Proposal for Water, Sewer and Sanitation Rate Analyses City of Douglas, 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 Douglas, 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 fair to all 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 set new user charge rates and fees that will fund the utilities at the proper level while charging ratepayers fairly structured rates.
4. 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.
5. You will successfully comply with your permit to dispense water, NPDES permit and other requirements from the regulatory agencies.

Firm Revenues, Qualifications and References

Firm revenues, qualifications and references are detailed in the document called "Qualifications and References," attached and available at gettinggreatrates.com/ggr/freebies/ReferenceList.pdf. The list includes all rate analysis clients since 2012.

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. Six 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 understand that Douglas is a member system of WARWS. That being the case, you will 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.

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 utility. Note that this analysis will cover rates and fees for your current trash collection and hauling service to the Casper landfill, plus your recycling program. It will also cover costs of the soon-to-be-closed Douglas landfill if those costs are to be paid through the current trash collection user fees. Otherwise, it will not cover Douglas landfill operation, tipping fees, closure or related issues of the soon-to-be-closed landfill.
- 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 commission meeting, especially when I analyze more than one utility.)

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 partly because clients must gather data for the analysis and make some interim decisions as the project proceeds – that takes time. And it is partly due to my workload.

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 financial goals (especially balances ten years in the future) for your utilities.
    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, 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.
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, etc.
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. I strongly prefer, whenever possible, to receive all data and information electronically, generally transferring it by e-mail attachment. I prefer to receive numerical data in a spreadsheet format and textual material in a word processor format. 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

It is my understanding that Douglas is a member system of WARWS so you will qualify for the 25 percent Wyoming RATES program discount. Therefore, following are your complete investments for my services, materials and travel costs, priced for WARWS membership, based upon the service descriptions above:

- **Service package 1**, water rate analysis – $7,744, less the Wyoming RATES Program discount of $1,936 yields a **net fee of $5,808**
- **Service package 2**, sewer rate analysis – $6,970, less the Wyoming RATES Program discount of $1,742 yields a **net fee of $5,227**
- **Service package 3**, sanitation rate analysis – $6,970, less the Wyoming RATES Program discount of $1,742 yields a **net fee of $5,227**
- **Service package 4**, on-site visits – $2,313, less the Wyoming RATES Program discount of $578 yields a **net fee of $1,735 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 $17,998, including a total Wyoming RATES Program discount of $5,999.

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

Proposal Acceptance

This proposal is effective through December 31, 2018, if you choose at least one service package by September 1, 2017. 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, 2017. Due to the timing of your fiscal year, you may desire to have me attend a public council meeting a month or two before July 1, 2018. Therefore, I extended the ending date of the proposal to easily cover that, as well.

Payment

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.

I will first invoice you for the total project amount upon your acceptance of this proposal. If you pay this initial invoice within 30 days of the invoice date (pre-payment) you may deduct an additional 2.5 percent from the invoice amount. **For packages 1, 2, 3 and one visit from package 4, that discount would amount to $449.95.**

If you choose not to pre-pay, 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 rates and finances reset on a good course.

Best regards,
GettingGreatRates.com

Carl E. Brown
President

Proposal Addendum 1: Add Landfill Rate and Fee Analysis to the Original Proposal City of Douglas, Wyoming

Purpose and Need

I issued an original proposal entitled, "Proposal for Water, Sewer and Sanitation Rate Analyses," dated July 5, 2017. Later, I issued a deadline extension by e-mail message dated September 25, 2017, which extended the deadline by which the City needed to accept the proposal to lock in the pricing in the original proposal.

Recently, the City requested a proposal to perform landfill rate and fee analysis, a service not originally requested or included in the original proposal. This proposal addendum, therefore, adds analysis of rates and fees for the City's sanitary and construction and demolition waste landfill to the original proposal. In this addendum, that body of work is called, "Service package 5." Except as amended by this addendum, all other stipulations of the original proposal stand.

Scope of Services in This Addendum

- Service package 5, analysis of your landfill rate and fee adjustment needs.

Investment

- **Service package 5**, landfill rate and fee analysis – $6,970, less the Wyoming RATES Program discount of $1,742 yields a **net fee of $5,227**

Proposal Addendum Acceptance

This addended service and fee are effective through the ending date of the original proposal.

Payment

The pre-payment date in the original proposal has past. Therefore, I will invoice Service package 5, along with all other services as described in the original proposal, where payment is made as the project proceeds and is concluded.

Best regards,
GettingGreatRates.com

Carl E. Brown
President

February 22, 2019

The Honorable Rene Kemper, Mayor
City of Douglas
P O Box 1030
Douglas, WY 82633

Subject: Utility Rate Analysis Report

Dear Mayor Kemper:

Attached is the rate analysis report package for the City's water, sewer, sanitation and landfill 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 contact that I finally have data as "right" as it can be.

My almost exclusive contact with the City has been Mary Nicol, Administrative Services Director/Treasurer. Mary has been wonderful to work with. Always patient with me, even after many data and information requests. I am sure many of those requests seemed like they were for the same thing. Many were, with a few tweaks to get just the right data or information. Utility rate analysis uses many of the customary financial statements. But, we also need many other kinds of data and information – equipment repair and replacement plans and schedules, capital improvement schedules and the like. And, in the case of your landfill and related operations, there are so many recent changes to that utility that we needed lots of "soft" information, too. Through it all, Mary got what we needed without any fuss. She filled in lots of blanks for us. She was always so helpful.

To Mary 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 Mary gave us. Having a contact like that makes this work a joy. But more important, it makes it accurate. I think you all are quite fortunate to have an administrative and finance director like Mary.

I have another thank you to offer, this time to Kathy Weinsaft 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 these associations. But, Kathy and WARWS 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.

Kathy linked up the City with my firm to address the rates issue. Without her desire to help Wyoming utilities get what I call "great rates," the City probably never would have found me. I appreciate her attention to this issue and I thank her. I hope that, once your new rates are in place and serving the City well, you will thank her, too.

Now, I have a report package to get to. The package is voluminous. Analysis for four utilities will do that. The report contains lots of details. However, each rate analysis was done using, essentially, the same basic spreadsheet template. Once you get acquainted with the water rates template, you will find the other three 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.

Still, there is a lot 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 Douglas.

Best regards,
GettingGreatRates.com

Carl E. Brown
President

Enclosure

City of Douglas, Wyoming

Water, Sewer, Sanitation and Landfill

Rate Analysis Report

Prepared February 22, 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, water and sewer rate revenues need to go up modestly, although the sewer rate structure would be changed dramatically. Sanitation rates need to go up and be restructured markedly. Landfill fees need very little overall increase but they, too, need marked restructuring. Capital improvements are the main drivers of rate increases.

Table of Contents

Introduction

The City of Douglas, Wyoming, later called "the City" or "you," hired GettingGreatRates.com, later called "me," "we" or "I," to perform rate analysis of its water, sewer, sanitation and landfill 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, and reserves are substantial. Each has unique issues that will be discussed in detail later. Adequate rates are job one in rate setting and the City has been handling that well.

Job two is setting rates in a fair structure, preferably in a cost-to-serve structure. The City's current rates and fees are generally 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 practice. It should be extended to minimum charges, as well, but you are on the right track. This best practice is still fairly uncommon, especially in smaller cities like Douglas.

It is more difficult to determine cost-to-serve rates for sanitation and landfill rates, but I can tell you have made strides there, too.

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, Mary Nichol, Administrative Services Director/Treasurer. Ms. Nichol replied. And I must point out, Ms. Nichol was always so helpful and responsive.

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. Nichol 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. Nichol 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 a set 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 am recommending 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. Unfortunately, there is not a definitive means by which capacity costs can be "metered out" to those customers. Thus, those costs have been embedded in the unit charges for sanitation and disposal services.

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.

"Front-loaded" Rate Adjustments

For several reasons, I have modeled rate adjustments that are front-loaded. That simply means, the initial rate adjustments (overall increases) will be greater than appear to be needed right now, preserving or building on reserves in the beginning. Future increases will be less than needed in the future, drawing down those reserves as inflation overtakes future rate increases.

Why have I done that?

- Your current reserves are quite strong. But, we have experienced data issues that cause me to question some of the data on which we based our analyses. Because of that, I wanted to be conservative, just in case the data we used was not in your favor.
- When the price for a service goes up, some customers change their behavior – they use less. That causes the calculated revenues to be higher than you will actually end up collecting. I made assumptions about how much conservation would "cost" the utilities, and calculated rates that are that much higher. But only time will tell how much customers conserve. I chose a more cautious approach regarding conservation.
- Capital improvement costs, and how they will get paid, are big wildcards. An issue that is out of your control is the circumstances of the State's finances. With lower revenues to work with, the State grant agencies have had to cut back on the amount of grants they give. I wanted to be conservative about these funds, so that necessitated higher rate increases. If the State grants situation turns around and you acquire unexpected grants, you will be able to slow down future rate increases.
- In future years, if you find you are retaining and accumulating reserves faster than I projected, and grant amounts are coming in higher than I assumed, you can take several actions:
    - You can slow down future rate increases to slow down reserve accumulation. You will never get complaints about that. But, were I to recommend only slight rate increases now, and next year you discover I was being too optimistic, it would be more difficult for you to increase rates to "catch up." It is better to under-promise and over-deliver early on, rather than be forced into the opposite by bad circumstances later. Or,
    - You can accelerate capital improvement programs. That will enable you to over-deliver on service quality.

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, so the 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 April 1, 2019, billing. Therefore, revenue increases to be generated by the adjusted rates have been delayed by the same number of 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, 2028.

This information is granular detail and may be esoteric to most readers, but I wanted you to know about this important 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 cut of this classification process is done in Table 8, page 76, 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 cut at rate structuring is to arrive at capacity costs. For water and sewer, these were calculated in Table 11, page 86, and distributed to system development (tap-on) fees and surcharges to the minimum charge in Tables 13, page 88, and 15, page 90, respectively. The capacity "share" of costs of each meter size is based upon the calculated shares in Table 12, page 87. Capacity costs and fees for sanitation and landfill services are handled differently and will be discussed in each of those sections of the report.

The third cut 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 cut is to set reserve goals and project those through the tenth year. Those goals will only be met if (primarily) rates are set high enough and/or (secondarily) grants and subsidized loans are large enough to enable the utility to generate net revenues.

The fifth cut 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 are often good reasons to adopt rates that are at least somewhat different from true cost-to-serve rates. Thus, a cost-based rate analysis often is just the starting point for calculating the rates that a utility may eventually 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 utility that are bumping up against their 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 assessed 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 industry 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.

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 73, and they are included in the Chart 8 amounts on page 76.

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. Nichol so check with him about reviewing it. Ms. Nichol does an excellent job of scheduling equipment repair and replacement (R&R). But, you may want to consider using the "Replacement Scheduler©" spreadsheet for future equipment replacement scheduling. I gave a copy of this spreadsheet to Ms. Nichol, 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, "Douglas WY; Water Rates, Model 2019-1,"
- The sewer model is called, "Douglas WY; Sewer Rates, Model 2019-1,"
- The sanitation model is called, "Douglas WY; Sanitation Rates, Model 2019-1," and
- The landfill model is called, "Douglas WY; Landfill Rates, Model 2019-1."

To abbreviate, I will call each the "Water Model," the "Sewer Model," the "Sanitation Model" or the "Landfill Model," respectively. Within each section, I will sometimes just say, "the Model."

Water Rates Discussion – the Water Model

Introduction

In this section on water rates, I discuss issues at some length. Other utilities experience many of these same issues and need to do the same things to deal with them. When that is the case, in the later sections, I only mention such an issue and I refer readers back to this section for how to 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." That chapter also give guidance on how to use the related spreadsheets.

Ms. Nichol gave me information about a large slate of capital improvements (CIP). I incorporated this CIP into the Water Model in Table 5, page 70. It has been the City's experience to receive funding for most improvement projects at the rate of 80 percent grant and 20 percent loan. In light of the State's funding situation over the past few years, and because of reports I have gathered from other cities, I opted to assume CIP funding at 50 percent loan and 50 percent reserves. For smaller projects, I assumed 100 percent funding from system reserves and incomes.

As to a few details, in Table 5:

- The City has a five-year plan for CIP. My analysis calculates rates and models other issues for ten years. Ms. Nichols told me that the City's current slate of CIP, primarily line replacements, is a normal and expectable type, rate and cost of such projects. Therefore, I simply duplicated the costs of the current list of projects to create an estimated ten-year CIP. The second set of those projects is highlighted in yellow to distinguish them. Note that the second set of projects costs more than the first set. Actually, all projects slated for 2019, and beyond are shown at costs greater than your five-year plan shows. That is because I accounted for inflation in future costs.

At the bottom of the subsection called, "Planned Spending, Cash-paid Portion of Projects…," there is a set of capitalized expenditures. These were extracted from the City's income and expense statement for the test year. (To make calculation of operating and coverage ratios accurate, I separate operating and capital expenses.) Ms. Nichols told me which of these expenses will be on-going and which were one-time events. I entered these expenses accordingly.

Equipment Repair and Replacement

Ms. Nichol sent to me the City's equipment repair and replacement (R&R) schedule. I incorporated that data into Table 6, page 73, of the Water Model. The Model calculated the annual annuity in Table 7, page 75. The annual annuity, or annual deposit amount needed to fund the R&R schedule, was then entered into Table 4, page 69, 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 quite 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 one 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 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 $2,500. That is the same fee you now charge for a one-inch or smaller meter new connection.
2. Larger meter sizes would be assessed higher system development fees 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 87. These share factors require larger meter new connections to be priced higher than you currently price them, but that is only fair.
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. You connect and serve those customers at the same fee rates as in-City customers. I would like for you to change that. It generally costs more, in dollars and risk, to connect and serve out of City connections. Therefore, I recommend you assess a premium to out of City new connections. That premium is commonly "priced" at 25 to 100 percent more than in-City rates. Because you are starting at no premium now, I recommend you start at 25 percent. The column entitled, "Out of City Multiplier," in Table 13, page 88, reflects that difference.

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.

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 86, between SDFs and system development surcharges, I modeled rates that will recover a bit over 75 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 one-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.

Recommended Rate Structure

In your case, I recommend cost-of-service based rates for minimum and unit charges with no usage allowance. Excepting the level minimum charges that the City currently assesses, your current structure is close to this already.

As shown in Table 18, page 93, on a percentage basis, bills will increase most for customers served by 1.5 to four-inch meters.

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.

"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.

As to how I calculated snowbird fees in your situation, should you decide to institute such fees, in Table 8, page 76, 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.

In Table 9, page 78, I establish the degree by which snowbirds share in each fixed cost category. (Snowbirds use no volume while they are away so the "Marginal Variable Cost" calculations in this table do not apply to them. They would apply to wholesale customers, should you have any.) That is done in the "Marginal Fixed Cost Percentage" column. 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 "starting place" for calculating the base snowbird fee.

As the modeled base minimum charge needs to rise or fall compared to its "starting place," in order to generate the revenue needed, the base snowbird fee is also increased or decreased, staying in the same ratio to the base minimum charge.

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. That capacity allocation costs money. Therefore, snowbirds need to pay a full share of those costs. That is done in Table 15, page 90, 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.

Out-of-City Sales

You have a small number of out of City customers. You price sales to those customers the same as you do in-City customers. That is quite unusual, and it is not fair to your in-City customers because it generally costs more to serve out of City customers than in-City customers. You also are subject to few options and greater risk in collecting revenue from out of City customers than you experience with 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. (Generally, it costs more to serve out of City customers than 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 charge rates on a marginal cost, plus profit margin basis. I will explain that.

In Table 8, page 76, 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 78, 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 25, 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 but then boost that rate by the out of City premium.

The base minimum charge is a different matter. It recovers fixed costs, much of which are general administration and other costs that are not "place" or customer type sensitive. You should assess a base minimum charge to wholesale customers just as you do regular customers and then add the applicable meter size-based surcharge.

Target Reserve Levels

Your current total reserves exceed the target reserves I recommend. However, I suspect that was done in anticipation of the need to fund large capital improvements.

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 equal the R&R cost in the most expensive year. Even still, the "payment" to the R&R fund would be negative, meaning, over time you will draw down the R&R fund to a reasonable level; 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 almost $1.5 million. But, it will still end at a very strong $6.8 million.

The lines on the bottom of Table 17, page 92, 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

> 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.

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.

In Table 17, page 92, near the top, I show the estimated Affordability Index for the current rates in the first column, at 0.80 percent, and the modeled rates in the following column, at 0.89 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 20 percent cheaper than the national average. After the initial rate adjustments, they will be about 11 percent cheaper than the national average and they will then slowly fall. In ten years, on an Affordability Index basis, rates will be cheaper than they are now.

The Affordability Index is useful, but it does not depict how new rates will affect customers using different volumes. Table 18, page 93, 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 charge and snowbird charges shown in Table A, that follows this list. These rates will not move you all the way to a cost-to-serve structure. Therefore, you should plan on continuing the transition to cost-to-serve rates by having the next rate analysis done in about five years. *Note: In the case of system development fees, because I did not include direct costs of making new connections, you should add those costs to the listed SDFs.*

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 April 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 2.5 percent.
6. If balances do not accrue as shown at the bottom of Table 17, page 92, 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, Part 1: Recommended In-City Water Fees and Charges

Table A, Part 1: Douglas, WY In-City Water System Development Fees; Minimum and Snow Bird Charges; Usage Allowance and Unit Charges

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Usage Allowance in Gallons	Unit Charge per 1,000 Gallons: 0 Through 29,999 Gallons	Unit Charge per 1,000 Gallons: 30,000 or More Gallons	Monthly Snowbird Fee
0.625	Displacement	$2,500	$38.57	0	$2.51	$3.22	$27.16
0.750	Displacement	$2,500	$38.57	0	$2.51	$3.22	$27.16
1.000	Displacement	$2,500	$38.57	0	$2.51	$3.22	$27.16
1.500	Displacement	$9,099	$120.16	0	$2.51	$3.22	$84.62
2.000	Displacement	$14,049	$181.35	0	$2.51	$3.22	$127.71
2.500	Displacement	$21,473	$273.14	0	$2.51	$3.22	$192.34
3.000	Singlet	$27,247	$344.52	0	$2.51	$3.22	$242.61
3.000	Compound, Class I	$27,247	$344.52	0	$2.51	$3.22	$242.61
3.000	Turbine, Class I	$29,722	$375.12	0	$2.51	$3.22	$264.16
4.000	Singlet	$42,095	$528.10	0	$2.51	$3.22	$371.88
4.000	Compound, Class I	$42,095	$528.10	0	$2.51	$3.22	$371.88
4.000	Turbine, Class I	$51,994	$650.48	0	$2.51	$3.22	$458.06
6.000	Singlet	$83,340	$1,038.02	0	$2.51	$3.22	$730.97
6.000	Compound, Class I	$83,340	$1,038.02	0	$2.51	$3.22	$730.97
6.000	Turbine, Class I	$108,086	$1,343.97	0	$2.51	$3.22	$946.42
8.000	Compound, Class I	$132,833	$1,649.92	0	$2.51	$3.22	$1,161.87
8.000	Turbine, Class I	$231,820	$2,873.73	0	$2.51	$3.22	$2,023.67
10.000	Turbine, Class II	$347,304	$4,301.50	0	$2.51	$3.22	$3,029.10

Table A, Part 2: Recommended Out of City Water Fees and Charges

Table A, Part 2: Douglas, WY Out of City Water System Development Fees; Minimum and Snow Bird Charges; Usage Allowance and Unit Charges

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Usage Allowance in Gallons	Unit Charge per 1,000 Gallons: 0 Through 29,999 Gallons	Unit Charge per 1,000 Gallons: 30,000 or More Gallons	Monthly Snowbird Fee
0.625	Displacement	$3,125	$43.67	0	$3.14	$4.02	$30.75
0.750	Displacement	$3,125	$43.67	0	$3.14	$4.02	$30.75
1.000	Displacement	$3,125	$43.67	0	$3.14	$4.02	$30.75
1.500	Displacement	$11,374	$145.66	0	$3.14	$4.02	$102.57
2.000	Displacement	$17,561	$222.14	0	$3.14	$4.02	$156.43
2.500	Displacement	$26,841	$336.88	0	$3.14	$4.02	$237.23
3.000	Singlet	$34,059	$426.11	0	$3.14	$4.02	$300.07
3.000	Compound, Class I	$34,059	$426.11	0	$3.14	$4.02	$300.07
3.000	Turbine, Class I	$37,152	$464.36	0	$3.14	$4.02	$327.00
4.000	Singlet	$52,619	$655.58	0	$3.14	$4.02	$461.65
4.000	Compound, Class I	$52,619	$655.58	0	$3.14	$4.02	$461.65
4.000	Turbine, Class I	$64,992	$808.55	0	$3.14	$4.02	$569.38
6.000	Singlet	$104,174	$1,292.98	0	$3.14	$4.02	$910.51
6.000	Compound, Class I	$104,174	$1,292.98	0	$3.14	$4.02	$910.51
6.000	Turbine, Class I	$135,108	$1,675.42	0	$3.14	$4.02	$1,179.82
8.000	Compound, Class I	$166,041	$2,057.86	0	$3.14	$4.02	$1,449.13
8.000	Turbine, Class I	$434,131	$6,774.62	0	$3.14	$4.02	$4,770.66
10.000	Turbine, Class II	$547,553	$12,029.63	0	$3.14	$4.02	$8,471.22

Water Rates Discussion Closing

I recommend you adopt the rates calculated in the Water Model and shown in the tables immediately above. Bills for low-volume, medium size meter customers would go up the most, on a percentage basis. The varying bill adjustments occur because the current structure is not in a cost-to-serve rate structure, while the recommended rate structure is very close to such a structure. Continue to move in the direction of cost-to-serve rates each time you have a good opportunity to do so and your water rates will be spot-on in one or two more rounds of analysis and adjustment.

***

Sewer Rates Discussion – the Sewer Model

Introduction

Only one part of the sewer system's rates – the minimum charge – is structured very different as compared to the water rates. But that difference is big when it comes to paying for costs on a cost-to-serve basis. That also means that some customers' bills will go up markedly while others will go down somewhat. And that is in the context of an overall revenue increase of 19.3 percent.

I will discuss rate structure at length. 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, at least, as I have assumed they will be funded. That is, I assumed 100 percent funding from system reserves.

I ran scenarios where CIP would be funded with various mixes of loan, reserves and grant funding. With any grant or loan funding, on average, you would need to reduce your current rates. The situation where I discover a system's rates are too high, overall, is so rare that it is nearly unheard of. I am suspicious that there may be some sewer system costs that have not been attributed to that system. Or, that reserves have been credited to the sewer system that should have been credited to another system. Or, some other unknown is skewing the sewer system's financial and rates situation. At the least, 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 the worst-case scenario; 100 percent funding from income and reserves.

Even assuming that, you only need to raise overall rates modestly. Unfortunately, your current minimum charge is so low that it only recovers a small percentage of the system's base fixed costs. Minimum charges need to go up markedly.

The modeled rates were set to pay for all planned and assumed CIP costs, as well as all other costs. These things are shown in Table 5, page 120.

Equipment Repair and Replacement

I incorporated sewer R&R data into Table 6, page 122, of the Sewer Model. The Model calculated the annual annuity in Table 7, page 123. The annual annuity, or annual deposit amount needed to fund the R&R schedule, was then entered into Table 4, page 119, 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, with a few differences. The discussion in the water section is quite thorough so be sure to refer to that and apply those considerations and treatments to sewer SDFs and surcharges, too.

One difference between water and sewer is, the current SDF for a one-inch or smaller meter is $1,000 for sewer (rather than $2,500), so I targeted $1,000 as the starting place for sewer SDFs.

Note that 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.

As shown in the left-hand side of Table 11, page 134, between SDFs and system development surcharges, I modeled rates that will recover a bit over 77 percent of system development costs.

The capacity surcharges to the minimum charge are also different, compared to the water rates. That is, I made an adjustment to reduce the rate shock for low-volume customers. I reduced all minimum charges by $13.00 across the board. That is shown in Table 15, page 138, in the column entitled, "Uniform Adjustment to Base Capacity Cost." This adjustment drove down the bill increase for a small meter, low volume customer. It also drove up the bill for a high-volume customer. I made this change just to reduce the degree of "sticker shock" for many ratepayers.

I do not recommend you make such an adjustment a permanent fixture. Over time, you should reduce this adjustment and eventually eliminate it, if possible. For example, each year when you make across the board inflationary increases, you might "add back" one dollar to each minimum charge and do that for ten years, until the adjustment has been eliminated.

Even with this adjustment, the rate structure will change markedly compared to what will happen with water rates. A difference between the current water rates and sewer rates is, the water rates include a demand charge based on a schedule of capacity units. In other words, the minimum charge graduates with meter size. Capacity units-based fees are analogous to the capacity surcharges I have calculated. However, the current sewer rates include no demand charge component. All customers pay a level minimum charge. That charge is so low that it only recovers about one-fifth of the system's fixed costs. That is not a fair rate structure.

I recommend capacity surcharges for water and for sewer rates and I recommend they be calculated in the same way. That means, bills that result from the recommended sewer rates for low volumes of use will be much higher than current bills. As meter size goes up, those bills will rise, but they will not rise as fast as the current rate structure does. Thus, for high volumes of use, bills would go down slightly. But, these changes move the rate structure closer to cost-to-serve, making them fairer.

Finally, as I recommended for water rates, I recommend higher rates for out of City sewer service. The column entitled, "Out of City Multiplier," in Table 13, page 136, shows the out of City premium I recommend you assess to such customers. It is the same as for water.

Recommended Rate Structure

With the exception of conservation rates, I recommend the same basic rate structure for sewer as for water. The recommended sewer rates 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.

"Snow Bird" Billing

"Snowbird" billing is done the same way for sewer as it is for water. Table 9, page 126, establishes the degree by which snowbirds share in each fixed cost category. The resulting snowbird fees are listed in Table B at the end of this section.

Out-of-City Sales

You have a small number of out of City 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 at a discount. Table 9, page 126, 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 B, page 32, 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.

Septic Waste Rates

The City accepts for treatment septage from haulers. 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 should charge premium rates for septage.

Revenues collected from septage haulers are somewhat substantial, at approximately 12 percent of the regular customers' user charge revenues. Analysis of the City's practices and policies concerning septage, volumes received, and such might inform you about how to set these fees. However, you probably would not gain that much from such analysis. Septage is such a small volume, individual hauler, staff intensive, treatment intensive operation that pricing for this service is more of a policy and operations issue than a cost recovery issue. You would have a very hard time definitively identifying septage-related costs.

For these reasons, I assumed that you are comfortable with your current septage pricing structure. To keep that structure in line with the recommended user charge rates, I recommend you raise all septage fees across the board by the same rate at which average sewer user charges will go up. That is 16.5 percent and is shown at the top of Table 18, page 141.

Septage fee revenues are shown at the bottom of Table 3, page 118, on the line called, "SEPTIC WASTE DISP FEES." I assumed that in the first full year after the initial rate adjustments are done, septage rates will go up by 16.5 percent; the same as the average rate increase for all other customers. Then, in future years, septage fees would be increased by the same percentage as all other user charges would go up. That is 2.0 percent. That is also shown in Table 3, on the line called, "Rate Increases Projected for Future Years."

If you end up raising the average user charge rates by a different percentage in the future, you should raise septage fees by that same percentage rate to keep them on par with regular rates.

Target Reserve Levels

I initially calculated target sewer reserves in the same way as I did for water. However, that would result in a drastic drawdown of reserves, which I do not like to recommend – I am conservative on the utility's side. In the test year you had a bit over $5,000,000. Therefore, I selected $3,000,000 in operating and CIP reserves ten years out as the target reserves level. This is lower than your current reserves level but still very strong. Lines on the bottom of Table 17, page 140, and several of the charts at the end of the Sewer Model show your reserve balances expected for the next ten years.

Rate Affordability

In Table 17, page 140, near the top, I show the estimated Affordability Index for the current rates in the first column, at 0.62 percent, and the modeled rates in the following column, at 0.83 percent. The same thing is shown graphically in Chart 4 of the Sewer Model. On an Affordability Index basis, your current rates are about 38 percent cheaper than the national average. After the initial rate adjustments, they will be about 17 percent cheaper than the national average and they will then slowly fall. In ten years, on an Affordability Index basis, rates will be almost as cheap as they are now.

To supplement the Affordability Index, Table 18, page 141, shows how bills at different volumes of use for each meter size will be affected by the recommended rates. On a percentage basis, because the current minimum charge is so low, and the unit charge is relatively high, rate adjustments will vary a lot. That is a function of the current rates being so far from cost-to-serve.

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 charge and snowbird charges shown in Table B, that follows this list. These rates will not move you all the way to a cost-to-serve structure. Therefore, you should plan on continuing the transition to cost-to-serve rates by having the next rate analysis done in about five years. *Note: In the case of system development fees, because I did not include direct costs of making new connections, you should add those costs to the listed SDFs.*
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 April 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 2.5 percent.
6. If balances do not accrue as shown at the bottom of Table 17, page 140, 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 B, Part 1: Recommended Sewer Fees and Charges

Table B, Part 1: Douglas, WY In-City Sewer System Development Fees; Minimum and Snow Bird Charges; Usage Allowance and Unit Charge

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Usage Allowance in Gallons	Unit Charge per 1,000 Gallons	Monthly Snowbird Fee
0.625	Displacement	$1,000	$20.28	0	$5.46	$13.96
0.750	Displacement	$1,000	$20.28	0	$5.46	$13.96
1.000	Displacement	$1,000	$20.28	0	$5.46	$13.96
1.500	Displacement	$3,639	$55.17	0	$5.46	$37.98
2.000	Displacement	$5,619	$81.34	0	$5.46	$55.99
2.500	Displacement	$8,588	$120.59	0	$5.46	$83.02
3.000	Singlet	$10,897	$151.12	0	$5.46	$104.04
3.000	Compound, Class I	$10,897	$151.12	0	$5.46	$104.04
3.000	Turbine, Class I	$11,887	$164.21	0	$5.46	$113.04
4.000	Singlet	$16,836	$229.63	0	$5.46	$158.08
4.000	Compound, Class I	$16,836	$229.63	0	$5.46	$158.08
4.000	Turbine, Class I	$20,795	$281.97	0	$5.46	$194.11
6.000	Singlet	$33,332	$447.70	0	$5.46	$308.21
6.000	Compound, Class I	$33,332	$447.70	0	$5.46	$308.21
6.000	Turbine, Class I	$43,229	$578.55	0	$5.46	$398.29
8.000	Compound, Class I	$53,126	$709.39	0	$5.46	$488.36
8.000	Turbine, Class I	$92,716	$1,232.78	0	$5.46	$848.67
10.000	Turbine, Class II	$138,904	$1,843.39	0	$5.46	$1,269.03

Table B, Part 2: Recommended Sewer Fees and Charges

Table B, Part 2: Douglas, WY Out of City Sewer System Development Fees; Minimum and Snow Bird Charges; Usage Allowance and Unit Charge

Water Meter Size in Inches	Meter Type	System Development Fee	Monthly Minimum Charge	Usage Allowance in Gallons	Unit Charge per 1,000 Gallons	Monthly Snowbird Fee
0.625	Displacement	$1,250	$22.46	0	$6.83	$15.46
0.750	Displacement	$1,250	$22.46	0	$6.83	$15.46
1.000	Displacement	$1,250	$22.46	0	$6.83	$15.46
1.500	Displacement	$4,549	$66.07	0	$6.83	$45.49
2.000	Displacement	$7,023	$98.78	0	$6.83	$68.00
2.500	Displacement	$10,735	$147.85	0	$6.83	$101.78
3.000	Singlet	$13,622	$186.01	0	$6.83	$128.06
3.000	Compound, Class I	$13,622	$186.01	0	$6.83	$128.06
3.000	Turbine, Class I	$14,859	$202.37	0	$6.83	$139.32
4.000	Singlet	$21,045	$284.15	0	$6.83	$195.61
4.000	Compound, Class I	$21,045	$284.15	0	$6.83	$195.61
4.000	Turbine, Class I	$25,994	$349.57	0	$6.83	$240.65
6.000	Singlet	$41,664	$556.74	0	$6.83	$383.27
6.000	Compound, Class I	$41,664	$556.74	0	$6.83	$383.27
6.000	Turbine, Class I	$54,036	$720.30	0	$6.83	$495.87
8.000	Compound, Class I	$66,408	$883.86	0	$6.83	$608.47
8.000	Turbine, Class I	$115,895	$1,538.08	0	$6.83	$1,058.85
10.000	Turbine, Class II	$173,630	$2,301.35	0	$6.83	$1,584.30

Sewer Rates Discussion Closing

I recommend you adopt the rates calculated in the Sewer Model and shown in the table immediately above. Bills for many customers will change markedly, on a percentage basis. That is even after I made some adjustments to reduce rate shock. This marked change in rates is due to the fact that the current structure is not in a cost-to-serve rate structure, while the recommended rate structure is close to such a structure.

Because I made some adjustments to structure, this is not the end of the restructuring you should do. Continue to move in the direction of cost-to-serve rates each time you have a good opportunity to do so.

***

Sanitation Rates Discussion – the Sanitation Model

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 markedly different. That also necessitated marked changes to the structure of the analysis model.

Variable Costs and the Unit Charge Unit of Measure

A bedrock part of the 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 and such. Costs to deal with these materials are directly, or at least partly, related to the volume of materials picked up.

The City appropriately splits these costs into two categories, to be recovered by two different fees: the "volume (collection) charge" to recover costs to pick up and transport material to the landfill or transfer station, and the "disposal charge" to recover tipping fees at the Casper landfill, or previously, landfilling costs at the City's (since closed) sanitary landfill. Although sanitary waste is now transported to the Casper landfill, the City will continue to accept construction and demolition waste, tires, yard waste and several other materials at the City landfill.

The City's current rate structure does not go all the way to cost-of-service rates because the disposal charge is the same for all container sizes. We can improve upon that structure.

On the water and wastewater service side, we use water meters to calculate service volume. A good surrogate to "meter" trash volume is container size and frequency of pick-up. Generally, sanitation customers use larger or multiple trash containers because they dispose of enough material to warrant those containers.

Therefore, I calculated sanitation rates based upon container size. Specifically, I used the volume capacity of the City's smallest trash bin; a 0.75 cubic yard bin; picked up once per week, as the unit of measure for variable costs and, therefore, unit charges. In the Sanitation Model and this narrative report, that is called a "0.75 Cu Yd Container Equivalent." Thus, that size bin and that pick-up frequency has one 0.75 Cu Yd Container Equivalent. The next size up, a 1.5 cubic yard dumpster, has two 0.75 Cu Yd Container Equivalents. And, the largest size, a 3.0 cubic yard dumpster, has four 0.75 Cu Yd Container Equivalents.

You will see this unit of measure through this section of the narrative report and in the Sanitation Model. One more thing about this unit of measure. If a customer had two 0.75 Cu Yd Containers that were picked up once per week, that would be two 0.75 Cu Yd Container Equivalents of service. If another customer had one 0.75 Cu Yd Container but it was picked up twice per week, that would also be two 0.75 Cu Yd Container Equivalents of service.

That said, the City also has many customers share bins and dumpsters. The City probably does that as a convenience for itself and as a cost-saving measure. Shared containers are most common for residential customers. In those cases, the City assesses bills to each of those customers at the rate of the small bin-size rate, or, based upon the container size share each sharing customer accounts for. In my calculations, I did the same.

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, usage data; and Table 10, rate calculations.
- I eliminated Table 12, meter size data; and Tables 15 and 16, that deal with minimum charge calculations, because they are irrelevant. Thus, I eliminated or merged five tables into one table.
- In all of the tables, I substituted the 0.75 Cu Yd Container Equivalent unit of measure for the 1,000-gallon unit of measure.
- I also eliminated or simply hid some functions of several tables when they are not relevant or not needed 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 Disposal Costs

The current billing structure includes a disposal fee for sanitation customers. However, that fee does not go into the sanitation utility's account and then the sanitation utility pays tipping fees to the landfill. Instead, the disposal fee goes directly to the landfill. I conceptualize those fees differently.

An individual who hauls their own waste to the landfill should pay tipping fees to the landfill. A private hauler who hauls waste to the landfill should pay tipping fees to the landfill and then they can recover that costs from their subscribers. I consider landfill disposal fees for wastes hauled by the sanitation utility to be a cost to the sanitation utility. In this situation it is the sanitation utility that hauls this waste to the landfill, not the individual in-town customers of the City's sanitation services. Thus, this cost should be included, in some way, in the fees the sanitation utility assesses and collects from its customers. Thus, for wastes hauled to the Casper landfill, the sanitation utility should pay those tipping fees. The same should be applied to wastes hauled by the sanitation utility to the City's landfill.

There is also the practical matter of how to pass disposal costs on to the sanitation utility's customers. After all, those customers are not hauling their own waste to the landfill and passing over scales to determine its weight, the unit of measure at the landfills. The sanitation utility is doing that for them. Thus, the sanitation utility needs to figure out how to fairly assess those costs to its customers. The sanitation utility already has the bin and dumpster collection system that can be used for that.

Thus, in the Sanitation Model, I included disposal fees. And in the Sanitation Model, those fees were passed through to the landfill in the Landfill Model, reflected as income in the form of City-hauled waste disposal fees.

In like manner, costs related to sanitation customers that continue at the City's landfill for recycling, yard waste and perhaps other services, should be "billed" by the City's landfill to the sanitation utility. In practice, you may just do an annual transfer from sanitation to the landfill utility to cover these costs but think of it in terms of rates being paid for units of volume being disposed. Those costs should be included in the sanitation utility's budget and income and expense statement and classified for recovery from sanitation utility customers. The sanitation utility should "pay" the landfill utility on whatever basis the landfill utility would otherwise charge at the gate. That may be on a weight basis, a volumetric basis or some other basis, but it would not be upon the basis of sanitation customer container sizes. The landfill's business is not conducted on a container size basis. It is done on a weight, volume or other basis at the gate.

As to these other services at the landfill, I did not receive detailed data about the costs to receive and manage them. Thus, except for those fees that are spelled out in the City's rate ordinance (mainly yard waste), those costs are recovered through the minimum charge and regular sanitation waste collection and disposal fees.

As I said earlier, it is quite acceptable that you track incomes and costs as you currently do. But, for rate calculation purposes, I included disposal costs incurred by the sanitation utility as a cost, with a fee assessed specifically to pay for that cost.

A technical note; it may well be that, at budget preparation time, the City would estimate volumes of the materials to be picked up and taken to the City's landfill and then transfer the resulting payment(s) on that basis. That would enable the City's collection trucks to bypass the landfill scales or other "metering" processes the landfill has, at least most of the time, speeding the operation of both utilities.

However, if the City landfill does allow the sanitation utility's trucks to bypass the scales, it should at least weigh an occasional truck (take samples) to arrive at the average weight or volume. The rest of the time it could just count trucks through the gate and come up with a fair estimate of weight or volume disposed each year. In that way, unit costs and tipping fees can be made more accurate, but the "metering" process would not be onerous.

These tweaks to the budgeting and income and expense statement structures of the two utilities will make calculation of sanitation rates surer in the future. Because that is not how these costs have been recovered in the past, I made the described changes to the expenses I attributed to the sanitation utility.

This drawing of differences is, admittedly, esoteric. But I wanted you to know my thinking, so you can better understand the analysis results. I will now move on to more concrete issues.

Capital Improvements, Debt and Repair and Replacement

There is no sanitation utility debt, little capital improvements and little repair and replacement to consider.

In Table 5 - Capital Improvements Program (CIP), page 167, there is one item called, "CAPITALIZED EXP EQUIPMENT/FURNITURE." This is a large expense relative to the total sanitation budget. I assumed the amount of this expense in the test year was normal and continued it for the following years.

A collection truck is replaced every five years. That is shown in Table 6, page 168. The resulting annual annuity needed to pay for these replacements as their costs rise over time is calculated in Table 7, page 169. This annuity was added to Table 4, page 166, near the bottom as an operating cost. Thus, rates I modeled will be adequate to pay these costs.

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.

The result is, I retained in the Sanitation Model, Tables 13 and 14, starting on page 173, to show the activation fee only. And, I left out Tables 15 and 16 entirely. Instead of those two tables, in Table 8, page 170, I classified the "Average Disposal Cost" as an additional type of variable cost. Those costs are recovered based on container size and the number of pick-ups of containers.

Recommended Rate Structure

I recommend the same basic rate structure and policies for sanitation as for water, with a few modifications.

You have a small number of out of City customers. If you want the sanitation activation fee structure to be consistent with the recommended water and sewer system development fees, assess an out of City activation fee that is 25 percent higher than the in-City fee. Otherwise, you can continue to assess to them the same fee as in-City customers. This is a slight rate structure fairness issue but either way, those fees will have almost no revenue effect on the utility.

All sanitation customers should pay the same minimum charge. These recover the basic fixed costs of the system – billing, general administration and the like.

Likewise, 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.

As to "volume (collection) charges," conceptually, one can see 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 0.75 cubic yard bins. All other things being equal, there is more driving involved in collecting the same volume from small bins as from large dumpster. But it may take more time, overall, to collect and transport volume in large dumpsters compared to small bins.

If you were to divvy costs at that level of detail, you should support such rates with data about the costs. That data does not exist. Therefore, I recommend that all in-City customers pay the same volume (collection) charge based upon the number of pick-ups per week they get. Out of City customers should pay that same set of charges, plus the 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.

As detailed in Table 18, page 178, the modeled rates will result in a 0.75 cubic yard (small) bin, one pick-up per week customer's bill going down slightly. A 1.5 cubic yard dumpster customer's bill would go up significantly. A 3.0 cubic yard dumpster customer's bill would go up more.

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.

The recommended rates are not a "soak it to the rich" scheme. These rates are based upon the costs to provide service to customers at the various service levels they choose. Large dumpster and multiple dumpster customers are currently paying too little for the service they receive so these rates are simply correcting that situation.

Additional issues are discussed in separate sub-sections that follow.

Extra Containers

Some customers produce a lot of trash. They have need of more than one container. In those cases, you assess an additional fee for additional containers. I recommend you assess marginally higher fees for additional containers.

Table 9, page 171, establishes the marginal cost basis for extra container rates. Marginal cost simply means, when an extra container is added at an existing pick-up location, that container causes the utility to incur extra costs at only part of the cost of picking up the first container. From the marginal variable cost for extra containers, I calculated their percentage of the average costs. And from that, I calculated the fee each size of extra container should be assessed to recover its share of total costs.

To be clear, customers that have extra containers are already customers for their first container. Thus, they should pay the standard minimum charge, and only one minimum charge. They should pay the volume (collection) charge plus the disposal fee for the first container they use. And, they should pay the marginal (lower) cost of collecting any extra container(s) they use. That is because, the cost of the collection truck, staff and all related inputs are mainly related to the mileage and time it takes to get to the pick-up location for the first container. There is little extra expense to picking up additional containers at that location. But, disposal at the landfill of the volume in the extra container(s) costs just as much for extra containers as it does for the first container. The marginal variable costs have been classified to reflect these facts.

Something to Watch for Regarding Extra Containers and Large Containers

Switching to a full volumetric-based rate structure, you might find that some customers that currently have a large dumpster or multiple dumpsters will want to downsize. That is fair if they do not need the extra capacity they currently have. But, if downsizing will result in trash spilling out or being set 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 relatively high compared to volume (collection) costs. Therefore, if a customer wants to decrease their bill and the schedule on which they generate trash will allow it, they could reduce their bill the most by downsizing their container but adding to their collection frequency to keep the weekly volume about the same.

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 165. Some of the income loss to disposal fees would be made up in increased fees for collection, but to keep it simple and more conservative, I did not include any such additional income. 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 2.5 percent per year, I assumed volume reduction by customers, due to using smaller bins and fewer pick-ups, would continue at that same rate of loss, 10 percent.

"Snow Bird" Billing

"Snowbird" billing can be done in the same way for sanitation as it is for water, so refer to the description in the water section of this report for how to do it.

Table 9, page 171, 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.

The snowbird fee worked out to be a small amount. But, in fairness, if a sanitation customer went into snowbird status, their bin or dumpster should be picked up and held during the time they are away. When they return and go back into active status, the City would need to return the bin or dumpster and reactivate their account. The cost of performing those services should be recovered by assessing a new activation fee. Thus, in most cases, it would be cheaper for a customer to just remain in active status and pay their regular monthly fee.

Whether, and how, you set sanitation snowbird fees is a policy issue. Whatever you do, I suggest you keep it simple.

- You can adopt the calculated snowbird fees. In almost all cases, a sanitation customer is also a water and sewer customer. Such a customer would inform you they want to go into snowbird status for all their services. You would switch their water, sewer and sanitation fees to the snowbird rates, handle "shut-off" and, later, "reconnection" of services, all in concert with each other.
- Or, you could continue to bill all customers the regular fees unless and until they discontinue service entirely.
- Or, you could do something else.

You likely have few snowbirds so whatever you do will probably have little effect on revenues. It is mainly a rate structure fairness issue.

Target Reserve Levels

It appears that when the sanitation and landfill utilities' reserves are considered together, last fiscal year should have been your low balance year out of the next ten. And, that combined balance should have been close to the desired reserve level. But, current revenues for the landfill are more than adequate while those for the sanitation utility are too low. Thus, the sanitation reserves need to go up and landfill reserves need to go down. Because the two "cancel" each other out, this change in reserves will have little to no effect on most customers in their bills.

I targeted sanitation reserves, ten years out, to be equal to 50 percent of operating costs in that year plus the full amount of capital improvement and debt spending in that year. I also assumed inflationary increases for the next ten years at 2.5 percent per year. Still, you are projected to run a low total reserves balance for the next couple of years. Lines on the bottom of Table 17, page 177, and several of the charts at the end of the Sanitation Model show your reserve balances expected for the next ten years.

Rate Affordability

In Table 17, near the top, I show the estimated Affordability Index (for a small bin, residential customer) for the current rates in the first column, at 0.60 percent, and the modeled rates in the following column, at 0.78 percent. Bill affordability for the subject one small bin and one pick-up per week customers are modeled to become more affordable over time.

The same thing is shown graphically in Chart 4 of the Sanitation Model.

To supplement the Affordability Index, Table 18, page 178, shows how bills for each container size and pick-up frequency will be affected by the recommended rates. On a percentage basis, because the current minimum charge is so low, and the unit charge is relatively high, rate adjustments will vary a lot. That is a function of the current rates being so far from cost-to-serve.

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 activation fee, monthly minimum charge, volume (collection) charge, disposal charge and, optionally, the snowbird charge, shown in Table C, that follows this list. These rates will move you close to a cost-to-serve structure. To move even closer, you should plan on having the next rate analysis done in about five years.
    a) As to landfill costs and tipping fees to be paid by the sanitation utility to the City's landfill to cover those costs, you should temporarily continue doing what you are doing now, just at a different "rate." That is, you should continue to remit to the landfill the amounts that accrue from the fees in the table that follows, which are called, "Disposal

Charge per Month This Container Size & PU Freq." Those fees generate the revenues needed to pay the line item cost called, "Transfer to Douglas Landfill for Services Rendered to Sanitation Utility (Recycling, Yard Waste, Transfer Station Operation, etc.)." This transfer is on the green highlighted row of Table 4 of Model 3, page 166. From this transfer, the City's landfill will continue to pay the Casper tipping fees plus relevant on-going costs of the City's landfill, temporarily.

b) Over the next several months, you should assess the volumes of the various materials hauled by the sanitation utility to the City's landfill. Once you have good estimates of these volumes, you should switch the "billing" of tipping fees and City landfill costs from being directly billed to sanitation customers, to being billed to the sanitation utility.

   i) Rather than the landfill assessing tipping fees per load to the sanitation utility, I think it is more likely and it would be more convenient, for you to transfer lump-sum amounts from the sanitation utility to the landfill utility on an estimated annual volume delivered basis for each waste stream.

c) When you transition to having the sanitation utility pay fees to the City's landfill for relevant City landfill services, you would also transition to having the sanitation utility directly pay Casper's landfill tipping fees. To read all of this is likely more confusing than it will be to do it in practice.

2. The calculations assumed you would have made these rate adjustments early enough to enable you to collect at these rates for the April 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 2.5 percent.

