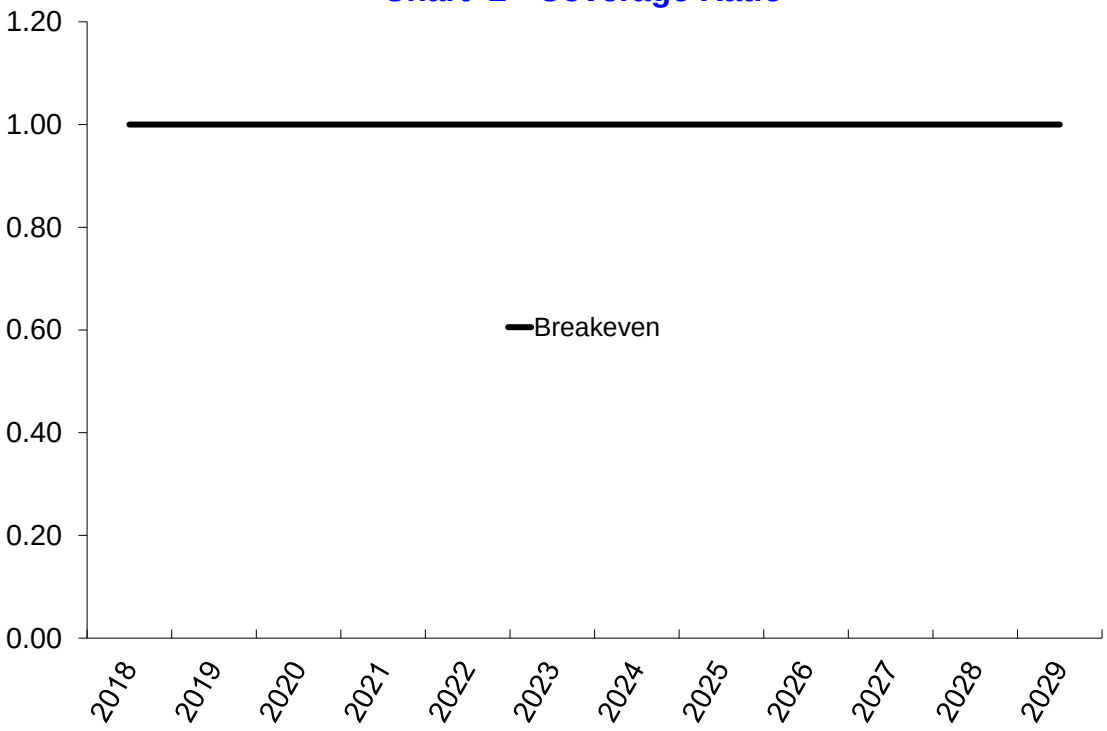

Chart 3 - 90 Gallon Residential User's Bill

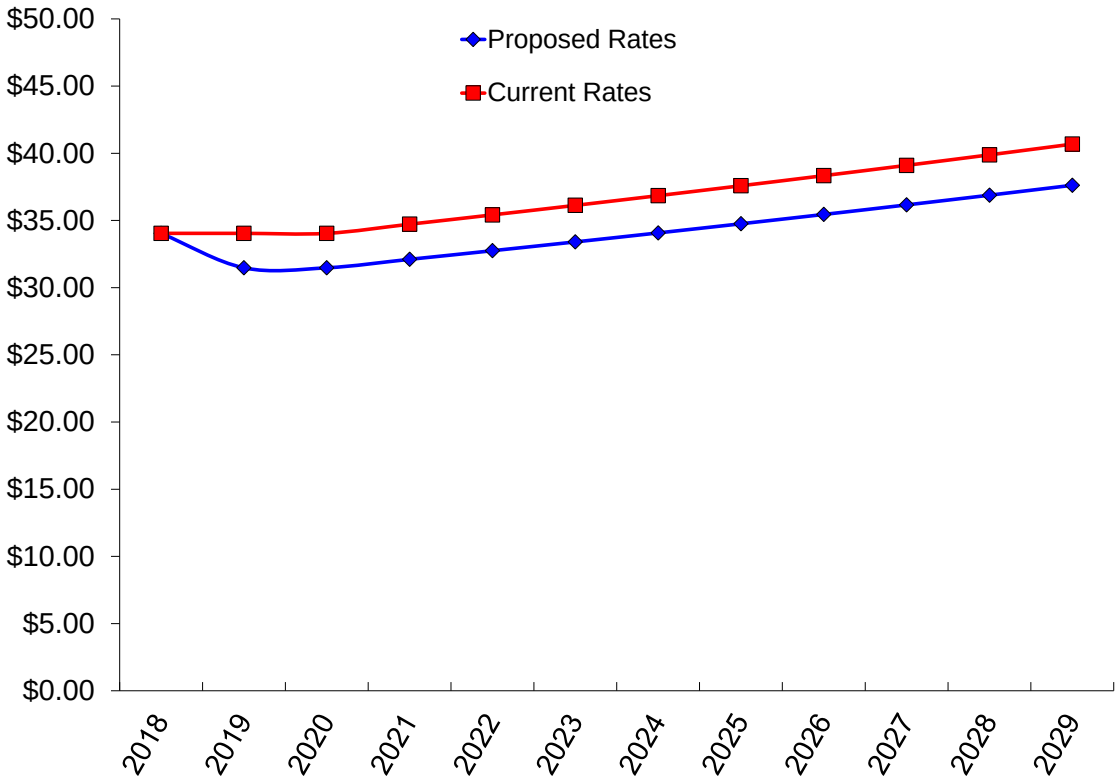