5. If balances do not accrue as shown at the bottom of Table 17, page 177, 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, Part 1: Recommended Sanitation Fees and Charges

Table C, Part 1: Douglas, WY In-City Sanitation System Development Fees; Minimum and Snow Bird Charges; Collection and Disposal Charges

Customer Class, Container Size and Pick-ups per Month	Full Activation Fee, per New Customer	Monthly Minimum Charge	Disposal Charge per Month This Container Size & PU Freq	Monthly Collection Charge	**Total Monthly Charges**	Monthly Snowbird Fee
In-City Customers						
541, 0.75 Cu Yd, 4 Container Pick ups	$125	$18.99	$12.08	$13.49	**$44.56**	$7.01
541, 1.5 Cu Yd, 4 Container Pick ups	$125	$18.99	$24.16	$13.49	**$56.64**	$7.01
541, 3 Cu Yd, 4 Container Pick ups	$125	$18.99	$48.32	$13.49	**$80.80**	$7.01
542, 0.75 Cu Yd, 4 Container Pick ups	$125	$18.99	$12.08	$13.49	**$44.56**	$7.01
542, 1.5 Cu Yd, 4 Container Pick ups	$125	$18.99	$24.16	$13.49	**$56.64**	$7.01
542, 3 Cu Yd, 4 Container Pick ups	$125	$18.99	$48.32	$13.49	**$80.80**	$7.01
543, 0.75 Cu Yd, 8 Container Pick ups	$125	$18.99	$24.16	$26.98	**$70.13**	$7.01
543, 1.5 Cu Yd, 8 Container Pick ups	$125	$18.99	$48.32	$26.98	**$94.29**	$7.01
543, 3 Cu Yd, 8 Container Pick ups	$125	$18.99	$96.64	$26.98	**$142.61**	$7.01
544, 0.75 Cu Yd, 12 Container Pick ups	$125	$18.99	$36.24	$40.47	**$95.70**	$7.01
544, 1.5 Cu Yd, 12 Container Pick ups	$125	$18.99	$72.48	$40.47	**$131.94**	$7.01
544, 3 Cu Yd, 12 Container Pick ups	$125	$18.99	$144.96	$40.47	**$204.42**	$7.01
545, 0.75 Cu Yd, 16 Container Pick ups	$125	$18.99	$48.32	$53.96	**$121.27**	$7.01
545, 1.5 Cu Yd, 16 Container Pick ups	$125	$18.99	$96.64	$53.96	**$169.59**	$7.01
545, 3 Cu Yd, 16 Container Pick ups	$125	$18.99	$193.28	$53.96	**$266.23**	$7.01
546, 0.75 Cu Yd, 20 Container Pick ups	$125	$18.99	$60.40	$67.45	**$146.84**	$7.01
546, 1.5 Cu Yd, 20 Container Pick ups	$125	$18.99	$120.80	$67.45	**$207.24**	$7.01
546, 3 Cu Yd, 20 Container Pick ups	$125	$18.99	$241.60	$67.45	**$328.04**	$7.01
In-City Extra Container Charges Only						
541, 0.75 Cu Yd, Extra Container	$0	$0.00	$12.08	$5.89	**$17.97**	$0.00
541, 1.5 Cu Yd, Extra Container	$0	$0.00	$24.16	$5.89	**$30.05**	$0.00
541, 3 Cu Yd, Extra Container	$0	$0.00	$48.32	$5.89	**$54.21**	$0.00
542, 0.75 Cu Yd, Extra Container	$0	$0.00	$12.08	$5.89	**$17.97**	$0.00
542, 1.5 Cu Yd, Extra Container	$0	$0.00	$24.16	$5.89	**$30.05**	$0.00
542, 3 Cu Yd, Extra Container	$0	$0.00	$48.32	$5.89	**$54.21**	$0.00
543, 0.75 Cu Yd, Extra Container	$0	$0.00	$24.16	$11.78	**$35.94**	$0.00
543, 1.5 Cu Yd, Extra Container	$0	$0.00	$48.32	$11.78	**$60.10**	$0.00
543, 3 Cu Yd, Extra Container	$0	$0.00	$96.64	$11.78	**$108.42**	$0.00
544, 0.75 Cu Yd, Extra Container	$0	$0.00	$36.24	$17.67	**$53.91**	$0.00
544, 1.5 Cu Yd, Extra Container	$0	$0.00	$72.48	$17.67	**$90.15**	$0.00
544, 3 Cu Yd, Extra Container	$0	$0.00	$144.96	$17.67	**$162.63**	$0.00
545, 0.75 Cu Yd, Extra Container	$0	$0.00	$48.32	$23.56	**$71.88**	$0.00
545, 1.5 Cu Yd, Extra Container	$0	$0.00	$96.64	$23.56	**$120.20**	$0.00
545, 3 Cu Yd, Extra Container	$0	$0.00	$193.28	$23.56	**$216.84**	$0.00
546, 0.75 Cu Yd, Extra Container	$0	$0.00	$60.40	$29.45	**$89.85**	$0.00
546, 1.5 Cu Yd, Extra Container	$0	$0.00	$120.80	$29.45	**$150.25**	$0.00
546, 3 Cu Yd, Extra Container	$0	$0.00	$241.60	$29.45	**$271.05**	$0.00

Note: For customers with more than one container, assess them the appropriate full monthly fee from the first section, plus the corresponding full monthly fee(s) from the second section for each extra container they use.

Table C, Part 2: Recommended Sanitation Fees and Charges

Table C, Part 2: Douglas, WY Out of City Sanitation System Development Fees; Minimum and Snow Bird Charges; Usage Allowance and Unit Charge

Customer Class, Container Size and Pick-ups per Month	Full Activation Fee, per New Customer	Monthly Minimum Charge	Disposal Charge per Month This Container Size & PU Freq	Monthly Collection Charge	**Total Monthly Charges**	Monthly Snowbird Fee
Out of City Customers						
551, 0.75 Cu Yd, 4 Container Pick ups	$125	$18.99	$12.08	$16.86	**$47.93**	$7.01
551, 1.5 Cu Yd, 4 Container Pick ups	$125	$18.99	$24.16	$16.86	**$60.01**	$7.01
551, 3 Cu Yd, 4 Container Pick ups	$125	$18.99	$48.32	$16.86	**$84.17**	$7.01
552, 0.75 Cu Yd, 4 Container Pick ups	$125	$18.99	$12.08	$16.86	**$47.93**	$7.01
552, 1.5 Cu Yd, 4 Container Pick ups	$125	$18.99	$24.16	$16.86	**$60.01**	$7.01
552, 3 Cu Yd, 4 Container Pick ups	$125	$18.99	$48.32	$16.86	**$84.17**	$7.01
553, 0.75 Cu Yd, 8 Container Pick ups	$125	$18.99	$24.16	$33.73	**$76.87**	$7.01
553, 1.5 Cu Yd, 8 Container Pick ups	$125	$18.99	$48.32	$33.73	**$101.03**	$7.01
553, 3 Cu Yd, 8 Container Pick ups	$125	$18.99	$96.64	$33.73	**$149.35**	$7.01
554, 0.75 Cu Yd, 12 Container Pick ups	$125	$18.99	$36.24	$50.59	**$105.82**	$7.01
554, 1.5 Cu Yd, 12 Container Pick ups	$125	$18.99	$72.48	$50.59	**$142.06**	$7.01
554, 3 Cu Yd, 12 Container Pick ups	$125	$18.99	$144.96	$50.59	**$214.54**	$7.01
555, 0.75 Cu Yd, 16 Container Pick ups	$125	$18.99	$48.32	$67.45	**$134.76**	$7.01
555, 1.5 Cu Yd, 16 Container Pick ups	$125	$18.99	$96.64	$67.45	**$183.08**	$7.01
555, 3 Cu Yd, 16 Container Pick ups	$125	$18.99	$193.28	$67.45	**$279.72**	$7.01
556, 0.75 Cu Yd, 20 Container Pick ups	$125	$18.99	$60.40	$84.31	**$163.70**	$7.01
556, 1.5 Cu Yd, 20 Container Pick ups	$125	$18.99	$120.80	$84.31	**$224.10**	$7.01
556, 3 Cu Yd, 20 Container Pick ups	$125	$18.99	$241.60	$84.31	**$344.90**	$7.01
Out of City Extra Container Charges Only						
551, 0.75 Cu Yd, Extra Container	$0	$0.00	$12.08	$7.36	**$19.44**	$0.00
551, 1.5 Cu Yd, Extra Container	$0	$0.00	$24.16	$7.36	**$31.52**	$0.00
551, 3 Cu Yd, Extra Container	$0	$0.00	$48.32	$7.36	**$55.68**	$0.00
552, 0.75 Cu Yd, Extra Container	$0	$0.00	$12.08	$7.36	**$19.44**	$0.00
552, 1.5 Cu Yd, Extra Container	$0	$0.00	$24.16	$7.36	**$31.52**	$0.00
552, 3 Cu Yd, Extra Container	$0	$0.00	$48.32	$7.36	**$55.68**	$0.00
553, 0.75 Cu Yd, Extra Container	$0	$0.00	$24.16	$14.72	**$38.88**	$0.00
553, 1.5 Cu Yd, Extra Container	$0	$0.00	$48.32	$14.72	**$63.04**	$0.00
553, 3 Cu Yd, Extra Container	$0	$0.00	$96.64	$14.72	**$111.36**	$0.00
554, 0.75 Cu Yd, Extra Container	$0	$0.00	$36.24	$22.08	**$58.32**	$0.00
554, 1.5 Cu Yd, Extra Container	$0	$0.00	$72.48	$22.08	**$94.56**	$0.00
554, 3 Cu Yd, Extra Container	$0	$0.00	$144.96	$22.08	**$167.04**	$0.00
555, 0.75 Cu Yd, Extra Container	$0	$0.00	$48.32	$29.45	**$77.77**	$0.00
555, 1.5 Cu Yd, Extra Container	$0	$0.00	$96.64	$29.45	**$126.09**	$0.00
555, 3 Cu Yd, Extra Container	$0	$0.00	$193.28	$29.45	**$222.73**	$0.00
556, 0.75 Cu Yd, Extra Container	$0	$0.00	$60.40	$36.81	**$97.21**	$0.00
556, 1.5 Cu Yd, Extra Container	$0	$0.00	$120.80	$36.81	**$157.61**	$0.00
556, 3 Cu Yd, Extra Container	$0	$0.00	$241.60	$36.81	**$278.41**	$0.00

Note: For customers with more than one container, assess them the appropriate full monthly fee from the first section, plus the corresponding full monthly fee(s) from the second section for each extra container they use.

Sanitation Rates Discussion 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 many customers will change markedly, on a percentage basis. But that will be true only for customers that maintain their current container size and pick-up schedule. Those that downsize or reduce frequency can reduce the bills they must pay. However, the City should guard against any customer downsizing and creating a sanitation or littering problem.

***

Landfill Rates Discussion – the Landfill Model

Introduction

As sewer is a service downstream of water service, landfilling is a service downstream of trash collection. Landfill rates will be discussed in that context.

I experienced problems with sanitation rates data. The disposal fees-related parts of those issues apply to landfill rates, too. But, with a more recent submission of data from Ms. Nicol, the data issues cleared up very well, so we should have accurate projections from the Landfill Model.

Moving to another big issue, the landfill utility recently went through a big change. Until recently, waste and other materials collected from the City and elsewhere was all landfilled or processed at the City's landfill. But, most of that waste, being sanitary waste, is now transferred to Casper for landfilling. Most of the City's landfill has since been closed. Thus, you are in post-closure for that part of the landfill. And, some services, notably construction and demolition ("C&D") waste landfilling, recycling and yard waste processing, continue at the landfill. The landfill's costs have changed dramatically so its rate structure needed to change dramatically, too.

I said, "needed to change" because in its most recent rate adjustments earlier this year, the City increased the disposal fee rate dramatically. You are most of the way to having landfill-related costs be fully funded. You only need an additional 6.8 percent in total revenue to be fully funded initially.

The bill for a small bin, one pick-up per week customer is nearly high enough. But, for the large bins and dumpsters, the bills are far too low.

Sanitation and landfill rates and finances are related to each other. Thus, I found it easier to model usage and rates for the landfill along with the usage and rates for sanitation. And, because the landfill's sanitary waste disposal fee is just one of several fees each of the sanitation utility's customers sees, some of the rate components and tables from my modeling template simply do not apply to landfill rates, so I left them out of the Landfill Model. These include: Tables 1, 2, 8-16, 18 and 19. In addition, Charts 3 and 4, apply to rates at the "retail" level, so those were left out, as well.

Bill Disposal Costs to the Sanitation Utility

This issue was discussed at length in the Sanitation section earlier. The reverse side of that discussion applies to the landfill utility – it needs to bill the sanitation utility for services it provides to that utility. If you take that approach, the landfill utility should also revise its budget and income and expense statements slightly to include service incomes from receiving and processing wastes and materials from the City as well as the costs of doing so. These tweaks to the budgeting structure will make calculation of landfill rates surer in the future.

To calculate sanitation rates, I added a cost item called, "Landfill Tipping (Disposal) Fees" to the lower part of Table 4, page 188, of the Sanitation Model. The income side of this cost is called, "Effective User Charges From City-hauled Disposal Fees." That appears near the middle of Table 3, of the Landfill Model, on page 187. In other words, this fee is a cost to the sanitation utility, the sanitation utility reimburses the Landfill utility for this cost and the landfill utility books the fee paid by the sanitation utility as income. Including disposal fees on the cost side enabled me to calculate the disposal fee to assess to sanitation customers on the volumetric basis they pay for other aspects of the sanitation service.

Moving on, I will now cover various issues that affect future landfill-related rates.

Capital Improvements, Debt and Repair and Replacement

There is only modest landfill utility debt (a Caterpillar lease, which was paid off in 2017-18). A small amount of new debt was incurred for the cell closing and more debt will likely be incurred to build a new recycling building in a few years. As I did for the other utilities, I assumed that some of the first five years' worth of capital improvement projects are typical, recurring needs, so I repeated them in the second five years to be representative of future needs. These things are detailed in Table 5, page 189.

The landfill utility also has significant repair and replacement needs that are shown in Table 6, page 191. The resulting annual annuity needed to pay for these replacements as their costs rise over time is calculated in Table 7, page 192. This annuity was added to Table 4, page 188, near the bottom as an operating cost. Thus, rates I modeled will be adequate to pay these costs.

The City May Eliminate Recycling - Effects

The City currently plans to build a recycling building and continue, and I suspect enhance, recycling. Costs of that option are included in the rate models in this report.

However, the City might opt to not build the recycling building and it might eliminate collection of recyclables. Doing that would affect costs to collect and recycle recyclables. This sub-section considers that option.

The Administrative Services Director/Treasurer reported to me that, if the City takes this option, it would likely reduce personnel costs by approximately $100,000 per year and eliminate construction of the recycling building, which is currently estimated to cost $1,275,000.

The personnel cost savings, as compared to the total sanitation (collection) service revenues, for example, would only amount to five percent of those adjusted revenues. That cost savings is not significant enough, at this stage, to model. It would have little effect on rates. Thus, the current model and the resulting rates are the "worst-case scenario" concerning this potential cost savings. If the City does take the option of ceasing recycling, if cost savings do materialize, and if all other incomes and expenses depicted by the model materialize, you can slow down the rate at which future rates will be increased. That would bring incomes back in line with the then actual costs and revenue needs.

As to the recycling building, the current model assumes 20 percent of that cost would be loan financed and the balance would be grant-paid. I assumed the 20 percent loan financed amount would be paid back over 20 years at two percent interest. To use easy numbers, such a loan would increase costs, assumed to start six years from now, by approximately $16,000 per year. As compared to landfill revenues in that year, as adjusted, of slightly more than $2,000,000, the debt service would amount to less than one percent of revenues. Again, that is not enough cost difference to warrant modeling and making changes to the initial rate adjustments at this time. As discussed above, if you eliminate this cost, monitor costs and revenues and adjust future rate increases accordingly.

Finally, on this issue, because I assumed the recycling building and related costs would not occur for (now) five years, and you likely will need a new rate analysis about then anyway, I or another rate analyst could build this consideration into a new set of rate models. In that way, you would have very current and accurate estimates of the recycling building cost, how it would be paid for and the cost of collecting and processing recyclables. Working with sound costs, you could arrive at very accurate rate effects at that time. If you move more quickly to consider recycling building and processing options in detail, just let me know. But for now, this issue does not appear to affect rates enough to be worth detailed analysis.

System Development Fees and Capacity Surcharges – Not Used

The basic notion of assessing system development fees to new customers and capacity surcharges to existing customers is relevant to landfill services generally. However, they are impractical to implement for this utility. Therefore, all such costs are imbedded in the rates for landfill and related services. Most of the landfill Fees are on a unit basis, which is appropriate, so capacity and capital costs will be recovered over time on that same basis – volumes of materials brought to the landfill or transfer station.

Recommended Rate Structure

The landfill has rates for about ten kinds of services right now. Most of those produce little revenue, and little is needed to recover their costs. Those costs are probably not well known or even known at all. For those reasons, I chose to let you set those rates as a matter of policy rather than mathematics.

I focused on sanitary waste disposal costs and fees. For those, I recommend a minimum charge that is the same regardless of where the waste originates. (One exception; you should NOT assess minimum charges for sanitation wastes hauled by the Sanitation utility for this reason. City-hauled waste will not be billed by the load. At most, landfill staff will tally City-hauled loads and sum up a total bill for the Sanitation utility. That likely will be "paid" to the Landfill utility once per year in the form of a transfer from one utility to the other. There will be essentially no billing and little general administration cost to recover.) It costs a certain amount of money to deal with any load that comes in, regardless of size. After the minimum charge, it makes sense to have two sets of per ton unit charges, one for City-hauled waste and a higher rate for all other haulers. Here's why.

The City can control where it hauls trash for disposal, but not waste hauled by others. The City can assess taxes to properties in-City, but not to outsiders, to support the waste services it provides. And, the City spent large sums and took on significant risk to close the sanitary cell of its own landfill, build the transfer station and gear up to do the transport of waste to Casper. The City is "on the line" for all these things. The outsiders are not. It is fair and proper that the City would recover, through higher fees from the "outsiders," at least some of the costs and risks it incurred on their behalf.

These rates will result in 0.75 cubic yard (small) bin, one pick-up per week customers' disposal fee going up ever so slightly. A 1.5 cubic yard dumpster customers' bills would go up markedly because two increments of the unit charge would be assessed to them. A 3.0 cubic yard dumpster customer's bill, with a container that is equivalent to four 0.75 cubic yard bins, would see their disposal fee go up quite significantly.

Because the disposal fee is only one of three parts of a customer's total bill, it is not useful for a retail customer to examine their disposal cost alone. Each customer should consider what will happen to their total bill. That is shown in Table 18, of the Sanitation Model on page 178. Bill comparisons for multiple bin or dumpster customers were not illustrated because there are dozens of combinations of container sizes and pick-up frequencies a customer can choose from.

If one had no information regarding costs to serve, it might appear that the recommended rates are a "soak it to the rich" scheme. They are not. These rates are based upon the costs to provide service to customers at the various service levels they choose. Large dumpster and multiple dumpster customers are currently paying too little for the service they receive so these rates are simply correcting that situation.

"Snow Bird" Billing – Not Used

In the context of my modeling of disposal fees, which are at the wholesale (utility to utility) level, there is no such thing as a "snowbird" fee. The sanitation utility hauls waste and recyclables to the landfill and transfer station. It pays the landfill utility for the volumes of those materials disposed. Individual sanitation customers do not come into play, so there is no Table 9, or calculation of snowbird fees.

Extra Containers

The issue of using extra containers was covered in the sanitation section of the report.

Target Reserve Levels

I targeted landfill reserves, ten years out, after adjustment for inflation, to generate working capital reserves at 50 percent of operating costs, plus the total capital improvement costs in the tenth year, plus $400,000.

Lines on the bottom of Table 17, page 195, and several of the charts at the end of the Landfill Model show your reserve balances expected for the next ten years.

Rate Affordability

Because I modeled the disposal fee as a wholesale fee, rate affordability is not a relevant measure. However, now that most of the City's landfill has been closed, a transfer station has been built and the City is paying tipping fees to Casper for landfilling, your disposal costs have gone up dramatically. That pushed overall waste disposal fees markedly higher. The rate increases you recently adopted will cover most of those costs. The additional increases I recommended in the sanitation section of the report will cover the rest.

Recommendations for Adjusting Sanitation Rates

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

1. You should assess the slate of fees shown in Table D, that follows this list. It applies to City-hauled materials as well as materials hauled to the landfill or transfer station by others. The first two categories of waste listed in the table cover sanitary waste. Other items are special wastes, yard wastes, recyclables and banned materials. These rates will not move you all the way to a cost-to-serve structure. Therefore, you should plan on continuing the transition to cost-to-serve rates by having the next rate analysis done in about five years.
2. The calculations assumed you would have made these adjustments early enough to enable you to collect at these rates for the April 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 1.0 percent. Note: this is different from the other three utilities.
5. If balances do not accrue as shown at the bottom of Table 17, page 195, 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 D: Recommended Landfill-related Fees

Table D: Douglas, WY Landfill-related Fees

Commodity	Minimum Charge, All Haulers Except as Noted	City of Douglas-hauled Waste Unit Charge	All Other Haulers Unit Charge	Unit of Measure	Notes
Maximum 8-foot trailer or pickup bed with no more than 2' vertical extended sides	$25.00				
Douglas sanitation utility loads exceeding either the 8-foot or 2-foot limits	N.A.	$154.70		per ton	**See Note 1 below**
Other loads exceeding either the 8-foot or 2-foot limits	$25.00		$193.38	per ton	**See Note 2 below**
Passenger car and pickup tires (up to 18-inch rim)	N.A.	$4.00	$5.00	per tire	limit 12 per day
Truck tires (18-inch and larger rims)	$15.00	$12.00	$15.00	per tire	limit 6 per day
Equipment tires (tractors, scrapers, loaders, etc.)	$100.00	$80.00	$100.00	per tire	must be cut into a minimum of 4 pieces
Shredded tires	$25.00	$96.00	$120.00	per ton	
Uncovered load	$10.00				plus applicable load fee(s)
Clean yard or green waste					No charge
Clean metals or appliances					No charge
Recyclable materials accepted					No charge
Freon containing appliances					Banned
Liquids, liquid petroleum products and unauthorized hazardous materials					Banned

Note 1: The Douglas sanitation utility-hauled waste charge above is an estimate. Do not charge this, or any other tonnage rate, yet. Until the conversion from billing the sanitation utility instead of its customers for disposal is complete, continue to accept the "Disposal Fee" as discussed in the Sanitation section of this report as the fee basis for those wastes.

Note 2: Charge this per ton rate initially to all haulers except the Douglas sanitation utility. Once the conversion from billing the sanitation utility instead of its customers for disposal is complete, recalculate this per ton rate to be the Douglas sanitation utility's per ton rate, times 125 percent.

Landfill Fees Discussion Closing

I recommend you adopt the fees calculated in the Landfill Model and shown in the table immediately above. The sanitary waste unit charge rates are in a cost-to-serve rate structure. All other fees and charges are a continuation of the City's current fees and charges, except where I modified them to recognize the higher costs and risks of accepting materials by entities other than the City.

Bills under these fees will be much like those under the City's current fees, with this important exception. The sanitary waste fees for City-hauled wastes are set up in the same way as those for other haulers. Rather than assessing sanitary waste disposal fees directly to "retail" customers, the sanitation utility would be billed by the landfill utility for sanitary and all other wastes and materials which that utility hauls to the landfill and transfer station.

***

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.

Douglas, WY; Water Rates, Model 2019-1

(This model moves the rate structure very close to cost-to-serve.)

February 22, 2019

This rate analysis scenario was produced by
Carl E. Brown, GettingGreatRates.com
1014 Carousel Drive, Jefferson City, Missouri 65101
(573) 619-3411
www.gettinggreatrates.com
carl1@gettinggreatrates.com

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.

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

Douglas, WY; Water Rates, Model 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

$6,242	Fees to GettingGreatRates.com
$500	Estimated value of system staff time and incidentals to assemble needed information
$6,742	Total Investment for This Analysis
$2,611,280	Five-year Increase in Revenue Due at Least Partly to This Analysis
38733%	Five-year Return on Investment (increase in revenues / investment)
$7,069,924	Ten-year Improvement in Cash Position Due at Least Partly to This Analysis
104,869%	Ten-year Return on Investment (increase in revenues / investment)

Table 1 - Rates

Douglas, WY; Water Rates, Model 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
0.75 Inch and Smaller Meters	0	$32.09	0.000	$2.31
	30,000	$32.09	0.000	$2.31
	31,000	$32.09	0.000	$2.96
	690,000	$32.09	0.000	$2.96
1 Inch Meters	0	$32.09	0.000	$2.31
	30,000	$32.09	0.000	$2.31
	31,000	$32.09	0.000	$2.96
	690,000	$32.09	0.000	$2.96
1.5 Inch Meters	0	$56.68	0.000	$2.31
	30,000	$56.68	0.000	$2.31
	31,000	$56.68	0.000	$2.96
	690,000	$56.68	0.000	$2.96
2 Inch Meters	0	$105.86	0.000	$2.31
	30,000	$105.86	0.000	$2.31
	31,000	$105.86	0.000	$2.96
	690,000	$105.86	0.000	$2.96
3 Inch Meters	0	$228.81	0.000	$2.31
	30,000	$228.81	0.000	$2.31
	31,000	$228.81	0.000	$2.96
	690,000	$228.81	0.000	$2.96

Table 1 - Rates

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
3 Inch Meters - City Use	0	$228.81	0.000	$2.31
	30,000	$228.81	0.000	$2.31
	31,000	$228.81	0.000	$2.96
	690,000	$228.81	0.000	$2.96
4 Inch Meters	0	$400.94	0.000	$2.31
	30,000	$400.94	0.000	$2.31
	31,000	$400.94	0.000	$2.96
	690,000	$400.94	0.000	$2.96
6 Inch Meters	0	$892.74	0.000	$2.31
	30,000	$892.74	0.000	$2.31
	31,000	$892.74	0.000	$2.96
	690,000	$892.74	0.000	$2.96
6 Inch Meters - City Use	0	$892.74	0.000	$2.31
	30,000	$892.74	0.000	$2.31
	31,000	$892.74	0.000	$2.96
	690,000	$892.74	0.000	$2.96
8 Inch Meters	0	$2,503.02	0.000	$2.31
	30,000	$2,503.02	0.000	$2.31
	31,000	$2,503.02	0.000	$2.96
	690,000	$2,503.02	0.000	$2.96
10 Inch Meters	0	$3,548.46	0.000	$2.31
	30,000	$3,548.46	0.000	$2.31
	31,000	$3,548.46	0.000	$2.96
	690,000	$3,548.46	0.000	$2.96

Table 2 - Test Year Usage

Douglas, WY; Water Rates, Model 2019-1

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

Residential meter readings per year: 12

Date this scenario created: 5/11/2018

Test year = the one-year period being analyzed starts: 7/1/2016

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 Averaged This Volume of Use	% of Total Use at This Average Volume
0.75 Inch and Smaller Meters	0	999	1,000	0.949	19,301	18,321,000	980	0	82	3.4%	4.5%
	1,000	1,999	1,000	0.871	18,321	15,965,000	2,356	2,356,000	196	8.1%	3.9%
	2,000	2,999	1,000	0.821	15,965	13,103,000	2,862	5,724,000	239	9.8%	3.2%
	3,000	3,999	1,000	0.799	13,103	10,470,000	2,633	7,899,000	219	9.0%	2.6%
	4,000	4,999	1,000	0.790	10,470	8,274,000	2,196	8,784,000	183	7.5%	2.0%
	5,000	5,999	1,000	0.814	8,274	6,733,000	1,541	7,705,000	128	5.3%	1.7%
	6,000	6,999	1,000	0.840	6,733	5,653,000	1,080	6,480,000	90	3.7%	1.4%
	7,000	7,999	1,000	0.856	5,653	4,841,000	812	5,684,000	68	2.8%	1.2%
	8,000	8,999	1,000	0.884	4,841	4,280,000	561	4,488,000	47	1.9%	1.1%
	9,000	9,999	1,000	0.901	4,280	3,858,000	422	3,798,000	35	1.4%	0.9%
	10,000	14,999	1,000	3.934	3,858	15,176,000	1,260	14,786,000	105	4.3%	3.7%
	15,000	19,999	1,000	4.094	2,598	10,635,000	743	12,505,000	62	2.6%	2.6%
	20,000	24,999	1,000	4.070	1,855	7,549,000	565	12,399,000	47	1.9%	1.9%
	25,000	29,999	1,000	4.000	1,290	5,160,000	411	11,040,000	34	1.4%	1.3%
	30,000	30,999	1,000	0.935	879	822,000	57	1,710,000	5	0.2%	0.2%
	31,000	39,999	1,000	6.136	822	5,044,000	414	14,206,000	35	1.4%	1.2%
	40,000	89,999	1,000	13.169	408	5,373,000	383	19,443,000	32	1.3%	1.3%
	90,000	139,999	1,000	20.720	25	518,000	22	2,348,000	2	0.1%	0.1%
	140,000	189,999	1,000	36.333	3	109,000	3	529,000	0	0.0%	0.0%
	190,000	239,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	240,000	289,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	290,000	339,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	340,000	389,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	390,000	489,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	490,000	589,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	183,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
			Monthly and Annual Subtotals:		118,679	141,884,000	19,301	141,884,000	1,608	66.3%	34.8%
1 Inch Meters	0	999	1,000	0.955	8,374	8,001,000	373	0	31	1.3%	2.0%
	1,000	1,999	1,000	0.905	8,001	7,240,000	761	761,000	63	2.6%	1.8%
	2,000	2,999	1,000	0.866	7,240	6,269,000	971	1,942,000	81	3.3%	1.5%
	3,000	3,999	1,000	0.830	6,269	5,203,000	1,066	3,198,000	89	3.7%	1.3%
	4,000	4,999	1,000	0.819	5,203	4,260,000	943	3,772,000	79	3.2%	1.0%
	5,000	5,999	1,000	0.835	4,260	3,558,000	702	3,510,000	59	2.4%	0.9%
	6,000	6,999	1,000	0.859	3,558	3,058,000	500	3,000,000	42	1.7%	0.8%
	7,000	7,999	1,000	0.883	3,058	2,699,000	359	2,513,000	30	1.2%	0.7%
	8,000	8,999	1,000	0.891	2,699	2,406,000	293	2,344,000	24	1.0%	0.6%
	9,000	9,999	1,000	0.920	2,406	2,214,000	192	1,728,000	16	0.7%	0.5%
	10,000	14,999	1,000	4.113	2,214	9,107,000	597	6,992,000	50	2.0%	2.2%
	15,000	19,999	1,000	4.186	1,617	6,768,000	432	7,323,000	36	1.5%	1.7%
	20,000	24,999	1,000	4.165	1,185	4,936,000	299	6,486,000	25	1.0%	1.2%
	25,000	29,999	1,000	4.271	886	3,784,000	220	5,954,000	18	0.8%	0.9%
	30,000	30,999	1,000	0.950	666	633,000	33	990,000	3	0.1%	0.2%
	31,000	39,999	1,000	7.308	633	4,626,000	199	6,889,000	17	0.7%	1.1%
	40,000	89,999	1,000	24.539	434	10,650,000	327	18,380,000	27	1.1%	2.6%
	90,000	139,999	1,000	33.523	107	3,587,000	58	6,357,000	5	0.2%	0.9%
	140,000	189,999	1,000	42.082	49	2,062,000	15	2,462,000	1	0.1%	0.5%
	190,000	239,999	1,000	39.294	34	1,336,000	11	2,276,000	1	0.0%	0.3%
	240,000	289,999	1,000	43.435	23	999,000	5	1,299,000	0	0.0%	0.2%
	290,000	339,999	1,000	47.944	18	863,000	1	303,000	0	0.0%	0.2%
	340,000	389,999	1,000	40.235	17	684,000	4	1,394,000	0	0.0%	0.2%
	390,000	489,999	1,000	83.615	13	1,087,000	8	3,707,000	1	0.0%	0.3%
	490,000	589,999	1,000	41.200	5	206,000	5	2,656,000	0	0.0%	0.1%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	582,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
			Monthly and Annual Subtotals:		58,969	96,236,000	8,374	96,236,000	698	28.8%	23.6%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
1.5 Inch Meters	0	999	1,000	0.956	735	703,000	32	0	3	0.1%	0.2%
	1,000	1,999	1,000	0.927	703	652,000	51	51,000	4	0.2%	0.2%
	2,000	2,999	1,000	0.923	652	602,000	50	100,000	4	0.2%	0.1%
	3,000	3,999	1,000	0.977	602	588,000	14	42,000	1	0.0%	0.1%
	4,000	4,999	1,000	0.968	588	569,000	19	76,000	2	0.1%	0.1%
	5,000	5,999	1,000	0.956	569	544,000	25	125,000	2	0.1%	0.1%
	6,000	6,999	1,000	0.932	544	507,000	37	222,000	3	0.1%	0.1%
	7,000	7,999	1,000	0.951	507	482,000	25	175,000	2	0.1%	0.1%
	8,000	8,999	1,000	0.944	482	455,000	27	216,000	2	0.1%	0.1%
	9,000	9,999	1,000	0.932	455	424,000	31	279,000	3	0.1%	0.1%
	10,000	14,999	1,000	4.285	424	1,817,000	88	1,017,000	7	0.3%	0.4%
	15,000	19,999	1,000	4.265	336	1,433,000	76	1,273,000	6	0.3%	0.4%
	20,000	24,999	1,000	4.531	260	1,178,000	37	803,000	3	0.1%	0.3%
	25,000	29,999	1,000	4.592	223	1,024,000	30	809,000	3	0.1%	0.3%
	30,000	30,999	1,000	0.969	193	187,000	6	180,000	1	0.0%	0.0%
	31,000	39,999	1,000	7.840	187	1,466,000	40	1,383,000	3	0.1%	0.4%
	40,000	89,999	1,000	26.735	147	3,930,000	103	5,850,000	9	0.4%	1.0%
	90,000	139,999	1,000	30.318	44	1,334,000	26	2,774,000	2	0.1%	0.3%
	140,000	189,999	1,000	39.222	18	706,000	5	756,000	0	0.0%	0.2%
	190,000	239,999	1,000	43.462	13	565,000	2	395,000	0	0.0%	0.1%
	240,000	289,999	1,000	41.727	11	459,000	3	779,000	0	0.0%	0.1%
	290,000	339,999	1,000	35.750	8	286,000	3	906,000	0	0.0%	0.1%
	340,000	389,999	1,000	44.200	5	221,000	1	361,000	0	0.0%	0.1%
	390,000	489,999	1,000	96.500	4	386,000	1	476,000	0	0.0%	0.1%
	490,000	589,999	1,000	17.667	3	53,000	3	1,523,000	0	0.0%	0.0%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	528,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
		Monthly and Annual Subtotals:			7,713	20,571,000	735	20,571,000	61	2.5%	5.0%
2 Inch Meters	0	999	1,000	0.929	367	341,000	26	0	2	0.1%	0.1%
	1,000	1,999	1,000	0.953	341	325,000	16	16,000	1	0.1%	0.1%
	2,000	2,999	1,000	0.985	325	320,000	5	10,000	0	0.0%	0.1%
	3,000	3,999	1,000	0.972	320	311,000	9	27,000	1	0.0%	0.1%
	4,000	4,999	1,000	0.965	311	300,000	11	44,000	1	0.0%	0.1%
	5,000	5,999	1,000	0.980	300	294,000	6	30,000	1	0.0%	0.1%
	6,000	6,999	1,000	0.986	294	290,000	4	24,000	0	0.0%	0.1%
	7,000	7,999	1,000	0.976	290	283,000	7	49,000	1	0.0%	0.1%
	8,000	8,999	1,000	0.982	283	278,000	5	40,000	0	0.0%	0.1%
	9,000	9,999	1,000	0.989	278	275,000	3	27,000	0	0.0%	0.1%
	10,000	14,999	1,000	4.811	275	1,323,000	15	173,000	1	0.1%	0.3%
	15,000	19,999	1,000	4.854	260	1,262,000	11	182,000	1	0.0%	0.3%
	20,000	24,999	1,000	4.795	249	1,194,000	15	324,000	1	0.1%	0.3%
	25,000	29,999	1,000	4.722	234	1,105,000	22	595,000	2	0.1%	0.3%
	30,000	30,999	1,000	0.972	212	206,000	6	180,000	1	0.0%	0.1%
	31,000	39,999	1,000	8.131	206	1,675,000	37	1,301,000	3	0.1%	0.4%
	40,000	89,999	1,000	35.604	169	6,017,000	78	4,587,000	7	0.3%	1.5%
	90,000	139,999	1,000	42.297	91	3,849,000	29	3,359,000	2	0.1%	0.9%
	140,000	189,999	1,000	44.597	62	2,765,000	11	1,755,000	1	0.0%	0.7%
	190,000	239,999	1,000	47.863	51	2,441,000	4	851,000	0	0.0%	0.6%
	240,000	289,999	1,000	42.787	47	2,011,000	11	2,851,000	1	0.0%	0.5%
	290,000	339,999	1,000	43.500	36	1,566,000	8	2,486,000	1	0.0%	0.4%
	340,000	389,999	1,000	43.786	28	1,226,000	9	3,336,000	1	0.0%	0.3%
	390,000	489,999	1,000	72.579	19	1,379,000	9	3,889,000	1	0.0%	0.3%
	490,000	589,999	1,000	97.000	10	970,000	1	560,000	0	0.0%	0.2%
	590,000	689,999	1,000	97.667	9	879,000	2	1,359,000	0	0.0%	0.2%
	690,000	11,570,000	1,000	4,789.857	7	33,529,000	7	38,359,000	1	0.0%	8.2%
		Monthly and Annual Subtotals:			5,074	66,414,000	367	66,414,000	31	1.3%	16.3%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
3 Inch Meters	0	999	1,000	0.940	167	157,000	10	0	1	0.0%	0.0%
	1,000	1,999	1,000	1.000	157	157,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	0.975	157	153,000	4	8,000	0	0.0%	0.0%
	3,000	3,999	1,000	0.987	153	151,000	2	6,000	0	0.0%	0.0%
	4,000	4,999	1,000	0.993	151	150,000	1	4,000	0	0.0%	0.0%
	5,000	5,999	1,000	0.993	150	149,000	1	5,000	0	0.0%	0.0%
	6,000	6,999	1,000	0.980	149	146,000	3	18,000	0	0.0%	0.0%
	7,000	7,999	1,000	0.986	146	144,000	2	14,000	0	0.0%	0.0%
	8,000	8,999	1,000	0.993	144	143,000	1	8,000	0	0.0%	0.0%
	9,000	9,999	1,000	0.986	143	141,000	2	18,000	0	0.0%	0.0%
	10,000	14,999	1,000	4.894	141	690,000	5	60,000	0	0.0%	0.2%
	15,000	19,999	1,000	4.926	136	670,000	4	70,000	0	0.0%	0.2%
	20,000	24,999	1,000	4.955	132	654,000	3	69,000	0	0.0%	0.2%
	25,000	29,999	1,000	4.705	129	607,000	13	352,000	1	0.0%	0.1%
	30,000	30,999	1,000	0.991	116	115,000	1	30,000	0	0.0%	0.0%
	31,000	39,999	1,000	8.383	115	964,000	15	529,000	1	0.1%	0.2%
	40,000	89,999	1,000	39.060	100	3,906,000	30	1,606,000	3	0.1%	1.0%
	90,000	139,999	1,000	46.443	70	3,251,000	7	731,000	1	0.0%	0.8%
	140,000	189,999	1,000	45.413	63	2,861,000	11	1,801,000	1	0.0%	0.7%
	190,000	239,999	1,000	44.635	52	2,321,000	14	3,081,000	1	0.0%	0.6%
	240,000	289,999	1,000	46.763	38	1,777,000	5	1,327,000	0	0.0%	0.4%
	290,000	339,999	1,000	47.909	33	1,581,000	3	951,000	0	0.0%	0.4%
	340,000	389,999	1,000	48.900	30	1,467,000	3	1,137,000	0	0.0%	0.4%
	390,000	489,999	1,000	95.481	27	2,578,000	4	1,838,000	0	0.0%	0.6%
	490,000	589,999	1,000	95.826	23	2,204,000	2	1,084,000	0	0.0%	0.5%
	590,000	689,999	1,000	96.524	21	2,027,000	1	617,000	0	0.0%	0.5%
	690,000	1,564,000	1,000	273.650	20	5,473,000	20	19,273,000	2	0.1%	1.3%
		Monthly and Annual Subtotals:			2,763	34,637,000	167	34,637,000	14	0.6%	8.5%
3 Inch Meters - City Use	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	30,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	9.000	12	108,000	0	0	0	0.0%	0.0%
	40,000	89,999	1,000	50.000	12	600,000	0	0	0	0.0%	0.1%
	90,000	139,999	1,000	50.000	12	600,000	0	0	0	0.0%	0.1%
	140,000	189,999	1,000	43.333	12	520,000	3	490,000	0	0.0%	0.1%
	190,000	239,999	1,000	44.556	9	401,000	3	671,000	0	0.0%	0.1%
	240,000	289,999	1,000	47.000	6	282,000	1	272,000	0	0.0%	0.1%
	290,000	339,999	1,000	48.600	5	243,000	1	333,000	0	0.0%	0.1%
	340,000	389,999	1,000	41.750	4	167,000	1	357,000	0	0.0%	0.0%
	390,000	489,999	1,000	51.667	3	155,000	2	835,000	0	0.0%	0.0%
	490,000	589,999	1,000	46.000	1	46,000	1	536,000	0	0.0%	0.0%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	536,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
		Monthly and Annual Subtotals:			256	3,494,000	12	3,494,000	1	0.0%	0.9%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
4 Inch Meters	0	999	1,000	0.911	101	92,000	9	0	1	0.0%	0.0%
	1,000	1,999	1,000	0.891	92	82,000	10	10,000	1	0.0%	0.0%
	2,000	2,999	1,000	0.963	82	79,000	3	6,000	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	79	79,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	0.987	79	78,000	1	4,000	0	0.0%	0.0%
	5,000	5,999	1,000	0.987	78	77,000	1	5,000	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	77	77,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	77	77,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	0.987	77	76,000	1	8,000	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	76	76,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	4.895	76	372,000	3	37,000	0	0.0%	0.1%
	15,000	19,999	1,000	4.822	73	352,000	4	67,000	0	0.0%	0.1%
	20,000	24,999	1,000	4.812	69	332,000	4	87,000	0	0.0%	0.1%
	25,000	29,999	1,000	4.877	65	317,000	3	82,000	0	0.0%	0.1%
	30,000	30,999	1,000	1.000	62	62,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	8.403	62	521,000	6	203,000	1	0.0%	0.1%
	40,000	89,999	1,000	38.875	56	2,177,000	21	1,267,000	2	0.1%	0.5%
	90,000	139,999	1,000	41.657	35	1,458,000	11	1,248,000	1	0.0%	0.4%
	140,000	189,999	1,000	44.875	24	1,077,000	4	637,000	0	0.0%	0.3%
	190,000	239,999	1,000	47.950	20	959,000	1	199,000	0	0.0%	0.2%
	240,000	289,999	1,000	46.105	19	876,000	2	506,000	0	0.0%	0.2%
	290,000	339,999	1,000	50.000	17	850,000	0	0	0	0.0%	0.2%
	340,000	389,999	1,000	49.824	17	847,000	1	387,000	0	0.0%	0.2%
	390,000	489,999	1,000	100.000	16	1,600,000	0	0	0	0.0%	0.4%
	490,000	589,999	1,000	93.938	16	1,503,000	3	1,673,000	0	0.0%	0.4%
	590,000	689,999	1,000	72.462	13	942,000	7	4,472,000	1	0.0%	0.2%
	690,000	3,061,000	1,000	840.333	6	5,042,000	6	9,182,000	1	0.0%	1.2%
		Monthly and Annual Subtotals:			1,464	20,080,000	101	20,080,000	8	0.3%	4.9%
6 Inch Meters	0	999	1,000	0.886	35	31,000	4	0	0	0.0%	0.0%
	1,000	1,999	1,000	1.000	31	31,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	0.968	31	30,000	1	2,000	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	4.800	30	144,000	2	24,000	0	0.0%	0.0%
	15,000	19,999	1,000	4.321	28	121,000	7	121,000	1	0.0%	0.0%
	20,000	24,999	1,000	4.476	21	94,000	5	114,000	0	0.0%	0.0%
	25,000	29,999	1,000	4.750	16	76,000	2	56,000	0	0.0%	0.0%
	30,000	30,999	1,000	1.000	14	14,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	8.500	14	119,000	2	73,000	0	0.0%	0.0%
	40,000	89,999	1,000	34.167	12	410,000	6	350,000	1	0.0%	0.1%
	90,000	139,999	1,000	41.167	6	247,000	2	227,000	0	0.0%	0.1%
	140,000	189,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.0%
	190,000	239,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.0%
	240,000	289,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.0%
	290,000	339,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.0%
	340,000	389,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.0%
	390,000	489,999	1,000	100.000	4	400,000	0	0	0	0.0%	0.1%
	490,000	589,999	1,000	100.000	4	400,000	0	0	0	0.0%	0.1%
	590,000	689,999	1,000	100.000	4	400,000	0	0	0	0.0%	0.1%
	690,000	4,436,000	1,000	2,528.250	4	10,113,000	4	12,873,000	0	0.0%	2.5%
		Monthly and Annual Subtotals:			484	13,840,000	35	13,840,000	3	0.1%	3.4%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
	0	999	1,000	0.667	12	8,000	4	0	0	0.0%	0.0%
	1,000	1,999	1,000	0.875	8	7,000	1	1,000	0	0.0%	0.0%
	2,000	2,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
	15,000	19,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
	20,000	24,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
6 Inch Meters - City Use	25,000	29,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
	30,000	30,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	9.000	7	63,000	0	0	0	0.0%	0.0%
	40,000	89,999	1,000	50.000	7	350,000	0	0	0	0.0%	0.1%
	90,000	139,999	1,000	46.000	7	322,000	1	112,000	0	0.0%	0.1%
	140,000	189,999	1,000	41.833	6	251,000	1	141,000	0	0.0%	0.1%
	190,000	239,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	240,000	289,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	290,000	339,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	340,000	389,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	390,000	489,999	1,000	100.000	5	500,000	0	0	0	0.0%	0.1%
	490,000	589,999	1,000	100.000	5	500,000	0	0	0	0.0%	0.1%
	590,000	689,999	1,000	84.400	5	422,000	1	612,000	0	0.0%	0.1%
	690,000	1,480,000	1,000	383.000	4	1,532,000	4	4,292,000	0	0.0%	0.4%
		Monthly and Annual Subtotals:			177	5,158,000	12	5,158,000	1	0.0%	1.3%
	0	999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	1,000	1,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
	15,000	19,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
	20,000	24,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
	25,000	29,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
8 Inch Meters	30,000	30,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	9.000	6	54,000	0	0	0	0.0%	0.0%
	40,000	89,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	90,000	139,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	140,000	189,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	190,000	239,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	240,000	289,999	1,000	47.000	6	282,000	1	272,000	0	0.0%	0.1%
	290,000	339,999	1,000	46.400	5	232,000	1	322,000	0	0.0%	0.1%
	340,000	389,999	1,000	34.500	4	138,000	2	718,000	0	0.0%	0.0%
	390,000	489,999	1,000	62.500	2	125,000	1	415,000	0	0.0%	0.0%
	490,000	589,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	590,000	689,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	690,000	958,000	1,000	268.000	1	268,000	1	958,000	0	0.0%	0.1%
		Monthly and Annual Subtotals:			140	2,685,000	6	2,685,000	1	0.0%	0.7%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
10 Inch Meters	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	30,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	8.333	12	100,000	1	32,000	0	0.0%	0.0%
	40,000	89,999	1,000	32.000	11	352,000	6	342,000	1	0.0%	0.1%
	90,000	139,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	140,000	189,999	1,000	45.200	5	226,000	1	166,000	0	0.0%	0.1%
	190,000	239,999	1,000	35.750	4	143,000	2	423,000	0	0.0%	0.0%
	240,000	289,999	1,000	50.000	2	100,000	0	0	0	0.0%	0.0%
	290,000	339,999	1,000	50.000	2	100,000	0	0	0	0.0%	0.0%
	340,000	389,999	1,000	50.000	2	100,000	0	0	0	0.0%	0.0%
	390,000	489,999	1,000	65.500	2	131,000	1	421,000	0	0.0%	0.0%
	490,000	589,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	590,000	689,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	690,000	1,221,000	1,000	531.000	1	531,000	1	1,221,000	0	0.0%	0.1%
		Monthly and Annual Subtotals:			228	2,605,000	12	2,605,000	1	0.0%	0.6%
		Grand Totals:			195,947	407,604,000	29,122		2,427	100%	100%

Table 3 - User Base Data and Operating Incomes

Douglas, WY; Water Rates, Model 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)

$65,758 Census Bureau estimate of AMHI for the year: 2016

$36,944 Census Bureau estimate of AMHI for the year: 2000

$28,814 AMHI growth during this time period

4.87% 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

10 Number of new connections made during the test year

$3,780 Average system development 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.