Chart 4 - Affordability Index

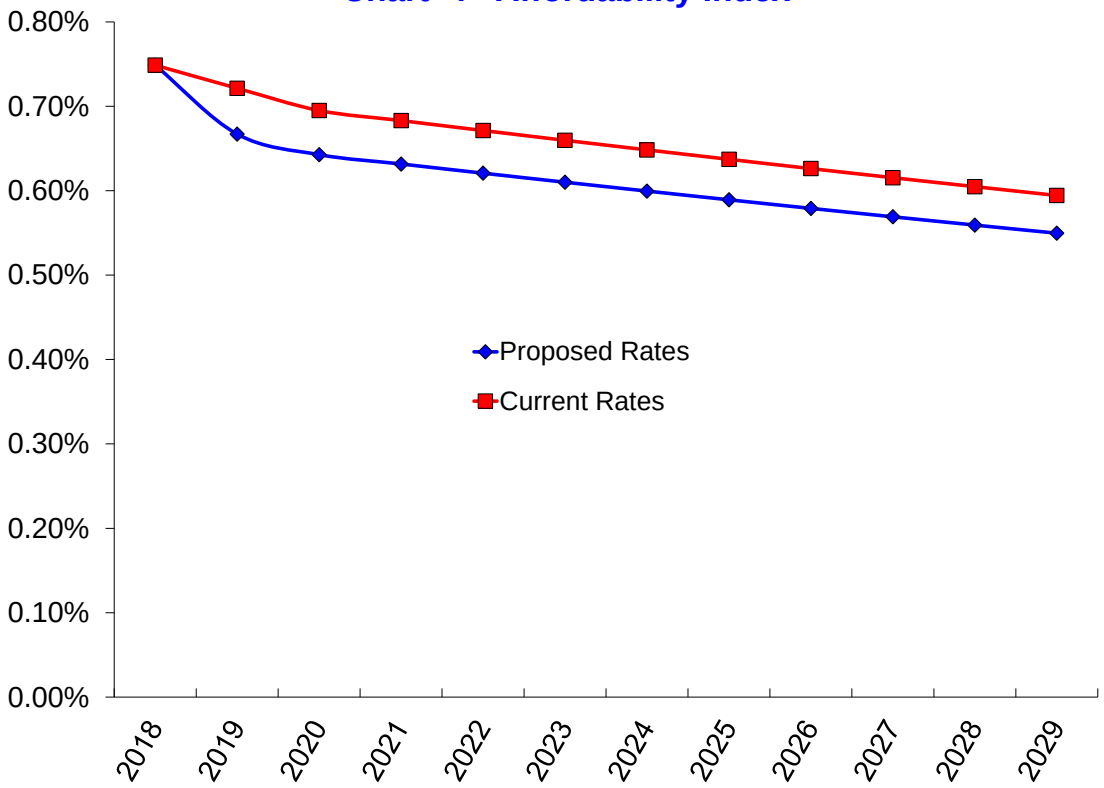

Chart 5 - Working Capital vs Goal

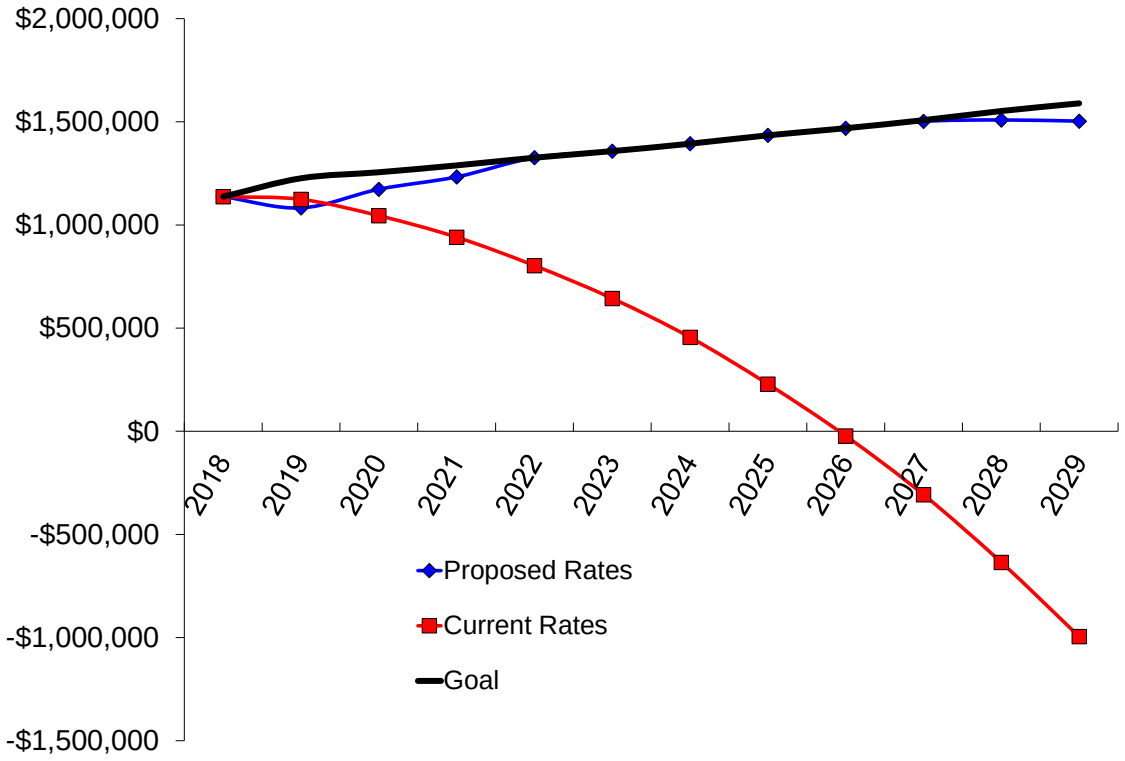

Chart 6 - Value of Cash Assets Before Inflation

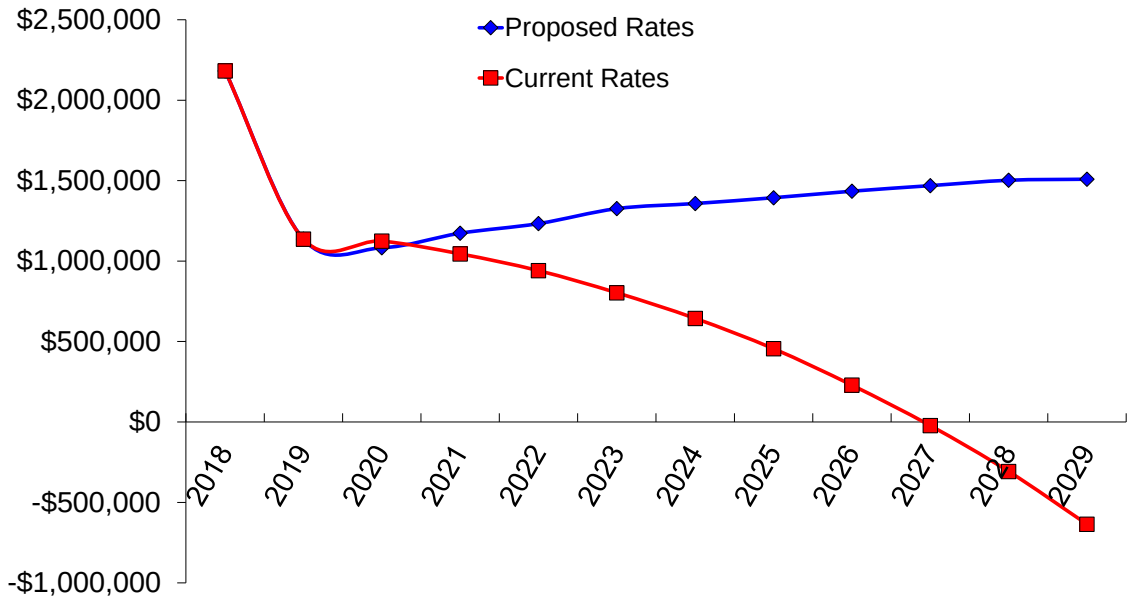