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)									
				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
		7/1/16	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
Average Number of Customers for the Year	N.A.	2,427	2,437	2,447	2,457	2,467	2,477	2,487	2,497	2,507	2,517	2,527	2,537
Actual (Test Year) and Projected Volumes, in Gallons	N.A.	407,604,000	409,283,571	410,963,143	412,642,714	414,322,286	416,001,857	417,681,429	419,361,000	421,040,572	422,720,143	424,399,715	426,079,286
Customers Added or Lost (-) During the Year	N.A.	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Customer Growth or Loss (-) Rate	N.A.	0.41%	0.41%	0.41%	0.41%	0.41%	0.40%	0.40%	0.40%	0.40%	0.40%	0.40%	0.39%
Rate Increases Projected for Future Years	N.A.	N.A.	N.A.	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

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		$2,207,528	$2,208,600	$2,598,669	$2,674,521	$2,752,588	$2,832,840	$2,915,385	$3,000,286	$3,087,609	$3,177,424	$3,269,800	$3,364,809
Additional Sales Revenues From New Customers			$25	$10,621	$10,931	$11,158	$11,437	$11,723	$12,016	$12,317	$12,625	$12,940	$13,264
Total Calculated Revenues (User Charge Fees)		$2,207,528	$2,208,625	$2,609,289	$2,685,452	$2,763,747	$2,844,278	$2,927,108	$3,012,302	$3,099,926	$3,190,049	$3,282,741	$3,378,073

Operating Incomes

USER CHARGES	N.A.	$2,137,960	$2,139,022	$2,527,060	$2,600,822	$2,676,650	$2,754,643	$2,834,863	$2,917,372	$3,002,235	$3,089,518	$3,179,288	$3,271,616
Late Payment Charge	N.A.	$23,515	$23,611	$23,708	$23,805	$23,901	$23,998	$24,094	$24,191	$24,287	$24,384	$24,480	$24,577
Water Plant Investment Fees (Current Rate Structure)	% Above	$37,800	$37,696	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500
Meter Size-based System Development Fees (Table 13)	% Above	$0	$93	$34,020	$34,871	$35,742	$36,636	$37,552	$38,491	$39,453	$40,439	$41,450	$42,487
Interest Income	N.A.	$40,227	$5,181	$5,367	$6,341	$6,507	$6,713	$6,854	$7,036	$7,261	$7,416	$7,614	$7,861
BULK WATER	N.A.	$37,020	$37,039	$43,758	$45,035	$46,348	$47,699	$49,088	$50,516	$51,986	$53,497	$55,052	$56,650
OTHER	N.A.	$2,094	$2,094	$2,094	$2,094	$2,094	$2,094	$2,094	$2,094	$2,094	$2,094	$2,094	$2,094
REIMBURSEMENTS	N.A.	$23,172	$23,172	$23,172	$23,172	$23,172	$23,172	$23,172	$23,172	$23,172	$23,172	$23,172	$23,172
TRANSFER FROM UTILITY DEPOSIT	N.A.	$340	$340	$340	$340	$340	$340	$340	$340	$340	$340	$340	$340
UTILITY SERVICE FEES	N.A.	$20,375	$20,375	$20,375	$20,375	$20,375	$20,375	$20,375	$20,375	$20,375	$20,375	$20,375	$20,375
WWDC GRANT	N.A.	$160,023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Loss Due to Late Rate Adjustment on 3/1/2019	N.A.	$0	-$391,141	-$293,355	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Incomes		**$2,482,525**	**$1,897,482**	**$2,390,038**	**$2,760,355**	**$2,838,629**	**$2,919,169**	**$3,001,932**	**$3,087,087**	**$3,174,703**	**$3,264,734**	**$3,357,365**	**$3,452,671**

Table 4 - Operating Costs and Net Income

Douglas, WY; Water Rates, Model 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 7/1/16	Analysis (This) Year Starting 7/1/17	Years Following the Analysis Year (for Which Results Have Been Projected) 1st Year Starting 7/1/18	2nd Year Starting 7/1/19	3rd Year Starting 7/1/20	4th Year Starting 7/1/21	5th Year Starting 7/1/22	6th Year Starting 7/1/23	7th Year Starting 7/1/24	8th Year Starting 7/1/25	9th Year Starting 7/1/26	10th Year Starting 7/1/27
ARCHITECT, ENG, SURVEY	3.0%	$789	$813	$837	$862	$888	$915	$942	$970	$999	$1,029	$1,060	$1,092
ARCHITECT/ENGINEERING/SURVEY	3.0%	$299	$308	$317	$327	$337	$347	$357	$368	$379	$390	$402	$414
COLLECTION FEES	3.0%	$266	$274	$283	$291	$300	$309	$318	$328	$337	$348	$358	$369
DEBT PAYMENT - CAPITAL LEASE	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
DEPRECIATION	0.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DUES/MEMBERSHIPS/SUBSCRIPTIONS	3.0%	$2,114	$2,177	$2,242	$2,310	$2,379	$2,450	$2,524	$2,600	$2,678	$2,758	$2,841	$2,926
EMPLOYEE BENEFITS - DFRRD COMP	3.0%	$2,331	$2,401	$2,473	$2,547	$2,624	$2,702	$2,783	$2,867	$2,953	$3,041	$3,133	$3,227
EMPLOYEE BENEFITS - HEALTH INS	3.0%	$90,364	$93,075	$95,867	$98,743	$101,705	$104,757	$107,899	$111,136	$114,470	$117,904	$121,442	$125,085
EMPLOYEE BENEFITS - SCL SCRTY	3.0%	$26,279	$27,068	$27,880	$28,716	$29,578	$30,465	$31,379	$32,320	$33,290	$34,289	$35,317	$36,377
EMPLOYEE BENEFITS - WRKRS COMP	3.0%	$14,755	$15,197	$15,653	$16,123	$16,607	$17,105	$17,618	$18,146	$18,691	$19,252	$19,829	$20,424
EMPLOYEE BENEFITS - WY RTRMNT	3.0%	$53,425	$55,028	$56,678	$58,379	$60,130	$61,934	$63,792	$65,706	$67,677	$69,707	$71,799	$73,953
EQUIPMENT/TOOLS-NON CAPITALIZE	3.0%	$32,325	$33,294	$34,293	$35,322	$36,382	$37,473	$38,597	$39,755	$40,948	$42,176	$43,442	$44,745
FUEL	3.0%	$9,152	$9,426	$9,709	$10,000	$10,300	$10,609	$10,928	$11,256	$11,593	$11,941	$12,299	$12,668
LEASE PAYMENTS - OPERATING	3.0%	$195	$200	$206	$213	$219	$226	$232	$239	$246	$254	$261	$269
MAINTENANCE AGREEMENT	3.0%	$8,674	$8,934	$9,202	$9,478	$9,763	$10,056	$10,357	$10,668	$10,988	$11,318	$11,657	$12,007
MANAGEMENT FEES - Administration	3.0%	$264,364	$272,295	$280,464	$288,878	$297,544	$306,470	$315,664	$325,134	$334,888	$344,935	$355,283	$365,942
MEALS/LODGING/TRAVEL	3.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MISC CONTRACTUAL SERVICES	3.0%	$24,921	$25,668	$26,438	$27,231	$28,048	$28,890	$29,756	$30,649	$31,569	$32,516	$33,491	$34,496
TRAINING/DEVELOPMENT	3.0%	$2,081	$2,143	$2,208	$2,274	$2,342	$2,412	$2,485	$2,559	$2,636	$2,715	$2,797	$2,881
UTILITY SERVICES - ELECTRICITY	3.0%	$50,367	$51,878	$53,652	$55,488	$57,384	$59,344	$61,370	$63,465	$65,629	$67,867	$70,179	$72,570
UTILITY SERVICES - NATURAL GAS	3.0%	$6,476	$6,670	$6,870	$7,076	$7,288	$7,507	$7,732	$7,964	$8,203	$8,449	$8,703	$8,964
UTILITY SERVICES - WTR/SWR/GRB	3.0%	$18,859	$19,425	$20,008	$20,608	$21,226	$21,863	$22,519	$23,195	$23,891	$24,607	$25,345	$26,106
CAPITALIZED EXPENDITURES: ARCHITECT/ENGINEERING/SURVEY	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
CAPITALIZED EXPENDITURES: IMPRVMNTS OTHER THAN BLDG	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
CAPITALIZED EXPENDITURES: LAND	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
CAPITALIZED EXPENDITURES: LEGAL	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL SERVICES	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
One-time Reduction of R&R Annuity	0.0%	-$168,758	-$168,758	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Annual Payment to Repair & Replacement (Table 7)	0.0%	$168,758	$168,758	$168,758	$168,758	$168,758	$168,758	$168,758	$168,758	$168,758	$168,758	$168,758	$168,758
User Charge Analysis Services	5.0%	$0	$6,242	$0	$0	$6,881	$0	$0	$7,587	$0	$0	$8,364	$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		**$1,036,145**	**$1,073,471**	**$1,268,222**	**$1,301,432**	**$1,342,525**	**$1,370,889**	**$1,407,198**	**$1,452,192**	**$1,483,141**	**$1,522,841**	**$1,572,105**	**$1,605,875**
Net Income (or Loss)		$1,446,381	$824,012	$1,121,817	$1,458,923	$1,496,104	$1,548,280	$1,594,733	$1,634,895	$1,691,562	$1,741,893	$1,785,261	$1,846,796
Working Capital Goal: 50%	In Dollars, That is:	$518,072	$536,735	$634,111	$650,716	$671,262	$685,444	$703,599	$726,096	$741,570	$761,421	$786,052	$802,937

Notes: The City includes individual capital and equipment replacement costs in its operating budget, which is normal. However, for rate calculation purposes, we account for capital costs in Table 5 and replacement costs in Table 6. Therefore, the "test year" costs in the above table do not add up to the same total as the City's expense statement did, but the remainder of those costs are in the other two tables. As to future costs, they were increased by an inflation factor and some, those that are related to the number of customers served and the volumes they use, are also increased by the growth rate each year. Those are highlighted yellow.

Table 5 - Capital Improvements Program (CIP)

Douglas, WY; Water Rates, Model 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
	7/1/16	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
Planned Spending, Debt-paid Portion of Projects (CIP costs to be funded with loans are shown in this section.)												
Treatment Install 4th Filter on WTP	$0	$0	$0	$0	$0	$0	$278,226	$0	$0	$0	$0	$322,540
Main Replace Poplar & 7th - 6th to Cedar	$0	$0	$215,270	$0	$0	$0	$0	$249,557	$0	$0	$0	$0
Main Replace Springline Replacement	$0	$0	$0	$2,811,385	$98,345	$0	$0	$0	$3,259,166	$114,009	$0	$0
Main Replace Elm St - Brownfield to 3rd	$0	$0	$154,500	$0	$0	$0	$0	$179,108	$0	$0	$0	$0
Main Replace 8th - Center to Cedar	$0	$0	$0	$245,068	$0	$0	$0	$0	$284,101	$0	$0	$0
Main Replace Oak Street - 2nd to 6th St	$0	$0	$243,595	$0	$0	$0	$0	$282,393	$0	$0	$0	$0
Main Replace 3rd St - Cedar to Center	$0	$0	$0	$137,121	$0	$0	$0	$0	$158,961	$0	$0	$0
Main Replace Cody St - 5th to Jefferson	$0	$0	$0	$0	$174,290	$0	$0	$0	$0	$202,050	$0	$0
Main Replace 9th Alley - Center to Cedar	$0	$0	$0	$0	$333,555	$0	$0	$0	$0	$386,682	$0	$0
Main Replace Adams St - Richards to Laramie	$0	$0	$0	$245,068	$0	$0	$0	$0	$284,101	$0	$0	$0
Main Replace Pine St - 5th to 6th	$0	$0	$0	$0	$140,962	$0	$0	$0	$0	$163,413	$0	$0
Main Replace Ash St - 3rd to 8th & 7th to Pine	$0	$0	$0	$0	$0	$173,328	$0	$0	$0	$0	$200,935	$0
Main Replace 10th St Alley - Hamilton to 10th	$0	$0	$0	$0	$0	$201,185	$0	$0	$0	$0	$233,228	$0
Main Replace Birch St - 6th to 8th	$0	$0	$0	$0	$0	$0	$194,178	$0	$0	$0	$0	$225,106
Main Replace New Well Line	$0	$0	$0	$0	$0	$0	$1,738,911	$0	$0	$0	$0	$2,015,875
Loan Closing Costs, Estimated at: 2.50%	$0	$0	$15,794	$91,201	$20,411	$10,538	$64,088	$21,226	$122,567	$27,430	$14,162	$86,129
Total Debt-paid Portion of Projects	$0	$0	$629,159	$3,529,844	$767,563	$385,051	$2,275,403	$732,284	$4,108,896	$893,584	$448,325	$2,649,649
Planned Spending, Grant-paid Portion of Projects (CIP costs to be grant-funded are shown here.)												
Total Grant-paid Portion of Projects	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Table 5 - Capital Improvements 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
	7/1/16	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
Planned Spending, Cash-paid Portion of Projects (CIP costs to be funded from reserves are shown here.)												
Treatment Install 4th Filter on WTP	$0	$0	$0	$0	$0	$0	$278,226	$0	$0	$0	$0	$322,540
Main Replace Poplar & 7th - 6th to Cedar	$0	$0	$215,270	$0	$0	$0	$0	$249,557	$0	$0	$0	$0
Main Replace Springline Replacement	$0	$0	$0	$2,811,385	$98,345	$0	$0	$0	$3,259,166	$114,009	$0	$0
Main Replace Elm St - Brownfield to 3rd	$0	$0	$154,500	$0	$0	$0	$0	$179,108	$0	$0	$0	$0
Main Replace 8th - Center to Cedar	$0	$0	$0	$245,068	$0	$0	$0	$0	$284,101	$0	$0	$0
Main Replace Oak Street - 2nd to 6th St	$0	$0	$243,595	$0	$0	$0	$0	$282,393	$0	$0	$0	$0
Main Replace 3rd St - Cedar to Center	$0	$0	$0	$137,121	$0	$0	$0	$0	$158,961	$0	$0	$0
Main Replace Cody St - 5th to Jefferson	$0	$0	$0	$0	$174,290	$0	$0	$0	$0	$202,050	$0	$0
Main Replace 9th Alley - Center to Cedar	$0	$0	$0	$0	$333,555	$0	$0	$0	$0	$386,682	$0	$0
Main Replace Adams St - Richards to Laramie	$0	$0	$0	$245,068	$0	$0	$0	$0	$284,101	$0	$0	$0
Main Replace Pine St - 5th to 6th	$0	$0	$0	$0	$140,962	$0	$0	$0	$0	$163,413	$0	$0
Main Replace Ash St - 3rd to 8th & 7th to Pine	$0	$0	$0	$0	$0	$173,328	$0	$0	$0	$0	$200,935	$0
Main Replace 10th St Alley - Hamilton to 10th	$0	$0	$0	$0	$0	$201,185	$0	$0	$0	$0	$233,228	$0
Main Replace Birch St - 6th to 8th	$0	$0	$0	$0	$0	$0	$194,178	$0	$0	$0	$0	$225,106
Main Replace New Well Line	$0	$0	$0	$0	$0	$0	$1,738,911	$0	$0	$0	$0	$2,015,875
CAPITALIZED EXPENDITURES: ARCHITECT/ENGINEERING/SURVEY	$256,792	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
CAPITALIZED EXPENDITURES: IMPRVMNTS OTHER THAN BLDG	$15,381	$15,381	$15,381	$15,381	$15,381	$15,381	$15,381	$15,381	$15,381	$15,381	$15,381	$15,381
CAPITALIZED EXPENDITURES: LAND	$51,349	$0	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10
CAPITALIZED EXPENDITURES: LEGAL	$380	$380	$380	$380	$380	$380	$380	$380	$380	$380	$380	$380
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL	$1,092	$1,092	$1,092	$1,092	$1,092	$1,092	$1,092	$1,092	$1,092	$1,092	$1,092	$1,092
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL SERVICES	$150	$150	$150	$150	$150	$150	$150	$150	$150	$150	$150	$150
DEBT PAYMENT - CAPITAL LEASE	$384	$384	$384	$384	$384	$384	$384	$384	$384	$384	$384	$384
Total Cash-paid Portion of Projects	$325,528	$17,387	$630,753	$3,456,031	$764,542	$391,904	$2,228,707	$728,451	$4,003,723	$883,549	$451,559	$2,580,918
Total CIP Costs	**$325,528**	**$17,387**	**$1,259,912**	**$6,985,875**	**$1,532,105**	**$776,955**	**$4,504,111**	**$1,460,735**	**$8,112,618**	**$1,777,134**	**$899,885**	**$5,230,567**
Planned Spending, Debt Repayment												
Existing Debt Payments (Following is debt that was initiated during the test year or earlier.)												
None	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
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 1st Year				$38,477	$38,477	$38,477	$38,477	$38,477	$38,477	$38,477	$38,477	$38,477
Loan Originated in 2nd Year					$215,874	$215,874	$215,874	$215,874	$215,874	$215,874	$215,874	$215,874
Loan Originated in 3rd Year						$46,942	$46,942	$46,942	$46,942	$46,942	$46,942	$46,942
Loan Originated in 4th Year							$23,548	$23,548	$23,548	$23,548	$23,548	$23,548
Loan Originated in 5th Year								$139,156	$139,156	$139,156	$139,156	$139,156
Loan Originated in 6th Year									$44,784	$44,784	$44,784	$44,784
Loan Originated in 7th Year										$251,287	$251,287	$251,287
Loan Originated in 8th Year											$54,649	$54,649
Loan Originated in 9th Year												$27,418
Total Debt Payments	$0	$0	$0	$38,477	$254,351	$301,293	$324,841	$463,997	$508,781	$760,068	$814,717	$842,135
Total, All CIP-related Payouts	**$325,528**	**$17,387**	**$1,259,912**	**$7,024,352**	**$1,786,456**	**$1,078,248**	**$4,828,952**	**$1,924,733**	**$8,621,400**	**$2,537,202**	**$1,714,601**	**$6,072,702**

(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 Improvements 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)									
	7/1/16	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
CIP Funding Plan (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	$6,963,797	$8,142,002	$9,092,804	$9,668,348	$7,809,525	$8,422,380	$9,431,729	$8,643,393	$9,236,211	$6,584,518	$6,794,635	$7,424,880
Working Capital Transferred in	$1,503,734	$805,349	$1,024,441	$1,442,318	$1,475,558	$1,534,098	$1,576,578	$1,612,398	$1,676,087	$1,722,043	$1,760,629	$1,829,911
Debt and CIP Reserves Interest Earned (or Paid)	$0	$162,840	$181,856	$193,367	$156,190	$168,448	$188,635	$172,868	$184,724	$131,690	$135,893	$148,498
Total Available Internal Funds	$8,467,530	$9,110,191	$10,299,101	$11,304,033	$9,441,273	$10,124,925	$11,196,942	$10,428,660	$11,097,022	$8,438,252	$8,691,156	$9,403,289
Grant and Loan Proceeds (External Funds)												
Grants Assumed in the Second Section Above	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 1st Year			$629,159	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 2nd Year				$3,529,844	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 3rd Year					$767,563	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 4th Year						$385,051	$0	$0	$0	$0	$0	$0
Loan Originated in 5th Year							$2,275,403	$0	$0	$0	$0	$0
Loan Originated in 6th Year								$732,284	$0	$0	$0	$0
Loan Originated in 7th Year									$4,108,896	$0	$0	$0
Loan Originated in 8th Year										$893,584	$0	$0
Loan Originated in 9th Year											$448,325	$0
Loan Originated in 10th Year												$2,649,649
Total Available External Funds	$0	$0	$629,159	$3,529,844	$767,563	$385,051	$2,275,403	$732,284	$4,108,896	$893,584	$448,325	$2,649,649
Total Available Funds	$8,467,530	$9,110,191	$10,928,260	$14,833,877	$10,208,836	$10,509,976	$13,472,345	$11,160,944	$15,205,918	$9,331,836	$9,139,482	$12,052,939
Outcomes (This CIP spending and funding plan will result in the following cash needs and ending balances each year.)												
Total Available Funds	**$8,467,530**	**$9,110,191**	**$10,928,260**	**$14,833,877**	**$10,208,836**	**$10,509,976**	**$13,472,345**	**$11,160,944**	**$15,205,918**	**$9,331,836**	**$9,139,482**	**$12,052,939**
Total, All CIP-related Payouts	**$325,528**	**$17,387**	**$1,259,912**	**$7,024,352**	**$1,786,456**	**$1,078,248**	**$4,828,952**	**$1,924,733**	**$8,621,400**	**$2,537,202**	**$1,714,601**	**$6,072,702**
Debt and CIP Reserves Ending Balances	**$8,142,002**	**$9,092,804**	**$9,668,348**	**$7,809,525**	**$8,422,380**	**$9,431,729**	**$8,643,393**	**$9,236,211**	**$6,584,518**	**$6,794,635**	**$7,424,880**	**$5,980,237**

Notes: The City has a full slate of projects for the next five years. However, that plan does not cover the full 10-year period modeled above. Therefore, it was assumed the current CIP plan is representative of the next five years, so the amounts were repeated in the last five years, as well.

Table 6 - Equipment Replacement Schedule - Detailed

Douglas, WY; Water Rates, Model 2019-1

Year Beginning	Misc R&R	Cleaning Water Tanks	Line Locator	Filter sand replacement	Replace Soft smart motor controller	SCADA System replacement - 10 sites	Pickup (Replace #4) 50%	Pickup w/ Utility box - 50% (Replace #176)	Compressor - 50%
7/1/17	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/18	$0	$0	$8,500	$415,000	$0	$275,000	$17,500	$0	$0
7/1/19	$0	$0	$0	$0	$95,000	$0	$0	$0	$0
7/1/20	$0	$15,000	$0	$0	$0	$0	$0	$0	$0
7/1/21	$0	$0	$0	$0	$0	$0	$0	$0	$11,000
7/1/22	$0	$0	$0	$0	$0	$0	$0	$25,000	$0
7/1/23	$0	$0	$8,500	$0	$0	$0	$0	$0	$0
7/1/24	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/25	$0	$15,000	$0	$0	$0	$0	$0	$0	$0
7/1/26	$0	$0	$0	$415,000	$0	$0	$0	$0	$0
7/1/27	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$0	$0	$8,500	$0	$0	$275,000	$17,500	$0	$0
7/1/29	$0	$0	$0	$0	$95,000	$0	$0	$0	$0
7/1/30	$0	$15,000	$0	$0	$0	$0	$0	$0	$0
7/1/31	$0	$0	$0	$0	$0	$0	$0	$0	$11,000
7/1/32	$0	$0	$0	$0	$0	$0	$0	$25,000	$0
7/1/33	$0	$0	$8,500	$0	$0	$0	$0	$0	$0
7/1/34	$0	$0	$0	$415,000	$0	$0	$0	$0	$0
7/1/35	$0	$15,000	$0	$0	$0	$0	$0	$0	$0
7/1/36	$0	$0	$0	$0	$0	$0	$0	$0	$0

Table 6 - Equipment Replacement Schedule - Detailed

Year Beginning	Vac Truck (Replace #174) 50%	Loader - 50% (Replace 1996)	Backhoe - 50% (Replace #184) (1996)	Loader - 50% (Replace #188)	Painting Water Tanks - 3	Pickup w/ Utility box - 50% (Replace #178)	Loader - 50% (Replace 1996)	**Total Annual Replacement Costs**
7/1/17	$0	$0	$0	$0	$0	$0	$0	$0
7/1/18	$0	$0	$0	$0	$130,000	$20,000	$0	$866,000
7/1/19	$0	$70,000	$65,000	$0	$0	$0	$70,000	$300,000
7/1/20	$0	$0	$0	$70,000	$0	$0	$0	$85,000
7/1/21	$0	$0	$0	$0	$0	$0	$0	$11,000
7/1/22	$160,000	$0	$0	$0	$0	$0	$0	$185,000
7/1/23	$0	$0	$0	$0	$0	$0	$0	$8,500
7/1/24	$0	$0	$0	$0	$0	$0	$0	$0
7/1/25	$0	$0	$0	$0	$0	$0	$0	$15,000
7/1/26	$0	$0	$0	$0	$0	$0	$0	$415,000
7/1/27	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$0	$0	$0	$0	$0	$0	$0	$301,000
7/1/29	$0	$0	$0	$0	$0	$0	$0	$95,000
7/1/30	$0	$0	$0	$0	$0	$0	$0	$15,000
7/1/31	$0	$0	$0	$0	$0	$0	$0	$11,000
7/1/32	$0	$0	$0	$0	$0	$0	$0	$25,000
7/1/33	$0	$0	$0	$0	$0	$0	$0	$8,500
7/1/34	$0	$70,000	$65,000	$0	$0	$0	$0	$550,000
7/1/35	$0	$0	$0	$70,000	$0	$0	$0	$85,000
7/1/36	$0	$0	$0	$0	$0	$0	$0	$0

Table 7 - Equipment Replacement Annuity Calculation

Douglas, WY; Water Rates, Model 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
7/1/17	Analysis Year	$0	$0	$14,436	$736,252	$148,800
7/1/18	1st Year	$866,000	$891,980	$14,725	$27,755	$153,264
7/1/19	2nd Year	$300,000	$318,270	$555	-$121,203	$157,862
7/1/20	3rd Year	$85,000	$92,882	-$2,424	-$47,751	$162,598
7/1/21	4th Year	$11,000	$12,381	-$955	$107,671	$167,476
7/1/22	5th Year	$185,000	$214,466	$2,153	$64,117	$172,500
7/1/23	6th Year	$8,500	$10,149	$1,282	$224,007	$177,675
7/1/24	7th Year	$0	$0	$4,480	$397,245	$183,005
7/1/25	8th Year	$15,000	$19,002	$7,945	$554,946	$188,495
7/1/26	9th Year	$415,000	$541,481	$11,099	$193,322	$194,150
7/1/27	10th Year	$0	$0	$3,866	$365,946	$199,975
7/1/28	11th Year	$301,000	$416,654	$7,319	$125,368	$205,974
7/1/29	12th Year	$95,000	$135,447	$2,507	$161,186	$212,153
7/1/30	13th Year	$15,000	$22,028	$3,224	$311,139	$218,518
7/1/31	14th Year	$11,000	$16,638	$6,223	$469,481	$225,073
7/1/32	15th Year	$25,000	$38,949	$9,390	$608,679	$231,826
7/1/33	16th Year	$8,500	$13,640	$12,174	$775,970	$238,780
7/1/34	17th Year	$550,000	$909,066	$15,519	$51,181	$245,944
7/1/35	18th Year	$85,000	$144,707	$1,024	$76,256	$253,322
7/1/36	19th Year	$0	$0	$1,525	$246,538	$260,922

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	$721,816
	Minimum Annual Annuity	$158,885
	Discretionary Annuity	$9,873

Required Annual Deposit (Annuity) to Replacement Account **$168,758**

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

Table 8 - Average Cost Classification

Douglas, WY; Water Rates, Model 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: 7/1/2021 through 6/30/2022

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Variable Cost Percentage	Average Fixed Cost	Average Variable Cost
ARCHITECT, ENG, SURVEY	$915	100.0%	0.0%	$915	$0
ARCHITECT/ENGINEERING/SURVEY	$347	100.0%	0.0%	$347	$0
COLLECTION FEES	$309	35.2%	64.8%	$109	$200
DEBT PAYMENT - CAPITAL LEASE	$0	100.0%	0.0%	$0	$0
DEPRECIATION	$0	100.0%	0.0%	$0	$0
DUES/MEMBERSHIPS/SUBSCRIPTIONS	$2,450	25.0%	75.0%	$613	$1,838
EMPLOYEE BENEFITS - DFRRD COMP	$2,702	25.0%	75.0%	$676	$2,027
EMPLOYEE BENEFITS - HEALTH INS	$104,757	25.0%	75.0%	$26,189	$78,567
EMPLOYEE BENEFITS - SCL SCRTY	$30,465	25.0%	75.0%	$7,616	$22,849
EMPLOYEE BENEFITS - WRKRS COMP	$17,105	25.0%	75.0%	$4,276	$12,829
EMPLOYEE BENEFITS - WY RTRMNT	$61,934	25.0%	75.0%	$15,484	$46,451
EQUIPMENT/TOOLS-NON CAPITALIZE	$37,473	25.0%	75.0%	$9,368	$28,105
FUEL	$10,609	25.0%	75.0%	$2,652	$7,957
LEASE PAYMENTS - OPERATING	$226	25.0%	75.0%	$56	$169
MAINTENANCE AGREEMENT	$10,056	25.0%	75.0%	$2,514	$7,542
MANAGEMENT FEES - Administration	$306,470	100.0%	0.0%	$306,470	$0
MEALS/LODGING/TRAVEL	$0	25.0%	75.0%	$0	$0
MISC CONTRACTUAL SERVICES	$28,890	25.0%	75.0%	$7,222	$21,667
OPERATING SUPPLIES	$60,602	25.0%	75.0%	$15,151	$45,452
REFUNDS/REIMBURSEMENT EXPENSE	$1,018	35.2%	64.8%	$359	$659
RENT - LAND/BUILDINGS	$29,721	35.2%	64.8%	$10,471	$19,250
REPAIRS/MAINTENANCE	$7,019	25.0%	75.0%	$1,755	$5,264
REPLACEMENT RESERVE-SAND FILTE	$0	0.0%	100.0%	$0	$0
REPLACEMENT RESERVE-SMW REHA	$0	0.0%	100.0%	$0	$0
SALARIES/WAGES - ALLOWANCES	$638	25.0%	75.0%	$159	$478
SALARIES/WAGES - INCENTIVE	$772	25.0%	75.0%	$193	$579
SALARIES/WAGES - LONGEVITY	$1,653	25.0%	75.0%	$413	$1,240

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
SALARIES/WAGES - OVERTIME	$8,599	25.0%	75.0%	$2,150	$6,449
SALARIES/WAGES - REGULAR	$381,896	25.0%	75.0%	$95,474	$286,422
SALARIES/WAGES - TEMPORARY	$3,508	25.0%	75.0%	$877	$2,631
TELECOMMUNICATIONS	$872	100.0%	0.0%	$872	$0
TRAINING/DEVELOPMENT	$2,412	25.0%	75.0%	$603	$1,809
UTILITY SERVICES - ELECTRICITY	$59,344	0.0%	100.0%	$0	$59,344
UTILITY SERVICES - NATURAL GAS	$7,507	35.2%	64.8%	$2,645	$4,862
UTILITY SERVICES - WTR/SWR/GRB	$21,863	35.2%	64.8%	$7,702	$14,161
CAPITALIZED EXPENDITURES: ARCHITECT/ENGINEERING/SURVEY	$0	25.0%	75.0%	$0	$0
CAPITALIZED EXPENDITURES: IMPRVMNTS OTHER THAN BLDG	$0	25.0%	75.0%	$0	$0
CAPITALIZED EXPENDITURES: LAND	$0	25.0%	75.0%	$0	$0
CAPITALIZED EXPENDITURES: LEGAL	$0	25.0%	75.0%	$0	$0
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL	$0	25.0%	75.0%	$0	$0
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL SERVICES	$0	25.0%	75.0%	$0	$0
Annual Payment to Repair & Replacement (Table 7)	$168,758	25.0%	75.0%	$42,189	$126,568
User Charge Analysis Services	$0	35.2%	64.8%	$0	$0
Total, All CIP-related Payouts	$1,078,248	25.0%	75.0%	$269,562	$808,686
Grand Total Costs, Weighted Avg Percentages	$2,449,136	34.10%	65.9%	$835,081	$1,614,055

Bases for Cost to Serve Rate Structure

Number of Customers During Year Defined Above =	2,477	Unbilled-for Water is Estimated at	25%
Billed Volume, in Gallons, During Year Defined Above =	416,001,857	Unbilled-for Water is Estimated at This Percentage of Average Cost	54%
Average Fixed Cost per User per Month During Year Defined Above =	$28.10	Resulting Cost of Unbilled-for Water	$296,683
Average Variable Cost to Produce per 1,000 Gallons During Year Defined Above =	$3.88	Test Year Customer Metered Volume, in Gallons	407,604,000
Gallons per Billing Cycle Used by Average Residential Customer =	7,351	+ Test Year Unbilled-for Water, in Gallons	138,527,013
		Total Test Year Volume, in Gallons, From Master Meter Readings	546,131,013

Table 9 - Marginal Cost Classification
Douglas, WY; Water Rates, Model 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

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

The marginal rate structure basis year runs from: 7/1/2021 through 6/30/2022

Cost Items	Average Fixed Cost	Average Variable Cost	Marginal Fixed Cost Percentage	Marginal Variable Cost Percentage	Marginal Fixed Cost	Marginal Variable Cost
ARCHITECT, ENG, SURVEY	$915	$0	100%	100%	$915	$0
ARCHITECT/ENGINEERING/SURVEY	$347	$0	100%	100%	$347	$0
COLLECTION FEES	$109	$200	72%	54%	$78	$109
DEBT PAYMENT - CAPITAL LEASE	$0	$0	100%	100%	$0	$0
DEPRECIATION	$0	$0	100%	100%	$0	$0
DUES/MEMBERSHIPS/SUBSCRIPTIONS	$613	$1,838	100%	100%	$613	$1,838
EMPLOYEE BENEFITS - DFRRD COMP	$676	$2,027	50%	50%	$338	$1,013
EMPLOYEE BENEFITS - HEALTH INS	$26,189	$78,567	50%	50%	$13,095	$39,284
EMPLOYEE BENEFITS - SCL SCRTY	$7,616	$22,849	50%	50%	$3,808	$11,424
EMPLOYEE BENEFITS - WRKRS COMP	$4,276	$12,829	50%	50%	$2,138	$6,414
EMPLOYEE BENEFITS - WY RTRMNT	$15,484	$46,451	50%	50%	$7,742	$23,225
EQUIPMENT/TOOLS-NON CAPITALIZE	$9,368	$28,105	100%	100%	$9,368	$28,105
FUEL	$2,652	$7,957	100%	100%	$2,652	$7,957
LEASE PAYMENTS - OPERATING	$56	$169	100%	100%	$56	$169
MAINTENANCE AGREEMENT	$2,514	$7,542	100%	100%	$2,514	$7,542
MANAGEMENT FEES - Administration	$306,470	$0	100%	100%	$306,470	$0
MEALS/LODGING/TRAVEL	$0	$0	100%	100%	$0	$0
MISC CONTRACTUAL SERVICES	$7,222	$21,667	100%	100%	$7,222	$21,667
OPERATING SUPPLIES	$15,151	$45,452	50%	50%	$7,575	$22,726
REFUNDS/REIMBURSEMENT EXPENSE	$359	$659	72%	54%	$259	$359
RENT - LAND/BUILDINGS	$10,471	$19,250	72%	54%	$7,549	$10,472
REPAIRS/MAINTENANCE	$1,755	$5,264	50%	50%	$877	$2,632
REPLACEMENT RESERVE-SAND FILTE	$0	$0	50%	50%	$0	$0
REPLACEMENT RESERVE-SMW REHA	$0	$0	50%	50%	$0	$0
SALARIES/WAGES - ALLOWANCES	$159	$478	50%	50%	$80	$239

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
SALARIES/WAGES - INCENTIVE	$193	$579	50%	50%	$96	$289
SALARIES/WAGES - LONGEVITY	$413	$1,240	50%	50%	$207	$620
SALARIES/WAGES - OVERTIME	$2,150	$6,449	50%	50%	$1,075	$3,225
SALARIES/WAGES - REGULAR	$95,474	$286,422	50%	50%	$47,737	$143,211
SALARIES/WAGES - TEMPORARY	$877	$2,631	50%	50%	$439	$1,316
TELECOMMUNICATIONS	$872	$0	100%	100%	$872	$0
TRAINING/DEVELOPMENT	$603	$1,809	100%	100%	$603	$1,809
UTILITY SERVICES - ELECTRICITY	$0	$59,344	100%	100%	$0	$59,344
UTILITY SERVICES - NATURAL GAS	$2,645	$4,862	72%	54%	$1,907	$2,645
UTILITY SERVICES - WTR/SWR/GRB	$7,702	$14,161	72%	54%	$5,553	$7,703
CAPITALIZED EXPENDITURES: ARCHITECT/ENGINEERING/SURVEY	$0	$0	100%	100%	$0	$0
CAPITALIZED EXPENDITURES: IMPRVMNTS OTHER THAN BLDG	$0	$0	100%	100%	$0	$0
CAPITALIZED EXPENDITURES: LAND	$0	$0	100%	100%	$0	$0
CAPITALIZED EXPENDITURES: LEGAL	$0	$0	100%	100%	$0	$0
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL	$0	$0	100%	100%	$0	$0
CAPITALIZED EXPENDITURES: MISC CONTRACTUAL SERVICES	$0	$0	100%	100%	$0	$0
Annual Payment to Repair & Replacement (Table 7)	$42,189	$126,568	50%	50%	$21,095	$63,284
User Charge Analysis Services	$0	$0	72%	54%	$0	$0
Total, All CIP-related Payouts	$269,562	$808,686	50%	50%	$134,781	$404,343
Grand Total All Costs	$835,081	$1,614,055			$588,061	$872,965
	$2,449,136				$1,461,026	

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
	$19.79	
Marginal Fixed Cost as a Percent of Total Fixed Cost:	70%	$2.10
Marginal Variable Cost as a Percent of Total Variable Cost:		54%

Table 10 - Initial Rate Adjustments and Resulting Revenues

Douglas, WY; Water Rates, Model 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** 128% **Other Multiplier** 100%

6/30/18 **Date when fees will first be collected at adjusted rates. Actual adjustment should occur one billing cycle earlier.**

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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
0.75 Inch and Smaller Meters	0	999	$73,568	82	$38.57	0.000	$2.51	$230	$73,797
	1,000	1,999	$112,175	196	$38.57	0.000	$2.51	$359	$112,534
	2,000	2,999	$121,775	239	$38.57	0.000	$2.51	$393	$122,168
	3,000	3,999	$108,381	219	$38.57	0.000	$2.51	$350	$108,731
	4,000	4,999	$89,337	183	$38.57	0.000	$2.51	$289	$89,626
	5,000	5,999	$64,826	128	$38.57	0.000	$2.51	$209	$65,035
	6,000	6,999	$47,585	90	$38.57	0.000	$2.51	$153	$47,738
	7,000	7,999	$37,138	68	$38.57	0.000	$2.51	$119	$37,257
	8,000	8,999	$27,813	47	$38.57	0.000	$2.51	$89	$27,902
	9,000	9,999	$22,392	35	$38.57	0.000	$2.51	$71	$22,464
	10,000	14,999	$75,283	105	$38.57	0.000	$2.51	$238	$75,521
	15,000	19,999	$48,277	62	$38.57	0.000	$2.51	$152	$48,429
	20,000	24,999	$35,472	47	$38.57	0.000	$2.51	$112	$35,583
	25,000	29,999	$25,040	34	$38.57	0.000	$2.51	$79	$25,119
	30,000	30,999	$3,718	5	$38.57	0.000	$3.22	$13	$3,731
	31,000	39,999	$28,138	35	$38.57	0.000	$3.22	$88	$28,226
	40,000	89,999	$28,117	32	$38.57	0.000	$3.22	$88	$28,205
	90,000	139,999	$2,233	2	$38.57	0.000	$3.22	$7	$2,240
	140,000	189,999	$418	0	$38.57	0.000	$3.22	$1	$419
1 Inch Meters	0	999	$30,368	31	$38.57	0.000	$2.51	$94	$30,463
	1,000	1,999	$41,032	63	$38.57	0.000	$2.51	$130	$41,162
	2,000	2,999	$45,516	81	$38.57	0.000	$2.51	$146	$45,661
	3,000	3,999	$46,100	89	$38.57	0.000	$2.51	$148	$46,249
	4,000	4,999	$39,992	79	$38.57	0.000	$2.51	$129	$40,121
	5,000	5,999	$30,662	59	$38.57	0.000	$2.51	$99	$30,761
	6,000	6,999	$23,046	42	$38.57	0.000	$2.51	$74	$23,120
	7,000	7,999	$17,706	30	$38.57	0.000	$2.51	$56	$17,763
	8,000	8,999	$14,919	24	$38.57	0.000	$2.51	$48	$14,967
	9,000	9,999	$11,245	16	$38.57	0.000	$2.51	$36	$11,280
	10,000	14,999	$40,085	50	$38.57	0.000	$2.51	$126	$40,210
	15,000	19,999	$29,416	36	$38.57	0.000	$2.51	$92	$29,508
	20,000	24,999	$20,940	25	$38.57	0.000	$2.51	$66	$21,005
	25,000	29,999	$15,758	18	$38.57	0.000	$2.51	$49	$15,807
	30,000	30,999	$2,514	3	$38.57	0.000	$3.22	$9	$2,523
	31,000	39,999	$20,024	17	$38.57	0.000	$3.22	$62	$20,086
	40,000	89,999	$41,902	27	$38.57	0.000	$3.22	$128	$42,031
	90,000	139,999	$12,445	5	$38.57	0.000	$3.22	$38	$12,482
	140,000	189,999	$6,567	1	$38.57	0.000	$3.22	$20	$6,587
	190,000	239,999	$4,296	1	$38.57	0.000	$3.22	$13	$4,309
	240,000	289,999	$3,109	0	$38.57	0.000	$3.22	$9	$3,118
	290,000	339,999	$2,579	0	$38.57	0.000	$3.22	$8	$2,587
	340,000	389,999	$2,147	0	$38.57	0.000	$3.22	$6	$2,154
	390,000	489,999	$3,465	1	$38.57	0.000	$3.22	$10	$3,475
	490,000	589,999	$768	0	$38.57	0.000	$3.22	$2	$770
	590,000	689,999	$0	0	$38.57	0.000	$3.22	$0	$0
	690,000	582,000	$0	0	$38.57	0.000	$3.22	$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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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	$3,428	3	$120.16	0.000	$2.51	$15	$3,444
	1,000	1,999	$4,385	4	$120.16	0.000	$2.51	$21	$4,406
	2,000	2,999	$4,213	4	$120.16	0.000	$2.51	$21	$4,234
	3,000	3,999	$2,146	1	$120.16	0.000	$2.51	$9	$2,155
	4,000	4,999	$2,385	2	$120.16	0.000	$2.51	$10	$2,395
	5,000	5,999	$2,666	2	$120.16	0.000	$2.51	$12	$2,678
	6,000	6,999	$3,259	3	$120.16	0.000	$2.51	$16	$3,275
	7,000	7,999	$2,523	2	$120.16	0.000	$2.51	$12	$2,535
	8,000	8,999	$2,574	2	$120.16	0.000	$2.51	$12	$2,586
	9,000	9,999	$2,729	3	$120.16	0.000	$2.51	$13	$2,742
	10,000	14,999	$9,160	7	$120.16	0.000	$2.51	$41	$9,201
	15,000	19,999	$7,597	6	$120.16	0.000	$2.51	$35	$7,632
	20,000	24,999	$4,805	3	$120.16	0.000	$2.51	$20	$4,825
1.5 Inch Meters	25,000	29,999	$4,055	3	$120.16	0.000	$2.51	$17	$4,072
	30,000	30,999	$770	1	$120.16	0.000	$3.22	$4	$774
	31,000	39,999	$6,588	3	$120.16	0.000	$3.22	$26	$6,615
	40,000	89,999	$17,423	9	$120.16	0.000	$3.22	$69	$17,492
	90,000	139,999	$5,407	2	$120.16	0.000	$3.22	$20	$5,428
	140,000	189,999	$2,367	0	$120.16	0.000	$3.22	$8	$2,375
	190,000	239,999	$1,781	0	$120.16	0.000	$3.22	$6	$1,787
	240,000	289,999	$1,524	0	$120.16	0.000	$3.22	$5	$1,530
	290,000	339,999	$1,014	0	$120.16	0.000	$3.22	$4	$1,017
	340,000	389,999	$709	0	$120.16	0.000	$3.22	$2	$711
	390,000	489,999	$1,196	0	$120.16	0.000	$3.22	$4	$1,200
	490,000	589,999	$326	0	$120.16	0.000	$3.22	$1	$327
	590,000	689,999	$0	0	$120.16	0.000	$3.22	$0	$0
	690,000	528,000	$0	0	$120.16	0.000	$3.22	$0	$0
	0	999	$3,530	2	$181.35	0.000	$2.51	$15	$3,546
	1,000	1,999	$2,438	1	$181.35	0.000	$2.51	$10	$2,448
	2,000	2,999	$1,265	0	$181.35	0.000	$2.51	$5	$1,270
	3,000	3,999	$1,667	1	$181.35	0.000	$2.51	$7	$1,673
	4,000	4,999	$1,852	1	$181.35	0.000	$2.51	$8	$1,860
	5,000	5,999	$1,311	1	$181.35	0.000	$2.51	$5	$1,316
	6,000	6,999	$1,090	0	$181.35	0.000	$2.51	$4	$1,094
	7,000	7,999	$1,391	1	$181.35	0.000	$2.51	$5	$1,396
	8,000	8,999	$1,168	0	$181.35	0.000	$2.51	$4	$1,173
	9,000	9,999	$950	0	$181.35	0.000	$2.51	$3	$954
	10,000	14,999	$4,631	1	$181.35	0.000	$2.51	$17	$4,648
	15,000	19,999	$4,069	1	$181.35	0.000	$2.51	$14	$4,083
	20,000	24,999	$4,334	1	$181.35	0.000	$2.51	$16	$4,350
2 Inch Meters	25,000	29,999	$4,868	2	$181.35	0.000	$2.51	$19	$4,887
	30,000	30,999	$1,108	1	$181.35	0.000	$3.22	$5	$1,113
	31,000	39,999	$8,851	3	$181.35	0.000	$3.22	$33	$8,884
	40,000	89,999	$25,996	7	$181.35	0.000	$3.22	$92	$26,088
	90,000	139,999	$14,423	2	$181.35	0.000	$3.22	$48	$14,472
	140,000	189,999	$9,323	1	$181.35	0.000	$3.22	$30	$9,353
	190,000	239,999	$7,628	0	$181.35	0.000	$3.22	$23	$7,651
	240,000	289,999	$7,098	1	$181.35	0.000	$3.22	$23	$7,121
	290,000	339,999	$5,467	1	$181.35	0.000	$3.22	$18	$5,485
	340,000	389,999	$4,569	1	$181.35	0.000	$3.22	$15	$4,584
	390,000	489,999	$5,021	1	$181.35	0.000	$3.22	$17	$5,037
	490,000	589,999	$2,969	0	$181.35	0.000	$3.22	$9	$2,978
	590,000	689,999	$2,806	0	$181.35	0.000	$3.22	$9	$2,815
	690,000	11,570,000	$99,713	1	$181.35	0.000	$3.22	$299	$100,012

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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	$2,644	1	$344.52	0.000	$2.51	$11	$2,654
	1,000	1,999	$362	0	$344.52	0.000	$2.51	$1	$363
	2,000	2,999	$1,265	0	$344.52	0.000	$2.51	$5	$1,270
	3,000	3,999	$804	0	$344.52	0.000	$2.51	$3	$807
	4,000	4,999	$574	0	$344.52	0.000	$2.51	$2	$576
	5,000	5,999	$571	0	$344.52	0.000	$2.51	$2	$573
	6,000	6,999	$1,021	0	$344.52	0.000	$2.51	$4	$1,025
	7,000	7,999	$788	0	$344.52	0.000	$2.51	$3	$791
	8,000	8,999	$558	0	$344.52	0.000	$2.51	$2	$560
	9,000	9,999	$781	0	$344.52	0.000	$2.51	$3	$784
	10,000	14,999	$2,730	0	$344.52	0.000	$2.51	$9	$2,740
	15,000	19,999	$2,456	0	$344.52	0.000	$2.51	$8	$2,465
	20,000	24,999	$2,191	0	$344.52	0.000	$2.51	$7	$2,198
3 Inch Meters	25,000	29,999	$4,365	1	$344.52	0.000	$2.51	$16	$4,381
	30,000	30,999	$493	0	$344.52	0.000	$3.22	$2	$495
	31,000	39,999	$6,268	1	$344.52	0.000	$3.22	$23	$6,291
	40,000	89,999	$18,376	3	$344.52	0.000	$3.22	$63	$18,438
	90,000	139,999	$11,194	1	$344.52	0.000	$3.22	$35	$11,229
	140,000	189,999	$10,955	1	$344.52	0.000	$3.22	$36	$10,991
	190,000	239,999	$10,046	1	$344.52	0.000	$3.22	$34	$10,080
	240,000	289,999	$6,386	0	$344.52	0.000	$3.22	$20	$6,407
	290,000	339,999	$5,351	0	$344.52	0.000	$3.22	$17	$5,368
	340,000	389,999	$5,015	0	$344.52	0.000	$3.22	$16	$5,031
	390,000	489,999	$8,523	0	$344.52	0.000	$3.22	$26	$8,549
	490,000	589,999	$6,962	0	$344.52	0.000	$3.22	$21	$6,984
	590,000	689,999	$6,212	0	$344.52	0.000	$3.22	$19	$6,230
	690,000	1,564,000	$20,719	2	$344.52	0.000	$3.22	$67	$20,786
	0	999	$28	0	$344.52	0.000	$2.51	$0	$28
	1,000	1,999	$28	0	$344.52	0.000	$2.51	$0	$28
	2,000	2,999	$28	0	$344.52	0.000	$2.51	$0	$28
	3,000	3,999	$28	0	$344.52	0.000	$2.51	$0	$28
	4,000	4,999	$28	0	$344.52	0.000	$2.51	$0	$28
	5,000	5,999	$28	0	$344.52	0.000	$2.51	$0	$28
	6,000	6,999	$28	0	$344.52	0.000	$2.51	$0	$28
	7,000	7,999	$28	0	$344.52	0.000	$2.51	$0	$28
	8,000	8,999	$28	0	$344.52	0.000	$2.51	$0	$28
	9,000	9,999	$28	0	$344.52	0.000	$2.51	$0	$28
	10,000	14,999	$138	0	$344.52	0.000	$2.51	$0	$139
	15,000	19,999	$138	0	$344.52	0.000	$2.51	$0	$139
	20,000	24,999	$138	0	$344.52	0.000	$2.51	$0	$139
3 Inch Meters - City Use	25,000	29,999	$138	0	$344.52	0.000	$2.51	$0	$139
	30,000	30,999	$28	0	$344.52	0.000	$3.22	$0	$28
	31,000	39,999	$319	0	$344.52	0.000	$3.22	$1	$320
	40,000	89,999	$1,771	0	$344.52	0.000	$3.22	$5	$1,776
	90,000	139,999	$1,771	0	$344.52	0.000	$3.22	$5	$1,776
	140,000	189,999	$2,220	0	$344.52	0.000	$3.22	$7	$2,227
	190,000	239,999	$1,868	0	$344.52	0.000	$3.22	$6	$1,875
	240,000	289,999	$1,061	0	$344.52	0.000	$3.22	$3	$1,064
	290,000	339,999	$945	0	$344.52	0.000	$3.22	$3	$949
	340,000	389,999	$721	0	$344.52	0.000	$3.22	$2	$724
	390,000	489,999	$914	0	$344.52	0.000	$3.22	$3	$917
	490,000	589,999	$364	0	$344.52	0.000	$3.22	$1	$365
	590,000	689,999	$0	0	$344.52	0.000	$3.22	$0	$0
	690,000	536,000	$0	0	$344.52	0.000	$3.22	$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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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
4 Inch Meters	0	999	$3,811	1	$528.10	0.000	$2.51	$14	$3,824
	1,000	1,999	$4,187	1	$528.10	0.000	$2.51	$15	$4,202
	2,000	2,999	$1,382	0	$528.10	0.000	$2.51	$5	$1,386
	3,000	3,999	$182	0	$528.10	0.000	$2.51	$1	$183
	4,000	4,999	$580	0	$528.10	0.000	$2.51	$2	$582
	5,000	5,999	$577	0	$528.10	0.000	$2.51	$2	$579
	6,000	6,999	$177	0	$528.10	0.000	$2.51	$1	$178
	7,000	7,999	$177	0	$528.10	0.000	$2.51	$1	$178
	8,000	8,999	$575	0	$528.10	0.000	$2.51	$2	$577
	9,000	9,999	$175	0	$528.10	0.000	$2.51	$1	$176
	10,000	14,999	$2,056	0	$528.10	0.000	$2.51	$7	$2,063
	15,000	19,999	$2,410	0	$528.10	0.000	$2.51	$8	$2,418
	20,000	24,999	$2,364	0	$528.10	0.000	$2.51	$8	$2,372
	25,000	29,999	$1,930	0	$528.10	0.000	$2.51	$7	$1,936
	30,000	30,999	$143	0	$528.10	0.000	$3.22	$1	$143
	31,000	39,999	$3,937	1	$528.10	0.000	$3.22	$13	$3,950
	40,000	89,999	$14,823	2	$528.10	0.000	$3.22	$50	$14,873
	90,000	139,999	$8,702	1	$528.10	0.000	$3.22	$29	$8,731
	140,000	189,999	$4,779	0	$528.10	0.000	$3.22	$15	$4,794
	190,000	239,999	$3,231	0	$528.10	0.000	$3.22	$10	$3,241
	240,000	289,999	$3,386	0	$528.10	0.000	$3.22	$11	$3,396
	290,000	339,999	$2,509	0	$528.10	0.000	$3.22	$7	$2,517
	340,000	389,999	$2,900	0	$528.10	0.000	$3.22	$9	$2,909
	390,000	489,999	$4,723	0	$528.10	0.000	$3.22	$14	$4,737
	490,000	589,999	$5,636	0	$528.10	0.000	$3.22	$18	$5,654
	590,000	689,999	$5,580	1	$528.10	0.000	$3.22	$18	$5,598
	690,000	3,061,000	$17,282	1	$528.10	0.000	$3.22	$53	$17,336
6 Inch Meters	0	999	$3,633	0	$1,038.02	0.000	$2.51	$12	$3,644
	1,000	1,999	$71	0	$1,038.02	0.000	$2.51	$0	$72
	2,000	2,999	$959	0	$1,038.02	0.000	$2.51	$3	$962
	3,000	3,999	$69	0	$1,038.02	0.000	$2.51	$0	$69
	4,000	4,999	$69	0	$1,038.02	0.000	$2.51	$0	$69
	5,000	5,999	$69	0	$1,038.02	0.000	$2.51	$0	$69
	6,000	6,999	$69	0	$1,038.02	0.000	$2.51	$0	$69
	7,000	7,999	$69	0	$1,038.02	0.000	$2.51	$0	$69
	8,000	8,999	$69	0	$1,038.02	0.000	$2.51	$0	$69
	9,000	9,999	$69	0	$1,038.02	0.000	$2.51	$0	$69
	10,000	14,999	$2,112	0	$1,038.02	0.000	$2.51	$7	$2,119
	15,000	19,999	$6,511	1	$1,038.02	0.000	$2.51	$21	$6,532
	20,000	24,999	$4,668	0	$1,038.02	0.000	$2.51	$15	$4,683
	25,000	29,999	$1,956	0	$1,038.02	0.000	$2.51	$6	$1,962
	30,000	30,999	$32	0	$1,038.02	0.000	$3.22	$0	$32
	31,000	39,999	$2,132	0	$1,038.02	0.000	$3.22	$7	$2,139
	40,000	89,999	$6,552	1	$1,038.02	0.000	$3.22	$21	$6,573
	90,000	139,999	$2,510	0	$1,038.02	0.000	$3.22	$8	$2,518
	140,000	189,999	$590	0	$1,038.02	0.000	$3.22	$2	$592
	190,000	239,999	$590	0	$1,038.02	0.000	$3.22	$2	$592
	240,000	289,999	$590	0	$1,038.02	0.000	$3.22	$2	$592
	290,000	339,999	$590	0	$1,038.02	0.000	$3.22	$2	$592
	340,000	389,999	$590	0	$1,038.02	0.000	$3.22	$2	$592
	390,000	489,999	$1,181	0	$1,038.02	0.000	$3.22	$4	$1,184
	490,000	589,999	$1,181	0	$1,038.02	0.000	$3.22	$4	$1,184
	590,000	689,999	$1,181	0	$1,038.02	0.000	$3.22	$4	$1,184
	690,000	4,436,000	$33,414	0	$1,038.02	0.000	$3.22	$100	$33,514

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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
6 Inch Meters - City Use	0	999	$3,580	0	$1,038.02	0.000	$2.51	$11	$3,591
	1,000	1,999	$906	0	$1,038.02	0.000	$2.51	$3	$909
	2,000	2,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	3,000	3,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	4,000	4,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	5,000	5,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	6,000	6,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	7,000	7,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	8,000	8,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	9,000	9,999	$16	0	$1,038.02	0.000	$2.51	$0	$16
	10,000	14,999	$81	0	$1,038.02	0.000	$2.51	$0	$81
	15,000	19,999	$81	0	$1,038.02	0.000	$2.51	$0	$81
	20,000	24,999	$81	0	$1,038.02	0.000	$2.51	$0	$81
	25,000	29,999	$81	0	$1,038.02	0.000	$2.51	$0	$81
	30,000	30,999	$16	0	$1,038.02	0.000	$3.22	$0	$16
	31,000	39,999	$186	0	$1,038.02	0.000	$3.22	$1	$187
	40,000	89,999	$1,033	0	$1,038.02	0.000	$3.22	$3	$1,036
	90,000	139,999	$1,841	0	$1,038.02	0.000	$3.22	$6	$1,846
	140,000	189,999	$1,631	0	$1,038.02	0.000	$3.22	$5	$1,636
	190,000	239,999	$738	0	$1,038.02	0.000	$3.22	$2	$740
	240,000	289,999	$738	0	$1,038.02	0.000	$3.22	$2	$740
	290,000	339,999	$738	0	$1,038.02	0.000	$3.22	$2	$740
	340,000	389,999	$738	0	$1,038.02	0.000	$3.22	$2	$740
	390,000	489,999	$1,476	0	$1,038.02	0.000	$3.22	$4	$1,480
	490,000	589,999	$1,476	0	$1,038.02	0.000	$3.22	$4	$1,480
	590,000	689,999	$2,136	0	$1,038.02	0.000	$3.22	$7	$2,143
	690,000	1,480,000	$8,083	0	$1,038.02	0.000	$3.22	$25	$8,108
8 Inch Meters	0	999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	1,000	1,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	2,000	2,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	3,000	3,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	4,000	4,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	5,000	5,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	6,000	6,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	7,000	7,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	8,000	8,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	9,000	9,999	$14	0	$1,649.92	0.000	$2.51	$0	$14
	10,000	14,999	$69	0	$1,649.92	0.000	$2.51	$0	$69
	15,000	19,999	$69	0	$1,649.92	0.000	$2.51	$0	$69
	20,000	24,999	$69	0	$1,649.92	0.000	$2.51	$0	$69
	25,000	29,999	$69	0	$1,649.92	0.000	$2.51	$0	$69
	30,000	30,999	$14	0	$1,649.92	0.000	$3.22	$0	$14
	31,000	39,999	$159	0	$1,649.92	0.000	$3.22	$0	$160
	40,000	89,999	$886	0	$1,649.92	0.000	$3.22	$3	$888
	90,000	139,999	$886	0	$1,649.92	0.000	$3.22	$3	$888
	140,000	189,999	$886	0	$1,649.92	0.000	$3.22	$3	$888
	190,000	239,999	$886	0	$1,649.92	0.000	$3.22	$3	$888
	240,000	289,999	$3,329	0	$1,649.92	0.000	$3.22	$7	$3,336
	290,000	339,999	$3,181	0	$1,649.92	0.000	$3.22	$7	$3,188
	340,000	389,999	$5,400	0	$1,649.92	0.000	$3.22	$10	$5,410
	390,000	489,999	$2,865	0	$1,649.92	0.000	$3.22	$6	$2,871
	490,000	589,999	$295	0	$1,649.92	0.000	$3.22	$1	$296
	590,000	689,999	$295	0	$1,649.92	0.000	$3.22	$1	$296
	690,000	958,000	$3,287	0	$1,649.92	0.000	$3.22	$7	$3,294

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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	$28	0	$4,301.50	0.000	$2.51	$0	$28
	1,000	1,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	2,000	2,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	3,000	3,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	4,000	4,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	5,000	5,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	6,000	6,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	7,000	7,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	8,000	8,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	9,000	9,999	$28	0	$4,301.50	0.000	$2.51	$0	$28
	10,000	14,999	$138	0	$4,301.50	0.000	$2.51	$0	$139
	15,000	19,999	$138	0	$4,301.50	0.000	$2.51	$0	$139
	20,000	24,999	$138	0	$4,301.50	0.000	$2.51	$0	$139
10 Inch Meters	25,000	29,999	$138	0	$4,301.50	0.000	$2.51	$0	$139
	30,000	30,999	$28	0	$4,301.50	0.000	$3.22	$0	$28
	31,000	39,999	$3,834	0	$4,301.50	0.000	$3.22	$13	$3,847
	40,000	89,999	$22,271	1	$4,301.50	0.000	$3.22	$74	$22,345
	90,000	139,999	$738	0	$4,301.50	0.000	$3.22	$2	$740
	140,000	189,999	$4,206	0	$4,301.50	0.000	$3.22	$14	$4,220
	190,000	239,999	$7,500	0	$4,301.50	0.000	$3.22	$25	$7,524
	240,000	289,999	$295	0	$4,301.50	0.000	$3.22	$1	$296
	290,000	339,999	$295	0	$4,301.50	0.000	$3.22	$1	$296
	340,000	389,999	$295	0	$4,301.50	0.000	$3.22	$1	$296
	390,000	489,999	$3,925	0	$4,301.50	0.000	$3.22	$13	$3,938
	490,000	589,999	$295	0	$4,301.50	0.000	$3.22	$1	$296
	590,000	689,999	$295	0	$4,301.50	0.000	$3.22	$1	$296
	690,000	1,221,000	$5,106	0	$4,301.50	0.000	$3.22	$16	$5,123
Total Rate Revenue at Current Rates			$2,201,480		Total Rate Revenue at Modeled Rates			$7,120	
					Total Blended Rate Revenues for the Year [2]				$2,208,600

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. Otherwise, use the rates use the rates spelled out in the narrative report.

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
Douglas, WY; Water Rates, Model 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)
	$28,024,750	75.0%	$21,018,563	$1,224,923	25.0%	$7,006,188	$408,308
Totals	$28,024,750		$21,018,563	$1,224,923		$7,006,188	$408,308

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

2.1%	Target Percentage of Costs to Recover
$25,515	Target Portion of Costs to Recover
$1,650	Cost per Peak Flow Capacity Share

Base Flow Capacity Costs to be Recovered by System Development Fees

2.1%	Target Percentage of Costs to Recover
$8,505	Target Portion of Costs to Recover
$851	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:

$0	Average Field Cost per New Connection
$0	Average Administration Cost per New Connection
$0	Field and Admin Cost per New Connection
$851	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

75.0%	Target Percentage of Costs to Recover
$918,692	Target Portion of Costs to Recover in One Full Year
$76,558	Target Portion of Costs to Recover in Monthly Surcharges
$20.40	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

Douglas, WY; Water Rates, Model 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
Douglas, WY; Water Rates, Model 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 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	AWWA Capacity "Share" Factor, Compared to 5/8 Inch Meter	Foot Notes	Out of City Multiplier	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 Customers												
Five Eighths	Displacement	1.0		100%	1.0	$1,650	$851	$2,500	$0	$0.00	$0	$2,500
Three Quarters	Displacement	1.0	1	100%	1.0	$1,650	$851	$2,500	$0	$0.00	$0	$2,500
One Inch	Displacement	2.5		100%	1.0	$1,650	$851	$2,500	$0	$0.00	$0	$2,500
One & a Half Inch	Displacement	5.0		100%	5.0	$8,249	$851	$9,099	$0	$0.00	$0	$9,099
Two Inch	Displacement	8.0		100%	8.0	$13,198	$851	$14,049	$0	$0.00	$0	$14,049
Two & a Half Inch	Displacement	12.5	2	100%	12.5	$20,622	$851	$21,473	$0	$0.00	$0	$21,473
Three Inch	Singlet	16.0		100%	16.0	$26,396	$851	$27,247	$0	$0.00	$0	$27,247
Three Inch	Compound, Class I	16.0		100%	16.0	$26,396	$851	$27,247	$0	$0.00	$0	$27,247
Three Inch	Turbine, Class I	17.5		100%	17.5	$28,871	$851	$29,722	$0	$0.00	$0	$29,722
Four Inch	Singlet	25.0		100%	25.0	$41,245	$851	$42,095	$0	$0.00	$0	$42,095
Four Inch	Compound, Class I	25.0		100%	25.0	$41,245	$851	$42,095	$0	$0.00	$0	$42,095
Four Inch	Turbine, Class I	31.0		100%	31.0	$51,143	$851	$51,994	$0	$0.00	$0	$51,994
Six Inch	Singlet	50.0		100%	50.0	$82,489	$851	$83,340	$0	$0.00	$0	$83,340
Six Inch	Compound, Class I	50.0		100%	50.0	$82,489	$851	$83,340	$0	$0.00	$0	$83,340
Six Inch	Turbine, Class I	65.0		100%	65.0	$107,236	$851	$108,086	$0	$0.00	$0	$108,086
Eight Inch	Compound, Class I	80.0		100%	80.0	$131,982	$851	$132,833	$0	$0.00	$0	$132,833
Eight Inch	Turbine, Class I	140.0		100%	140.0	$230,969	$851	$231,820	$0	$0.00	$0	$231,820
Ten Inch	Turbine, Class II	210.0		100%	210.0	$346,454	$851	$347,304	$0	$0.00	$0	$347,304
Out of City Customers												
Five Eighths	Displacement	1.0		125%	1.0	$2,062	$1,063	$3,125	$0	$0.00	$0	$3,125
Three Quarters	Displacement	1.0	1	125%	1.0	$2,062	$1,063	$3,125	$0	$0.00	$0	$3,125
One Inch	Displacement	2.5		125%	1.0	$2,062	$1,063	$3,125	$0	$0.00	$0	$3,125
One & a Half Inch	Displacement	5.0		125%	5.0	$10,311	$1,063	$11,374	$0	$0.00	$0	$11,374
Two Inch	Displacement	8.0		125%	8.0	$16,498	$1,063	$17,561	$0	$0.00	$0	$17,561
Two & a Half Inch	Displacement	12.5	2	125%	12.5	$25,778	$1,063	$26,841	$0	$0.00	$0	$26,841
Three Inch	Singlet	16.0		125%	16.0	$32,996	$1,063	$34,059	$0	$0.00	$0	$34,059
Three Inch	Compound, Class I	16.0		125%	16.0	$32,996	$1,063	$34,059	$0	$0.00	$0	$34,059
Three Inch	Turbine, Class I	17.5		125%	17.5	$36,089	$1,063	$37,152	$0	$0.00	$0	$37,152
Four Inch	Singlet	25.0		125%	25.0	$51,556	$1,063	$52,619	$0	$0.00	$0	$52,619
Four Inch	Compound, Class I	25.0		125%	25.0	$51,556	$1,063	$52,619	$0	$0.00	$0	$52,619
Four Inch	Turbine, Class I	31.0		125%	31.0	$63,929	$1,063	$64,992	$0	$0.00	$0	$64,992
Six Inch	Singlet	50.0		125%	50.0	$103,111	$1,063	$104,174	$0	$0.00	$0	$104,174
Six Inch	Compound, Class I	50.0		125%	50.0	$103,111	$1,063	$104,174	$0	$0.00	$0	$104,174
Six Inch	Turbine, Class I	65.0		125%	65.0	$134,045	$1,063	$135,108	$0	$0.00	$0	$135,108
Eight Inch	Compound, Class I	80.0		125%	80.0	$164,978	$1,063	$166,041	$0	$0.00	$0	$166,041
Eight Inch	Turbine, Class I	140.0		125%	140.0	$288,712	$1,063	$289,775	$0	$0.00	$0	$289,775
Ten Inch	Turbine, Class II	210.0		125%	210.0	$433,067	$1,063	$434,131	$0	$0.00	$0	$434,131

Please Note: The above system development fees are to replace the City's current "Plant Investment Fees," with one exception. To recover the direct costs associated with making each new connection, the City should continue to assess the cost of metering equipment, other equipment and supplies, staff time and any other costs associated with each new connection. This should be done on the basis of actual cost, or estimated actual cost, for each new connection.

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 that capacity do not rise as rapidly. Therefore, peak flow capacity shares were 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

Douglas, WY; Water Rates, Model 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	Capacity Shares, Including Out of City Multiplier and Economy of Scale Adjustments	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 Customers									
Five Eighths	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	6.6	1.0	6.6	$10,934	$5,637	$16,570	$0	**$16,570**
One Inch	Displacement	2.9	1.0	2.9	$4,744	$2,446	$7,189	$0	**$7,189**
One & a Half Inch	Displacement	0.3	5.0	1.3	$2,082	$215	$2,296	$0	**$2,296**
Two Inch	Displacement	0.1	8.0	1.0	$1,663	$107	$1,770	$0	**$1,770**
Two & a Half Inch	Displacement	0.0	12.5	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	16.0	0.1	$109	$4	$112	$0	**$112**
Three Inch	Compound, Class I	0.1	16.0	0.9	$1,523	$49	$1,572	$0	**$1,572**
Three Inch	Turbine, Class I	0.0	17.5	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	25.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Compound, Class I	0.0	25.0	0.9	$1,430	$29	$1,460	$0	**$1,460**
Four Inch	Turbine, Class I	0.0	31.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	50.0	0.2	$340	$4	$343	$0	**$343**
Six Inch	Compound, Class I	0.0	50.0	0.6	$991	$10	$1,002	$0	**$1,002**
Six Inch	Turbine, Class I	0.0	65.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	80.0	0.2	$272	$2	$274	$0	**$274**
Eight Inch	Turbine, Class I	0.0	140.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	210.0	0.9	$1,428	$4	$1,431	$0	**$1,431**
Twelve Inch	Turbine, Class II	0.0	265.0	0.0	$0	$0	$0	$0	**$0**
Sixteen Inch	0.0	0.0	471.1	0.0	$0	$0	$0	$0	**$0**
0.0	0.0	0.0	471.1	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	10.0		15.5	$25,515	$8,505	$34,020	$0	**$34,020**
Out of City Customers									
Five Eighths	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
One Inch	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
One & a Half Inch	Displacement	0.0	5.0	0.0	$0	$0	$0	$0	**$0**
Two Inch	Displacement	0.0	8.0	0.0	$0	$0	$0	$0	**$0**
Two & a Half Inch	Displacement	0.0	12.5	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	16.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Compound, Class I	0.0	16.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Turbine, Class I	0.0	17.5	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	25.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Compound, Class I	0.0	25.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Turbine, Class I	0.0	31.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	50.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Compound, Class I	0.0	50.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Turbine, Class I	0.0	65.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	80.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Turbine, Class I	0.0	140.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	210.0	0.0	$0	$0	$0	$0	**$0**
Twelve Inch	Turbine, Class II	0.0	265.0	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	0.0		0.0	$0	$0	$0	$0	**$0**
	Total:	10.0		15.5	$25,515	$8,505	$34,020	$0	**$34,020**

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

Douglas, WY; Water Rates, Model 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	Monthly Peak Capacity-only Costs (Surcharge per Capacity Share, Including Out of City Multiplier)	Uniform Adjustment to Peak Capacity Cost	Capacity-only Cost (Fee)	Cost to Serve Minimum Calculated in Table 10	Monthly Minimum Charge	Monthly Snowbird Fee
In-City Customers							
Five Eighths	Displacement	$20.40	$0.00	$20.40	$18.18	$38.57	$27.16
Three Quarters	Displacement	$20.40	$0.00	$20.40	$18.18	$38.57	$27.16
One Inch	Displacement	$20.40	$0.00	$20.40	$18.18	$38.57	$27.16
One & a Half Inch	Displacement	$101.98	$0.00	$101.98	$18.18	$120.16	$84.62
Two Inch	Displacement	$163.17	$0.00	$163.17	$18.18	$181.35	$127.71
Two & a Half Inch	Displacement	$254.96	$0.00	$254.96	$18.18	$273.14	$192.34
Three Inch	Singlet	$326.35	$0.00	$326.35	$18.18	$344.52	$242.61
Three Inch	Compound, Class I	$326.35	$0.00	$326.35	$18.18	$344.52	$242.61
Three Inch	Turbine, Class I	$356.94	$0.00	$356.94	$18.18	$375.12	$264.16
Four Inch	Singlet	$509.92	$0.00	$509.92	$18.18	$528.10	$371.88
Four Inch	Compound, Class I	$509.92	$0.00	$509.92	$18.18	$528.10	$371.88
Four Inch	Turbine, Class I	$632.30	$0.00	$632.30	$18.18	$650.48	$458.06
Six Inch	Singlet	$1,019.84	$0.00	$1,019.84	$18.18	$1,038.02	$730.97
Six Inch	Compound, Class I	$1,019.84	$0.00	$1,019.84	$18.18	$1,038.02	$730.97
Six Inch	Turbine, Class I	$1,325.79	$0.00	$1,325.79	$18.18	$1,343.97	$946.42
Eight Inch	Compound, Class I	$1,631.74	$0.00	$1,631.74	$18.18	$1,649.92	$1,161.87
Eight Inch	Turbine, Class I	$2,855.55	$0.00	$2,855.55	$18.18	$2,873.73	$2,023.67
Ten Inch	Turbine, Class II	$4,283.33	$0.00	$4,283.33	$18.18	$4,301.50	$3,029.10
Out of City Customers							
Five Eighths	Displacement	$25.50	$0.00	$25.50	$18.18	$43.67	$30.75
Three Quarters	Displacement	$25.50	$0.00	$25.50	$18.18	$43.67	$30.75
One Inch	Displacement	$25.50	$0.00	$25.50	$18.18	$43.67	$30.75
One & a Half Inch	Displacement	$127.48	$0.00	$127.48	$18.18	$145.66	$102.57
Two Inch	Displacement	$203.97	$0.00	$203.97	$18.18	$222.14	$156.43
Two & a Half Inch	Displacement	$318.70	$0.00	$318.70	$18.18	$336.88	$237.23
Three Inch	Singlet	$407.94	$0.00	$407.94	$18.18	$426.11	$300.07
Three Inch	Compound, Class I	$407.94	$0.00	$407.94	$18.18	$426.11	$300.07
Three Inch	Turbine, Class I	$446.18	$0.00	$446.18	$18.18	$464.36	$327.00
Four Inch	Singlet	$637.40	$0.00	$637.40	$18.18	$655.58	$461.65
Four Inch	Compound, Class I	$637.40	$0.00	$637.40	$18.18	$655.58	$461.65
Four Inch	Turbine, Class I	$790.38	$0.00	$790.38	$18.18	$808.55	$569.38
Six Inch	Singlet	$1,274.80	$0.00	$1,274.80	$18.18	$1,292.98	$910.51
Six Inch	Compound, Class I	$1,274.80	$0.00	$1,274.80	$18.18	$1,292.98	$910.51
Six Inch	Turbine, Class I	$1,657.24	$0.00	$1,657.24	$18.18	$1,675.42	$1,179.82
Eight Inch	Compound, Class I	$2,039.68	$0.00	$2,039.68	$18.18	$2,057.86	$1,449.13
Eight Inch	Turbine, Class I	$3,569.44	$0.00	$3,569.44	$18.18	$3,587.62	$2,526.39
Ten Inch	Turbine, Class II	$5,354.16	$0.00	$5,354.16	$18.18	$5,372.34	$3,783.18

Table 16 - Revenues From Minimum Charges

Douglas, WY; Water Rates, Model 2019-1

This table calculates total minimum charge fee 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 Customers							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	1,608	1,608	$393,679	$0	$393,679
One Inch	Displacement	1.0	698	698	$170,803	$0	$170,803
One & a Half Inch	Displacement	5.0	61	306	$74,958	$0	$74,958
Two Inch	Displacement	8.0	31	245	$59,885	$0	$59,885
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	1	16	$3,916	$0	$3,916
Three Inch	Compound, Class I	16.0	14	224	$54,827	$0	$54,827
Three Inch	Turbine, Class I	17.5	0	0	$0	$0	$0
Four Inch	Singlet	25.0	0	0	$0	$0	$0
Four Inch	Compound, Class I	25.0	8	210	$51,502	$0	$51,502
Four Inch	Turbine, Class I	31.0	0	0	$0	$0	$0
Six Inch	Singlet	50.0	1	50	$12,238	$0	$12,238
Six Inch	Compound, Class I	50.0	3	146	$35,694	$0	$35,694
Six Inch	Turbine, Class I	65.0	0	0	$0	$0	$0
Eight Inch	Compound, Class I	80.0	1	40	$9,790	$0	$9,790
Eight Inch	Turbine, Class I	140.0	0	0	$0	$0	$0
Ten Inch	Turbine, Class II	210.0	1	210	$51,400	$0	$51,400
		Subtotal:	2,427	3,753	$918,692	$0	$918,692
Out of City Customers							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	0	0	$0	$0	$0
One Inch	Displacement	1.0	0	0	$0	$0	$0
One & a Half Inch	Displacement	5.0	0	0	$0	$0	$0
Two Inch	Displacement	8.0	0	0	$0	$0	$0
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	0	0	$0	$0	$0
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	$0	$0	$0
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	$0	$0	$0
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	$0	$0	$0
		Total:	2,427	3,753	$918,692	$0	$918,692

Table 17 - Financial Capacity Indicators and Reserves

Douglas, WY; Water Rates, Model 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 7/1/16	Analysis (This) Year Starting 7/1/17	1st Year Starting 7/1/18	2nd Year Starting 7/1/19	3rd Year Starting 7/1/20	4th Year Starting 7/1/21	5th Year Starting 7/1/22	6th Year Starting 7/1/23	7th Year Starting 7/1/24	8th Year Starting 7/1/25	9th Year Starting 7/1/26	10th Year Starting 7/1/27
Equivalent Final Monthly Bill for a 5,000 gal per Month Residential Customer	$43.64	$51.12	$51.12	$52.40	$53.71	$55.05	$56.43	$57.84	$59.29	$60.77	$62.29	$63.85
Annual Median Household Income (AMHI) Within Service Area	$65,758	$68,963	$72,325	$75,851	$79,548	$83,426	$87,492	$91,757	$96,230	$100,921	$105,841	$111,000
Affordability Index: Current Rates First Column, Then Proposed Rates	0.80%	0.89%	0.85%	0.83%	0.81%	0.79%	0.77%	0.76%	0.74%	0.72%	0.71%	0.69%

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	$36.71	$43.59	$43.59	$44.68	$45.80	$46.94	$48.12	$49.32	$50.55	$51.82	$53.11	$54.44
Income at One-half the AMHI Above	$32,879	$33,680	$34,501	$35,342	$36,204	$37,086	$37,990	$38,916	$39,864	$40,836	$41,831	$42,851
Bill Affordability for Low-income, Low-volume Customer: Current Rates First Column, Then Proposed Rates	1.34%	1.55%	1.52%	1.52%	1.52%	1.52%	1.52%	1.52%	1.52%	1.52%	1.52%	1.52%

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	2.40	1.77	1.88	2.12	2.11	2.13	2.13	2.13	2.14	2.14	2.14	2.15

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	N.A.	N.A.	N.A.	37.48	5.80	5.09	4.85	3.48	3.29	2.27	2.16	2.17

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 6/30/16	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
Cash and Cash Equivalents	$575,425	$518,072	$536,735	$634,111	$650,716	$671,262	$685,444	$703,599	$726,096	$741,570	$761,421	$786,052	$802,937
Other Liquid Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Undedicated Cash Assets, Before Inflation	$575,425	$518,072	$536,735	$634,111	$650,716	$671,262	$685,444	$703,599	$726,096	$741,570	$761,421	$786,052	$802,937
Total Cash Assets Discounted for Inflation (Future Unrestricted Purchasing Power)	$575,425	$518,072	$536,735	$615,088	$612,258	$612,643	$606,819	$604,205	$604,817	$599,176	$596,758	$597,581	$610,418
Repair & Replacement	$721,816	$736,252	$27,755	-$121,203	-$47,751	$107,671	$64,117	$224,007	$397,245	$554,946	$193,322	$365,946	$125,368
Debt and CIP Reserves	$6,963,797	$8,142,002	$9,092,804	$9,668,348	$7,809,525	$8,422,380	$9,431,729	$8,643,393	$9,236,211	$6,584,518	$6,794,635	$7,424,880	$5,980,237
Sum of All Reserves	$8,261,038	$9,396,327	$9,657,294	$10,181,256	$8,412,490	$9,201,314	$10,181,290	$9,571,000	$10,359,552	$7,881,035	$7,749,377	$8,576,878	$6,908,542

Table 18 - Comparison of Bills Before and After Rate Adjustments

Douglas, WY; Water Rates, Model 2019-1

The weighted-average revenue (bill) increase for all customers combined will be 15.1%

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

Changes to the base bills for customer classes and example volumes of use are shown below. These do not include the effect of meter size-based minimum charge surcharges from Table 13. Those are customer-specific. That level of detail cannot be shown in a brief table. Suffice it to say, large meter customers' bills will be higher than shown in this table.

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 (-)
0.75 Inch and Smaller Meters	0	82	82	$32.09	$38.57	$6.48	20%
	1,000	196	278	$34.40	$41.08	$6.68	19%
	2,000	239	517	$36.71	$43.59	$6.88	19%
	3,000	219	736	$39.02	$46.10	$7.08	18%
	4,000	183	919	$41.33	$48.61	$7.28	18%
	5,000	128	1,047	$43.64	$51.12	$7.48	17%
	6,000	90	1,137	$45.95	$53.63	$7.68	17%
	7,000	68	1,205	$48.26	$56.14	$7.88	16%
	8,000	47	1,252	$50.57	$58.65	$8.08	16%
	9,000	35	1,287	$52.88	$61.16	$8.28	16%
	10,000	105	1,392	$55.19	$63.67	$8.48	15%
	15,000	62	1,454	$66.74	$76.22	$9.48	14%
	20,000	47	1,501	$78.29	$88.77	$10.48	13%
	25,000	34	1,535	$89.84	$101.32	$11.48	13%
	30,000	5	1,540	$101.39	$117.40	$16.01	16%
	31,000	35	1,574	$104.35	$120.62	$16.27	16%
	40,000	32	1,606	$130.99	$149.57	$18.58	14%
	90,000	2	1,608	$278.99	$310.38	$31.39	11%
	140,000	0	1,608	$426.99	$471.19	$44.20	10%
	190,000	0	1,608	$574.99	$632.01	$57.02	10%
	240,000	0	1,608	$722.99	$792.82	$69.83	10%
	290,000	0	1,608	$870.99	$953.64	$82.65	9%
	340,000	0	1,608	$1,018.99	$1,114.45	$95.46	9%
	390,000	0	1,608	$1,166.99	$1,275.26	$108.27	9%
	490,000	0	1,608	$1,462.99	$1,596.89	$133.90	9%
	590,000	0	1,608	$1,758.99	$1,918.52	$159.53	9%
	690,000	0	1,608	$2,054.99	$2,240.15	$185.16	9%

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 (-)
	0	31	31	$32.09	$38.57	$6.48	20%
	1,000	63	95	$34.40	$41.08	$6.68	19%
	2,000	81	175	$36.71	$43.59	$6.88	19%
	3,000	89	264	$39.02	$46.10	$7.08	18%
	4,000	79	343	$41.33	$48.61	$7.28	18%
	5,000	59	401	$43.64	$51.12	$7.48	17%
	6,000	42	443	$45.95	$53.63	$7.68	17%
	7,000	30	473	$48.26	$56.14	$7.88	16%
	8,000	24	497	$50.57	$58.65	$8.08	16%
	9,000	16	513	$52.88	$61.16	$8.28	16%
	10,000	50	563	$55.19	$63.67	$8.48	15%
	15,000	36	599	$66.74	$76.22	$9.48	14%
	20,000	25	624	$78.29	$88.77	$10.48	13%
1 Inch Meters	25,000	18	642	$89.84	$101.32	$11.48	13%
	30,000	3	645	$101.39	$117.40	$16.01	16%
	31,000	17	662	$104.35	$120.62	$16.27	16%
	40,000	27	689	$130.99	$149.57	$18.58	14%
	90,000	5	694	$278.99	$310.38	$31.39	11%
	140,000	1	695	$426.99	$471.19	$44.20	10%
	190,000	1	696	$574.99	$632.01	$57.02	10%
	240,000	0	696	$722.99	$792.82	$69.83	10%
	290,000	0	696	$870.99	$953.64	$82.65	9%
	340,000	0	697	$1,018.99	$1,114.45	$95.46	9%
	390,000	1	697	$1,166.99	$1,275.26	$108.27	9%
	490,000	0	698	$1,462.99	$1,596.89	$133.90	9%
	590,000	0	698	$1,758.99	$1,918.52	$159.53	9%
	690,000	0	698	$2,054.99	$2,240.15	$185.16	9%
	0	3	3	$56.68	$120.16	$63.48	112%
	1,000	4	7	$58.99	$122.67	$63.68	108%
	2,000	4	11	$61.30	$125.18	$63.88	104%
	3,000	1	12	$63.61	$127.69	$64.08	101%
	4,000	2	14	$65.92	$130.20	$64.28	98%
	5,000	2	16	$68.23	$132.71	$64.48	95%
	6,000	3	19	$70.54	$135.22	$64.68	92%
	7,000	2	21	$72.85	$137.73	$64.88	89%
	8,000	2	23	$75.16	$140.24	$65.08	87%
	9,000	3	26	$77.47	$142.75	$65.28	84%
	10,000	7	33	$79.78	$145.26	$65.48	82%
	15,000	6	40	$91.33	$157.81	$66.48	73%
	20,000	3	43	$102.88	$170.36	$67.48	66%
1.5 Inch Meters	25,000	3	45	$114.43	$182.91	$68.48	60%
	30,000	1	46	$125.98	$198.99	$73.01	58%
	31,000	3	49	$128.94	$202.21	$73.27	57%
	40,000	9	58	$155.58	$231.15	$75.57	49%
	90,000	2	60	$303.58	$391.97	$88.39	29%
	140,000	0	60	$451.58	$552.78	$101.20	22%
	190,000	0	60	$599.58	$713.60	$114.02	19%
	240,000	0	61	$747.58	$874.41	$126.83	17%
	290,000	0	61	$895.58	$1,035.22	$139.64	16%
	340,000	0	61	$1,043.58	$1,196.04	$152.46	15%
	390,000	0	61	$1,191.58	$1,356.85	$165.27	14%
	490,000	0	61	$1,487.58	$1,678.48	$190.90	13%
	590,000	0	61	$1,783.58	$2,000.11	$216.53	12%
	690,000	0	61	$2,079.58	$2,321.73	$242.15	12%

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 (-)
	0	2	2	$105.86	$181.35	$75.49	71%
	1,000	1	4	$108.17	$183.86	$75.69	70%
	2,000	0	4	$110.48	$186.37	$75.89	69%
	3,000	1	5	$112.79	$188.88	$76.09	67%
	4,000	1	6	$115.10	$191.39	$76.29	66%
	5,000	1	6	$117.41	$193.90	$76.49	65%
	6,000	0	6	$119.72	$196.41	$76.69	64%
	7,000	1	7	$122.03	$198.92	$76.89	63%
	8,000	0	7	$124.34	$201.43	$77.09	62%
	9,000	0	8	$126.65	$203.94	$77.29	61%
	10,000	1	9	$128.96	$206.45	$77.49	60%
	15,000	1	10	$140.51	$219.00	$78.49	56%
	20,000	1	11	$152.06	$231.55	$79.49	52%
2 Inch Meters	25,000	2	13	$163.61	$244.10	$80.49	49%
	30,000	1	13	$175.16	$260.18	$85.02	49%
	31,000	3	17	$178.12	$263.40	$85.28	48%
	40,000	7	23	$204.76	$292.34	$87.58	43%
	90,000	2	25	$352.76	$453.16	$100.40	28%
	140,000	1	26	$500.76	$613.97	$113.21	23%
	190,000	0	27	$648.76	$774.79	$126.03	19%
	240,000	1	28	$796.76	$935.60	$138.84	17%
	290,000	1	28	$944.76	$1,096.41	$151.65	16%
	340,000	1	29	$1,092.76	$1,257.23	$164.47	15%
	390,000	1	30	$1,240.76	$1,418.04	$177.28	14%
	490,000	0	30	$1,536.76	$1,739.67	$202.91	13%
	590,000	0	30	$1,832.76	$2,061.30	$228.54	12%
	690,000	1	31	$2,128.76	$2,382.92	$254.16	12%
	0	1	1	$228.81	$344.52	$115.71	51%
	1,000	0	1	$231.12	$347.03	$115.91	50%
	2,000	0	1	$233.43	$349.54	$116.11	50%
	3,000	0	1	$235.74	$352.05	$116.31	49%
	4,000	0	1	$238.05	$354.56	$116.51	49%
	5,000	0	2	$240.36	$357.07	$116.71	49%
	6,000	0	2	$242.67	$359.58	$116.91	48%
	7,000	0	2	$244.98	$362.09	$117.11	48%
	8,000	0	2	$247.29	$364.60	$117.31	47%
	9,000	0	2	$249.60	$367.11	$117.51	47%
	10,000	0	3	$251.91	$369.62	$117.71	47%
	15,000	0	3	$263.46	$382.17	$118.71	45%
	20,000	0	3	$275.01	$394.72	$119.71	44%
3 Inch Meters	25,000	1	4	$286.56	$407.27	$120.71	42%
	30,000	0	4	$298.11	$423.36	$125.25	42%
	31,000	1	6	$301.07	$426.57	$125.50	42%
	40,000	3	8	$327.71	$455.52	$127.81	39%
	90,000	1	9	$475.71	$616.33	$140.62	30%
	140,000	1	10	$623.71	$777.15	$153.44	25%
	190,000	1	11	$771.71	$937.96	$166.25	22%
	240,000	0	11	$919.71	$1,098.77	$179.06	19%
	290,000	0	11	$1,067.71	$1,259.59	$191.88	18%
	340,000	0	12	$1,215.71	$1,420.40	$204.69	17%
	390,000	0	12	$1,363.71	$1,581.22	$217.51	16%
	490,000	0	12	$1,659.71	$1,902.84	$243.13	15%
	590,000	0	12	$1,955.71	$2,224.47	$268.76	14%
	690,000	2	14	$2,251.71	$2,546.10	$294.39	13%

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 (-)
3 Inch Meters - City Use	0	0	0	$228.81	$344.52	$115.71	51%
	1,000	0	0	$231.12	$347.03	$115.91	50%
	2,000	0	0	$233.43	$349.54	$116.11	50%
	3,000	0	0	$235.74	$352.05	$116.31	49%
	4,000	0	0	$238.05	$354.56	$116.51	49%
	5,000	0	0	$240.36	$357.07	$116.71	49%
	6,000	0	0	$242.67	$359.58	$116.91	48%
	7,000	0	0	$244.98	$362.09	$117.11	48%
	8,000	0	0	$247.29	$364.60	$117.31	47%
	9,000	0	0	$249.60	$367.11	$117.51	47%
	10,000	0	0	$251.91	$369.62	$117.71	47%
	15,000	0	0	$263.46	$382.17	$118.71	45%
	20,000	0	0	$275.01	$394.72	$119.71	44%
	25,000	0	0	$286.56	$407.27	$120.71	42%
	30,000	0	0	$298.11	$423.36	$125.25	42%
	31,000	0	0	$301.07	$426.57	$125.50	42%
	40,000	0	0	$327.71	$455.52	$127.81	39%
	90,000	0	0	$475.71	$616.33	$140.62	30%
	140,000	0	0	$623.71	$777.15	$153.44	25%
	190,000	0	1	$771.71	$937.96	$166.25	22%
	240,000	0	1	$919.71	$1,098.77	$179.06	19%
	290,000	0	1	$1,067.71	$1,259.59	$191.88	18%
	340,000	0	1	$1,215.71	$1,420.40	$204.69	17%
	390,000	0	1	$1,363.71	$1,581.22	$217.51	16%
	490,000	0	1	$1,659.71	$1,902.84	$243.13	15%
	590,000	0	1	$1,955.71	$2,224.47	$268.76	14%
	690,000	0	1	$2,251.71	$2,546.10	$294.39	13%
4 Inch Meters	0	1	1	$400.94	$528.10	$127.16	32%
	1,000	1	2	$403.25	$530.61	$127.36	32%
	2,000	0	2	$405.56	$533.12	$127.56	31%
	3,000	0	2	$407.87	$535.63	$127.76	31%
	4,000	0	2	$410.18	$538.14	$127.96	31%
	5,000	0	2	$412.49	$540.65	$128.16	31%
	6,000	0	2	$414.80	$543.16	$128.36	31%
	7,000	0	2	$417.11	$545.67	$128.56	31%
	8,000	0	2	$419.42	$548.18	$128.76	31%
	9,000	0	2	$421.73	$550.69	$128.96	31%
	10,000	0	2	$424.04	$553.20	$129.16	30%
	15,000	0	3	$435.59	$565.75	$130.16	30%
	20,000	0	3	$447.14	$578.30	$131.16	29%
	25,000	0	3	$458.69	$590.85	$132.16	29%
	30,000	0	3	$470.24	$606.93	$136.69	29%
	31,000	1	4	$473.20	$610.14	$136.94	29%
	40,000	2	6	$499.84	$639.09	$139.25	28%
	90,000	1	6	$647.84	$799.90	$152.06	23%
	140,000	0	7	$795.84	$960.72	$164.88	21%
	190,000	0	7	$943.84	$1,121.53	$177.69	19%
	240,000	0	7	$1,091.84	$1,282.35	$190.51	17%
	290,000	0	7	$1,239.84	$1,443.16	$203.32	16%
	340,000	0	7	$1,387.84	$1,603.97	$216.13	16%
	390,000	0	7	$1,535.84	$1,764.79	$228.95	15%
	490,000	0	7	$1,831.84	$2,086.42	$254.58	14%
	590,000	1	8	$2,127.84	$2,408.04	$280.20	13%
	690,000	1	8	$2,423.84	$2,729.67	$305.83	13%

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 (-)
6 Inch Meters	0	0	0	$892.74	$1,038.02	$145.28	16%
	1,000	0	0	$895.05	$1,040.53	$145.48	16%
	2,000	0	0	$897.36	$1,043.04	$145.68	16%
	3,000	0	0	$899.67	$1,045.55	$145.88	16%
	4,000	0	0	$901.98	$1,048.06	$146.08	16%
	5,000	0	0	$904.29	$1,050.57	$146.28	16%
	6,000	0	0	$906.60	$1,053.08	$146.48	16%
	7,000	0	0	$908.91	$1,055.59	$146.68	16%
	8,000	0	0	$911.22	$1,058.10	$146.88	16%
	9,000	0	0	$913.53	$1,060.61	$147.08	16%
	10,000	0	1	$915.84	$1,063.12	$147.28	16%
	15,000	1	1	$927.39	$1,075.67	$148.28	16%
	20,000	0	2	$938.94	$1,088.22	$149.28	16%
	25,000	0	2	$950.49	$1,100.77	$150.28	16%
	30,000	0	2	$962.04	$1,116.85	$154.81	16%
	31,000	0	2	$965.00	$1,120.06	$155.06	16%
	40,000	1	2	$991.64	$1,149.01	$157.37	16%
	90,000	0	3	$1,139.64	$1,309.82	$170.18	15%
	140,000	0	3	$1,287.64	$1,470.64	$183.00	14%
	190,000	0	3	$1,435.64	$1,631.45	$195.81	14%
	240,000	0	3	$1,583.64	$1,792.27	$208.63	13%
	290,000	0	3	$1,731.64	$1,953.08	$221.44	13%
	340,000	0	3	$1,879.64	$2,113.89	$234.25	12%
	390,000	0	3	$2,027.64	$2,274.71	$247.07	12%
	490,000	0	3	$2,323.64	$2,596.34	$272.70	12%
	590,000	0	3	$2,619.64	$2,917.96	$298.32	11%
	690,000	0	3	$2,915.64	$3,239.59	$323.95	11%
6 Inch Meters - City Use	0	0	0	$892.74	$1,038.02	$145.28	16%
	1,000	0	0	$895.05	$1,040.53	$145.48	16%
	2,000	0	0	$897.36	$1,043.04	$145.68	16%
	3,000	0	0	$899.67	$1,045.55	$145.88	16%
	4,000	0	0	$901.98	$1,048.06	$146.08	16%
	5,000	0	0	$904.29	$1,050.57	$146.28	16%
	6,000	0	0	$906.60	$1,053.08	$146.48	16%
	7,000	0	0	$908.91	$1,055.59	$146.68	16%
	8,000	0	0	$911.22	$1,058.10	$146.88	16%
	9,000	0	0	$913.53	$1,060.61	$147.08	16%
	10,000	0	0	$915.84	$1,063.12	$147.28	16%
	15,000	0	0	$927.39	$1,075.67	$148.28	16%
	20,000	0	0	$938.94	$1,088.22	$149.28	16%
	25,000	0	0	$950.49	$1,100.77	$150.28	16%
	30,000	0	0	$962.04	$1,116.85	$154.81	16%
	31,000	0	0	$965.00	$1,120.06	$155.06	16%
	40,000	0	0	$991.64	$1,149.01	$157.37	16%
	90,000	0	1	$1,139.64	$1,309.82	$170.18	15%
	140,000	0	1	$1,287.64	$1,470.64	$183.00	14%
	190,000	0	1	$1,435.64	$1,631.45	$195.81	14%
	240,000	0	1	$1,583.64	$1,792.27	$208.63	13%
	290,000	0	1	$1,731.64	$1,953.08	$221.44	13%
	340,000	0	1	$1,879.64	$2,113.89	$234.25	12%
	390,000	0	1	$2,027.64	$2,274.71	$247.07	12%
	490,000	0	1	$2,323.64	$2,596.34	$272.70	12%
	590,000	0	1	$2,619.64	$2,917.96	$298.32	11%
	690,000	0	1	$2,915.64	$3,239.59	$323.95	11%

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 (-)
	0	0	0	$2,503.02	$1,649.92	-$853.10	-34%
	1,000	0	0	$2,505.33	$1,652.43	-$852.90	-34%
	2,000	0	0	$2,507.64	$1,654.94	-$852.70	-34%
	3,000	0	0	$2,509.95	$1,657.45	-$852.50	-34%
	4,000	0	0	$2,512.26	$1,659.96	-$852.30	-34%
	5,000	0	0	$2,514.57	$1,662.47	-$852.10	-34%
	6,000	0	0	$2,516.88	$1,664.98	-$851.90	-34%
	7,000	0	0	$2,519.19	$1,667.49	-$851.70	-34%
	8,000	0	0	$2,521.50	$1,670.00	-$851.50	-34%
	9,000	0	0	$2,523.81	$1,672.51	-$851.30	-34%
	10,000	0	0	$2,526.12	$1,675.02	-$851.10	-34%
	15,000	0	0	$2,537.67	$1,687.57	-$850.10	-33%
	20,000	0	0	$2,549.22	$1,700.12	-$849.10	-33%
8 Inch Meters	25,000	0	0	$2,560.77	$1,712.67	-$848.10	-33%
	30,000	0	0	$2,572.32	$1,728.75	-$843.57	-33%
	31,000	0	0	$2,575.28	$1,731.97	-$843.31	-33%
	40,000	0	0	$2,601.92	$1,760.91	-$841.01	-32%
	90,000	0	0	$2,749.92	$1,921.73	-$828.19	-30%
	140,000	0	0	$2,897.92	$2,082.54	-$815.38	-28%
	190,000	0	0	$3,045.92	$2,243.36	-$802.56	-26%
	240,000	0	0	$3,193.92	$2,404.17	-$789.75	-25%
	290,000	0	0	$3,341.92	$2,564.98	-$776.94	-23%
	340,000	0	0	$3,489.92	$2,725.80	-$764.12	-22%
	390,000	0	0	$3,637.92	$2,886.61	-$751.31	-21%
	490,000	0	0	$3,933.92	$3,208.24	-$725.68	-18%
	590,000	0	0	$4,229.92	$3,529.87	-$700.05	-17%
	690,000	0	1	$4,525.92	$3,851.49	-$674.43	-15%
	0	0	0	$3,548.46	$4,301.50	$753.04	21%
	1,000	0	0	$3,550.77	$4,304.01	$753.24	21%
	2,000	0	0	$3,553.08	$4,306.52	$753.44	21%
	3,000	0	0	$3,555.39	$4,309.03	$753.64	21%
	4,000	0	0	$3,557.70	$4,311.54	$753.84	21%
	5,000	0	0	$3,560.01	$4,314.05	$754.04	21%
	6,000	0	0	$3,562.32	$4,316.56	$754.24	21%
	7,000	0	0	$3,564.63	$4,319.07	$754.44	21%
	8,000	0	0	$3,566.94	$4,321.58	$754.64	21%
	9,000	0	0	$3,569.25	$4,324.09	$754.84	21%
	10,000	0	0	$3,571.56	$4,326.60	$755.04	21%
	15,000	0	0	$3,583.11	$4,339.15	$756.04	21%
	20,000	0	0	$3,594.66	$4,351.70	$757.04	21%
10 Inch Meters	25,000	0	0	$3,606.21	$4,364.25	$758.04	21%
	30,000	0	0	$3,617.76	$4,380.34	$762.58	21%
	31,000	0	0	$3,620.72	$4,383.55	$762.83	21%
	40,000	1	1	$3,647.36	$4,412.50	$765.14	21%
	90,000	0	1	$3,795.36	$4,573.31	$777.95	20%
	140,000	0	1	$3,943.36	$4,734.13	$790.77	20%
	190,000	0	1	$4,091.36	$4,894.94	$803.58	20%
	240,000	0	1	$4,239.36	$5,055.75	$816.39	19%
	290,000	0	1	$4,387.36	$5,216.57	$829.21	19%
	340,000	0	1	$4,535.36	$5,377.38	$842.02	19%
	390,000	0	1	$4,683.36	$5,538.20	$854.84	18%
	490,000	0	1	$4,979.36	$5,859.82	$880.46	18%
	590,000	0	1	$5,275.36	$6,181.45	$906.09	17%
	690,000	0	1	$5,571.36	$6,503.08	$931.72	17%

Table 19 - User Statistics

Douglas, WY; Water Rates, Model 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:

7,351 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.