Chart 7 - Value of Cash Assets After Inflation

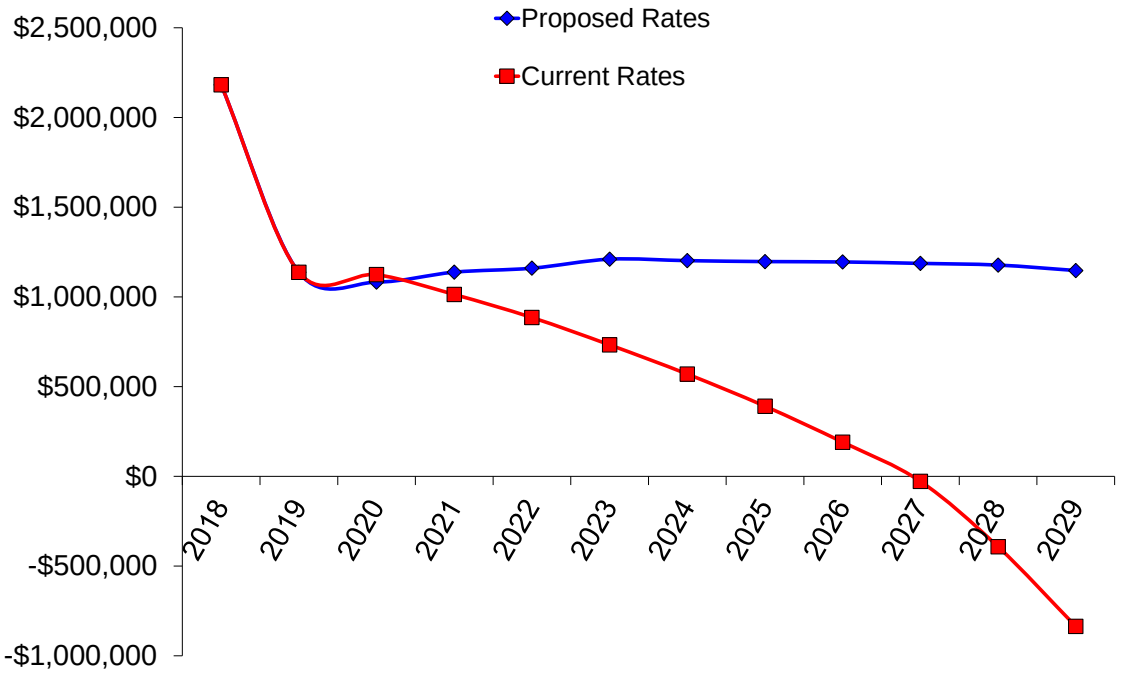

Chart 8 - Sum of All Reserves