407,604,000 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
0.75 Inch and Smaller Meters	0	999	0.949	18,321,000.0	81.7	3.4%	4.5%	12.9%	100.0%	3.3%	3.2%
	1,000	1,999	0.871	15,965,000.0	196.3	8.1%	3.9%	24.2%	87.1%	5.1%	5.0%
	2,000	2,999	0.821	13,103,000.0	238.5	9.8%	3.2%	33.4%	75.8%	5.5%	5.5%
	3,000	3,999	0.799	10,470,000.0	219.4	9.0%	2.6%	40.8%	66.6%	4.9%	4.9%
	4,000	4,999	0.790	8,274,000.0	183.0	7.5%	2.0%	46.6%	59.2%	4.1%	4.1%
	5,000	5,999	0.814	6,733,000.0	128.4	5.3%	1.7%	51.4%	53.4%	2.9%	2.9%
	6,000	6,999	0.840	5,653,000.0	90.0	3.7%	1.4%	55.3%	48.6%	2.2%	2.1%
	7,000	7,999	0.856	4,841,000.0	67.7	2.8%	1.2%	58.8%	44.7%	1.7%	1.7%
	8,000	8,999	0.884	4,280,000.0	46.8	1.9%	1.1%	61.8%	41.2%	1.3%	1.2%
	9,000	9,999	0.901	3,858,000.0	35.2	1.4%	0.9%	64.5%	38.2%	1.0%	1.0%
	10,000	14,999	3.934	15,176,000.0	105.0	4.3%	3.7%	75.2%	35.5%	3.4%	3.3%
	15,000	19,999	4.094	10,635,000.0	61.9	2.6%	2.6%	82.7%	24.8%	2.2%	2.1%
	20,000	24,999	4.070	7,549,000.0	47.1	1.9%	1.9%	88.0%	17.3%	1.6%	1.6%
	25,000	29,999	4.000	5,160,000.0	34.3	1.4%	1.3%	91.6%	12.0%	1.1%	1.1%
	30,000	30,999	0.935	822,000.0	4.8	0.2%	0.2%	92.2%	8.4%	0.2%	0.2%
	31,000	39,999	6.136	5,044,000.0	34.5	1.4%	1.2%	95.8%	7.8%	1.3%	1.2%
	40,000	89,999	13.169	5,373,000.0	31.9	1.3%	1.3%	99.6%	4.2%	1.3%	1.2%
	90,000	139,999	20.720	518,000.0	1.8	0.1%	0.1%	99.9%	0.4%	0.1%	0.1%
	140,000	189,999	36.333	109,000.0	0.3	0.0%	0.0%	100.0%	0.1%	0.0%	0.0%
	190,000	239,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	240,000	289,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	290,000	339,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	340,000	389,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	390,000	489,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	490,000	589,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	183,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			141,884,000.0	1,608.4	66.3%	34.8%			43.2%	42.7%

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
	0	999	0.955	8,001,000.0	31.1	1.3%	2.0%	8.3%	100.0%	1.4%	1.3%
	1,000	1,999	0.905	7,240,000.0	63.4	2.6%	1.8%	15.8%	91.7%	1.9%	1.8%
	2,000	2,999	0.866	6,269,000.0	80.9	3.3%	1.5%	22.4%	84.2%	2.1%	2.0%
	3,000	3,999	0.830	5,203,000.0	88.8	3.7%	1.3%	27.8%	77.6%	2.1%	2.1%
	4,000	4,999	0.819	4,260,000.0	78.6	3.2%	1.0%	32.2%	72.2%	1.8%	1.8%
	5,000	5,999	0.835	3,558,000.0	58.5	2.4%	0.9%	35.9%	67.8%	1.4%	1.4%
	6,000	6,999	0.859	3,058,000.0	41.7	1.7%	0.8%	39.1%	64.1%	1.0%	1.0%
	7,000	7,999	0.883	2,699,000.0	29.9	1.2%	0.7%	41.9%	60.9%	0.8%	0.8%
	8,000	8,999	0.891	2,406,000.0	24.4	1.0%	0.6%	44.4%	58.1%	0.7%	0.7%
	9,000	9,999	0.920	2,214,000.0	16.0	0.7%	0.5%	46.7%	55.6%	0.5%	0.5%
	10,000	14,999	4.113	9,107,000.0	49.8	2.0%	2.2%	56.1%	53.3%	1.8%	1.8%
	15,000	19,999	4.186	6,768,000.0	36.0	1.5%	1.7%	63.2%	43.9%	1.3%	1.3%
	20,000	24,999	4.165	4,936,000.0	24.9	1.0%	1.2%	68.3%	36.8%	1.0%	0.9%
1 Inch Meters	25,000	29,999	4.271	3,784,000.0	18.3	0.8%	0.9%	72.2%	31.7%	0.7%	0.7%
	30,000	30,999	0.950	633,000.0	2.8	0.1%	0.2%	72.9%	27.8%	0.1%	0.1%
	31,000	39,999	7.308	4,626,000.0	16.6	0.7%	1.1%	77.7%	27.1%	0.9%	0.9%
	40,000	89,999	24.539	10,650,000.0	27.3	1.1%	2.6%	88.8%	22.3%	1.9%	1.8%
	90,000	139,999	33.523	3,587,000.0	4.8	0.2%	0.9%	92.5%	11.2%	0.6%	0.5%
	140,000	189,999	42.082	2,062,000.0	1.3	0.1%	0.5%	94.6%	7.5%	0.3%	0.3%
	190,000	239,999	39.294	1,336,000.0	0.9	0.0%	0.3%	96.0%	5.4%	0.2%	0.2%
	240,000	289,999	43.435	999,000.0	0.4	0.0%	0.2%	97.0%	4.0%	0.1%	0.1%
	290,000	339,999	47.944	863,000.0	0.1	0.0%	0.2%	97.9%	3.0%	0.1%	0.1%
	340,000	389,999	40.235	684,000.0	0.3	0.0%	0.2%	98.7%	2.1%	0.1%	0.1%
	390,000	489,999	83.615	1,087,000.0	0.7	0.0%	0.3%	99.8%	1.3%	0.2%	0.1%
	490,000	589,999	41.200	206,000.0	0.4	0.0%	0.1%	100.0%	0.2%	0.0%	0.0%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	582,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			96,236,000.0	697.8	28.8%	23.6%			23.0%	22.5%
	0	999	0.956	703,000.0	2.7	0.1%	0.2%	3.4%	100.0%	0.2%	0.2%
	1,000	1,999	0.927	652,000.0	4.3	0.2%	0.2%	6.6%	96.6%	0.2%	0.3%
	2,000	2,999	0.923	602,000.0	4.2	0.2%	0.1%	9.5%	93.4%	0.2%	0.3%
	3,000	3,999	0.977	588,000.0	1.2	0.0%	0.1%	12.4%	90.5%	0.1%	0.1%
	4,000	4,999	0.968	569,000.0	1.6	0.1%	0.1%	15.1%	87.6%	0.1%	0.1%
	5,000	5,999	0.956	544,000.0	2.1	0.1%	0.1%	17.8%	84.9%	0.1%	0.2%
	6,000	6,999	0.932	507,000.0	3.1	0.1%	0.1%	20.2%	82.2%	0.1%	0.2%
	7,000	7,999	0.951	482,000.0	2.1	0.1%	0.1%	22.6%	79.8%	0.1%	0.2%
	8,000	8,999	0.944	455,000.0	2.3	0.1%	0.1%	24.8%	77.4%	0.1%	0.2%
	9,000	9,999	0.932	424,000.0	2.6	0.1%	0.1%	26.9%	75.2%	0.1%	0.2%
	10,000	14,999	4.285	1,817,000.0	7.3	0.3%	0.4%	35.7%	73.1%	0.4%	0.6%
	15,000	19,999	4.265	1,433,000.0	6.3	0.3%	0.4%	42.7%	64.3%	0.3%	0.5%
	20,000	24,999	4.531	1,178,000.0	3.1	0.1%	0.3%	48.4%	57.3%	0.2%	0.3%
1.5 Inch Meters	25,000	29,999	4.592	1,024,000.0	2.5	0.1%	0.3%	53.4%	51.6%	0.2%	0.2%
	30,000	30,999	0.969	187,000.0	0.5	0.0%	0.0%	54.3%	46.6%	0.0%	0.1%
	31,000	39,999	7.840	1,466,000.0	3.3	0.1%	0.4%	61.4%	45.7%	0.3%	0.4%
	40,000	89,999	26.735	3,930,000.0	8.6	0.4%	1.0%	80.5%	38.6%	0.8%	1.0%
	90,000	139,999	30.318	1,334,000.0	2.2	0.1%	0.3%	87.0%	19.5%	0.2%	0.3%
	140,000	189,999	39.222	706,000.0	0.4	0.0%	0.2%	90.4%	13.0%	0.1%	0.1%
	190,000	239,999	43.462	565,000.0	0.2	0.0%	0.1%	93.2%	9.6%	0.1%	0.1%
	240,000	289,999	41.727	459,000.0	0.3	0.0%	0.1%	95.4%	6.8%	0.1%	0.1%
	290,000	339,999	35.750	286,000.0	0.3	0.0%	0.1%	96.8%	4.6%	0.0%	0.0%
	340,000	389,999	44.200	221,000.0	0.1	0.0%	0.1%	97.9%	3.2%	0.0%	0.0%
	390,000	489,999	96.500	386,000.0	0.1	0.0%	0.1%	99.7%	2.1%	0.1%	0.1%
	490,000	589,999	17.667	53,000.0	0.3	0.0%	0.0%	100.0%	0.3%	0.0%	0.0%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	528,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			20,571,000.0	61.3	2.5%	5.0%			4.3%	5.6%

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	0.929	341,000.0	2.2	0.1%	0.1%	0.5%	100.0%	0.2%	0.2%
	1,000	1,999	0.953	325,000.0	1.3	0.1%	0.1%	1.0%	99.5%	0.1%	0.1%
	2,000	2,999	0.985	320,000.0	0.4	0.0%	0.1%	1.5%	99.0%	0.1%	0.1%
	3,000	3,999	0.972	311,000.0	0.8	0.0%	0.1%	2.0%	98.5%	0.1%	0.1%
	4,000	4,999	0.965	300,000.0	0.9	0.0%	0.1%	2.4%	98.0%	0.1%	0.1%
	5,000	5,999	0.980	294,000.0	0.5	0.0%	0.1%	2.8%	97.6%	0.1%	0.1%
	6,000	6,999	0.986	290,000.0	0.3	0.0%	0.1%	3.3%	97.2%	0.0%	0.1%
	7,000	7,999	0.976	283,000.0	0.6	0.0%	0.1%	3.7%	96.7%	0.1%	0.1%
	8,000	8,999	0.982	278,000.0	0.4	0.0%	0.1%	4.1%	96.3%	0.1%	0.1%
	9,000	9,999	0.989	275,000.0	0.3	0.0%	0.1%	4.5%	95.9%	0.0%	0.0%
	10,000	14,999	4.811	1,323,000.0	1.3	0.1%	0.3%	6.5%	95.5%	0.2%	0.2%
	15,000	19,999	4.854	1,262,000.0	0.9	0.0%	0.3%	8.4%	93.5%	0.2%	0.2%
	20,000	24,999	4.795	1,194,000.0	1.3	0.1%	0.3%	10.2%	91.6%	0.2%	0.2%
2 Inch Meters	25,000	29,999	4.722	1,105,000.0	1.8	0.1%	0.3%	11.9%	89.8%	0.2%	0.3%
	30,000	30,999	0.972	206,000.0	0.5	0.0%	0.1%	12.2%	88.1%	0.1%	0.1%
	31,000	39,999	8.131	1,675,000.0	3.1	0.1%	0.4%	14.7%	87.8%	0.4%	0.5%
	40,000	89,999	35.604	6,017,000.0	6.5	0.3%	1.5%	23.8%	85.3%	1.2%	1.3%
	90,000	139,999	42.297	3,849,000.0	2.4	0.1%	0.9%	29.6%	76.2%	0.7%	0.7%
	140,000	189,999	44.597	2,765,000.0	0.9	0.0%	0.7%	33.7%	70.4%	0.4%	0.4%
	190,000	239,999	47.863	2,441,000.0	0.3	0.0%	0.6%	37.4%	66.3%	0.3%	0.3%
	240,000	289,999	42.787	2,011,000.0	0.9	0.0%	0.5%	40.5%	62.6%	0.3%	0.3%
	290,000	339,999	43.500	1,566,000.0	0.7	0.0%	0.4%	42.8%	59.5%	0.2%	0.2%
	340,000	389,999	43.786	1,226,000.0	0.8	0.0%	0.3%	44.7%	57.2%	0.2%	0.2%
	390,000	489,999	72.579	1,379,000.0	0.8	0.0%	0.3%	46.7%	55.3%	0.2%	0.2%
	490,000	589,999	97.000	970,000.0	0.1	0.0%	0.2%	48.2%	53.3%	0.1%	0.1%
	590,000	689,999	97.667	879,000.0	0.2	0.0%	0.2%	49.5%	51.8%	0.1%	0.1%
	690,000	11,570,000	4,789.857	33,529,000.0	0.6	0.0%	8.2%	100.0%	50.5%	4.5%	4.2%
	Totals for Class			66,414,000.0	30.6	1.3%	16.3%			10.4%	10.6%
	0	999	0.940	157,000.0	0.8	0.0%	0.0%	0.5%	100.0%	0.1%	0.1%
	1,000	1,999	1.000	157,000.0	0.0	0.0%	0.0%	0.9%	99.5%	0.0%	0.0%
	2,000	2,999	0.975	153,000.0	0.3	0.0%	0.0%	1.3%	99.1%	0.1%	0.1%
	3,000	3,999	0.987	151,000.0	0.2	0.0%	0.0%	1.8%	98.7%	0.0%	0.0%
	4,000	4,999	0.993	150,000.0	0.1	0.0%	0.0%	2.2%	98.2%	0.0%	0.0%
	5,000	5,999	0.993	149,000.0	0.1	0.0%	0.0%	2.6%	97.8%	0.0%	0.0%
	6,000	6,999	0.980	146,000.0	0.3	0.0%	0.0%	3.1%	97.4%	0.0%	0.1%
	7,000	7,999	0.986	144,000.0	0.2	0.0%	0.0%	3.5%	96.9%	0.0%	0.0%
	8,000	8,999	0.993	143,000.0	0.1	0.0%	0.0%	3.9%	96.5%	0.0%	0.0%
	9,000	9,999	0.986	141,000.0	0.2	0.0%	0.0%	4.3%	96.1%	0.0%	0.0%
	10,000	14,999	4.894	690,000.0	0.4	0.0%	0.2%	6.3%	95.7%	0.1%	0.1%
	15,000	19,999	4.926	670,000.0	0.3	0.0%	0.2%	8.2%	93.7%	0.1%	0.1%
	20,000	24,999	4.955	654,000.0	0.3	0.0%	0.2%	10.1%	91.8%	0.1%	0.1%
3 Inch Meters	25,000	29,999	4.705	607,000.0	1.1	0.0%	0.1%	11.9%	89.9%	0.2%	0.2%
	30,000	30,999	0.991	115,000.0	0.1	0.0%	0.0%	12.2%	88.1%	0.0%	0.0%
	31,000	39,999	8.383	964,000.0	1.3	0.1%	0.2%	15.0%	87.8%	0.3%	0.3%
	40,000	89,999	39.060	3,906,000.0	2.5	0.1%	1.0%	26.3%	85.0%	0.8%	0.9%
	90,000	139,999	46.443	3,251,000.0	0.6	0.0%	0.8%	35.6%	73.7%	0.5%	0.5%
	140,000	189,999	45.413	2,861,000.0	0.9	0.0%	0.7%	43.9%	64.4%	0.5%	0.5%
	190,000	239,999	44.635	2,321,000.0	1.2	0.0%	0.6%	50.6%	56.1%	0.5%	0.5%
	240,000	289,999	46.763	1,777,000.0	0.4	0.0%	0.4%	55.7%	49.4%	0.3%	0.3%
	290,000	339,999	47.909	1,581,000.0	0.3	0.0%	0.4%	60.3%	44.3%	0.2%	0.2%
	340,000	389,999	48.900	1,467,000.0	0.3	0.0%	0.4%	64.5%	39.7%	0.2%	0.2%
	390,000	489,999	95.481	2,578,000.0	0.3	0.0%	0.6%	72.0%	35.5%	0.4%	0.4%
	490,000	589,999	95.826	2,204,000.0	0.2	0.0%	0.5%	78.3%	28.0%	0.3%	0.3%
	590,000	689,999	96.524	2,027,000.0	0.1	0.0%	0.5%	84.2%	21.7%	0.3%	0.3%
	690,000	1,564,000	273.650	5,473,000.0	1.7	0.1%	1.3%	100.0%	15.8%	0.9%	0.9%
	Totals for Class			34,637,000.0	13.9	0.6%	8.5%			6.3%	6.4%

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
	0	999	1.000	12,000.0	0.0	0.0%	0.0%	0.3%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	12,000.0	0.0	0.0%	0.0%	0.7%	99.7%	0.0%	0.0%
	2,000	2,999	1.000	12,000.0	0.0	0.0%	0.0%	1.0%	99.3%	0.0%	0.0%
	3,000	3,999	1.000	12,000.0	0.0	0.0%	0.0%	1.4%	99.0%	0.0%	0.0%
	4,000	4,999	1.000	12,000.0	0.0	0.0%	0.0%	1.7%	98.6%	0.0%	0.0%
	5,000	5,999	1.000	12,000.0	0.0	0.0%	0.0%	2.1%	98.3%	0.0%	0.0%
	6,000	6,999	1.000	12,000.0	0.0	0.0%	0.0%	2.4%	97.9%	0.0%	0.0%
	7,000	7,999	1.000	12,000.0	0.0	0.0%	0.0%	2.7%	97.6%	0.0%	0.0%
	8,000	8,999	1.000	12,000.0	0.0	0.0%	0.0%	3.1%	97.3%	0.0%	0.0%
	9,000	9,999	1.000	12,000.0	0.0	0.0%	0.0%	3.4%	96.9%	0.0%	0.0%
	10,000	14,999	5.000	60,000.0	0.0	0.0%	0.0%	5.2%	96.6%	0.0%	0.0%
	15,000	19,999	5.000	60,000.0	0.0	0.0%	0.0%	6.9%	94.8%	0.0%	0.0%
	20,000	24,999	5.000	60,000.0	0.0	0.0%	0.0%	8.6%	93.1%	0.0%	0.0%
3 Inch Meters - City Use	25,000	29,999	5.000	60,000.0	0.0	0.0%	0.0%	10.3%	91.4%	0.0%	0.0%
	30,000	30,999	1.000	12,000.0	0.0	0.0%	0.0%	10.6%	89.7%	0.0%	0.0%
	31,000	39,999	9.000	108,000.0	0.0	0.0%	0.0%	13.7%	89.4%	0.0%	0.0%
	40,000	89,999	50.000	600,000.0	0.0	0.0%	0.1%	30.9%	86.3%	0.1%	0.1%
	90,000	139,999	50.000	600,000.0	0.0	0.0%	0.1%	48.1%	69.1%	0.1%	0.1%
	140,000	189,999	43.333	520,000.0	0.3	0.0%	0.1%	63.0%	51.9%	0.1%	0.1%
	190,000	239,999	44.556	401,000.0	0.3	0.0%	0.1%	74.4%	37.0%	0.1%	0.1%
	240,000	289,999	47.000	282,000.0	0.1	0.0%	0.1%	82.5%	25.6%	0.0%	0.0%
	290,000	339,999	48.600	243,000.0	0.1	0.0%	0.1%	89.5%	17.5%	0.0%	0.0%
	340,000	389,999	41.750	167,000.0	0.1	0.0%	0.0%	94.2%	10.5%	0.0%	0.0%
	390,000	489,999	51.667	155,000.0	0.2	0.0%	0.0%	98.7%	5.8%	0.0%	0.0%
	490,000	589,999	46.000	46,000.0	0.1	0.0%	0.0%	100.0%	1.3%	0.0%	0.0%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	536,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			3,494,000.0	1.0	0.0%	0.9%			0.6%	0.6%
	0	999	0.911	92,000.0	0.8	0.0%	0.0%	0.5%	100.0%	0.2%	0.2%
	1,000	1,999	0.891	82,000.0	0.8	0.0%	0.0%	0.9%	99.5%	0.2%	0.2%
	2,000	2,999	0.963	79,000.0	0.3	0.0%	0.0%	1.3%	99.1%	0.1%	0.1%
	3,000	3,999	1.000	79,000.0	0.0	0.0%	0.0%	1.7%	98.7%	0.0%	0.0%
	4,000	4,999	0.987	78,000.0	0.1	0.0%	0.0%	2.0%	98.3%	0.0%	0.0%
	5,000	5,999	0.987	77,000.0	0.1	0.0%	0.0%	2.4%	98.0%	0.0%	0.0%
	6,000	6,999	1.000	77,000.0	0.0	0.0%	0.0%	2.8%	97.6%	0.0%	0.0%
	7,000	7,999	1.000	77,000.0	0.0	0.0%	0.0%	3.2%	97.2%	0.0%	0.0%
	8,000	8,999	0.987	76,000.0	0.1	0.0%	0.0%	3.6%	96.8%	0.0%	0.0%
	9,000	9,999	1.000	76,000.0	0.0	0.0%	0.0%	3.9%	96.4%	0.0%	0.0%
	10,000	14,999	4.895	372,000.0	0.3	0.0%	0.1%	5.8%	96.1%	0.1%	0.1%
	15,000	19,999	4.822	352,000.0	0.3	0.0%	0.1%	7.6%	94.2%	0.1%	0.1%
	20,000	24,999	4.812	332,000.0	0.3	0.0%	0.1%	9.2%	92.4%	0.1%	0.1%
4 Inch Meters	25,000	29,999	4.877	317,000.0	0.3	0.0%	0.1%	10.8%	90.8%	0.1%	0.1%
	30,000	30,999	1.000	62,000.0	0.0	0.0%	0.0%	11.1%	89.2%	0.0%	0.0%
	31,000	39,999	8.403	521,000.0	0.5	0.0%	0.1%	13.7%	88.9%	0.2%	0.2%
	40,000	89,999	38.875	2,177,000.0	1.8	0.1%	0.5%	24.5%	86.3%	0.7%	0.7%
	90,000	139,999	41.657	1,458,000.0	0.9	0.0%	0.4%	31.8%	75.5%	0.4%	0.4%
	140,000	189,999	44.875	1,077,000.0	0.3	0.0%	0.3%	37.2%	68.2%	0.2%	0.2%
	190,000	239,999	47.950	959,000.0	0.1	0.0%	0.2%	41.9%	62.8%	0.1%	0.1%
	240,000	289,999	46.105	876,000.0	0.2	0.0%	0.2%	46.3%	58.1%	0.2%	0.1%
	290,000	339,999	50.000	850,000.0	0.0	0.0%	0.2%	50.5%	53.7%	0.1%	0.1%
	340,000	389,999	49.824	847,000.0	0.1	0.0%	0.2%	54.7%	49.5%	0.1%	0.1%
	390,000	489,999	100.000	1,600,000.0	0.0	0.0%	0.4%	62.7%	45.3%	0.2%	0.2%
	490,000	589,999	93.938	1,503,000.0	0.3	0.0%	0.4%	70.2%	37.3%	0.3%	0.2%
	590,000	689,999	72.462	942,000.0	0.6	0.0%	0.2%	74.9%	29.8%	0.3%	0.3%
	690,000	3,061,000	840.333	5,042,000.0	0.5	0.0%	1.2%	100.0%	25.1%	0.8%	0.7%
	Totals for Class			20,080,000.0	8.4	0.3%	4.9%			4.5%	4.5%

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
	0	999	0.886	31,000.0	0.3	0.0%	0.0%	0.2%	100.0%	0.2%	0.2%
	1,000	1,999	1.000	31,000.0	0.0	0.0%	0.0%	0.4%	99.8%	0.0%	0.0%
	2,000	2,999	0.968	30,000.0	0.1	0.0%	0.0%	0.7%	99.6%	0.0%	0.0%
	3,000	3,999	1.000	30,000.0	0.0	0.0%	0.0%	0.9%	99.3%	0.0%	0.0%
	4,000	4,999	1.000	30,000.0	0.0	0.0%	0.0%	1.1%	99.1%	0.0%	0.0%
	5,000	5,999	1.000	30,000.0	0.0	0.0%	0.0%	1.3%	98.9%	0.0%	0.0%
	6,000	6,999	1.000	30,000.0	0.0	0.0%	0.0%	1.5%	98.7%	0.0%	0.0%
	7,000	7,999	1.000	30,000.0	0.0	0.0%	0.0%	1.7%	98.5%	0.0%	0.0%
	8,000	8,999	1.000	30,000.0	0.0	0.0%	0.0%	2.0%	98.3%	0.0%	0.0%
	9,000	9,999	1.000	30,000.0	0.0	0.0%	0.0%	2.2%	98.0%	0.0%	0.0%
	10,000	14,999	4.800	144,000.0	0.2	0.0%	0.0%	3.2%	97.8%	0.1%	0.1%
	15,000	19,999	4.321	121,000.0	0.6	0.0%	0.0%	4.1%	96.8%	0.3%	0.3%
	20,000	24,999	4.476	94,000.0	0.4	0.0%	0.0%	4.8%	95.9%	0.2%	0.2%
6 Inch Meters	25,000	29,999	4.750	76,000.0	0.2	0.0%	0.0%	5.3%	95.2%	0.1%	0.1%
	30,000	30,999	1.000	14,000.0	0.0	0.0%	0.0%	5.4%	94.7%	0.0%	0.0%
	31,000	39,999	8.500	119,000.0	0.2	0.0%	0.0%	6.3%	94.6%	0.1%	0.1%
	40,000	89,999	34.167	410,000.0	0.5	0.0%	0.1%	9.2%	93.7%	0.3%	0.3%
	90,000	139,999	41.167	247,000.0	0.2	0.0%	0.1%	11.0%	90.8%	0.1%	0.1%
	140,000	189,999	50.000	200,000.0	0.0	0.0%	0.0%	12.5%	89.0%	0.0%	0.0%
	190,000	239,999	50.000	200,000.0	0.0	0.0%	0.0%	13.9%	87.5%	0.0%	0.0%
	240,000	289,999	50.000	200,000.0	0.0	0.0%	0.0%	15.4%	86.1%	0.0%	0.0%
	290,000	339,999	50.000	200,000.0	0.0	0.0%	0.0%	16.8%	84.6%	0.0%	0.0%
	340,000	389,999	50.000	200,000.0	0.0	0.0%	0.0%	18.3%	83.2%	0.0%	0.0%
	390,000	489,999	100.000	400,000.0	0.0	0.0%	0.1%	21.1%	81.7%	0.1%	0.0%
	490,000	589,999	100.000	400,000.0	0.0	0.0%	0.1%	24.0%	78.9%	0.1%	0.0%
	590,000	689,999	100.000	400,000.0	0.0	0.0%	0.1%	26.9%	76.0%	0.1%	0.0%
	690,000	4,436,000	2,528.250	10,113,000.0	0.3	0.0%	2.5%	100.0%	73.1%	1.5%	1.4%
	Totals for Class			13,840,000.0	2.9	0.1%	3.4%			3.2%	3.1%
	0	999	0.667	8,000.0	0.3	0.0%	0.0%	0.2%	100.0%	0.2%	0.2%
	1,000	1,999	0.875	7,000.0	0.1	0.0%	0.0%	0.3%	99.8%	0.0%	0.0%
	2,000	2,999	1.000	7,000.0	0.0	0.0%	0.0%	0.4%	99.7%	0.0%	0.0%
	3,000	3,999	1.000	7,000.0	0.0	0.0%	0.0%	0.6%	99.6%	0.0%	0.0%
	4,000	4,999	1.000	7,000.0	0.0	0.0%	0.0%	0.7%	99.4%	0.0%	0.0%
	5,000	5,999	1.000	7,000.0	0.0	0.0%	0.0%	0.8%	99.3%	0.0%	0.0%
	6,000	6,999	1.000	7,000.0	0.0	0.0%	0.0%	1.0%	99.2%	0.0%	0.0%
	7,000	7,999	1.000	7,000.0	0.0	0.0%	0.0%	1.1%	99.0%	0.0%	0.0%
	8,000	8,999	1.000	7,000.0	0.0	0.0%	0.0%	1.2%	98.9%	0.0%	0.0%
	9,000	9,999	1.000	7,000.0	0.0	0.0%	0.0%	1.4%	98.8%	0.0%	0.0%
	10,000	14,999	5.000	35,000.0	0.0	0.0%	0.0%	2.1%	98.6%	0.0%	0.0%
	15,000	19,999	5.000	35,000.0	0.0	0.0%	0.0%	2.7%	97.9%	0.0%	0.0%
	20,000	24,999	5.000	35,000.0	0.0	0.0%	0.0%	3.4%	97.3%	0.0%	0.0%
6 Inch Meters - City Use	25,000	29,999	5.000	35,000.0	0.0	0.0%	0.0%	4.1%	96.6%	0.0%	0.0%
	30,000	30,999	1.000	7,000.0	0.0	0.0%	0.0%	4.2%	95.9%	0.0%	0.0%
	31,000	39,999	9.000	63,000.0	0.0	0.0%	0.0%	5.4%	95.8%	0.0%	0.0%
	40,000	89,999	50.000	350,000.0	0.0	0.0%	0.1%	12.2%	94.6%	0.0%	0.0%
	90,000	139,999	46.000	322,000.0	0.1	0.0%	0.1%	18.5%	87.8%	0.1%	0.1%
	140,000	189,999	41.833	251,000.0	0.1	0.0%	0.1%	23.3%	81.5%	0.1%	0.1%
	190,000	239,999	50.000	250,000.0	0.0	0.0%	0.1%	28.2%	76.7%	0.0%	0.0%
	240,000	289,999	50.000	250,000.0	0.0	0.0%	0.1%	33.0%	71.8%	0.0%	0.0%
	290,000	339,999	50.000	250,000.0	0.0	0.0%	0.1%	37.9%	67.0%	0.0%	0.0%
	340,000	389,999	50.000	250,000.0	0.0	0.0%	0.1%	42.7%	62.1%	0.0%	0.0%
	390,000	489,999	100.000	500,000.0	0.0	0.0%	0.1%	52.4%	57.3%	0.1%	0.1%
	490,000	589,999	100.000	500,000.0	0.0	0.0%	0.1%	62.1%	47.6%	0.1%	0.1%
	590,000	689,999	84.400	422,000.0	0.1	0.0%	0.1%	70.3%	37.9%	0.1%	0.1%
	690,000	1,480,000	383.000	1,532,000.0	0.3	0.0%	0.4%	100.0%	29.7%	0.4%	0.3%
	Totals for Class			5,158,000.0	1.0	0.0%	1.3%			1.2%	1.1%

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	6,000.0	0.0	0.0%	0.0%	0.2%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	6,000.0	0.0	0.0%	0.0%	0.4%	99.8%	0.0%	0.0%
	2,000	2,999	1.000	6,000.0	0.0	0.0%	0.0%	0.7%	99.6%	0.0%	0.0%
	3,000	3,999	1.000	6,000.0	0.0	0.0%	0.0%	0.9%	99.3%	0.0%	0.0%
	4,000	4,999	1.000	6,000.0	0.0	0.0%	0.0%	1.1%	99.1%	0.0%	0.0%
	5,000	5,999	1.000	6,000.0	0.0	0.0%	0.0%	1.3%	98.9%	0.0%	0.0%
	6,000	6,999	1.000	6,000.0	0.0	0.0%	0.0%	1.6%	98.7%	0.0%	0.0%
	7,000	7,999	1.000	6,000.0	0.0	0.0%	0.0%	1.8%	98.4%	0.0%	0.0%
	8,000	8,999	1.000	6,000.0	0.0	0.0%	0.0%	2.0%	98.2%	0.0%	0.0%
	9,000	9,999	1.000	6,000.0	0.0	0.0%	0.0%	2.2%	98.0%	0.0%	0.0%
	10,000	14,999	5.000	30,000.0	0.0	0.0%	0.0%	3.4%	97.8%	0.0%	0.0%
	15,000	19,999	5.000	30,000.0	0.0	0.0%	0.0%	4.5%	96.6%	0.0%	0.0%
	20,000	24,999	5.000	30,000.0	0.0	0.0%	0.0%	5.6%	95.5%	0.0%	0.0%
8 Inch Meters	25,000	29,999	5.000	30,000.0	0.0	0.0%	0.0%	6.7%	94.4%	0.0%	0.0%
	30,000	30,999	1.000	6,000.0	0.0	0.0%	0.0%	6.9%	93.3%	0.0%	0.0%
	31,000	39,999	9.000	54,000.0	0.0	0.0%	0.0%	8.9%	93.1%	0.0%	0.0%
	40,000	89,999	50.000	300,000.0	0.0	0.0%	0.1%	20.1%	91.1%	0.0%	0.0%
	90,000	139,999	50.000	300,000.0	0.0	0.0%	0.1%	31.3%	79.9%	0.0%	0.0%
	140,000	189,999	50.000	300,000.0	0.0	0.0%	0.1%	42.5%	68.7%	0.0%	0.0%
	190,000	239,999	50.000	300,000.0	0.0	0.0%	0.1%	53.6%	57.5%	0.0%	0.0%
	240,000	289,999	47.000	282,000.0	0.1	0.0%	0.1%	64.1%	46.4%	0.2%	0.1%
	290,000	339,999	46.400	232,000.0	0.1	0.0%	0.1%	72.8%	35.9%	0.1%	0.1%
	340,000	389,999	34.500	138,000.0	0.2	0.0%	0.0%	77.9%	27.2%	0.2%	0.1%
	390,000	489,999	62.500	125,000.0	0.1	0.0%	0.0%	82.6%	22.1%	0.1%	0.1%
	490,000	589,999	100.000	100,000.0	0.0	0.0%	0.0%	86.3%	17.4%	0.0%	0.0%
	590,000	689,999	100.000	100,000.0	0.0	0.0%	0.0%	90.0%	13.7%	0.0%	0.0%
	690,000	958,000	268.000	268,000.0	0.1	0.0%	0.1%	100.0%	10.0%	0.1%	0.1%
	Totals for Class			2,685,000.0	0.5	0.0%	0.7%			1.0%	0.7%
	0	999	1.000	12,000.0	0.0	0.0%	0.0%	0.5%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	12,000.0	0.0	0.0%	0.0%	0.9%	99.5%	0.0%	0.0%
	2,000	2,999	1.000	12,000.0	0.0	0.0%	0.0%	1.4%	99.1%	0.0%	0.0%
	3,000	3,999	1.000	12,000.0	0.0	0.0%	0.0%	1.8%	98.6%	0.0%	0.0%
	4,000	4,999	1.000	12,000.0	0.0	0.0%	0.0%	2.3%	98.2%	0.0%	0.0%
	5,000	5,999	1.000	12,000.0	0.0	0.0%	0.0%	2.8%	97.7%	0.0%	0.0%
	6,000	6,999	1.000	12,000.0	0.0	0.0%	0.0%	3.2%	97.2%	0.0%	0.0%
	7,000	7,999	1.000	12,000.0	0.0	0.0%	0.0%	3.7%	96.8%	0.0%	0.0%
	8,000	8,999	1.000	12,000.0	0.0	0.0%	0.0%	4.1%	96.3%	0.0%	0.0%
	9,000	9,999	1.000	12,000.0	0.0	0.0%	0.0%	4.6%	95.9%	0.0%	0.0%
	10,000	14,999	5.000	60,000.0	0.0	0.0%	0.0%	6.9%	95.4%	0.0%	0.0%
	15,000	19,999	5.000	60,000.0	0.0	0.0%	0.0%	9.2%	93.1%	0.0%	0.0%
	20,000	24,999	5.000	60,000.0	0.0	0.0%	0.0%	11.5%	90.8%	0.0%	0.0%
10 Inch Meters	25,000	29,999	5.000	60,000.0	0.0	0.0%	0.0%	13.8%	88.5%	0.0%	0.0%
	30,000	30,999	1.000	12,000.0	0.0	0.0%	0.0%	14.3%	86.2%	0.0%	0.0%
	31,000	39,999	8.333	100,000.0	0.1	0.0%	0.0%	18.1%	85.7%	0.2%	0.2%
	40,000	89,999	32.000	352,000.0	0.5	0.0%	0.1%	31.6%	81.9%	1.0%	1.0%
	90,000	139,999	50.000	250,000.0	0.0	0.0%	0.1%	41.2%	68.4%	0.0%	0.0%
	140,000	189,999	45.200	226,000.0	0.1	0.0%	0.1%	49.9%	58.8%	0.2%	0.2%
	190,000	239,999	35.750	143,000.0	0.2	0.0%	0.0%	55.4%	50.1%	0.3%	0.3%
	240,000	289,999	50.000	100,000.0	0.0	0.0%	0.0%	59.2%	44.6%	0.0%	0.0%
	290,000	339,999	50.000	100,000.0	0.0	0.0%	0.0%	63.1%	40.8%	0.0%	0.0%
	340,000	389,999	50.000	100,000.0	0.0	0.0%	0.0%	66.9%	36.9%	0.0%	0.0%
	390,000	489,999	65.500	131,000.0	0.1	0.0%	0.0%	71.9%	33.1%	0.2%	0.2%
	490,000	589,999	100.000	100,000.0	0.0	0.0%	0.0%	75.8%	28.1%	0.0%	0.0%
	590,000	689,999	100.000	100,000.0	0.0	0.0%	0.0%	79.6%	24.2%	0.0%	0.0%
	690,000	1,221,000	531.000	531,000.0	0.1	0.0%	0.1%	100.0%	20.4%	0.2%	0.2%
	Totals for Class			2,605,000.0	1.0	0.0%	0.6%			2.3%	2.3%
	Grand Totals			407,604,000.0		100.00%	100.00%			100.00%	100.00%

Chart 1 - Operating Ratio

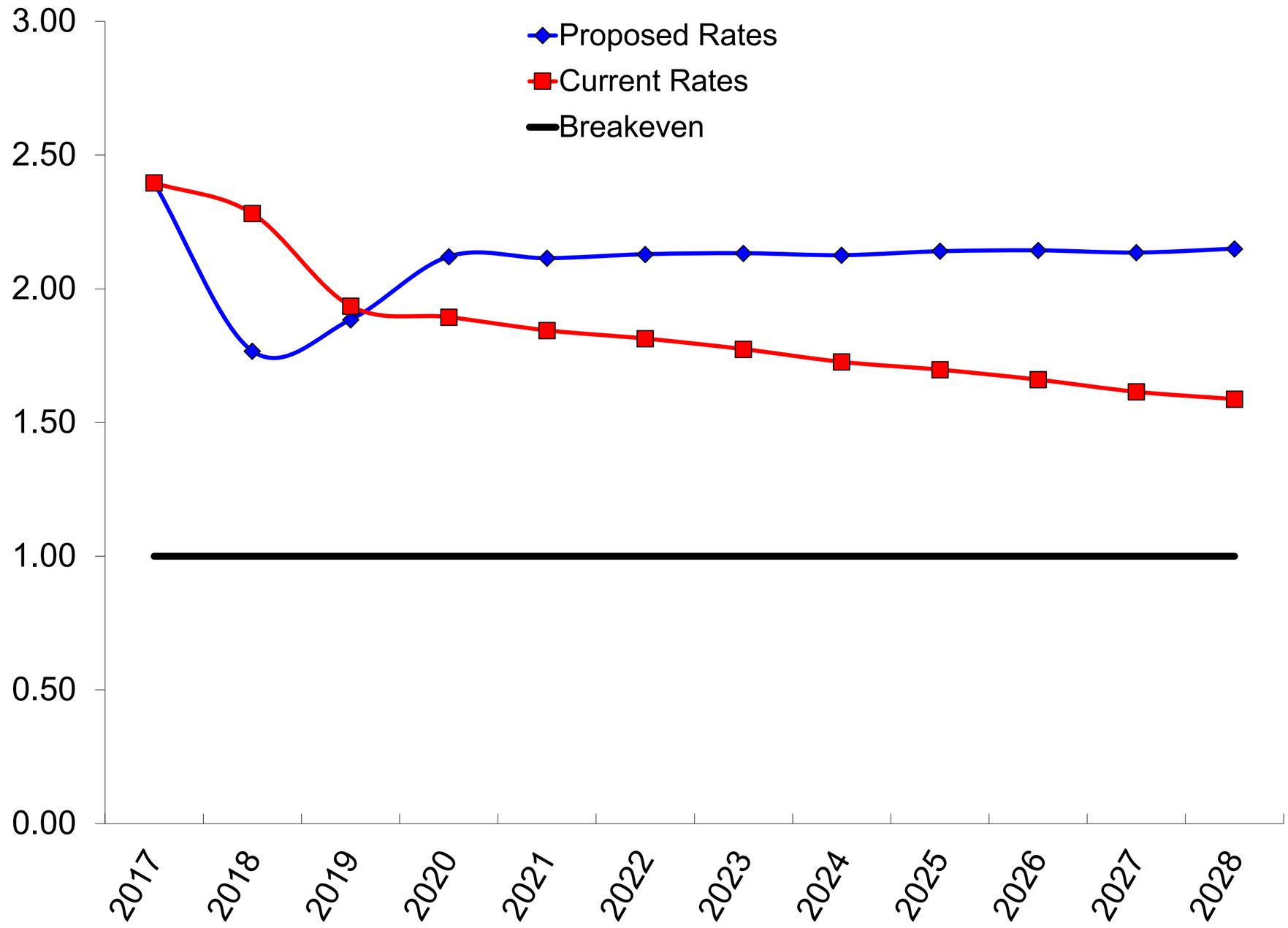


Chart 2 - Coverage Ratio

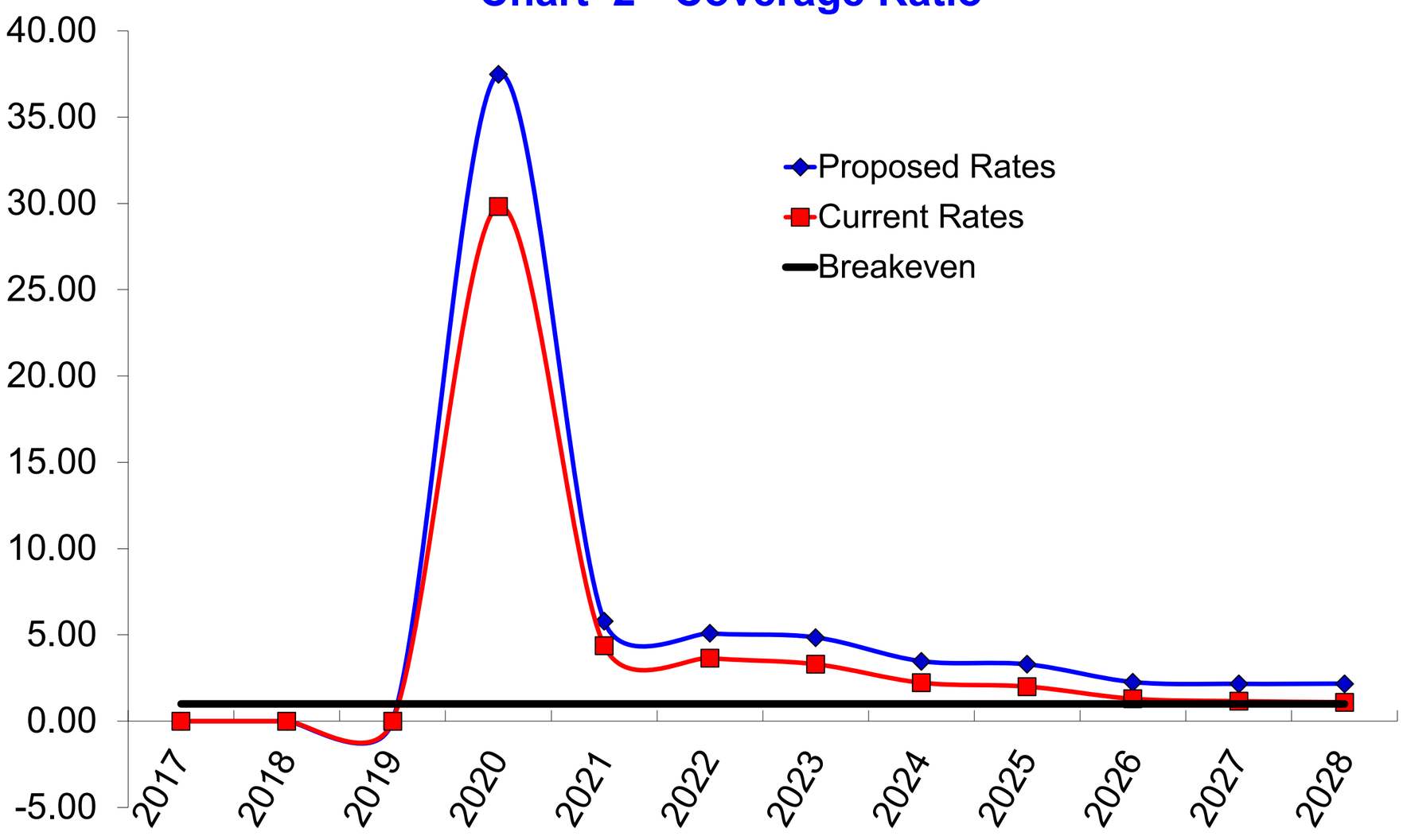


Chart 3 - 5,000 Gal Residential User's Bill

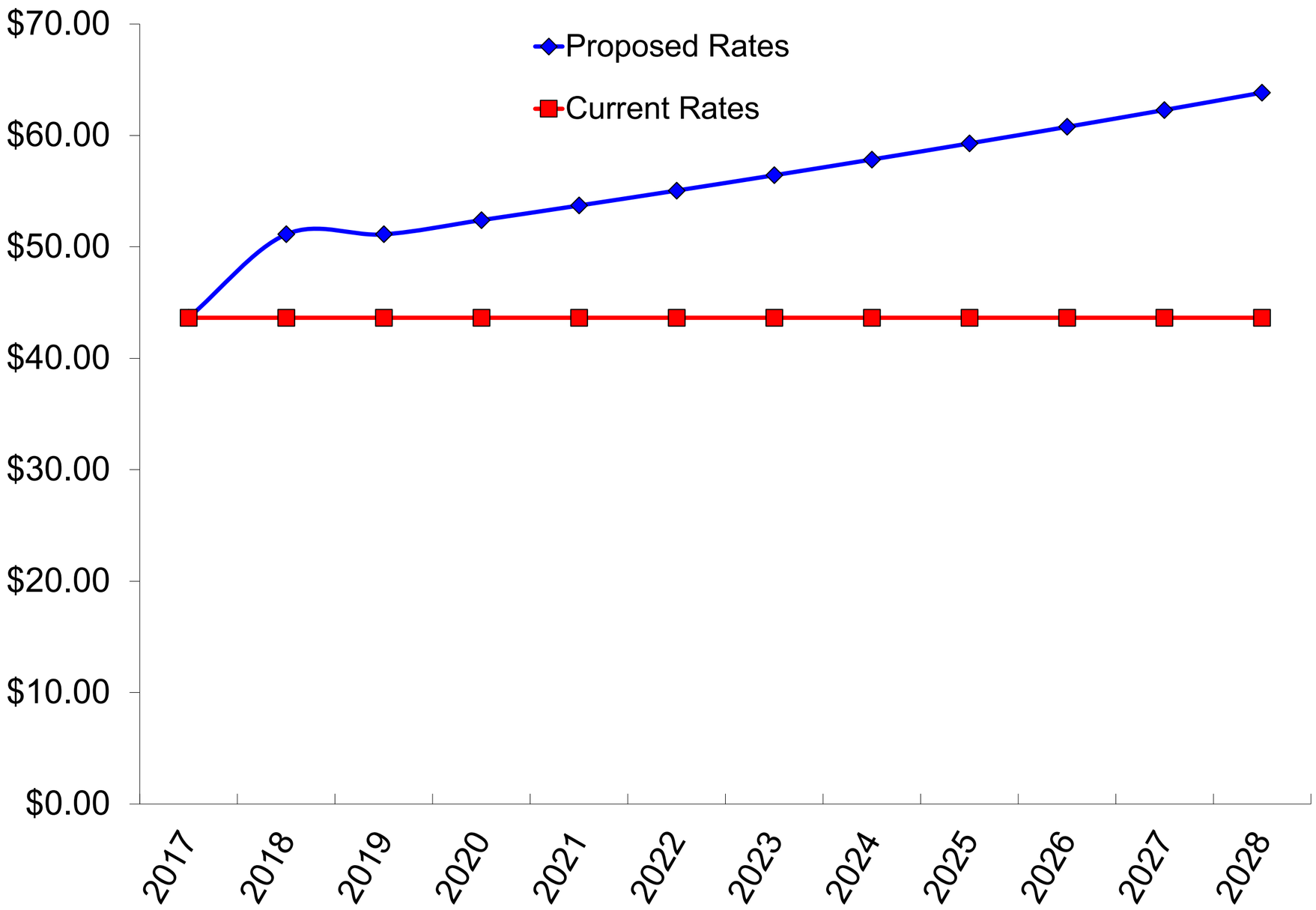


Chart 4 - Affordability Index

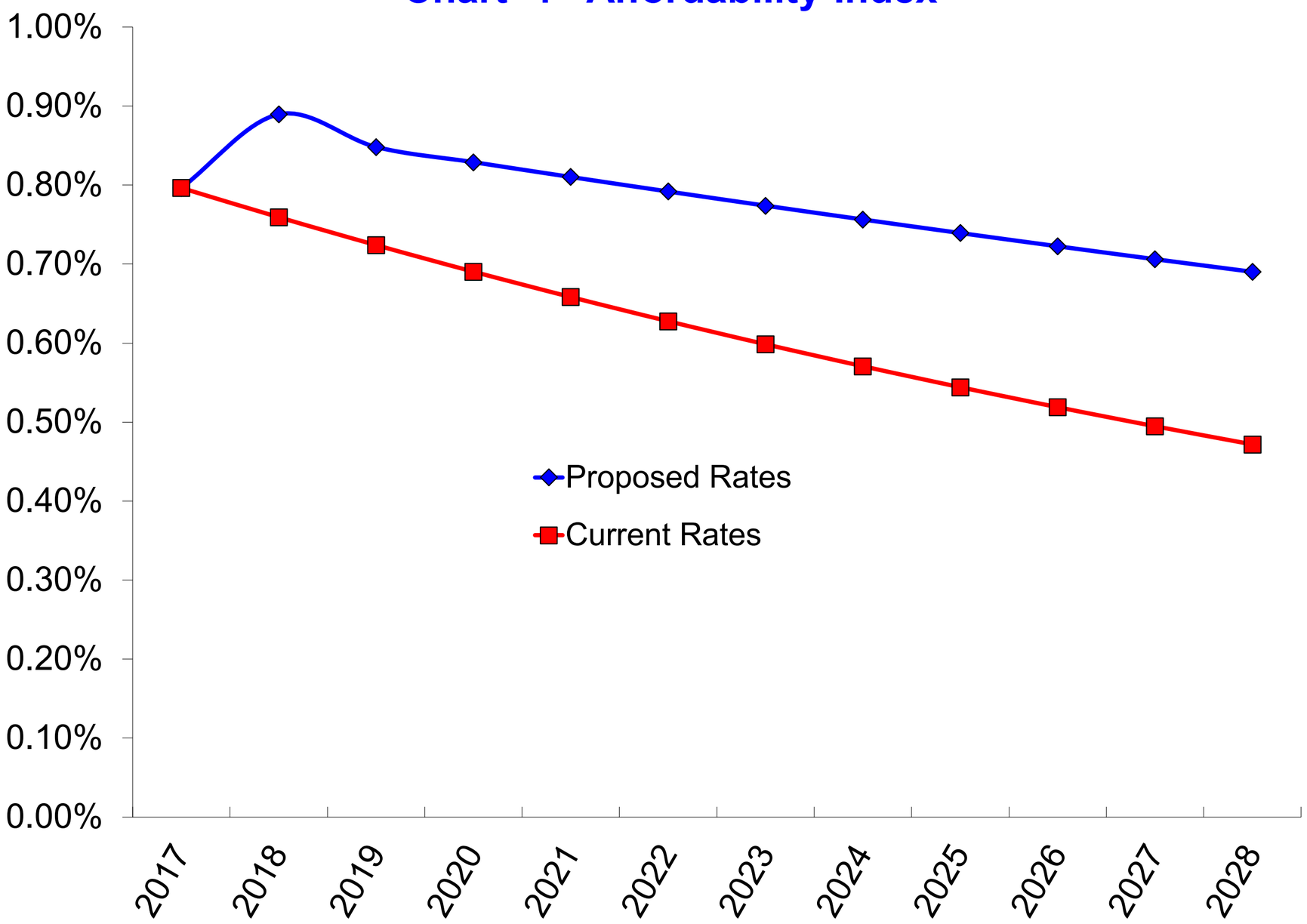


Chart 5 - Working Capital vs Goal

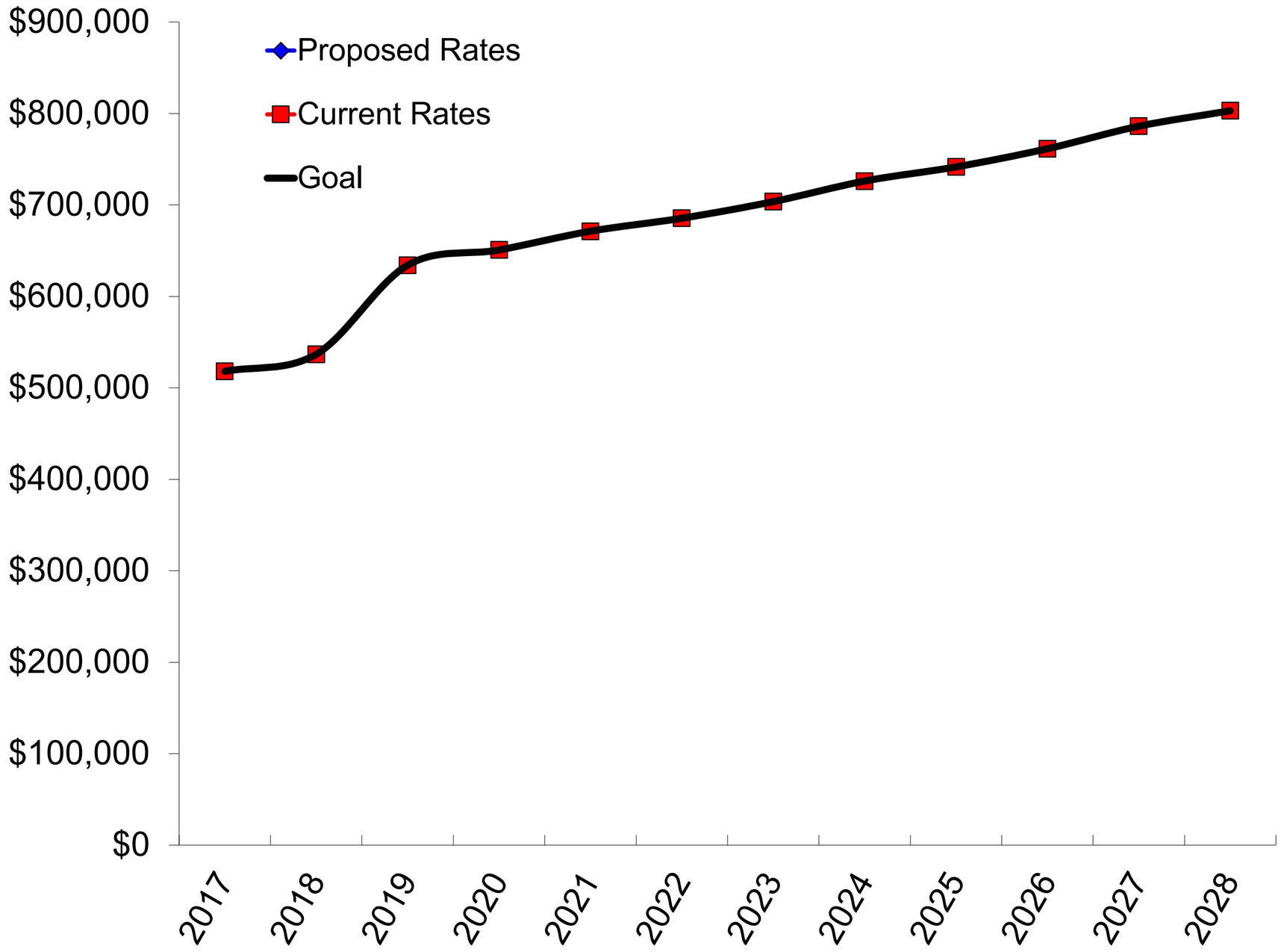


Chart 6 - Value of Cash Assets Before Inflation

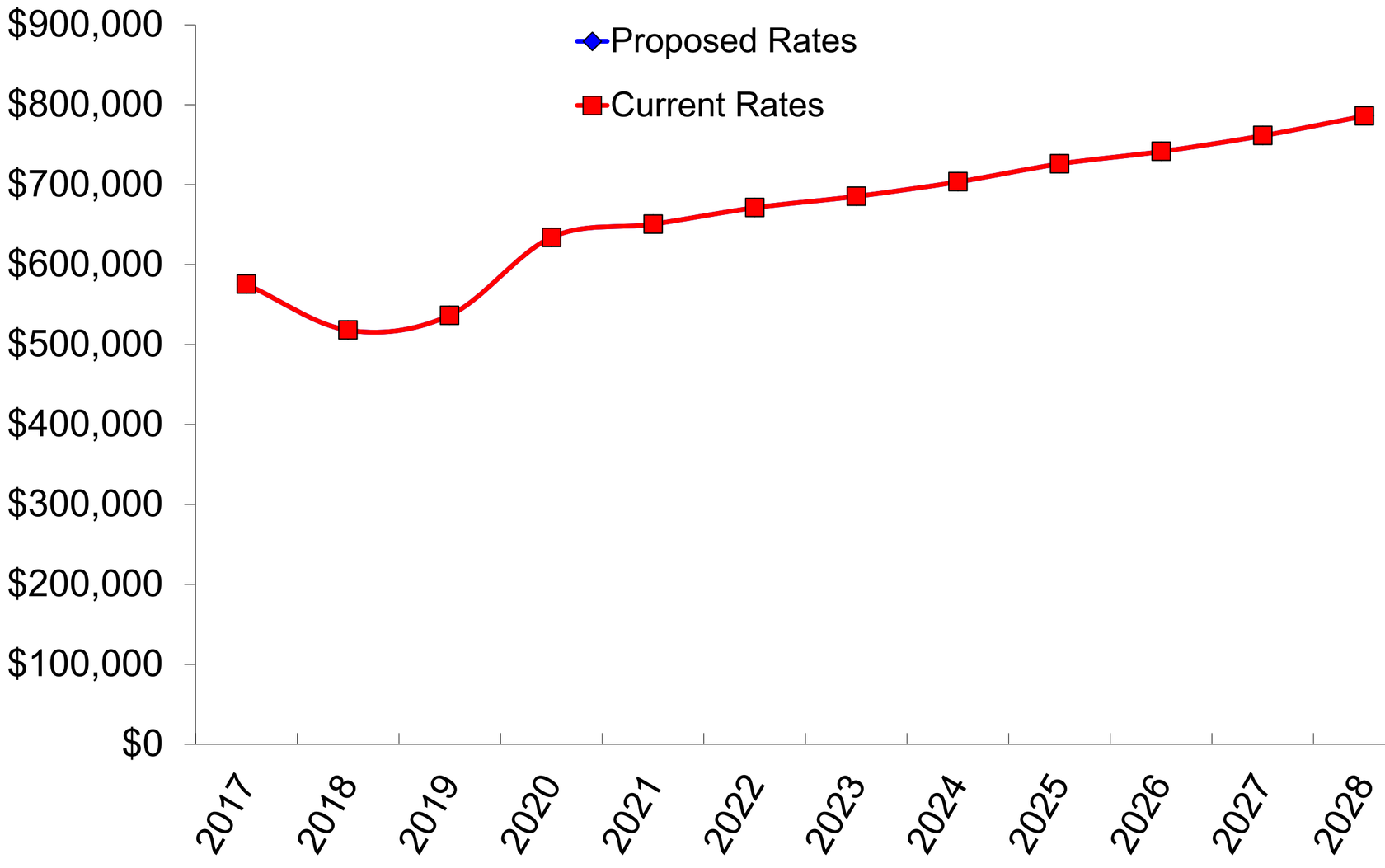


Chart 7 - Value of Cash Assets After Inflation

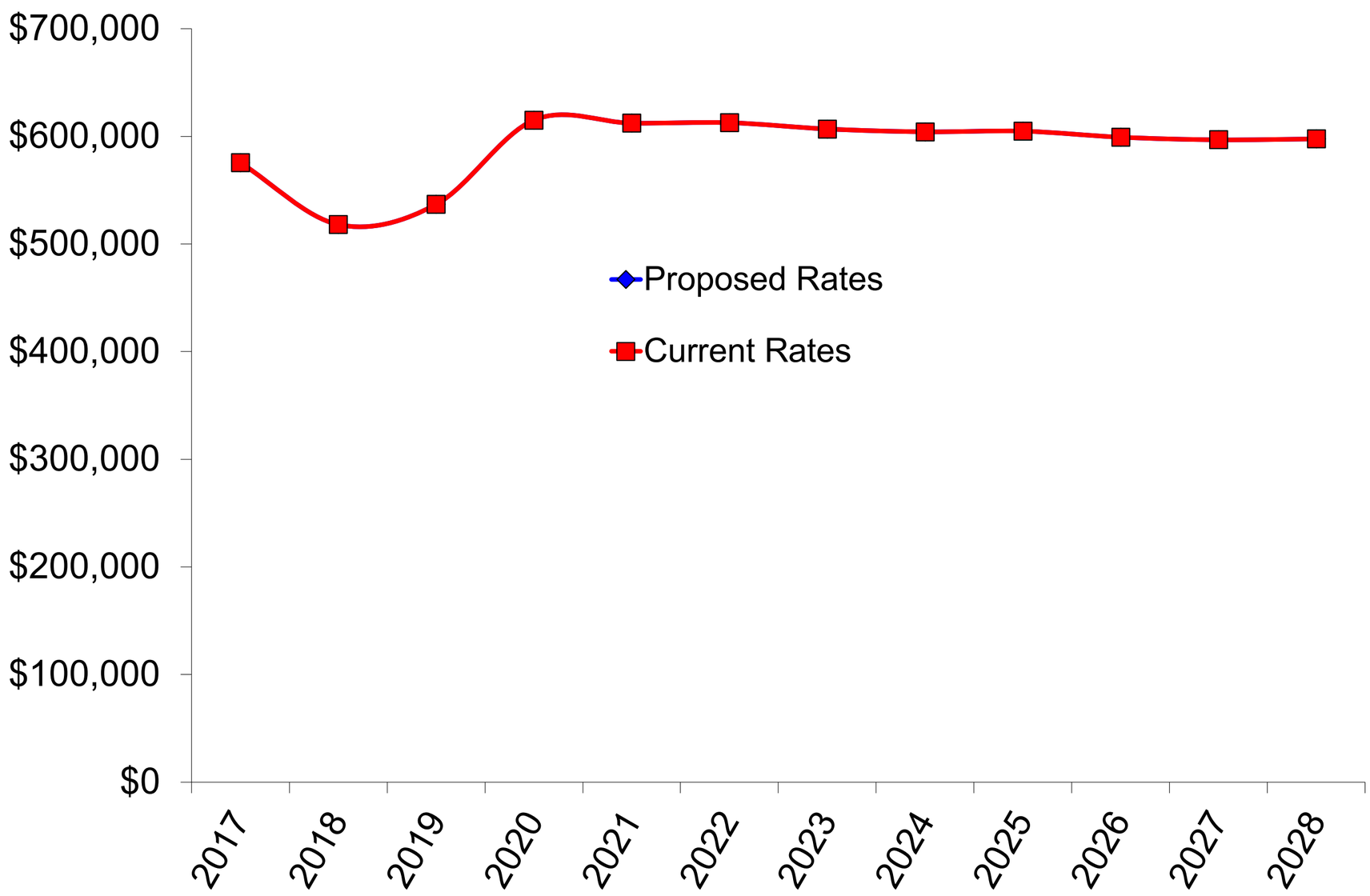
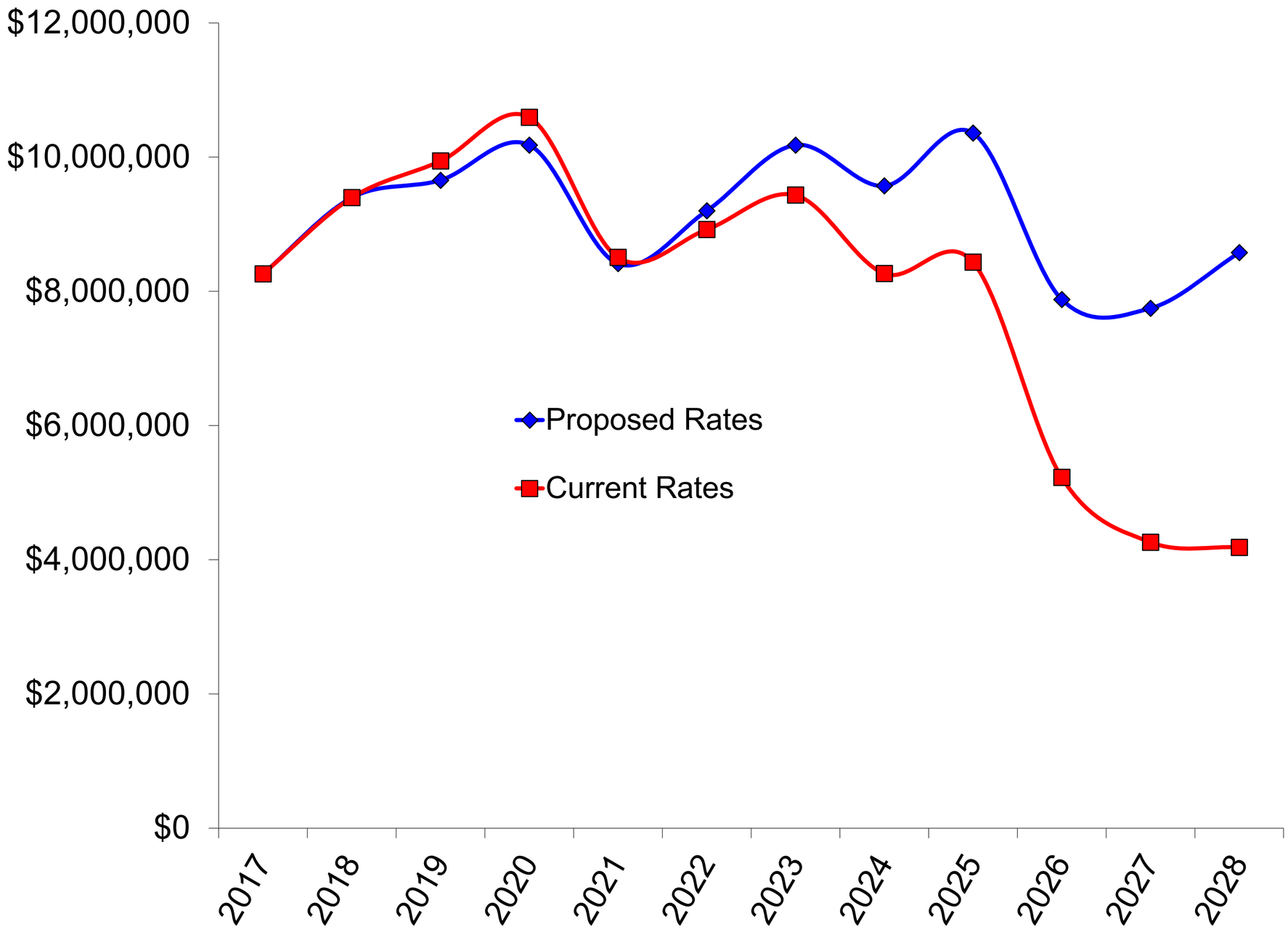


Chart 8 - Sum of All Reserves



Douglas, WY; Sewer Rates, Model 2019-2

(This model moves the rate structure closer to cost-to-serve.)

February 22, 2019

This rate analysis scenario was produced by
Carl E. Brown, GettingGreatRates.com
1014 Carousel Drive, Jefferson City, Missouri 65101
(573) 619-3411
www.gettinggreatrates.com
carl1@gettinggreatrates.com

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

Douglas, WY; Sewer Rates, Model 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

$5,661	Fees to GettingGreatRates.com
$500	Estimated value of system staff time and incidentals to assemble needed information
$6,161	Total Investment for This Analysis
$1,807,502	Five-year Increase in Revenue Due at Least Partly to This Analysis
29337%	Five-year Return on Investment (increase in revenues / investment)
$6,404,453	Ten-year Improvement in Cash Position Due at Least Partly to This Analysis
103,948%	Ten-year Return on Investment (increase in revenues / investment)

Table 1 - Rates
Douglas, WY; Sewer Rates, Model 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
0.75 Inch and Smaller Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
1 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
1.5 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
2 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
3 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
3 Inch Meters - City Use	0	$3.31	0.000	$6.09
	1,000	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
4 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
6 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
6 Inch Meters - City Use	0	$3.31	0.000	$6.09
	1,000	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
8 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09
10 Inch Meters	0	$3.31	0.000	$6.09
	690,000	$3.31	0.000	$6.09

Table 2 - Test Year Usage

Douglas, WY; Sewer Rates, Model 2019-2

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

Residential meter readings per year: 12

Date this scenario created: 5/30/2018

Test year = the one-year period being analyzed starts: 7/1/2016

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 Averaged This Volume of Use	% of Total Use at This Average Volume
0.75 Inch and Smaller Meters	0	999	1,000	0.950	18,696	17,760,000	936	0	78	3.3%	6.2%
	1,000	1,999	1,000	0.836	17,760	14,856,000	2,904	2,904,000	242	10.3%	5.2%
	2,000	2,999	1,000	0.741	14,856	11,012,000	3,844	7,688,000	320	13.6%	3.9%
	3,000	3,999	1,000	0.682	11,012	7,512,000	3,500	10,500,000	292	12.4%	2.6%
	4,000	4,999	1,000	0.629	7,512	4,724,000	2,788	11,152,000	232	9.9%	1.7%
	5,000	5,999	1,000	0.633	4,724	2,988,000	1,736	8,680,000	145	6.2%	1.1%
	6,000	6,999	1,000	0.651	2,988	1,944,000	1,044	6,264,000	87	3.7%	0.7%
	7,000	7,999	1,000	0.646	1,944	1,256,000	688	4,816,000	57	2.4%	0.4%
	8,000	8,999	1,000	0.653	1,256	820,000	436	3,488,000	36	1.5%	0.3%
	9,000	9,999	1,000	0.737	820	604,000	216	1,944,000	18	0.8%	0.2%
	10,000	14,999	1,000	2.755	604	1,664,000	384	4,404,000	32	1.4%	0.6%
	15,000	19,999	1,000	3.109	220	684,000	112	1,824,000	9	0.4%	0.2%
	20,000	24,999	1,000	4.630	108	500,000	24	560,000	2	0.1%	0.2%
	25,000	29,999	1,000	4.048	84	340,000	20	520,000	2	0.1%	0.1%
	30,000	30,999	1,000	1.000	64	64,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	8.438	64	540,000	12	444,000	1	0.0%	0.2%
	40,000	89,999	1,000	16.923	52	880,000	48	2,600,000	4	0.2%	0.3%
	90,000	139,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.1%
	140,000	189,999	1,000	28.000	4	112,000	4	672,000	0	0.0%	0.0%
	190,000	239,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	240,000	289,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	290,000	339,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	340,000	389,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	390,000	489,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	490,000	589,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	168,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	Monthly and Annual Subtotals:				82,772	68,460,000	18,696	68,460,000	1,558	66.4%	24.1%
1 Inch Meters	0	999	1,000	0.960	8,033	7,708,000	325	0	27	1.2%	2.7%
	1,000	1,999	1,000	0.872	7,708	6,720,000	988	988,000	82	3.5%	2.4%
	2,000	2,999	1,000	0.793	6,720	5,332,000	1,388	2,776,000	116	4.9%	1.9%
	3,000	3,999	1,000	0.720	5,332	3,840,000	1,492	4,476,000	124	5.3%	1.4%
	4,000	4,999	1,000	0.683	3,840	2,624,000	1,216	4,864,000	101	4.3%	0.9%
	5,000	5,999	1,000	0.671	2,624	1,760,000	864	4,320,000	72	3.1%	0.6%
	6,000	6,999	1,000	0.670	1,760	1,180,000	580	3,480,000	48	2.1%	0.4%
	7,000	7,999	1,000	0.742	1,180	876,000	304	2,128,000	25	1.1%	0.3%
	8,000	8,999	1,000	0.731	876	640,000	236	1,888,000	20	0.8%	0.2%
	9,000	9,999	1,000	0.881	640	564,000	76	684,000	6	0.3%	0.2%
	10,000	14,999	1,000	3.787	564	2,136,000	200	2,316,000	17	0.7%	0.8%
	15,000	19,999	1,000	4.088	364	1,488,000	112	1,908,000	9	0.4%	0.5%
	20,000	24,999	1,000	3.905	252	984,000	84	1,824,000	7	0.3%	0.3%
	25,000	29,999	1,000	4.357	168	732,000	32	852,000	3	0.1%	0.3%
	30,000	30,999	1,000	0.971	136	132,000	4	120,000	0	0.0%	0.0%
	31,000	39,999	1,000	7.121	132	940,000	36	1,192,000	3	0.1%	0.3%
	40,000	89,999	1,000	24.458	96	2,348,000	72	4,028,000	6	0.3%	0.8%
	90,000	139,999	1,000	41.833	24	1,004,000	4	364,000	0	0.0%	0.4%
	140,000	189,999	1,000	50.000	20	1,000,000	0	0	0	0.0%	0.4%
	190,000	239,999	1,000	48.000	20	960,000	4	920,000	0	0.0%	0.3%
	240,000	289,999	1,000	50.000	16	800,000	0	0	0	0.0%	0.3%
	290,000	339,999	1,000	50.000	16	800,000	0	0	0	0.0%	0.3%
	340,000	389,999	1,000	38.250	16	612,000	4	1,372,000	0	0.0%	0.2%
	390,000	489,999	1,000	89.333	12	1,072,000	4	1,832,000	0	0.0%	0.4%
	490,000	589,999	1,000	29.000	8	232,000	8	4,152,000	1	0.0%	0.1%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	520,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	Monthly and Annual Subtotals:				40,557	46,484,000	8,033	46,484,000	669	28.5%	16.3%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
1.5 Inch Meters	0	999	1,000	0.956	735	703,000	32	0	3	0.1%	0.2%
	1,000	1,999	1,000	0.927	703	652,000	51	51,000	4	0.2%	0.2%
	2,000	2,999	1,000	0.923	652	602,000	50	100,000	4	0.2%	0.2%
	3,000	3,999	1,000	0.977	602	588,000	14	42,000	1	0.0%	0.2%
	4,000	4,999	1,000	0.968	588	569,000	19	76,000	2	0.1%	0.2%
	5,000	5,999	1,000	0.956	569	544,000	25	125,000	2	0.1%	0.2%
	6,000	6,999	1,000	0.932	544	507,000	37	222,000	3	0.1%	0.2%
	7,000	7,999	1,000	0.951	507	482,000	25	175,000	2	0.1%	0.2%
	8,000	8,999	1,000	0.944	482	455,000	27	216,000	2	0.1%	0.2%
	9,000	9,999	1,000	0.932	455	424,000	31	279,000	3	0.1%	0.1%
	10,000	14,999	1,000	4.285	424	1,817,000	88	1,017,000	7	0.3%	0.6%
	15,000	19,999	1,000	4.265	336	1,433,000	76	1,273,000	6	0.3%	0.5%
	20,000	24,999	1,000	4.531	260	1,178,000	37	803,000	3	0.1%	0.4%
	25,000	29,999	1,000	4.592	223	1,024,000	30	809,000	3	0.1%	0.4%
	30,000	30,999	1,000	0.969	193	187,000	6	180,000	1	0.0%	0.1%
	31,000	39,999	1,000	7.840	187	1,466,000	40	1,383,000	3	0.1%	0.5%
	40,000	89,999	1,000	26.735	147	3,930,000	103	5,850,000	9	0.4%	1.4%
	90,000	139,999	1,000	30.318	44	1,334,000	26	2,774,000	2	0.1%	0.5%
	140,000	189,999	1,000	39.222	18	706,000	5	756,000	0	0.0%	0.2%
	190,000	239,999	1,000	43.462	13	565,000	2	395,000	0	0.0%	0.2%
	240,000	289,999	1,000	41.727	11	459,000	3	779,000	0	0.0%	0.2%
	290,000	339,999	1,000	35.750	8	286,000	3	906,000	0	0.0%	0.1%
	340,000	389,999	1,000	44.200	5	221,000	1	361,000	0	0.0%	0.1%
	390,000	489,999	1,000	96.500	4	386,000	1	476,000	0	0.0%	0.1%
	490,000	589,999	1,000	17.667	3	53,000	3	1,523,000	0	0.0%	0.0%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	528,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
		Monthly and Annual Subtotals:			7,713	20,571,000	735	20,571,000	61	2.6%	7.2%
2 Inch Meters	0	999	1,000	0.929	367	341,000	26	0	2	0.1%	0.1%
	1,000	1,999	1,000	0.953	341	325,000	16	16,000	1	0.1%	0.1%
	2,000	2,999	1,000	0.985	325	320,000	5	10,000	0	0.0%	0.1%
	3,000	3,999	1,000	0.972	320	311,000	9	27,000	1	0.0%	0.1%
	4,000	4,999	1,000	0.965	311	300,000	11	44,000	1	0.0%	0.1%
	5,000	5,999	1,000	0.980	300	294,000	6	30,000	1	0.0%	0.1%
	6,000	6,999	1,000	0.986	294	290,000	4	24,000	0	0.0%	0.1%
	7,000	7,999	1,000	0.976	290	283,000	7	49,000	1	0.0%	0.1%
	8,000	8,999	1,000	0.982	283	278,000	5	40,000	0	0.0%	0.1%
	9,000	9,999	1,000	0.989	278	275,000	3	27,000	0	0.0%	0.1%
	10,000	14,999	1,000	4.811	275	1,323,000	15	173,000	1	0.1%	0.5%
	15,000	19,999	1,000	4.854	260	1,262,000	11	182,000	1	0.0%	0.4%
	20,000	24,999	1,000	4.795	249	1,194,000	15	324,000	1	0.1%	0.4%
	25,000	29,999	1,000	4.722	234	1,105,000	22	595,000	2	0.1%	0.4%
	30,000	30,999	1,000	0.972	212	206,000	6	180,000	1	0.0%	0.1%
	31,000	39,999	1,000	8.131	206	1,675,000	37	1,301,000	3	0.1%	0.6%
	40,000	89,999	1,000	35.604	169	6,017,000	78	4,587,000	7	0.3%	2.1%
	90,000	139,999	1,000	42.297	91	3,849,000	29	3,359,000	2	0.1%	1.4%
	140,000	189,999	1,000	44.597	62	2,765,000	11	1,755,000	1	0.0%	1.0%
	190,000	239,999	1,000	47.863	51	2,441,000	4	851,000	0	0.0%	0.9%
	240,000	289,999	1,000	42.787	47	2,011,000	11	2,851,000	1	0.0%	0.7%
	290,000	339,999	1,000	43.500	36	1,566,000	8	2,486,000	1	0.0%	0.6%
	340,000	389,999	1,000	43.786	28	1,226,000	9	3,336,000	1	0.0%	0.4%
	390,000	489,999	1,000	72.579	19	1,379,000	9	3,889,000	1	0.0%	0.5%
	490,000	589,999	1,000	97.000	10	970,000	1	560,000	0	0.0%	0.3%
	590,000	689,999	1,000	97.667	9	879,000	2	1,359,000	0	0.0%	0.3%
	690,000	11,570,000	1,000	4,789.857	7	33,529,000	7	38,359,000	1	0.0%	11.8%
		Monthly and Annual Subtotals:			5,074	66,414,000	367	66,414,000	31	1.3%	23.4%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
3 Inch Meters	0	999	1,000	0.940	167	157,000	10	0	1	0.0%	0.1%
	1,000	1,999	1,000	1.000	157	157,000	0	0	0	0.0%	0.1%
	2,000	2,999	1,000	0.975	157	153,000	4	8,000	0	0.0%	0.1%
	3,000	3,999	1,000	0.987	153	151,000	2	6,000	0	0.0%	0.1%
	4,000	4,999	1,000	0.993	151	150,000	1	4,000	0	0.0%	0.1%
	5,000	5,999	1,000	0.993	150	149,000	1	5,000	0	0.0%	0.1%
	6,000	6,999	1,000	0.980	149	146,000	3	18,000	0	0.0%	0.1%
	7,000	7,999	1,000	0.986	146	144,000	2	14,000	0	0.0%	0.1%
	8,000	8,999	1,000	0.993	144	143,000	1	8,000	0	0.0%	0.1%
	9,000	9,999	1,000	0.986	143	141,000	2	18,000	0	0.0%	0.0%
	10,000	14,999	1,000	4.894	141	690,000	5	60,000	0	0.0%	0.2%
	15,000	19,999	1,000	4.926	136	670,000	4	70,000	0	0.0%	0.2%
	20,000	24,999	1,000	4.955	132	654,000	3	69,000	0	0.0%	0.2%
	25,000	29,999	1,000	4.705	129	607,000	13	352,000	1	0.0%	0.2%
	30,000	30,999	1,000	0.991	116	115,000	1	30,000	0	0.0%	0.0%
	31,000	39,999	1,000	8.383	115	964,000	15	529,000	1	0.1%	0.3%
	40,000	89,999	1,000	39.060	100	3,906,000	30	1,606,000	3	0.1%	1.4%
	90,000	139,999	1,000	46.443	70	3,251,000	7	731,000	1	0.0%	1.1%
	140,000	189,999	1,000	45.413	63	2,861,000	11	1,801,000	1	0.0%	1.0%
	190,000	239,999	1,000	44.635	52	2,321,000	14	3,081,000	1	0.0%	0.8%
	240,000	289,999	1,000	46.763	38	1,777,000	5	1,327,000	0	0.0%	0.6%
	290,000	339,999	1,000	47.909	33	1,581,000	3	951,000	0	0.0%	0.6%
	340,000	389,999	1,000	48.900	30	1,467,000	3	1,137,000	0	0.0%	0.5%
	390,000	489,999	1,000	95.481	27	2,578,000	4	1,838,000	0	0.0%	0.9%
	490,000	589,999	1,000	95.826	23	2,204,000	2	1,084,000	0	0.0%	0.8%
	590,000	689,999	1,000	96.524	21	2,027,000	1	617,000	0	0.0%	0.7%
	690,000	1,564,000	1,000	273.650	20	5,473,000	20	19,273,000	2	0.1%	1.9%
		Monthly and Annual Subtotals:			2,763	34,637,000	167	34,637,000	14	0.6%	12.2%
3 Inch Meters - City Use	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	30,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	9.000	12	108,000	0	0	0	0.0%	0.0%
	40,000	89,999	1,000	50.000	12	600,000	0	0	0	0.0%	0.2%
	90,000	139,999	1,000	50.000	12	600,000	0	0	0	0.0%	0.2%
	140,000	189,999	1,000	43.333	12	520,000	3	490,000	0	0.0%	0.2%
	190,000	239,999	1,000	44.556	9	401,000	3	671,000	0	0.0%	0.1%
	240,000	289,999	1,000	47.000	6	282,000	1	272,000	0	0.0%	0.1%
	290,000	339,999	1,000	48.600	5	243,000	1	333,000	0	0.0%	0.1%
	340,000	389,999	1,000	41.750	4	167,000	1	357,000	0	0.0%	0.1%
	390,000	489,999	1,000	51.667	3	155,000	2	835,000	0	0.0%	0.1%
	490,000	589,999	1,000	46.000	1	46,000	1	536,000	0	0.0%	0.0%
	590,000	689,999	1,000	0.000	0	0	0	0	0	0.0%	0.0%
	690,000	536,000	1,000	0.000	0	0	0	0	0	0.0%	0.0%
		Monthly and Annual Subtotals:			256	3,494,000	12	3,494,000	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 Averaged This Volume of Use	% of Total Use at This Average Volume
4 Inch Meters	0	999	1,000	0.911	101	92,000	9	0	1	0.0%	0.0%
	1,000	1,999	1,000	0.891	92	82,000	10	10,000	1	0.0%	0.0%
	2,000	2,999	1,000	0.963	82	79,000	3	6,000	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	79	79,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	0.987	79	78,000	1	4,000	0	0.0%	0.0%
	5,000	5,999	1,000	0.987	78	77,000	1	5,000	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	77	77,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	77	77,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	0.987	77	76,000	1	8,000	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	76	76,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	4.895	76	372,000	3	37,000	0	0.0%	0.1%
	15,000	19,999	1,000	4.822	73	352,000	4	67,000	0	0.0%	0.1%
	20,000	24,999	1,000	4.812	69	332,000	4	87,000	0	0.0%	0.1%
	25,000	29,999	1,000	4.877	65	317,000	3	82,000	0	0.0%	0.1%
	30,000	30,999	1,000	1.000	62	62,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	8.403	62	521,000	6	203,000	1	0.0%	0.2%
	40,000	89,999	1,000	38.875	56	2,177,000	21	1,267,000	2	0.1%	0.8%
	90,000	139,999	1,000	41.657	35	1,458,000	11	1,248,000	1	0.0%	0.5%
	140,000	189,999	1,000	44.875	24	1,077,000	4	637,000	0	0.0%	0.4%
	190,000	239,999	1,000	47.950	20	959,000	1	199,000	0	0.0%	0.3%
	240,000	289,999	1,000	46.105	19	876,000	2	506,000	0	0.0%	0.3%
	290,000	339,999	1,000	50.000	17	850,000	0	0	0	0.0%	0.3%
	340,000	389,999	1,000	49.824	17	847,000	1	387,000	0	0.0%	0.3%
	390,000	489,999	1,000	100.000	16	1,600,000	0	0	0	0.0%	0.6%
	490,000	589,999	1,000	93.938	16	1,503,000	3	1,673,000	0	0.0%	0.5%
	590,000	689,999	1,000	72.462	13	942,000	7	4,472,000	1	0.0%	0.3%
	690,000	3,061,000	1,000	840.333	6	5,042,000	6	9,182,000	1	0.0%	1.8%
		Monthly and Annual Subtotals:			1,464	20,080,000	101	20,080,000	8	0.4%	7.1%
6 Inch Meters	0	999	1,000	0.886	35	31,000	4	0	0	0.0%	0.0%
	1,000	1,999	1,000	1.000	31	31,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	0.968	31	30,000	1	2,000	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	30	30,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	4.800	30	144,000	2	24,000	0	0.0%	0.1%
	15,000	19,999	1,000	4.321	28	121,000	7	121,000	1	0.0%	0.0%
	20,000	24,999	1,000	4.476	21	94,000	5	114,000	0	0.0%	0.0%
	25,000	29,999	1,000	4.750	16	76,000	2	56,000	0	0.0%	0.0%
	30,000	30,999	1,000	1.000	14	14,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	8.500	14	119,000	2	73,000	0	0.0%	0.0%
	40,000	89,999	1,000	34.167	12	410,000	6	350,000	1	0.0%	0.1%
	90,000	139,999	1,000	41.167	6	247,000	2	227,000	0	0.0%	0.1%
	140,000	189,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.1%
	190,000	239,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.1%
	240,000	289,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.1%
	290,000	339,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.1%
	340,000	389,999	1,000	50.000	4	200,000	0	0	0	0.0%	0.1%
	390,000	489,999	1,000	100.000	4	400,000	0	0	0	0.0%	0.1%
	490,000	589,999	1,000	100.000	4	400,000	0	0	0	0.0%	0.1%
	590,000	689,999	1,000	100.000	4	400,000	0	0	0	0.0%	0.1%
	690,000	4,436,000	1,000	2,528.250	4	10,113,000	4	12,873,000	0	0.0%	3.6%
		Monthly and Annual Subtotals:			484	13,840,000	35	13,840,000	3	0.1%	4.9%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
6 Inch Meters - City Use	0	999	1,000	0.667	12	8,000	4	0	0	0.0%	0.0%
	1,000	1,999	1,000	0.875	8	7,000	1	1,000	0	0.0%	0.0%
	2,000	2,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
	15,000	19,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
	20,000	24,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
	25,000	29,999	1,000	5.000	7	35,000	0	0	0	0.0%	0.0%
	30,000	30,999	1,000	1.000	7	7,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	9.000	7	63,000	0	0	0	0.0%	0.0%
	40,000	89,999	1,000	50.000	7	350,000	0	0	0	0.0%	0.1%
	90,000	139,999	1,000	46.000	7	322,000	1	112,000	0	0.0%	0.1%
	140,000	189,999	1,000	41.833	6	251,000	1	141,000	0	0.0%	0.1%
	190,000	239,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	240,000	289,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	290,000	339,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	340,000	389,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	390,000	489,999	1,000	100.000	5	500,000	0	0	0	0.0%	0.2%
	490,000	589,999	1,000	100.000	5	500,000	0	0	0	0.0%	0.2%
	590,000	689,999	1,000	84.400	5	422,000	1	612,000	0	0.0%	0.1%
	690,000	1,480,000	1,000	383.000	4	1,532,000	4	4,292,000	0	0.0%	0.5%
		Monthly and Annual Subtotals:			177	5,158,000	12	5,158,000	1	0.0%	1.8%
8 Inch Meters	0	999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	1,000	1,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	2,000	2,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	3,000	3,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	4,000	4,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	5,000	5,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	6,000	6,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	7,000	7,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	8,000	8,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	9,000	9,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	10,000	14,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
	15,000	19,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
	20,000	24,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
	25,000	29,999	1,000	5.000	6	30,000	0	0	0	0.0%	0.0%
	30,000	30,999	1,000	1.000	6	6,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	9.000	6	54,000	0	0	0	0.0%	0.0%
	40,000	89,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	90,000	139,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	140,000	189,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	190,000	239,999	1,000	50.000	6	300,000	0	0	0	0.0%	0.1%
	240,000	289,999	1,000	47.000	6	282,000	1	272,000	0	0.0%	0.1%
	290,000	339,999	1,000	46.400	5	232,000	1	322,000	0	0.0%	0.1%
	340,000	389,999	1,000	34.500	4	138,000	2	718,000	0	0.0%	0.0%
	390,000	489,999	1,000	62.500	2	125,000	1	415,000	0	0.0%	0.0%
	490,000	589,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	590,000	689,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	690,000	958,000	1,000	268.000	1	268,000	1	958,000	0	0.0%	0.1%
		Monthly and Annual Subtotals:			140	2,685,000	6	2,685,000	1	0.0%	0.9%

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 Averaged This Volume of Use	% of Total Use at This Average Volume
10 Inch Meters	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	30,999	1,000	1.000	12	12,000	0	0	0	0.0%	0.0%
	31,000	39,999	1,000	8.333	12	100,000	1	32,000	0	0.0%	0.0%
	40,000	89,999	1,000	32.000	11	352,000	6	342,000	1	0.0%	0.1%
	90,000	139,999	1,000	50.000	5	250,000	0	0	0	0.0%	0.1%
	140,000	189,999	1,000	45.200	5	226,000	1	166,000	0	0.0%	0.1%
	190,000	239,999	1,000	35.750	4	143,000	2	423,000	0	0.0%	0.1%
	240,000	289,999	1,000	50.000	2	100,000	0	0	0	0.0%	0.0%
	290,000	339,999	1,000	50.000	2	100,000	0	0	0	0.0%	0.0%
	340,000	389,999	1,000	50.000	2	100,000	0	0	0	0.0%	0.0%
	390,000	489,999	1,000	65.500	2	131,000	1	421,000	0	0.0%	0.0%
	490,000	589,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	590,000	689,999	1,000	100.000	1	100,000	0	0	0	0.0%	0.0%
	690,000	1,221,000	1,000	531.000	1	531,000	1	1,221,000	0	0.0%	0.2%
			Monthly and Annual Subtotals:		228	2,605,000	12	2,605,000	1	0.0%	0.9%
			Grand Totals:		141,628	284,428,000	28,176		2,348	100%	100%

Table 3 - Operating Incomes
(and User Base Data)
Douglas, WY; Sewer Rates, Model 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)

$65,758 Census Bureau estimate of AMHI for the year: 2016

$36,944 Census Bureau estimate of AMHI for the year: 2000

$28,814 AMHI growth during this time period

4.87% 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

10 Number of new connections made during the test year

$1,370 Average system development 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.

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)									
				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
		7/1/16	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
Average Number of Customers for the Year	N.A.	2,348	2,358	2,368	2,378	2,388	2,398	2,408	2,418	2,428	2,438	2,448	2,458
Actual (Test Year) and Projected Volumes, in Gallons	N.A.	284,428,000	285,639,363	286,850,726	288,062,089	289,273,451	290,484,814	291,696,177	292,907,540	294,118,903	295,330,266	296,541,629	297,752,991
Customers Added or Lost (-) During the Year	N.A.	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Customer Growth or Loss (-) Rate	N.A.	0.43%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%	0.41%	0.41%	0.41%	0.41%	0.41%
Rate Increases Projected for Future Years	N.A.	N.A.	N.A.	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

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		$1,825,429	$1,826,628	$2,262,992	$2,329,363	$2,397,680	$2,467,913	$2,540,160	$2,614,476	$2,690,921	$2,769,554	$2,850,437	$2,933,633
Additional Sales Revenues From New Customers			$21	$9,557	$9,837	$10,041	$10,292	$10,549	$10,813	$11,083	$11,360	$11,644	$11,935
Total Calculated Revenues (User Charge Fees)		$1,825,429	$1,826,649	$2,272,549	$2,339,200	$2,407,720	$2,478,205	$2,550,709	$2,625,289	$2,702,004	$2,780,914	$2,862,081	$2,945,568

Operating Incomes

USER CHARGES	N.A.	$1,178,677	$1,179,465	$1,467,382	$1,510,418	$1,554,662	$1,600,174	$1,646,989	$1,695,146	$1,744,681	$1,795,633	$1,848,042	$1,901,949
Late Payment Charge	N.A.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SEWER PLANT INVESTMENT FEES (Current Structure)	% Above	$13,700	$13,662	$2,500	$2,563	$2,627	$2,692	$2,760	$2,829	$2,899	$2,972	$3,046	$3,122
Meter Size-based System Development Fees (Table 13)	% Above	$0	$37	$13,606	$13,947	$14,295	$14,653	$15,019	$15,394	$15,779	$16,174	$16,578	$16,992
Interest Income	N.A.	$26,964	$4,119	$4,271	$4,589	$4,722	$4,891	$5,002	$5,148	$5,334	$5,455	$5,615	$5,818
OTHER	N.A.	$2,270	$2,270	$2,270	$2,270	$2,270	$2,270	$2,270	$2,270	$2,270	$2,270	$2,270	$2,270
SEPTIC WASTE DISP FEES	N.A.	$146,490	$146,490	$181,485	$186,808	$192,287	$197,919	$203,713	$209,673	$215,804	$222,110	$228,596	$235,268
Revenue Loss Due to Late Rate Adjustment on 3/1/2019	N.A.	$0	-$437,563	-$328,172	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Incomes		**$1,368,101**	**$908,481**	**$1,343,342**	**$1,720,594**	**$1,770,863**	**$1,822,599**	**$1,875,753**	**$1,930,460**	**$1,986,767**	**$2,044,613**	**$2,104,147**	**$2,165,421**

Table 4 - Operating Costs and Net Income

Douglas, WY; Sewer Rates, Model 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 7/1/16	Analysis (This) Year Starting 7/1/17	Years Following the Analysis Year (for Which Results Have Been Projected) 1st Year Starting 7/1/18	2nd Year Starting 7/1/19	3rd Year Starting 7/1/20	4th Year Starting 7/1/21	5th Year Starting 7/1/22	6th Year Starting 7/1/23	7th Year Starting 7/1/24	8th Year Starting 7/1/25	9th Year Starting 7/1/26	10th Year Starting 7/1/27
ARCHITECT/ENGINEERING/SURVEY	3.0%	$598	$616	$634	$653	$673	$693	$714	$735	$758	$780	$804	$828
DEPRECIATION	0.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DUES/MEMBERSHIPS/SUBSCRIPTIONS	3.0%	$784	$807	$832	$856	$882	$909	$936	$964	$993	$1,023	$1,053	$1,085
EMPLOYEE BENEFITS - DFRRD COMP	3.0%	$336	$346	$356	$367	$378	$389	$401	$413	$425	$438	$451	$465
EMPLOYEE BENEFITS - HEALTH INS	3.0%	$100,031	$103,032	$106,123	$109,306	$112,586	$115,963	$119,442	$123,025	$126,716	$130,518	$134,433	$138,466
EMPLOYEE BENEFITS - SCL SCRTY	3.0%	$19,081	$19,653	$20,243	$20,850	$21,476	$22,120	$22,784	$23,467	$24,171	$24,896	$25,643	$26,412
EMPLOYEE BENEFITS - WRKRS COMP	3.0%	$10,774	$11,097	$11,430	$11,773	$12,126	$12,490	$12,864	$13,250	$13,648	$14,057	$14,479	$14,913
EMPLOYEE BENEFITS - WY RTRMNT	3.0%	$40,779	$42,002	$43,262	$44,560	$45,897	$47,274	$48,692	$50,153	$51,658	$53,207	$54,804	$56,448
EQUIPMENT/TOOLS-NON CAPITALIZE	3.0%	$7,043	$7,254	$7,472	$7,696	$7,927	$8,165	$8,410	$8,662	$8,922	$9,189	$9,465	$9,749
FUEL	3.0%	$8,107	$8,350	$8,600	$8,858	$9,124	$9,398	$9,680	$9,970	$10,269	$10,577	$10,894	$11,221
LEASE PAYMENTS - OPERATING	3.0%	$177	$182	$188	$193	$199	$205	$211	$218	$224	$231	$238	$245
MANAGEMENT FEES	3.0%	$157,360	$162,081	$166,943	$171,952	$177,110	$182,423	$187,896	$193,533	$199,339	$205,319	$211,479	$217,823
MEALS/LODGING/TRAVEL	3.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MISC CONTRACTUAL SERVICES	3.0%	$11,820	$12,175	$12,540	$12,916	$13,304	$13,703	$14,114	$14,538	$14,974	$15,423	$15,886	$16,362
OPERATING SUPPLIES	3.0%	$42,536	$43,812	$45,127	$46,481	$47,875	$49,311	$50,791	$52,314	$53,884	$55,500	$57,165	$58,880
REPAIRS/MAINTENANCE	3.0%	$1,307	$1,346	$1,387	$1,428	$1,471	$1,515	$1,561	$1,607	$1,656	$1,705	$1,756	$1,809
SALARIES & WAGES - ALLOWANCES	3.0%	$250	$258	$265	$273	$281	$290	$299	$307	$317	$326	$336	$346
SALARIES/WAGES - ALLOWANCES	3.0%	$300	$309	$318	$328	$338	$348	$358	$369	$380	$391	$403	$415
SALARIES/WAGES - LONGEVITY	3.0%	$806	$830	$855	$881	$907	$935	$963	$992	$1,021	$1,052	$1,084	$1,116
SALARIES/WAGES - OVERTIME	3.0%	$3,059	$3,150	$3,245	$3,342	$3,442	$3,546	$3,652	$3,762	$3,875	$3,991	$4,110	$4,234
SALARIES/WAGES - REGULAR	3.0%	$242,353	$249,624	$257,113	$264,826	$272,771	$280,954	$289,382	$298,064	$307,006	$316,216	$325,703	$335,474
SALARIES/WAGES - TEMPORARY	3.0%	$3,026	$3,117	$3,211	$3,307	$3,406	$3,508	$3,614	$3,722	$3,834	$3,949	$4,067	$4,189
SLUDGE REMOVAL RESERVE	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
TAP FEE REFUNDS	3.0%	$1,500	$1,545	$1,591	$1,639	$1,688	$1,739	$1,791	$1,845	$1,900	$1,957	$2,016	$2,076
TELECOMMUNICATIONS	3.0%	$2,702	$2,783	$2,867	$2,953	$3,041	$3,133	$3,227	$3,323	$3,423	$3,526	$3,632	$3,740
TRAINING/DEVELOPMENT	3.0%	$2,275	$2,343	$2,414	$2,486	$2,561	$2,637	$2,716	$2,798	$2,882	$2,968	$3,057	$3,149
UTILITY SERVICES - ELECTRICITY	3.0%	$108,622	$111,881	$115,724	$119,699	$123,806	$128,052	$132,441	$136,979	$141,669	$146,518	$151,530	$156,710
UTILITY SERVICES - NATURAL GAS	3.0%	$1,743	$1,795	$1,849	$1,905	$1,962	$2,021	$2,081	$2,144	$2,208	$2,274	$2,343	$2,413
UTILITY SERVICES - WTR/SWR/GRB	3.0%	$56,430	$58,123	$59,867	$61,663	$63,512	$65,418	$67,380	$69,402	$71,484	$73,628	$75,837	$78,112
APITALIZED EXP ARCHITECT/ENGINEERING/SURVEY	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
CAPITALIZED EXP EQUIPMENT/FURNITURE	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
CAPITALIZED EXP IMPRVMNTS OTHER THAN BLDG	0.0%	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
One-time Reduction of R&R Annuity	0.0%	-$43,273	-$43,273	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Annual Payment to Repair & Replacement (Table 7)	0.0%	$43,273	$43,273	$43,273	$43,273	$43,273	$43,273	$43,273	$43,273	$43,273	$43,273	$43,273	$43,273
User Charge Analysis Services	5.0%	$0	$5,661	$0	$0	$6,241	$0	$0	$6,881	$0	$0	$7,587	$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		**$823,799**	**$854,174**	**$917,727**	**$944,464**	**$978,258**	**$1,000,411**	**$1,029,672**	**$1,066,710**	**$1,090,906**	**$1,122,934**	**$1,163,527**	**$1,189,955**
Net Income (or Loss)		$544,303	$54,307	$425,615	$776,130	$792,605	$822,189	$846,081	$863,751	$895,860	$921,679	$940,621	$975,465
Working Capital Goal: 50%	In Dollars, That is:	$411,899	$427,087	$458,864	$472,232	$489,129	$500,205	$514,836	$533,355	$545,453	$561,467	$581,763	$594,978

Notes: The City includes individual capital and equipment replacement costs in its operating budget, which is normal. However, for rate calculation purposes, we account for capital costs in Table 5 and replacement costs in Table 6. Therefore, the "test year" costs in the above table do not add up to the same total as the City's expense statement did, but the remainder of those costs are in the other two tables. As to future costs, they were increased by an inflation factor and some, those that are related to the number of customers served and the volumes they use, are also increased by the growth rate each year. Those are highlighted yellow.

Table 5 - Capital Improvement Program (CIP)

Douglas, WY; Sewer Rates, Model 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)									
	7/1/16	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
Planned Spending, Debt-paid Portion of Projects (CIP costs to be funded with loans are shown in this section.)												
Sewer - Treatment, Cell 2 aeration replacement & sludge removal	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Treatment, UV Disinfection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, 7th - 6th to Cedar	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Oak Street - 2nd to 6th St	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, 8th - Center to Cedar	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Elm St - Brownfield to 3rd	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Cody St - 5th to Jefferson	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, 9th - Alley - Center to Cedar	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Pine St - 5th to 6th	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Alley between 5th & Adams - Richards to Cody	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Ash St - 3rd to 8th and 7th to Pine crossing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, 10th St Alley - Hamilton to 10th	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Birch St - 6th to 8th Crossing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer - Main Replacement, Cody to Laramie between 5th & Washington	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Closing Costs, Estimated at: 2.50%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Debt-paid Portion of Projects	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Planned Spending, Grant-paid Portion of Projects (CIP costs to be grant-funded are shown here.)												
Total Grant-paid Portion of Projects	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Planned Spending, Cash-paid Portion of Projects (CIP costs to be funded from reserves are shown here.)												
Sewer - Treatment, Cell 2 aeration replacement & sludge removal	$0	$0	$860,050	$0	$0	$0	$0	$997,034	$0	$0	$0	$0
Sewer - Treatment, UV Disinfection	$0	$0	$0	$0	$0	$0	$284,022	$0	$0	$0	$0	$329,260
Sewer - Main Replacement, 7th - 6th to Cedar	$0	$0	$436,720	$0	$0	$0	$0	$506,278	$0	$0	$0	$0
Sewer - Main Replacement, Oak Street - 2nd to 6th St	$0	$0	$123,600	$0	$0	$0	$0	$143,286	$0	$0	$0	$0
Sewer - Main Replacement, 8th - Center to Cedar	$0	$0	$0	$250,903	$0	$0	$0	$0	$290,865	$0	$0	$0
Sewer - Main Replacement, Elm St - Brownfield to 3rd	$0	$0	$366,680	$0	$0	$0	$0	$425,083	$0	$0	$0	$0
Sewer - Main Replacement, Cody St - 5th to Jefferson	$0	$0	$0	$0	$222,370	$0	$0	$0	$0	$257,788	$0	$0
Sewer - Main Replacement, 9th - Alley - Center to Cedar	$0	$0	$0	$0	$552,920	$0	$0	$0	$0	$640,986	$0	$0
Sewer - Main Replacement, Pine St - 5th to 6th	$0	$0	$0	$0	$304,871	$0	$0	$0	$0	$353,429	$0	$0
Sewer - Main Replacement, Alley between 5th & Adams - Richards to Cody	$0	$0	$0	$425,951	$0	$0	$0	$0	$493,794	$0	$0	$0
Sewer - Main Replacement, Ash St - 3rd to 8th and 7th to Pine crossing	$0	$0	$0	$0	$0	$377,608	$0	$0	$0	$0	$437,751	$0
Sewer - Main Replacement, 10th St Alley - Hamilton to 10th	$0	$0	$0	$0	$0	$433,321	$0	$0	$0	$0	$502,338	$0
Sewer - Main Replacement, Birch St - 6th to 8th Crossing	$0	$0	$0	$0	$0	$0	$146,648	$0	$0	$0	$0	$170,005
Sewer - Main Replacement, Cody to Laramie between 5th & Washington	$0	$0	$0	$0	$0	$0	$463,710	$0	$0	$0	$0	$537,567
CAPITALIZED EXP ARCHITECT/ENGINEERING/SURVEY	$28,139	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
CAPITALIZED EXP EQUIPMENT/FURNITURE	$3,548	$3,548	$3,548	$3,548	$3,548	$3,548	$3,548	$3,548	$3,548	$3,548	$3,548	$3,548
CAPITALIZED EXP IMPRVMNTS OTHER THAN BLDG	$883	$883	$883	$883	$883	$883	$883	$883	$883	$883	$883	$883
Grant Acquisition Costs, Estimated at: 2.50%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Cash-paid Portion of Projects	$32,570	$4,431	$1,791,481	$681,285	$1,084,592	$815,360	$898,811	$2,076,112	$789,091	$1,256,633	$944,520	$1,041,262
Total CIP Costs	**$32,570**	**$4,431**	**$1,791,481**	**$681,285**	**$1,084,592**	**$815,360**	**$898,811**	**$2,076,112**	**$789,091**	**$1,256,633**	**$944,520**	**$1,041,262**

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
	7/1/16	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
Planned Spending, Debt Repayment												
Existing Debt Payments (Following is debt that was initiated during the test year or earlier.)												
None	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
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 1st Year				$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 2nd Year					$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 3rd Year						$0	$0	$0	$0	$0	$0	$0
Loan Originated in 4th Year							$0	$0	$0	$0	$0	$0
Loan Originated in 5th Year								$0	$0	$0	$0	$0
Loan Originated in 6th Year									$0	$0	$0	$0
Loan Originated in 7th Year										$0	$0	$0
Loan Originated in 8th Year											$0	$0
Loan Originated in 9th Year												$0
Total Debt Payments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total, All CIP-related Payouts	**$32,570**	**$4,431**	**$1,791,481**	**$681,285**	**$1,084,592**	**$815,360**	**$898,811**	**$2,076,112**	**$789,091**	**$1,256,633**	**$944,520**	**$1,041,262**
(This is the Total Cash Required for This CIP Schedule. These amounts must come from utility income, reserves or outside sources.)												
CIP Funding Plan (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	$4,374,051	$4,669,797	$4,797,882	$3,496,196	$3,647,596	$3,411,665	$3,475,651	$3,477,803	$2,316,479	$2,457,480	$2,155,661	$2,174,579
Working Capital Transferred in	$328,316	$39,120	$393,838	$762,761	$775,708	$811,112	$831,450	$845,232	$883,762	$905,665	$920,324	$962,251
Debt and CIP Reserves Interest Earned (or Paid)	$0	$93,396	$95,958	$69,924	$72,952	$68,233	$69,513	$69,556	$46,330	$49,150	$43,113	$43,492
Internal Income Source (Name it)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Available Cash	$4,702,367	$4,802,313	$5,287,677	$4,328,882	$4,496,257	$4,291,011	$4,376,613	$4,392,591	$3,246,570	$3,412,295	$3,119,099	$3,180,322
Grant and Loan Proceeds (External Funds)												
Grants Assumed in the Second Section Above	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 1st Year			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 2nd Year				$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 3rd Year					$0	$0	$0	$0	$0	$0	$0	$0
Loan Originated in 4th Year						$0	$0	$0	$0	$0	$0	$0
Loan Originated in 5th Year							$0	$0	$0	$0	$0	$0
Loan Originated in 6th Year								$0	$0	$0	$0	$0
Loan Originated in 7th Year									$0	$0	$0	$0
Loan Originated in 8th Year										$0	$0	$0
Loan Originated in 9th Year											$0	$0
Loan Originated in 10th Year												$0
Total Available External Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Available Funds, All Sources	$4,702,367	$4,802,313	$5,287,677	$4,328,882	$4,496,257	$4,291,011	$4,376,613	$4,392,591	$3,246,570	$3,412,295	$3,119,099	$3,180,322
Outcomes (This CIP spending and funding plan will result in the following cash needs and ending balances each year.)												
Total Available Funds, All Sources	**$4,702,367**	**$4,802,313**	**$5,287,677**	**$4,328,882**	**$4,496,257**	**$4,291,011**	**$4,376,613**	**$4,392,591**	**$3,246,570**	**$3,412,295**	**$3,119,099**	**$3,180,322**
Total, All CIP-related Payouts	**$32,570**	**$4,431**	**$1,791,481**	**$681,285**	**$1,084,592**	**$815,360**	**$898,811**	**$2,076,112**	**$789,091**	**$1,256,633**	**$944,520**	**$1,041,262**
Debt and CIP Reserves Ending Balances	**$4,669,797**	**$4,797,882**	**$3,496,196**	**$3,647,596**	**$3,411,665**	**$3,475,651**	**$3,477,803**	**$2,316,479**	**$2,457,480**	**$2,155,661**	**$2,174,579**	**$2,139,059**

Notes: The City has a full slate of projects for the next five years. However, that plan does not cover the full 10-year period modeled above. Therefore, it was assumed the current CIP plan is representative of the next five years, so the amounts were repeated in the last five years, as well.

Table 6 - Equipment Replacement Schedule - Detailed

Douglas, WY; Sewer Rates, Model 2019-2

Year Beginning	Misc R&R	Pickup (Replace #4) 50%	Pickup w/ Utility box - 50% (Replace #176)	Generator - Chalk Buttes Booster Station	Compressor - 50%	Pickup (Replace #180 (1994)	Vac Truck (Replace #174) 50%	Pumps - Chalk Buttes Booster Station (2)	Loader - 50% (Replace 1996)	Backhoe - 50% (Replace #184) (1996)	Loader - 50% (Replace #188)	Pickup w/ Utility box - 50% (Replace #178)	Loader - 50% (Replace 1996)	Total Annual Replacement Costs
7/1/17	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/18	$0	$17,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20,000	$0	$37,500
7/1/19	$0	$0	$0	$0	$0	$0	$0	$0	$70,000	$65,000	$0	$0	$70,000	$205,000
7/1/20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$70,000	$0	$0	$70,000
7/1/21	$0	$0	$0	$75,000	$11,000	$35,000	$0	$12,000	$0	$0	$0	$0	$0	$133,000
7/1/22	$0	$0	$25,000	$0	$0	$0	$160,000	$0	$0	$0	$0	$0	$0	$185,000
7/1/23	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/24	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/25	$0	$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	$0
7/1/27	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$0	$17,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,500
7/1/29	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/30	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/31	$0	$0	$0	$75,000	$11,000	$35,000	$0	$0	$0	$0	$0	$0	$0	$121,000
7/1/32	$0	$0	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,000
7/1/33	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/34	$0	$0	$0	$0	$0	$0	$0	$0	$70,000	$65,000	$0	$0	$0	$135,000
7/1/35	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$70,000	$0	$0	$70,000
7/1/36	$0	$0	$0	$0	$0	$0	$0	$12,000	$0	$0	$0	$0	$0	$12,000
7/1/37	$0	$0	$0	$0	$0	$0	$160,000	$0	$0	$0	$0	$0	$0	$160,000
7/1/38	$0	$17,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20,000	$0	$37,500
7/1/39	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$70,000	$70,000
7/1/40	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/41	$0	$0	$0	$75,000	$11,000	$35,000	$0	$0	$0	$0	$0	$0	$0	$121,000

Table 7 - Equipment Replacement Annuity Calculation
Douglas, WY; Sewer Rates, Model 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
7/1/17	Analysis Year	$0	$0	$9,318	$475,200	$50,550
7/1/18	1st Year	$37,500	$38,625	$9,504	$489,352	$52,067
7/1/19	2nd Year	$205,000	$217,485	$9,787	$324,927	$53,628
7/1/20	3rd Year	$70,000	$76,491	$6,499	$298,207	$55,237
7/1/21	4th Year	$133,000	$149,693	$5,964	$197,752	$56,894
7/1/22	5th Year	$185,000	$214,466	$3,955	$30,514	$58,601
7/1/23	6th Year	$0	$0	$610	$74,397	$60,359
7/1/24	7th Year	$0	$0	$1,488	$119,157	$62,170
7/1/25	8th Year	$0	$0	$2,383	$164,813	$64,035
7/1/26	9th Year	$0	$0	$3,296	$211,382	$65,956
7/1/27	10th Year	$0	$0	$4,228	$258,883	$67,935
7/1/28	11th Year	$17,500	$24,224	$5,178	$283,109	$69,973
7/1/29	12th Year	$0	$0	$5,662	$332,044	$72,072
7/1/30	13th Year	$0	$0	$6,641	$381,958	$74,234
7/1/31	14th Year	$121,000	$183,023	$7,639	$249,846	$76,461
7/1/32	15th Year	$25,000	$38,949	$4,997	$259,167	$78,755
7/1/33	16th Year	$0	$0	$5,183	$307,623	$81,118
7/1/34	17th Year	$135,000	$223,134	$6,152	$133,914	$83,551
7/1/35	18th Year	$70,000	$119,170	$2,678	$60,694	$86,058
7/1/36	19th Year	$12,000	$21,042	$1,214	$84,139	$88,640

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	$465,882	$50,550
Minimum Annual Annuity	$40,183	Minimum Desired Balance in Today's Dollars
Discretionary Annuity	$3,089	

Required Annual Deposit (Annuity) to Replacement Account **$43,273**

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

Table 8 - Average Cost Classification

Douglas, WY; Sewer Rates, Model 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: 7/1/2021 through 6/30/2022

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Variable Cost Percentage	Average Fixed Cost	Average Variable Cost
ARCHITECT/ENGINEERING/SURVEY	$693	100.0%	0.0%	$693	$0
DEPRECIATION	$0	100.0%	0.0%	$0	$0
DUES/MEMBERSHIPS/SUBSCRIPTIONS	$909	25.0%	75.0%	$227	$681
EMPLOYEE BENEFITS - DFRRD COMP	$389	25.0%	75.0%	$97	$292
EMPLOYEE BENEFITS - HEALTH INS	$115,963	25.0%	75.0%	$28,991	$86,972
EMPLOYEE BENEFITS - SCL SCRTY	$22,120	25.0%	75.0%	$5,530	$16,590
EMPLOYEE BENEFITS - WRKRS COMP	$12,490	25.0%	75.0%	$3,122	$9,367
EMPLOYEE BENEFITS - WY RTRMNT	$47,274	25.0%	75.0%	$11,819	$35,456
EQUIPMENT/TOOLS-NON CAPITALIZE	$8,165	25.0%	75.0%	$2,041	$6,124
FUEL	$9,398	25.0%	75.0%	$2,349	$7,048
LEASE PAYMENTS - OPERATING	$205	25.0%	75.0%	$51	$154
MANAGEMENT FEES (Administration)	$182,423	100.0%	0.0%	$182,423	$0
MEALS/LODGING/TRAVEL	$0	25.0%	75.0%	$0	$0
MISC CONTRACTUAL SERVICES	$13,703	25.0%	75.0%	$3,426	$10,277
OPERATING SUPPLIES	$49,311	25.0%	75.0%	$12,328	$36,983
REPAIRS/MAINTENANCE	$1,515	25.0%	75.0%	$379	$1,136
SALARIES & WAGES - ALLOWANCES	$290	25.0%	75.0%	$72	$217
SALARIES/WAGES - ALLOWANCES	$348	25.0%	75.0%	$87	$261
SALARIES/WAGES - LONGEVITY	$935	25.0%	75.0%	$234	$701
SALARIES/WAGES - OVERTIME	$3,546	25.0%	75.0%	$886	$2,659
SALARIES/WAGES - REGULAR	$280,954	25.0%	75.0%	$70,238	$210,715
SALARIES/WAGES - TEMPORARY	$3,508	25.0%	75.0%	$877	$2,631
SLUDGE REMOVAL RESERVE	$0	0.0%	100.0%	$0	$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
TAP FEE REFUNDS	$1,739	31.6%	68.4%	$549	$1,189
TELECOMMUNICATIONS	$3,133	31.6%	68.4%	$990	$2,143
TRAINING/DEVELOPMENT	$2,637	25.0%	75.0%	$659	$1,978
UTILITY SERVICES - ELECTRICITY	$128,052	0.0%	100.0%	$0	$128,052
UTILITY SERVICES - NATURAL GAS	$2,021	25.0%	75.0%	$505	$1,516
UTILITY SERVICES - WTR/SWR/GRB	$65,418	25.0%	75.0%	$16,354	$49,063
CAPITALIZED EXP ARCHITECT/ENGINEERING/SURVEY	$0	25.0%	75.0%	$0	$0
CAPITALIZED EXP EQUIPMENT/FURNITURE	$0	25.0%	75.0%	$0	$0
CAPITALIZED EXP IMPRVMNTS OTHER THAN BLDG	$0	25.0%	75.0%	$0	$0
Annual Payment to Repair & Replacement (Table 7)	$43,273	25.0%	75.0%	$10,818	$32,455
User Charge Analysis Services	$0	31.6%	68.4%	$0	$0
Total, All CIP-related Payouts	$815,360	25.0%	75.0%	$203,840	$611,520
Grand Total Costs, Weighted Avg Percentages	$1,815,771	30.8%	69.2%	$559,589	$1,256,182

Bases for Cost to Serve Rate Structure

Number of Customers During Year Defined Above =	2,398
Billed Volume, in Gallons, During Year Defined Above =	290,484,814
Average Fixed Cost per User per Month During Year Defined Above =	$19.45
Average Variable Cost to Produce per 1,000 Gallons During Year Defined Above =	$4.32
Gallons per Billing Cycle Used by Average Residential Customer =	3,662

100%	$1,815,771	
Inflow and Infiltration is Estimated at		0%
Inflow and Infiltration is Estimated at This Percentage of Average Cost		58%
Resulting Cost of Inflow and Infiltration		$1,650
Test Year Customer Metered Volume, in Gallons		284,428,000
+ Test Year Inflow and Infiltration, in Gallons		645,477
Total Test Year Volume, in Gallons, From Master Meter Readings		285,073,477

Table 9 - Marginal Cost Classification
Douglas, WY; Sewer Rates, Model 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

In the calculations below, it is assumed that marginal variable costs are being calculated for: Wholesale Customers

The marginal rate structure basis year runs from: 7/1/2021 through 6/30/2022

Cost Items	Average Fixed Cost	Average Variable Cost	Marginal Fixed Cost Percentage	Marginal Variable Cost Percentage	Marginal Fixed Cost	Marginal Variable Cost
ARCHITECT/ENGINEERING/SURVEY	$693	$0	100%	100%	$693	$0
DEPRECIATION	$0	$0	100%	100%	$0	$0
DUES/MEMBERSHIPS/SUBSCRIPTIONS	$227	$681	50%	50%	$114	$341
EMPLOYEE BENEFITS - DFRRD COMP	$97	$292	50%	50%	$49	$146
EMPLOYEE BENEFITS - HEALTH INS	$28,991	$86,972	50%	50%	$14,495	$43,486
EMPLOYEE BENEFITS - SCL SCRTY	$5,530	$16,590	50%	50%	$2,765	$8,295
EMPLOYEE BENEFITS - WRKRS COMP	$3,122	$9,367	50%	50%	$1,561	$4,684
EMPLOYEE BENEFITS - WY RTRMNT	$11,819	$35,456	50%	50%	$5,909	$17,728
EQUIPMENT/TOOLS-NON CAPITALIZE	$2,041	$6,124	50%	50%	$1,021	$3,062
FUEL	$2,349	$7,048	100%	100%	$2,349	$7,048
LEASE PAYMENTS - OPERATING	$51	$154	50%	50%	$26	$77
MANAGEMENT FEES	$182,423	$0	100%	100%	$182,423	$0
MEALS/LODGING/TRAVEL	$0	$0	100%	100%	$0	$0
MISC CONTRACTUAL SERVICES	$3,426	$10,277	100%	100%	$3,426	$10,277
OPERATING SUPPLIES	$12,328	$36,983	100%	100%	$12,328	$36,983
REPAIRS/MAINTENANCE	$379	$1,136	100%	100%	$379	$1,136
SALARIES & WAGES - ALLOWANCES	$72	$217	50%	50%	$36	$109
SALARIES/WAGES - ALLOWANCES	$87	$261	50%	50%	$43	$130
SALARIES/WAGES - LONGEVITY	$234	$701	50%	50%	$117	$351
SALARIES/WAGES - OVERTIME	$886	$2,659	50%	50%	$443	$1,330

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
SALARIES/WAGES - REGULAR	$70,238	$210,715	50%	50%	$35,119	$105,358
SALARIES/WAGES - TEMPORARY	$877	$2,631	50%	50%	$439	$1,316
SLUDGE REMOVAL RESERVE	$0	$0	100%	100%	$0	$0
TAP FEE REFUNDS	$549	$1,189	100%	100%	$549	$1,189
TELECOMMUNICATIONS	$990	$2,143	100%	100%	$990	$2,143
TRAINING/DEVELOPMENT	$659	$1,978	100%	100%	$659	$1,978
UTILITY SERVICES - ELECTRICITY	$0	$128,052	100%	100%	$0	$128,052
UTILITY SERVICES - NATURAL GAS	$505	$1,516	71%	59%	$359	$894
UTILITY SERVICES - WTR/SWR/GRB	$16,354	$49,063	71%	59%	$11,612	$28,947
CAPITALIZED EXP ARCHITECT/ENGINEERING/SURVEY	$0	$0	100%	100%	$0	$0
CAPITALIZED EXP EQUIPMENT/FURNITURE	$0	$0	100%	100%	$0	$0
CAPITALIZED EXP IMPRVMNTS OTHER THAN BLDG	$0	$0	100%	100%	$0	$0
Annual Payment to Repair & Replacement (Table 7)	$10,818	$32,455	50%	50%	$5,409	$16,227
User Charge Analysis Services	$0	$0	71%	59%	$0	$0
Total, All CIP-related Payouts	$203,840	$611,520	50%	50%	$101,920	$305,760
Grand Total All Costs	$559,589	$1,256,182			$385,233	$727,047
	$1,815,771				$1,112,280	

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
	$13.39	
Marginal Fixed Cost as a Percent of Total Fixed Cost:	69%	$2.50
Marginal Variable Cost as a Percent of Total Variable Cost:		58%

Table 10 - Initial Rate Adjustments and Resulting Revenues

Douglas, WY; Sewer Rates, Model 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%

6/30/18 **Date when fees will first be collected at adjusted rates. Actual adjustment should occur one billing cycle earlier.**

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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
0.75 Inch and Smaller Meters	0	999	$110,952	78	$20.28	0.000	$5.46	$318	$111,269
	1,000	1,999	$99,811	242	$20.28	0.000	$5.46	$384	$100,195
	2,000	2,999	$79,568	320	$20.28	0.000	$5.46	$378	$79,946
	3,000	3,999	$57,176	292	$20.28	0.000	$5.46	$307	$57,483
	4,000	4,999	$37,893	232	$20.28	0.000	$5.46	$226	$38,119
	5,000	5,999	$23,877	145	$20.28	0.000	$5.46	$141	$24,019
	6,000	6,999	$15,253	87	$20.28	0.000	$5.46	$87	$15,340
	7,000	7,999	$9,899	57	$20.28	0.000	$5.46	$57	$9,956
	8,000	8,999	$6,419	36	$20.28	0.000	$5.46	$36	$6,456
	9,000	9,999	$4,381	18	$20.28	0.000	$5.46	$21	$4,402
	10,000	14,999	$11,374	32	$20.28	0.000	$5.46	$46	$11,420
	15,000	19,999	$4,524	9	$20.28	0.000	$5.46	$16	$4,540
	20,000	24,999	$3,116	2	$20.28	0.000	$5.46	$9	$3,125
	25,000	29,999	$2,131	2	$20.28	0.000	$5.46	$6	$2,137
	30,000	30,999	$389	0	$20.28	0.000	$5.46	$1	$390
	31,000	39,999	$3,319	1	$20.28	0.000	$5.46	$9	$3,328
	40,000	89,999	$5,503	4	$20.28	0.000	$5.46	$16	$5,519
	90,000	139,999	$1,215	0	$20.28	0.000	$5.46	$3	$1,218
	140,000	189,999	$693	0	$20.28	0.000	$5.46	$2	$695
1 Inch Meters	0	999	$47,886	27	$20.28	0.000	$5.46	$133	$48,019
	1,000	1,999	$44,074	82	$20.28	0.000	$5.46	$155	$44,229
	2,000	2,999	$36,965	116	$20.28	0.000	$5.46	$157	$37,121
	3,000	3,999	$28,247	124	$20.28	0.000	$5.46	$140	$28,387
	4,000	4,999	$19,950	101	$20.28	0.000	$5.46	$107	$20,057
	5,000	5,999	$13,541	72	$20.28	0.000	$5.46	$74	$13,615
	6,000	6,999	$9,081	48	$20.28	0.000	$5.46	$50	$9,131
	7,000	7,999	$6,324	25	$20.28	0.000	$5.46	$30	$6,354
	8,000	8,999	$4,666	20	$20.28	0.000	$5.46	$23	$4,689
	9,000	9,999	$3,676	6	$20.28	0.000	$5.46	$13	$3,689
	10,000	14,999	$13,633	17	$20.28	0.000	$5.46	$43	$13,676
	15,000	19,999	$9,407	9	$20.28	0.000	$5.46	$28	$9,435
	20,000	24,999	$6,253	7	$20.28	0.000	$5.46	$19	$6,273
	25,000	29,999	$4,551	3	$20.28	0.000	$5.46	$13	$4,564
	30,000	30,999	$815	0	$20.28	0.000	$5.46	$2	$817
	31,000	39,999	$5,828	3	$20.28	0.000	$5.46	$16	$5,844
	40,000	89,999	$14,498	6	$20.28	0.000	$5.46	$39	$14,537
	90,000	139,999	$6,111	0	$20.28	0.000	$5.46	$15	$6,126
	140,000	189,999	$6,073	0	$20.28	0.000	$5.46	$15	$6,088
	190,000	239,999	$5,844	0	$20.28	0.000	$5.46	$15	$5,858
	240,000	289,999	$4,859	0	$20.28	0.000	$5.46	$12	$4,871
	290,000	339,999	$4,859	0	$20.28	0.000	$5.46	$12	$4,871
	340,000	389,999	$3,730	0	$20.28	0.000	$5.46	$9	$3,739
	390,000	489,999	$6,524	0	$20.28	0.000	$5.46	$16	$6,540
	490,000	589,999	$1,435	1	$20.28	0.000	$5.46	$4	$1,439
	590,000	689,999	$0	0	$20.28	0.000	$5.46	$0	$0
	690,000	520,000	$0	0	$20.28	0.000	$5.46	$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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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	$4,375	3	$55.17	0.000	$5.46	$15	$4,391
	1,000	1,999	$4,128	4	$55.17	0.000	$5.46	$17	$4,146
	2,000	2,999	$3,821	4	$55.17	0.000	$5.46	$17	$3,838
	3,000	3,999	$3,617	1	$55.17	0.000	$5.46	$11	$3,628
	4,000	4,999	$3,518	2	$55.17	0.000	$5.46	$11	$3,530
	5,000	5,999	$3,386	2	$55.17	0.000	$5.46	$12	$3,398
	6,000	6,999	$3,201	3	$55.17	0.000	$5.46	$13	$3,214
	7,000	7,999	$3,010	2	$55.17	0.000	$5.46	$11	$3,021
	8,000	8,999	$2,852	2	$55.17	0.000	$5.46	$11	$2,863
	9,000	9,999	$2,677	3	$55.17	0.000	$5.46	$11	$2,688
	10,000	14,999	$11,326	7	$55.17	0.000	$5.46	$40	$11,366
	15,000	19,999	$8,954	6	$55.17	0.000	$5.46	$33	$8,987
	20,000	24,999	$7,276	3	$55.17	0.000	$5.46	$23	$7,300
1.5 Inch Meters	25,000	29,999	$6,318	3	$55.17	0.000	$5.46	$20	$6,338
	30,000	30,999	$1,156	1	$55.17	0.000	$5.46	$4	$1,159
	31,000	39,999	$9,036	3	$55.17	0.000	$5.46	$28	$9,063
	40,000	89,999	$24,208	9	$55.17	0.000	$5.46	$74	$24,282
	90,000	139,999	$8,188	2	$55.17	0.000	$5.46	$24	$8,212
	140,000	189,999	$4,304	0	$55.17	0.000	$5.46	$11	$4,316
	190,000	239,999	$3,438	0	$55.17	0.000	$5.46	$9	$3,447
	240,000	289,999	$2,798	0	$55.17	0.000	$5.46	$7	$2,805
	290,000	339,999	$1,747	0	$55.17	0.000	$5.46	$5	$1,752
	340,000	389,999	$1,346	0	$55.17	0.000	$5.46	$3	$1,349
	390,000	489,999	$2,348	0	$55.17	0.000	$5.46	$6	$2,354
	490,000	589,999	$332	0	$55.17	0.000	$5.46	$1	$333
	590,000	689,999	$0	0	$55.17	0.000	$5.46	$0	$0
	690,000	528,000	$0	0	$55.17	0.000	$5.46	$0	$0
	0	999	$2,157	2	$81.34	0.000	$5.46	$11	$2,168
	1,000	1,999	$2,027	1	$81.34	0.000	$5.46	$8	$2,035
	2,000	2,999	$1,960	0	$81.34	0.000	$5.46	$6	$1,966
	3,000	3,999	$1,919	1	$81.34	0.000	$5.46	$7	$1,925
	4,000	4,999	$1,858	1	$81.34	0.000	$5.46	$7	$1,865
	5,000	5,999	$1,805	1	$81.34	0.000	$5.46	$6	$1,811
	6,000	6,999	$1,774	0	$81.34	0.000	$5.46	$5	$1,780
	7,000	7,999	$1,742	1	$81.34	0.000	$5.46	$6	$1,748
	8,000	8,999	$1,705	0	$81.34	0.000	$5.46	$5	$1,710
	9,000	9,999	$1,680	0	$81.34	0.000	$5.46	$5	$1,685
	10,000	14,999	$8,085	1	$81.34	0.000	$5.46	$23	$8,108
	15,000	19,999	$7,701	1	$81.34	0.000	$5.46	$21	$7,722
	20,000	24,999	$7,301	1	$81.34	0.000	$5.46	$21	$7,322
2 Inch Meters	25,000	29,999	$6,784	2	$81.34	0.000	$5.46	$21	$6,805
	30,000	30,999	$1,271	1	$81.34	0.000	$5.46	$4	$1,275
	31,000	39,999	$10,295	3	$81.34	0.000	$5.46	$33	$10,328
	40,000	89,999	$36,801	7	$81.34	0.000	$5.46	$107	$36,908
	90,000	139,999	$23,472	2	$81.34	0.000	$5.46	$64	$23,536
	140,000	189,999	$16,829	1	$81.34	0.000	$5.46	$44	$16,873
	190,000	239,999	$14,838	0	$81.34	0.000	$5.46	$37	$14,876
	240,000	289,999	$12,250	1	$81.34	0.000	$5.46	$33	$12,282
	290,000	339,999	$9,537	1	$81.34	0.000	$5.46	$25	$9,562
	340,000	389,999	$7,476	1	$81.34	0.000	$5.46	$20	$7,496
	390,000	489,999	$8,405	1	$81.34	0.000	$5.46	$23	$8,427
	490,000	589,999	$5,894	0	$81.34	0.000	$5.46	$15	$5,909
	590,000	689,999	$5,345	0	$81.34	0.000	$5.46	$14	$5,359
	690,000	11,570,000	$203,655	1	$81.34	0.000	$5.46	$503	$204,158

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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
3 Inch Meters	0	999	$987	1	$151.12	0.000	$5.46	$6	$993
	1,000	1,999	$954	0	$151.12	0.000	$5.46	$2	$956
	2,000	2,999	$942	0	$151.12	0.000	$5.46	$4	$946
	3,000	3,999	$924	0	$151.12	0.000	$5.46	$3	$927
	4,000	4,999	$914	0	$151.12	0.000	$5.46	$3	$917
	5,000	5,999	$908	0	$151.12	0.000	$5.46	$3	$911
	6,000	6,999	$897	0	$151.12	0.000	$5.46	$3	$900
	7,000	7,999	$881	0	$151.12	0.000	$5.46	$3	$884
	8,000	8,999	$872	0	$151.12	0.000	$5.46	$3	$874
	9,000	9,999	$863	0	$151.12	0.000	$5.46	$3	$866
	10,000	14,999	$4,207	0	$151.12	0.000	$5.46	$12	$4,219
	15,000	19,999	$4,082	0	$151.12	0.000	$5.46	$12	$4,094
	20,000	24,999	$3,982	0	$151.12	0.000	$5.46	$11	$3,993
	25,000	29,999	$3,729	1	$151.12	0.000	$5.46	$14	$3,744
	30,000	30,999	$702	0	$151.12	0.000	$5.46	$2	$704
	31,000	39,999	$5,904	1	$151.12	0.000	$5.46	$21	$5,925
	40,000	89,999	$23,821	3	$151.12	0.000	$5.46	$71	$23,892
	90,000	139,999	$19,767	1	$151.12	0.000	$5.46	$52	$19,819
	140,000	189,999	$17,412	1	$151.12	0.000	$5.46	$47	$17,459
	190,000	239,999	$14,142	1	$151.12	0.000	$5.46	$41	$14,183
	240,000	289,999	$10,809	0	$151.12	0.000	$5.46	$29	$10,837
	290,000	339,999	$9,612	0	$151.12	0.000	$5.46	$25	$9,637
	340,000	389,999	$8,919	0	$151.12	0.000	$5.46	$23	$8,943
	390,000	489,999	$15,670	0	$151.12	0.000	$5.46	$40	$15,710
	490,000	589,999	$13,392	0	$151.12	0.000	$5.46	$34	$13,426
	590,000	689,999	$12,314	0	$151.12	0.000	$5.46	$31	$12,345
	690,000	1,564,000	$33,305	2	$151.12	0.000	$5.46	$90	$33,395
3 Inch Meters - City Use	0	999	$73	0	$151.12	0.000	$5.46	$0	$73
	1,000	1,999	$73	0	$151.12	0.000	$5.46	$0	$73
	2,000	2,999	$73	0	$151.12	0.000	$5.46	$0	$73
	3,000	3,999	$73	0	$151.12	0.000	$5.46	$0	$73
	4,000	4,999	$73	0	$151.12	0.000	$5.46	$0	$73
	5,000	5,999	$73	0	$151.12	0.000	$5.46	$0	$73
	6,000	6,999	$73	0	$151.12	0.000	$5.46	$0	$73
	7,000	7,999	$73	0	$151.12	0.000	$5.46	$0	$73
	8,000	8,999	$73	0	$151.12	0.000	$5.46	$0	$73
	9,000	9,999	$73	0	$151.12	0.000	$5.46	$0	$73
	10,000	14,999	$364	0	$151.12	0.000	$5.46	$1	$365
	15,000	19,999	$364	0	$151.12	0.000	$5.46	$1	$365
	20,000	24,999	$364	0	$151.12	0.000	$5.46	$1	$365
	25,000	29,999	$364	0	$151.12	0.000	$5.46	$1	$365
	30,000	30,999	$73	0	$151.12	0.000	$5.46	$0	$73
	31,000	39,999	$656	0	$151.12	0.000	$5.46	$2	$658
	40,000	89,999	$3,644	0	$151.12	0.000	$5.46	$9	$3,653
	90,000	139,999	$3,644	0	$151.12	0.000	$5.46	$9	$3,653
	140,000	189,999	$3,168	0	$151.12	0.000	$5.46	$9	$3,177
	190,000	239,999	$2,445	0	$151.12	0.000	$5.46	$7	$2,453
	240,000	289,999	$1,716	0	$151.12	0.000	$5.46	$5	$1,721
	290,000	339,999	$1,479	0	$151.12	0.000	$5.46	$4	$1,483
	340,000	389,999	$1,018	0	$151.12	0.000	$5.46	$3	$1,020
	390,000	489,999	$948	0	$151.12	0.000	$5.46	$3	$951
	490,000	589,999	$283	0	$151.12	0.000	$5.46	$1	$284
	590,000	689,999	$0	0	$151.12	0.000	$5.46	$0	$0
	690,000	536,000	$0	0	$151.12	0.000	$5.46	$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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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	$588	1	$229.63	0.000	$5.46	$7	$595
	1,000	1,999	$531	1	$229.63	0.000	$5.46	$8	$539
	2,000	2,999	$490	0	$229.63	0.000	$5.46	$3	$493
	3,000	3,999	$480	0	$229.63	0.000	$5.46	$1	$481
	4,000	4,999	$477	0	$229.63	0.000	$5.46	$2	$479
	5,000	5,999	$471	0	$229.63	0.000	$5.46	$2	$473
	6,000	6,999	$468	0	$229.63	0.000	$5.46	$1	$469
	7,000	7,999	$468	0	$229.63	0.000	$5.46	$1	$469
	8,000	8,999	$465	0	$229.63	0.000	$5.46	$2	$467
	9,000	9,999	$462	0	$229.63	0.000	$5.46	$1	$463
	10,000	14,999	$2,269	0	$229.63	0.000	$5.46	$7	$2,277
	15,000	19,999	$2,151	0	$229.63	0.000	$5.46	$8	$2,159
	20,000	24,999	$2,030	0	$229.63	0.000	$5.46	$7	$2,037
4 Inch Meters	25,000	29,999	$1,935	0	$229.63	0.000	$5.46	$7	$1,942
	30,000	30,999	$377	0	$229.63	0.000	$5.46	$1	$377
	31,000	39,999	$3,184	1	$229.63	0.000	$5.46	$12	$3,196
	40,000	89,999	$13,291	2	$229.63	0.000	$5.46	$46	$13,337
	90,000	139,999	$8,891	1	$229.63	0.000	$5.46	$29	$8,920
	140,000	189,999	$6,554	0	$229.63	0.000	$5.46	$19	$6,573
	190,000	239,999	$5,828	0	$229.63	0.000	$5.46	$15	$5,843
	240,000	289,999	$5,327	0	$229.63	0.000	$5.46	$14	$5,341
	290,000	339,999	$5,162	0	$229.63	0.000	$5.46	$13	$5,175
	340,000	389,999	$5,147	0	$229.63	0.000	$5.46	$13	$5,161
	390,000	489,999	$9,717	0	$229.63	0.000	$5.46	$24	$9,741
	490,000	589,999	$9,138	0	$229.63	0.000	$5.46	$24	$9,162
	590,000	689,999	$5,744	1	$229.63	0.000	$5.46	$18	$5,763
	690,000	3,061,000	$30,641	1	$229.63	0.000	$5.46	$79	$30,721
	0	999	$201	0	$447.70	0.000	$5.46	$5	$207
	1,000	1,999	$188	0	$447.70	0.000	$5.46	$0	$189
	2,000	2,999	$186	0	$447.70	0.000	$5.46	$2	$187
	3,000	3,999	$182	0	$447.70	0.000	$5.46	$0	$183
	4,000	4,999	$182	0	$447.70	0.000	$5.46	$0	$183
	5,000	5,999	$182	0	$447.70	0.000	$5.46	$0	$183
	6,000	6,999	$182	0	$447.70	0.000	$5.46	$0	$183
	7,000	7,999	$182	0	$447.70	0.000	$5.46	$0	$183
	8,000	8,999	$182	0	$447.70	0.000	$5.46	$0	$183
	9,000	9,999	$182	0	$447.70	0.000	$5.46	$0	$183
	10,000	14,999	$881	0	$447.70	0.000	$5.46	$5	$886
	15,000	19,999	$758	1	$447.70	0.000	$5.46	$10	$768
	20,000	24,999	$587	0	$447.70	0.000	$5.46	$8	$595
6 Inch Meters	25,000	29,999	$468	0	$447.70	0.000	$5.46	$4	$472
	30,000	30,999	$85	0	$447.70	0.000	$5.46	$0	$85
	31,000	39,999	$729	0	$447.70	0.000	$5.46	$4	$734
	40,000	89,999	$2,510	1	$447.70	0.000	$5.46	$13	$2,523
	90,000	139,999	$1,507	0	$447.70	0.000	$5.46	$6	$1,513
	140,000	189,999	$1,215	0	$447.70	0.000	$5.46	$3	$1,218
	190,000	239,999	$1,215	0	$447.70	0.000	$5.46	$3	$1,218
	240,000	289,999	$1,215	0	$447.70	0.000	$5.46	$3	$1,218
	290,000	339,999	$1,215	0	$447.70	0.000	$5.46	$3	$1,218
	340,000	389,999	$1,215	0	$447.70	0.000	$5.46	$3	$1,218
	390,000	489,999	$2,429	0	$447.70	0.000	$5.46	$6	$2,435
	490,000	589,999	$2,429	0	$447.70	0.000	$5.46	$6	$2,435
	590,000	689,999	$2,429	0	$447.70	0.000	$5.46	$6	$2,435
	690,000	4,436,000	$61,433	0	$447.70	0.000	$5.46	$156	$61,589

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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
6 Inch Meters - City Use	0	999	$62	0	$447.70	0.000	$5.46	$5	$67
	1,000	1,999	$46	0	$447.70	0.000	$5.46	$1	$47
	2,000	2,999	$43	0	$447.70	0.000	$5.46	$0	$43
	3,000	3,999	$43	0	$447.70	0.000	$5.46	$0	$43
	4,000	4,999	$43	0	$447.70	0.000	$5.46	$0	$43
	5,000	5,999	$43	0	$447.70	0.000	$5.46	$0	$43
	6,000	6,999	$43	0	$447.70	0.000	$5.46	$0	$43
	7,000	7,999	$43	0	$447.70	0.000	$5.46	$0	$43
	8,000	8,999	$43	0	$447.70	0.000	$5.46	$0	$43
	9,000	9,999	$43	0	$447.70	0.000	$5.46	$0	$43
	10,000	14,999	$213	0	$447.70	0.000	$5.46	$1	$213
	15,000	19,999	$213	0	$447.70	0.000	$5.46	$1	$213
	20,000	24,999	$213	0	$447.70	0.000	$5.46	$1	$213
	25,000	29,999	$213	0	$447.70	0.000	$5.46	$1	$213
	30,000	30,999	$43	0	$447.70	0.000	$5.46	$0	$43
	31,000	39,999	$383	0	$447.70	0.000	$5.46	$1	$384
	40,000	89,999	$2,126	0	$447.70	0.000	$5.46	$5	$2,131
	90,000	139,999	$1,959	0	$447.70	0.000	$5.46	$6	$1,965
	140,000	189,999	$1,528	0	$447.70	0.000	$5.46	$5	$1,533
	190,000	239,999	$1,518	0	$447.70	0.000	$5.46	$4	$1,522
	240,000	289,999	$1,518	0	$447.70	0.000	$5.46	$4	$1,522
	290,000	339,999	$1,518	0	$447.70	0.000	$5.46	$4	$1,522
	340,000	389,999	$1,518	0	$447.70	0.000	$5.46	$4	$1,522
	390,000	489,999	$3,037	0	$447.70	0.000	$5.46	$7	$3,044
	490,000	589,999	$3,037	0	$447.70	0.000	$5.46	$7	$3,044
	590,000	689,999	$2,566	0	$447.70	0.000	$5.46	$8	$2,574
	690,000	1,480,000	$9,318	0	$447.70	0.000	$5.46	$28	$9,345
8 Inch Meters	0	999	$36	0	$709.39	0.000	$5.46	$0	$37
	1,000	1,999	$36	0	$709.39	0.000	$5.46	$0	$37
	2,000	2,999	$36	0	$709.39	0.000	$5.46	$0	$37
	3,000	3,999	$36	0	$709.39	0.000	$5.46	$0	$37
	4,000	4,999	$36	0	$709.39	0.000	$5.46	$0	$37
	5,000	5,999	$36	0	$709.39	0.000	$5.46	$0	$37
	6,000	6,999	$36	0	$709.39	0.000	$5.46	$0	$37
	7,000	7,999	$36	0	$709.39	0.000	$5.46	$0	$37
	8,000	8,999	$36	0	$709.39	0.000	$5.46	$0	$37
	9,000	9,999	$36	0	$709.39	0.000	$5.46	$0	$37
	10,000	14,999	$182	0	$709.39	0.000	$5.46	$0	$183
	15,000	19,999	$182	0	$709.39	0.000	$5.46	$0	$183
	20,000	24,999	$182	0	$709.39	0.000	$5.46	$0	$183
	25,000	29,999	$182	0	$709.39	0.000	$5.46	$0	$183
	30,000	30,999	$36	0	$709.39	0.000	$5.46	$0	$37
	31,000	39,999	$328	0	$709.39	0.000	$5.46	$1	$329
	40,000	89,999	$1,822	0	$709.39	0.000	$5.46	$4	$1,826
	90,000	139,999	$1,822	0	$709.39	0.000	$5.46	$4	$1,826
	140,000	189,999	$1,822	0	$709.39	0.000	$5.46	$4	$1,826
	190,000	239,999	$1,822	0	$709.39	0.000	$5.46	$4	$1,826
	240,000	289,999	$1,716	0	$709.39	0.000	$5.46	$6	$1,722
	290,000	339,999	$1,412	0	$709.39	0.000	$5.46	$5	$1,418
	340,000	389,999	$845	0	$709.39	0.000	$5.46	$6	$851
	390,000	489,999	$762	0	$709.39	0.000	$5.46	$4	$766
	490,000	589,999	$607	0	$709.39	0.000	$5.46	$1	$609
	590,000	689,999	$607	0	$709.39	0.000	$5.46	$1	$609
	690,000	958,000	$1,631	0	$709.39	0.000	$5.46	$6	$1,637

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 at or Above This Volume and Below Next	New Minimum Charge Including Surcharges1	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	$73	0	$1,843.39	0.000	$5.46	$0	$73
	1,000	1,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	2,000	2,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	3,000	3,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	4,000	4,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	5,000	5,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	6,000	6,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	7,000	7,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	8,000	8,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	9,000	9,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	10,000	14,999	$364	0	$1,843.39	0.000	$5.46	$1	$365
	15,000	19,999	$364	0	$1,843.39	0.000	$5.46	$1	$365
	20,000	24,999	$364	0	$1,843.39	0.000	$5.46	$1	$365
10 Inch Meters	25,000	29,999	$364	0	$1,843.39	0.000	$5.46	$1	$365
	30,000	30,999	$73	0	$1,843.39	0.000	$5.46	$0	$73
	31,000	39,999	$611	0	$1,843.39	0.000	$5.46	$7	$617
	40,000	89,999	$2,158	1	$1,843.39	0.000	$5.46	$36	$2,193
	90,000	139,999	$1,518	0	$1,843.39	0.000	$5.46	$4	$1,522
	140,000	189,999	$1,376	0	$1,843.39	0.000	$5.46	$8	$1,384
	190,000	239,999	$875	0	$1,843.39	0.000	$5.46	$12	$887
	240,000	289,999	$607	0	$1,843.39	0.000	$5.46	$1	$609
	290,000	339,999	$607	0	$1,843.39	0.000	$5.46	$1	$609
	340,000	389,999	$607	0	$1,843.39	0.000	$5.46	$1	$609
	390,000	489,999	$799	0	$1,843.39	0.000	$5.46	$7	$806
	490,000	589,999	$607	0	$1,843.39	0.000	$5.46	$1	$609
	590,000	689,999	$607	0	$1,843.39	0.000	$5.46	$1	$609
	690,000	1,221,000	$3,228	0	$1,843.39	0.000	$5.46	$13	$3,241
Total Rate Revenue at Current Rates			$1,820,428	Total Rate Revenue at Modeled Rates				$6,200	
Total Blended Rate Revenues for the Year [2]									$1,826,628

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. Otherwise, use the rates use the rates spelled out in the narrative report.

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

Douglas, WY; Sewer Rates, Model 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)
	$11,985,243	75.0%	$8,988,932	$523,858	25.0%	$2,996,311	$174,619
Totals	$11,985,243		$8,988,932	$523,858		$2,996,311	$174,619

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

1.9%	Target Percentage of Costs to Recover
$10,205	Target Portion of Costs to Recover
$660	Cost per Peak Flow Capacity Share

Base Flow Capacity Costs to be Recovered by System Development Fees

1.9%	Target Percentage of Costs to Recover
$3,402	Target Portion of Costs to Recover
$340	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:

$0	Average Field Cost per New Connection
$0	Average Administration Cost per New Connection
$0	Field and Admin Cost per New Connection
$340	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

75.0%	Target Percentage of Costs to Recover
$392,894	Target Portion of Costs to Recover in One Full Year
$32,741	Target Portion of Costs to Recover in Monthly Surcharges
$8.72	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

Douglas, WY; Sewer Rates, Model 2019-2

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

Douglas, WY; Sewer Rates, Model 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 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	AWWA Capacity "Share" Factor, Compared to 5/8 Inch Meter	Foot Notes	Out of City Multiplier	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 Customers												
Five Eighths	Displacement	1.0		100%	1.0	$660	$340	$1,000	$0	$0.00	$0	$1,000
Three Quarters	Displacement	1.0	1	100%	1.0	$660	$340	$1,000	$0	$0.00	$0	$1,000
One Inch	Displacement	2.5		100%	1.0	$660	$340	$1,000	$0	$0.00	$0	$1,000
One & a Half Inch	Displacement	5.0		100%	5.0	$3,299	$340	$3,639	$0	$0.00	$0	$3,639
Two Inch	Displacement	8.0		100%	8.0	$5,279	$340	$5,619	$0	$0.00	$0	$5,619
Two & a Half Inch	Displacement	12.5	2	100%	12.5	$8,248	$340	$8,588	$0	$0.00	$0	$8,588
Three Inch	Singlet	16.0		100%	16.0	$10,557	$340	$10,897	$0	$0.00	$0	$10,897
Three Inch	Compound, Class I	16.0		100%	16.0	$10,557	$340	$10,897	$0	$0.00	$0	$10,897
Three Inch	Turbine, Class I	17.5		100%	17.5	$11,547	$340	$11,887	$0	$0.00	$0	$11,887
Four Inch	Singlet	25.0		100%	25.0	$16,496	$340	$16,836	$0	$0.00	$0	$16,836
Four Inch	Compound, Class I	25.0		100%	25.0	$16,496	$340	$16,836	$0	$0.00	$0	$16,836
Four Inch	Turbine, Class I	31.0		100%	31.0	$20,455	$340	$20,795	$0	$0.00	$0	$20,795
Six Inch	Singlet	50.0		100%	50.0	$32,991	$340	$33,332	$0	$0.00	$0	$33,332
Six Inch	Compound, Class I	50.0		100%	50.0	$32,991	$340	$33,332	$0	$0.00	$0	$33,332
Six Inch	Turbine, Class I	65.0		100%	65.0	$42,889	$340	$43,229	$0	$0.00	$0	$43,229
Eight Inch	Compound, Class I	80.0		100%	80.0	$52,786	$340	$53,126	$0	$0.00	$0	$53,126
Eight Inch	Turbine, Class I	140.0		100%	140.0	$92,376	$340	$92,716	$0	$0.00	$0	$92,716
Ten Inch	Turbine, Class II	210.0		100%	210.0	$138,564	$340	$138,904	$0	$0.00	$0	$138,904
Out of City Customers												
Five Eighths	Displacement	1.0		125%	1.0	$825	$425	$1,250	$0	$0.00	$0	$1,250
Three Quarters	Displacement	1.0	1	125%	1.0	$825	$425	$1,250	$0	$0.00	$0	$1,250
One Inch	Displacement	2.5		125%	1.0	$825	$425	$1,250	$0	$0.00	$0	$1,250
One & a Half Inch	Displacement	5.0		125%	5.0	$4,124	$425	$4,549	$0	$0.00	$0	$4,549
Two Inch	Displacement	8.0		125%	8.0	$6,598	$425	$7,023	$0	$0.00	$0	$7,023
Two & a Half Inch	Displacement	12.5	2	125%	12.5	$10,310	$425	$10,735	$0	$0.00	$0	$10,735
Three Inch	Singlet	16.0		125%	16.0	$13,197	$425	$13,622	$0	$0.00	$0	$13,622
Three Inch	Compound, Class I	16.0		125%	16.0	$13,197	$425	$13,622	$0	$0.00	$0	$13,622
Three Inch	Turbine, Class I	17.5		125%	17.5	$14,434	$425	$14,859	$0	$0.00	$0	$14,859
Four Inch	Singlet	25.0		125%	25.0	$20,620	$425	$21,045	$0	$0.00	$0	$21,045
Four Inch	Compound, Class I	25.0		125%	25.0	$20,620	$425	$21,045	$0	$0.00	$0	$21,045
Four Inch	Turbine, Class I	31.0		125%	31.0	$25,568	$425	$25,994	$0	$0.00	$0	$25,994
Six Inch	Singlet	50.0		125%	50.0	$41,239	$425	$41,664	$0	$0.00	$0	$41,664
Six Inch	Compound, Class I	50.0		125%	50.0	$41,239	$425	$41,664	$0	$0.00	$0	$41,664
Six Inch	Turbine, Class I	65.0		125%	65.0	$53,611	$425	$54,036	$0	$0.00	$0	$54,036
Eight Inch	Compound, Class I	80.0		125%	80.0	$65,983	$425	$66,408	$0	$0.00	$0	$66,408
Eight Inch	Turbine, Class I	140.0		125%	140.0	$115,470	$425	$115,895	$0	$0.00	$0	$115,895
Ten Inch	Turbine, Class II	210.0		125%	210.0	$173,205	$425	$173,630	$0	$0.00	$0	$173,630

Please Note: The above system development fees are to replace the City's current "Plant Investment Fees," with one exception. To recover the direct costs associated with making each new connection, the City should continue to assess the cost of metering equipment, other equipment and supplies, staff time and any other costs associated with each new connection. This should be done on the basis of actual cost, or estimated actual cost, for each new connection.

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 that capacity do not rise as rapidly. Therefore, peak flow capacity shares were 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
Douglas, WY; Sewer Rates, Model 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	Capacity Shares, Including Out of City Multiplier and Economy of Scale Adjustments	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 Customers									
Five Eighths	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	6.6	1.0	6.6	$4,373	$2,254	$6,627	$0	**$6,627**
One Inch	Displacement	2.9	1.0	2.9	$1,897	$978	$2,875	$0	**$2,875**
One & a Half Inch	Displacement	0.3	5.0	1.3	$833	$86	$918	$0	**$918**
Two Inch	Displacement	0.1	8.0	1.0	$665	$43	$708	$0	**$708**
Two & a Half Inch	Displacement	0.0	12.5	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	16.0	0.1	$44	$1	$45	$0	**$45**
Three Inch	Compound, Class I	0.1	16.0	0.9	$609	$20	$629	$0	**$629**
Three Inch	Turbine, Class I	0.0	17.5	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	25.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Compound, Class I	0.0	25.0	0.9	$572	$12	$584	$0	**$584**
Four Inch	Turbine, Class I	0.0	31.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	50.0	0.2	$136	$1	$137	$0	**$137**
Six Inch	Compound, Class I	0.0	50.0	0.6	$396	$4	$401	$0	**$401**
Six Inch	Turbine, Class I	0.0	65.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	80.0	0.2	$109	$1	$109	$0	**$109**
Eight Inch	Turbine, Class I	0.0	140.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	210.0	0.9	$571	$1	$572	$0	**$572**
Twelve Inch	Turbine, Class II	0.0	265.0	0.0	$0	$0	$0	$0	**$0**
Sixteen Inch	0.0	0.0	471.1	0.0	$0	$0	$0	$0	**$0**
0.0	0.0	0.0	471.1	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	10.0		15.5	$10,205	$3,402	$13,606	$0	**$13,606**
Out of City Customers									
Five Eighths	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
Three Quarters	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
One Inch	Displacement	0.0	1.0	0.0	$0	$0	$0	$0	**$0**
One & a Half Inch	Displacement	0.0	5.0	0.0	$0	$0	$0	$0	**$0**
Two Inch	Displacement	0.0	8.0	0.0	$0	$0	$0	$0	**$0**
Two & a Half Inch	Displacement	0.0	12.5	0.0	$0	$0	$0	$0	**$0**
Three Inch	Singlet	0.0	16.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Compound, Class I	0.0	16.0	0.0	$0	$0	$0	$0	**$0**
Three Inch	Turbine, Class I	0.0	17.5	0.0	$0	$0	$0	$0	**$0**
Four Inch	Singlet	0.0	25.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Compound, Class I	0.0	25.0	0.0	$0	$0	$0	$0	**$0**
Four Inch	Turbine, Class I	0.0	31.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Singlet	0.0	50.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Compound, Class I	0.0	50.0	0.0	$0	$0	$0	$0	**$0**
Six Inch	Turbine, Class I	0.0	65.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Compound, Class I	0.0	80.0	0.0	$0	$0	$0	$0	**$0**
Eight Inch	Turbine, Class I	0.0	140.0	0.0	$0	$0	$0	$0	**$0**
Ten Inch	Turbine, Class II	0.0	210.0	0.0	$0	$0	$0	$0	**$0**
Twelve Inch	Turbine, Class II	0.0	265.0	0.0	$0	$0	$0	$0	**$0**
	Subtotal:	0.0		0.0	$0	$0	$0	$0	**$0**
	Total:	10.0		15.5	$10,205	$3,402	$13,606	$0	**$13,606**

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

Douglas, WY; Sewer Rates, Model 2019-2

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

Uniform Adjustment to Peak Capacity Cost		$0.00			Uniform Adjustment to Base Capacity Cost	-$13.00				
Meter Size	Meter Type	Monthly Peak Capacity-only Costs (Surcharge per Capacity Share, Including Out of City Multiplier)	Uniform Adjustment to Peak Capacity Cost	Capacity-only Cost (Fee)	Monthly Base Capacity-only Costs (Surcharge per Customer, Including Out of City Multiplier)	Uniform Adjustment to Base Capacity Cost	Cost to Serve Minimum Calculated in Table 10	Monthly Minimum Charge	Total Annual Capacity Surcharges for Each Meter Size[5]	Monthly Snowbird Fee
In-City Customers										
Five Eighths	Displacement	$8.72	$0.00	$8.72	$0.00	-$13.00	$24.55	$20.28	$0	$13.96
Three Quarters	Displacement	$8.72	$0.00	$8.72	$0.00	-$13.00	$24.55	$20.28	-$82,550	$13.96
One Inch	Displacement	$8.72	$0.00	$8.72	$0.00	-$13.00	$24.55	$20.28	-$35,815	$13.96
One & a Half Inch	Displacement	$43.62	$0.00	$43.62	$0.00	-$13.00	$24.55	$55.17	$22,502	$37.98
Two Inch	Displacement	$69.78	$0.00	$69.78	$0.00	-$13.00	$24.55	$81.34	$20,840	$55.99
Two & a Half Inch	Displacement	$109.04	$0.00	$109.04	$0.00	-$13.00	$24.55	$120.59	$0	$83.02
Three Inch	Singlet	$139.57	$0.00	$139.57	$0.00	-$13.00	$24.55	$151.12	$1,519	$104.04
Three Inch	Compound, Class I	$139.57	$0.00	$139.57	$0.00	-$13.00	$24.55	$151.12	$21,263	$104.04
Three Inch	Turbine, Class I	$152.65	$0.00	$152.65	$0.00	-$13.00	$24.55	$164.21	$0	$113.04
Four Inch	Singlet	$218.08	$0.00	$218.08	$0.00	-$13.00	$24.55	$229.63	$0	$158.08
Four Inch	Compound, Class I	$218.08	$0.00	$218.08	$0.00	-$13.00	$24.55	$229.63	$20,713	$158.08
Four Inch	Turbine, Class I	$270.41	$0.00	$270.41	$0.00	-$13.00	$24.55	$281.97	$0	$194.11
Six Inch	Singlet	$436.15	$0.00	$436.15	$0.00	-$13.00	$24.55	$447.70	$5,078	$308.21
Six Inch	Compound, Class I	$436.15	$0.00	$436.15	$0.00	-$13.00	$24.55	$447.70	$14,810	$308.21
Six Inch	Turbine, Class I	$567.00	$0.00	$567.00	$0.00	-$13.00	$24.55	$578.55	$0	$398.29
Eight Inch	Compound, Class I	$697.84	$0.00	$697.84	$0.00	-$13.00	$24.55	$709.39	$4,109	$488.36
Eight Inch	Turbine, Class I	$1,221.22	$0.00	$1,221.22	$0.00	-$13.00	$24.55	$1,232.78	$0	$848.67
Ten Inch	Turbine, Class II	$1,831.84	$0.00	$1,831.84	$0.00	-$13.00	$24.55	$1,843.39	$21,826	$1,269.03
Twelve Inch	Turbine, Class II	$2,311.60	$0.00	$2,311.60	$0.00	-$13.00	$24.55	$2,323.15	$0	$1,599.31
Sixteen Inch	0.0	$4,109.51	$0.00	$4,109.51	$0.00	-$13.00	$24.55	$4,121.07	$0	$2,837.04
0.0	0.0	$4,109.51	$0.00	$4,109.51	$0.00	-$13.00	$24.55	$4,121.07	$0	$2,837.04
Out of City Customers										
Five Eighths	Displacement	$10.90	$0.00	$10.90	$0.00	-$13.00	$24.55	$22.46	$0	$15.46
Three Quarters	Displacement	$10.90	$0.00	$10.90	$0.00	-$13.00	$24.55	$22.46	$0	$15.46
One Inch	Displacement	$10.90	$0.00	$10.90	$0.00	-$13.00	$24.55	$22.46	$0	$15.46
One & a Half Inch	Displacement	$54.52	$0.00	$54.52	$0.00	-$13.00	$24.55	$66.07	$0	$45.49
Two Inch	Displacement	$87.23	$0.00	$87.23	$0.00	-$13.00	$24.55	$98.78	$0	$68.00
Two & a Half Inch	Displacement	$136.30	$0.00	$136.30	$0.00	-$13.00	$24.55	$147.85	$0	$101.78
Three Inch	Singlet	$174.46	$0.00	$174.46	$0.00	-$13.00	$24.55	$186.01	$0	$128.06
Three Inch	Compound, Class I	$174.46	$0.00	$174.46	$0.00	-$13.00	$24.55	$186.01	$0	$128.06
Three Inch	Turbine, Class I	$190.82	$0.00	$190.82	$0.00	-$13.00	$24.55	$202.37	$0	$139.32
Four Inch	Singlet	$272.59	$0.00	$272.59	$0.00	-$13.00	$24.55	$284.15	$0	$195.61
Four Inch	Compound, Class I	$272.59	$0.00	$272.59	$0.00	-$13.00	$24.55	$284.15	$0	$195.61
Four Inch	Turbine, Class I	$338.02	$0.00	$338.02	$0.00	-$13.00	$24.55	$349.57	$0	$240.65
Six Inch	Singlet	$545.19	$0.00	$545.19	$0.00	-$13.00	$24.55	$556.74	$0	$383.27
Six Inch	Compound, Class I	$545.19	$0.00	$545.19	$0.00	-$13.00	$24.55	$556.74	$0	$383.27
Six Inch	Turbine, Class I	$708.75	$0.00	$708.75	$0.00	-$13.00	$24.55	$720.30	$0	$495.87
Eight Inch	Compound, Class I	$872.30	$0.00	$872.30	$0.00	-$13.00	$24.55	$883.86	$0	$608.47
Eight Inch	Turbine, Class I	$1,526.53	$0.00	$1,526.53	$0.00	-$13.00	$24.55	$1,538.08	$0	$1,058.85
Ten Inch	Turbine, Class II	$2,289.79	$0.00	$2,289.79	$0.00	-$13.00	$24.55	$2,301.35	$0	$1,584.30
Twelve Inch	Turbine, Class II	$2,889.50	$0.00	$2,889.50	$0.00	-$13.00	$24.55	$2,901.06	$0	$1,997.15
Sixteen Inch	0.0	$5,136.89	$0.00	$5,136.89	$0.00	-$13.00	$24.55	$5,148.45	$0	$3,544.31
0.0	0.0	$5,136.89	$0.00	$5,136.89	$0.00	-$13.00	$24.55	$5,148.45	$0	$3,544.31

Table 16 - Revenues From Minimum Charges
Douglas, WY; Sewer Rates, Model 2019-2

This table calculates total minimum charge fee 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 Customers							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	1,608	1,608	$168,363	-$250,913	-$82,550
One Inch	Displacement	1.0	698	698	$73,047	-$108,862	-$35,815
One & a Half Inch	Displacement	5.0	61	306	$32,057	-$9,555	$22,502
Two Inch	Displacement	8.0	31	245	$25,611	-$4,771	$20,840
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	1	16	$1,675	-$156	$1,519
Three Inch	Compound, Class I	16.0	14	224	$23,447	-$2,184	$21,263
Three Inch	Turbine, Class I	17.5	0	0	$0	$0	$0
Four Inch	Singlet	25.0	0	0	$0	$0	$0
Four Inch	Compound, Class I	25.0	8	210	$22,026	-$1,313	$20,713
Four Inch	Turbine, Class I	31.0	0	0	$0	$0	$0
Six Inch	Singlet	50.0	1	50	$5,234	-$156	$5,078
Six Inch	Compound, Class I	50.0	3	146	$15,265	-$455	$14,810
Six Inch	Turbine, Class I	65.0	0	0	$0	$0	$0
Eight Inch	Compound, Class I	80.0	1	40	$4,187	-$78	$4,109
Eight Inch	Turbine, Class I	140.0	0	0	$0	$0	$0
Ten Inch	Turbine, Class II	210.0	1	210	$21,982	-$156	$21,826
		Subtotal:	2,427	3,753	$392,894	-$378,599	$14,295
Out of City Customers							
Five Eighths	Displacement	1.0	0	0	$0	$0	$0
Three Quarters	Displacement	1.0	0	0	$0	$0	$0
One Inch	Displacement	1.0	0	0	$0	$0	$0
One & a Half Inch	Displacement	5.0	0	0	$0	$0	$0
Two Inch	Displacement	8.0	0	0	$0	$0	$0
Two & a Half Inch	Displacement	12.5	0	0	$0	$0	$0
Three Inch	Singlet	16.0	0	0	$0	$0	$0
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	$0	$0	$0
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	$0	$0	$0
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	$0	$0	$0
		Total:	2,427	3,753	$392,894	-$378,599	$14,295

Table 17 - Financial Capacity Indicators and Reserves

Douglas, WY; Sewer Rates, Model 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 7/1/16	Analysis (This) Year Starting 7/1/17	1st Year Starting 7/1/18	2nd Year Starting 7/1/19	3rd Year Starting 7/1/20	4th Year Starting 7/1/21	5th Year Starting 7/1/22	6th Year Starting 7/1/23	7th Year Starting 7/1/24	8th Year Starting 7/1/25	9th Year Starting 7/1/26	10th Year Starting 7/1/27
Equivalent Final Monthly Bill for a 5,000 gal per Month Residential Customer	$33.76	$47.58	$47.58	$48.77	$49.98	$51.23	$52.51	$53.83	$55.17	$56.55	$57.97	$59.42
Annual Median Household Income (AMHI) Within Service Area	$65,758	$68,963	$72,325	$75,851	$79,548	$83,426	$87,492	$91,757	$96,230	$100,921	$105,841	$111,000
Affordability Index: Current Rates First Column, Then Proposed Rates	0.62%	0.83%	0.79%	0.77%	0.75%	0.74%	0.72%	0.70%	0.69%	0.67%	0.66%	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	$15.49	$31.20	$31.20	$31.98	$32.78	$33.59	$34.43	$35.30	$36.18	$37.08	$38.01	$38.96
Income at One-half the AMHI Above	$32,879	$33,680	$34,501	$35,342	$36,204	$37,086	$37,990	$38,916	$39,864	$40,836	$41,831	$42,851
Bill Affordability for Low-income, Low-volume Customer: Current Rates First Column, Then Proposed Rates	0.57%	1.11%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%

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	1.66	1.06	1.46	1.82	1.81	1.82	1.82	1.81	1.82	1.82	1.81	1.82

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	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

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 6/30/16	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
Cash and Cash Equivalents	$195,913	$411,899	$427,087	$458,864	$472,232	$489,129	$500,205	$514,836	$533,355	$545,453	$561,467	$581,763	$594,978
Other Liquid Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Undedicated Cash Assets, Before Inflation	$195,913	$411,899	$427,087	$458,864	$472,232	$489,129	$500,205	$514,836	$533,355	$545,453	$561,467	$581,763	$594,978
Total Cash Assets Discounted for Inflation (Future Unrestricted Purchasing Power)	$195,913	$411,899	$427,087	$445,098	$444,323	$446,415	$442,828	$442,107	$444,270	$440,717	$440,046	$442,275	$452,320
Repair & Replacement	$465,882	$475,200	$489,352	$324,927	$298,207	$197,752	$30,514	$74,397	$119,157	$164,813	$211,382	$258,883	$283,109
Debt and CIP Reserves	$4,374,051	$4,669,797	$4,797,882	$3,496,196	$3,647,596	$3,411,665	$3,475,651	$3,477,803	$2,316,479	$2,457,480	$2,155,661	$2,174,579	$2,139,059
Sum of All Reserves	$5,035,846	$5,556,897	$5,714,320	$4,279,987	$4,418,036	$4,098,546	$4,006,370	$4,067,036	$2,968,991	$3,167,746	$2,928,511	$3,015,225	$3,017,146

Table 18 - Comparison of Bills Before and After Rate Adjustments

Douglas, WY; Sewer Rates, Model 2019-2

The weighted-average revenue (bill) increase for all customers combined will be 19.3%

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

Changes to the base bills for customer classes and example volumes of use are shown below. These do not include the effect of meter size-based minimum charge surcharges from Table 13. Those are customer-specific. That level of detail cannot be shown in a brief table. Suffice it to say, large meter customers' bills will be higher than shown in this table.

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 (-)
0.75 Inch and Smaller Meters	0	78	78	$3.31	$20.28	$16.97	513%
	1,000	242	320	$9.40	$25.74	$16.34	174%
	2,000	320	640	$15.49	$31.20	$15.71	101%
	3,000	292	932	$21.58	$36.66	$15.08	70%
	4,000	232	1,164	$27.67	$42.12	$14.45	52%
	5,000	145	1,309	$33.76	$47.58	$13.82	41%
	6,000	87	1,396	$39.85	$53.04	$13.19	33%
	7,000	57	1,453	$45.94	$58.50	$12.56	27%
	8,000	36	1,490	$52.03	$63.96	$11.93	23%
	9,000	18	1,508	$58.12	$69.42	$11.30	19%
	10,000	32	1,540	$64.21	$74.88	$10.67	17%
	15,000	9	1,549	$94.66	$102.18	$7.52	8%
	20,000	2	1,551	$125.11	$129.48	$4.37	3%
	25,000	2	1,553	$155.56	$156.78	$1.22	1%
	30,000	0	1,553	$186.01	$184.08	-$1.93	-1%
	31,000	1	1,554	$192.10	$189.54	-$2.56	-1%
	40,000	4	1,558	$246.91	$238.68	-$8.23	-3%
	90,000	0	1,558	$551.41	$511.68	-$39.73	-7%
	140,000	0	1,558	$855.91	$784.68	-$71.23	-8%
	190,000	0	1,558	$1,160.41	$1,057.68	-$102.73	-9%
	240,000	0	1,558	$1,464.91	$1,330.68	-$134.23	-9%
	290,000	0	1,558	$1,769.41	$1,603.68	-$165.73	-9%
	340,000	0	1,558	$2,073.91	$1,876.68	-$197.23	-10%
	390,000	0	1,558	$2,378.41	$2,149.68	-$228.73	-10%
	490,000	0	1,558	$2,987.41	$2,695.68	-$291.73	-10%
	590,000	0	1,558	$3,596.41	$3,241.68	-$354.73	-10%
	690,000	0	1,558	$4,205.41	$3,787.68	-$417.73	-10%

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 (-)
	0	27	27	$3.31	$20.28	$16.97	513%
	1,000	82	109	$9.40	$25.74	$16.34	174%
	2,000	116	225	$15.49	$31.20	$15.71	101%
	3,000	124	349	$21.58	$36.66	$15.08	70%
	4,000	101	451	$27.67	$42.12	$14.45	52%
	5,000	72	523	$33.76	$47.58	$13.82	41%
	6,000	48	571	$39.85	$53.04	$13.19	33%
	7,000	25	596	$45.94	$58.50	$12.56	27%
	8,000	20	616	$52.03	$63.96	$11.93	23%
	9,000	6	622	$58.12	$69.42	$11.30	19%
	10,000	17	639	$64.21	$74.88	$10.67	17%
	15,000	9	648	$94.66	$102.18	$7.52	8%
	20,000	7	655	$125.11	$129.48	$4.37	3%
1 Inch Meters	25,000	3	658	$155.56	$156.78	$1.22	1%
	30,000	0	658	$186.01	$184.08	-$1.93	-1%
	31,000	3	661	$192.10	$189.54	-$2.56	-1%
	40,000	6	667	$246.91	$238.68	-$8.23	-3%
	90,000	0	668	$551.41	$511.68	-$39.73	-7%
	140,000	0	668	$855.91	$784.68	-$71.23	-8%
	190,000	0	668	$1,160.41	$1,057.68	-$102.73	-9%
	240,000	0	668	$1,464.91	$1,330.68	-$134.23	-9%
	290,000	0	668	$1,769.41	$1,603.68	-$165.73	-9%
	340,000	0	668	$2,073.91	$1,876.68	-$197.23	-10%
	390,000	0	669	$2,378.41	$2,149.68	-$228.73	-10%
	490,000	1	669	$2,987.41	$2,695.68	-$291.73	-10%
	590,000	0	669	$3,596.41	$3,241.68	-$354.73	-10%
	690,000	0	669	$4,205.41	$3,787.68	-$417.73	-10%
	0	3	3	$3.31	$55.17	$51.86	1567%
	1,000	4	7	$9.40	$60.63	$51.23	545%
	2,000	4	11	$15.49	$66.09	$50.60	327%
	3,000	1	12	$21.58	$71.55	$49.97	232%
	4,000	2	14	$27.67	$77.01	$49.34	178%
	5,000	2	16	$33.76	$82.47	$48.71	144%
	6,000	3	19	$39.85	$87.93	$48.08	121%
	7,000	2	21	$45.94	$93.39	$47.45	103%
	8,000	2	23	$52.03	$98.85	$46.82	90%
	9,000	3	26	$58.12	$104.31	$46.19	79%
	10,000	7	33	$64.21	$109.77	$45.56	71%
	15,000	6	40	$94.66	$137.07	$42.41	45%
	20,000	3	43	$125.11	$164.37	$39.26	31%
1.5 Inch Meters	25,000	3	45	$155.56	$191.67	$36.11	23%
	30,000	1	46	$186.01	$218.97	$32.96	18%
	31,000	3	49	$192.10	$224.43	$32.33	17%
	40,000	9	58	$246.91	$273.57	$26.66	11%
	90,000	2	60	$551.41	$546.57	-$4.84	-1%
	140,000	0	60	$855.91	$819.57	-$36.34	-4%
	190,000	0	60	$1,160.41	$1,092.57	-$67.84	-6%
	240,000	0	61	$1,464.91	$1,365.57	-$99.34	-7%
	290,000	0	61	$1,769.41	$1,638.57	-$130.84	-7%
	340,000	0	61	$2,073.91	$1,911.57	-$162.34	-8%
	390,000	0	61	$2,378.41	$2,184.57	-$193.84	-8%
	490,000	0	61	$2,987.41	$2,730.57	-$256.84	-9%
	590,000	0	61	$3,596.41	$3,276.57	-$319.84	-9%
	690,000	0	61	$4,205.41	$3,822.57	-$382.84	-9%

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 (-)
	0	2	2	$3.31	$81.34	$78.03	2357%
	1,000	1	4	$9.40	$86.80	$77.40	823%
	2,000	0	4	$15.49	$92.26	$76.77	496%
	3,000	1	5	$21.58	$97.72	$76.14	353%
	4,000	1	6	$27.67	$103.18	$75.51	273%
	5,000	1	6	$33.76	$108.64	$74.88	222%
	6,000	0	6	$39.85	$114.10	$74.25	186%
	7,000	1	7	$45.94	$119.56	$73.62	160%
	8,000	0	7	$52.03	$125.02	$72.99	140%
	9,000	0	8	$58.12	$130.48	$72.36	124%
	10,000	1	9	$64.21	$135.94	$71.73	112%
	15,000	1	10	$94.66	$163.24	$68.58	72%
	20,000	1	11	$125.11	$190.54	$65.43	52%
2 Inch Meters	25,000	2	13	$155.56	$217.84	$62.28	40%
	30,000	1	13	$186.01	$245.14	$59.13	32%
	31,000	3	17	$192.10	$250.60	$58.50	30%
	40,000	7	23	$246.91	$299.74	$52.83	21%
	90,000	2	25	$551.41	$572.74	$21.33	4%
	140,000	1	26	$855.91	$845.74	-$10.17	-1%
	190,000	0	27	$1,160.41	$1,118.74	-$41.67	-4%
	240,000	1	28	$1,464.91	$1,391.74	-$73.17	-5%
	290,000	1	28	$1,769.41	$1,664.74	-$104.67	-6%
	340,000	1	29	$2,073.91	$1,937.74	-$136.17	-7%
	390,000	1	30	$2,378.41	$2,210.74	-$167.67	-7%
	490,000	0	30	$2,987.41	$2,756.74	-$230.67	-8%
	590,000	0	30	$3,596.41	$3,302.74	-$293.67	-8%
	690,000	1	31	$4,205.41	$3,848.74	-$356.67	-8%
	0	1	1	$3.31	$151.12	$147.81	4466%
	1,000	0	1	$9.40	$156.58	$147.18	1566%
	2,000	0	1	$15.49	$162.04	$146.55	946%
	3,000	0	1	$21.58	$167.50	$145.92	676%
	4,000	0	1	$27.67	$172.96	$145.29	525%
	5,000	0	2	$33.76	$178.42	$144.66	428%
	6,000	0	2	$39.85	$183.88	$144.03	361%
	7,000	0	2	$45.94	$189.34	$143.40	312%
	8,000	0	2	$52.03	$194.80	$142.77	274%
	9,000	0	2	$58.12	$200.26	$142.14	245%
	10,000	0	3	$64.21	$205.72	$141.51	220%
	15,000	0	3	$94.66	$233.02	$138.36	146%
	20,000	0	3	$125.11	$260.32	$135.21	108%
3 Inch Meters	25,000	1	4	$155.56	$287.62	$132.06	85%
	30,000	0	4	$186.01	$314.92	$128.91	69%
	31,000	1	6	$192.10	$320.38	$128.28	67%
	40,000	3	8	$246.91	$369.52	$122.61	50%
	90,000	1	9	$551.41	$642.52	$91.11	17%
	140,000	1	10	$855.91	$915.52	$59.61	7%
	190,000	1	11	$1,160.41	$1,188.52	$28.11	2%
	240,000	0	11	$1,464.91	$1,461.52	-$3.39	0%
	290,000	0	11	$1,769.41	$1,734.52	-$34.89	-2%
	340,000	0	12	$2,073.91	$2,007.52	-$66.39	-3%
	390,000	0	12	$2,378.41	$2,280.52	-$97.89	-4%
	490,000	0	12	$2,987.41	$2,826.52	-$160.89	-5%
	590,000	0	12	$3,596.41	$3,372.52	-$223.89	-6%
	690,000	2	14	$4,205.41	$3,918.52	-$286.89	-7%

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 (-)
3 Inch Meters - City Use	0	0	0	$3.31	$151.12	$147.81	4466%
	1,000	0	0	$9.40	$156.58	$147.18	1566%
	2,000	0	0	$15.49	$162.04	$146.55	946%
	3,000	0	0	$21.58	$167.50	$145.92	676%
	4,000	0	0	$27.67	$172.96	$145.29	525%
	5,000	0	0	$33.76	$178.42	$144.66	428%
	6,000	0	0	$39.85	$183.88	$144.03	361%
	7,000	0	0	$45.94	$189.34	$143.40	312%
	8,000	0	0	$52.03	$194.80	$142.77	274%
	9,000	0	0	$58.12	$200.26	$142.14	245%
	10,000	0	0	$64.21	$205.72	$141.51	220%
	15,000	0	0	$94.66	$233.02	$138.36	146%
	20,000	0	0	$125.11	$260.32	$135.21	108%
	25,000	0	0	$155.56	$287.62	$132.06	85%
	30,000	0	0	$186.01	$314.92	$128.91	69%
	31,000	0	0	$192.10	$320.38	$128.28	67%
	40,000	0	0	$246.91	$369.52	$122.61	50%
	90,000	0	0	$551.41	$642.52	$91.11	17%
	140,000	0	0	$855.91	$915.52	$59.61	7%
	190,000	0	1	$1,160.41	$1,188.52	$28.11	2%
	240,000	0	1	$1,464.91	$1,461.52	-$3.39	0%
	290,000	0	1	$1,769.41	$1,734.52	-$34.89	-2%
	340,000	0	1	$2,073.91	$2,007.52	-$66.39	-3%
	390,000	0	1	$2,378.41	$2,280.52	-$97.89	-4%
	490,000	0	1	$2,987.41	$2,826.52	-$160.89	-5%
	590,000	0	1	$3,596.41	$3,372.52	-$223.89	-6%
	690,000	0	1	$4,205.41	$3,918.52	-$286.89	-7%
4 Inch Meters	0	1	1	$3.31	$229.63	$226.32	6837%
	1,000	1	2	$9.40	$235.09	$225.69	2401%
	2,000	0	2	$15.49	$240.55	$225.06	1453%
	3,000	0	2	$21.58	$246.01	$224.43	1040%
	4,000	0	2	$27.67	$251.47	$223.80	809%
	5,000	0	2	$33.76	$256.93	$223.17	661%
	6,000	0	2	$39.85	$262.39	$222.54	558%
	7,000	0	2	$45.94	$267.85	$221.91	483%
	8,000	0	2	$52.03	$273.31	$221.28	425%
	9,000	0	2	$58.12	$278.77	$220.65	380%
	10,000	0	2	$64.21	$284.23	$220.02	343%
	15,000	0	3	$94.66	$311.53	$216.87	229%
	20,000	0	3	$125.11	$338.83	$213.72	171%
	25,000	0	3	$155.56	$366.13	$210.57	135%
	30,000	0	3	$186.01	$393.43	$207.42	112%
	31,000	1	4	$192.10	$398.89	$206.79	108%
	40,000	2	6	$246.91	$448.03	$201.12	81%
	90,000	1	6	$551.41	$721.03	$169.62	31%
	140,000	0	7	$855.91	$994.03	$138.12	16%
	190,000	0	7	$1,160.41	$1,267.03	$106.62	9%
	240,000	0	7	$1,464.91	$1,540.03	$75.12	5%
	290,000	0	7	$1,769.41	$1,813.03	$43.62	2%
	340,000	0	7	$2,073.91	$2,086.03	$12.12	1%
	390,000	0	7	$2,378.41	$2,359.03	-$19.38	-1%
	490,000	0	7	$2,987.41	$2,905.03	-$82.38	-3%
	590,000	1	8	$3,596.41	$3,451.03	-$145.38	-4%
	690,000	1	8	$4,205.41	$3,997.03	-$208.38	-5%

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 (-)
6 Inch Meters	0	0	0	$3.31	$447.70	$444.39	13426%
	1,000	0	0	$9.40	$453.16	$443.76	4721%
	2,000	0	0	$15.49	$458.62	$443.13	2861%
	3,000	0	0	$21.58	$464.08	$442.50	2051%
	4,000	0	0	$27.67	$469.54	$441.87	1597%
	5,000	0	0	$33.76	$475.00	$441.24	1307%
	6,000	0	0	$39.85	$480.46	$440.61	1106%
	7,000	0	0	$45.94	$485.92	$439.98	958%
	8,000	0	0	$52.03	$491.38	$439.35	844%
	9,000	0	0	$58.12	$496.84	$438.72	755%
	10,000	0	1	$64.21	$502.30	$438.09	682%
	15,000	1	1	$94.66	$529.60	$434.94	459%
	20,000	0	2	$125.11	$556.90	$431.79	345%
	25,000	0	2	$155.56	$584.20	$428.64	276%
	30,000	0	2	$186.01	$611.50	$425.49	229%
	31,000	0	2	$192.10	$616.96	$424.86	221%
	40,000	1	2	$246.91	$666.10	$419.19	170%
	90,000	0	3	$551.41	$939.10	$387.69	70%
	140,000	0	3	$855.91	$1,212.10	$356.19	42%
	190,000	0	3	$1,160.41	$1,485.10	$324.69	28%
	240,000	0	3	$1,464.91	$1,758.10	$293.19	20%
	290,000	0	3	$1,769.41	$2,031.10	$261.69	15%
	340,000	0	3	$2,073.91	$2,304.10	$230.19	11%
	390,000	0	3	$2,378.41	$2,577.10	$198.69	8%
	490,000	0	3	$2,987.41	$3,123.10	$135.69	5%
	590,000	0	3	$3,596.41	$3,669.10	$72.69	2%
	690,000	0	3	$4,205.41	$4,215.10	$9.69	0%
6 Inch Meters - City Use	0	0	0	$3.31	$447.70	$444.39	13426%
	1,000	0	0	$9.40	$453.16	$443.76	4721%
	2,000	0	0	$15.49	$458.62	$443.13	2861%
	3,000	0	0	$21.58	$464.08	$442.50	2051%
	4,000	0	0	$27.67	$469.54	$441.87	1597%
	5,000	0	0	$33.76	$475.00	$441.24	1307%
	6,000	0	0	$39.85	$480.46	$440.61	1106%
	7,000	0	0	$45.94	$485.92	$439.98	958%
	8,000	0	0	$52.03	$491.38	$439.35	844%
	9,000	0	0	$58.12	$496.84	$438.72	755%
	10,000	0	0	$64.21	$502.30	$438.09	682%
	15,000	0	0	$94.66	$529.60	$434.94	459%
	20,000	0	0	$125.11	$556.90	$431.79	345%
	25,000	0	0	$155.56	$584.20	$428.64	276%
	30,000	0	0	$186.01	$611.50	$425.49	229%
	31,000	0	0	$192.10	$616.96	$424.86	221%
	40,000	0	0	$246.91	$666.10	$419.19	170%
	90,000	0	1	$551.41	$939.10	$387.69	70%
	140,000	0	1	$855.91	$1,212.10	$356.19	42%
	190,000	0	1	$1,160.41	$1,485.10	$324.69	28%
	240,000	0	1	$1,464.91	$1,758.10	$293.19	20%
	290,000	0	1	$1,769.41	$2,031.10	$261.69	15%
	340,000	0	1	$2,073.91	$2,304.10	$230.19	11%
	390,000	0	1	$2,378.41	$2,577.10	$198.69	8%
	490,000	0	1	$2,987.41	$3,123.10	$135.69	5%
	590,000	0	1	$3,596.41	$3,669.10	$72.69	2%
	690,000	0	1	$4,205.41	$4,215.10	$9.69	0%

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 (-)
	0	0	0	$3.31	$709.39	$706.08	21332%
	1,000	0	0	$9.40	$714.85	$705.45	7505%
	2,000	0	0	$15.49	$720.31	$704.82	4550%
	3,000	0	0	$21.58	$725.77	$704.19	3263%
	4,000	0	0	$27.67	$731.23	$703.56	2543%
	5,000	0	0	$33.76	$736.69	$702.93	2082%
	6,000	0	0	$39.85	$742.15	$702.30	1762%
	7,000	0	0	$45.94	$747.61	$701.67	1527%
	8,000	0	0	$52.03	$753.07	$701.04	1347%
	9,000	0	0	$58.12	$758.53	$700.41	1205%
	10,000	0	0	$64.21	$763.99	$699.78	1090%
	15,000	0	0	$94.66	$791.29	$696.63	736%
	20,000	0	0	$125.11	$818.59	$693.48	554%
8 Inch Meters	25,000	0	0	$155.56	$845.89	$690.33	444%
	30,000	0	0	$186.01	$873.19	$687.18	369%
	31,000	0	0	$192.10	$878.65	$686.55	357%
	40,000	0	0	$246.91	$927.79	$680.88	276%
	90,000	0	0	$551.41	$1,200.79	$649.38	118%
	140,000	0	0	$855.91	$1,473.79	$617.88	72%
	190,000	0	0	$1,160.41	$1,746.79	$586.38	51%
	240,000	0	0	$1,464.91	$2,019.79	$554.88	38%
	290,000	0	0	$1,769.41	$2,292.79	$523.38	30%
	340,000	0	0	$2,073.91	$2,565.79	$491.88	24%
	390,000	0	0	$2,378.41	$2,838.79	$460.38	19%
	490,000	0	0	$2,987.41	$3,384.79	$397.38	13%
	590,000	0	0	$3,596.41	$3,930.79	$334.38	9%
	690,000	0	1	$4,205.41	$4,476.79	$271.38	6%
	0	0	0	$3.31	$1,843.39	$1,840.08	55591%
	1,000	0	0	$9.40	$1,848.85	$1,839.45	19569%
	2,000	0	0	$15.49	$1,854.31	$1,838.82	11871%
	3,000	0	0	$21.58	$1,859.77	$1,838.19	8518%
	4,000	0	0	$27.67	$1,865.23	$1,837.56	6641%
	5,000	0	0	$33.76	$1,870.69	$1,836.93	5441%
	6,000	0	0	$39.85	$1,876.15	$1,836.30	4608%
	7,000	0	0	$45.94	$1,881.61	$1,835.67	3996%
	8,000	0	0	$52.03	$1,887.07	$1,835.04	3527%
	9,000	0	0	$58.12	$1,892.53	$1,834.41	3156%
	10,000	0	0	$64.21	$1,897.99	$1,833.78	2856%
	15,000	0	0	$94.66	$1,925.29	$1,830.63	1934%
	20,000	0	0	$125.11	$1,952.59	$1,827.48	1461%
10 Inch Meters	25,000	0	0	$155.56	$1,979.89	$1,824.33	1173%
	30,000	0	0	$186.01	$2,007.19	$1,821.18	979%
	31,000	0	0	$192.10	$2,012.65	$1,820.55	948%
	40,000	1	1	$246.91	$2,061.79	$1,814.88	735%
	90,000	0	1	$551.41	$2,334.79	$1,783.38	323%
	140,000	0	1	$855.91	$2,607.79	$1,751.88	205%
	190,000	0	1	$1,160.41	$2,880.79	$1,720.38	148%
	240,000	0	1	$1,464.91	$3,153.79	$1,688.88	115%
	290,000	0	1	$1,769.41	$3,426.79	$1,657.38	94%
	340,000	0	1	$2,073.91	$3,699.79	$1,625.88	78%
	390,000	0	1	$2,378.41	$3,972.79	$1,594.38	67%
	490,000	0	1	$2,987.41	$4,518.79	$1,531.38	51%
	590,000	0	1	$3,596.41	$5,064.79	$1,468.38	41%
	690,000	0	1	$4,205.41	$5,610.79	$1,405.38	33%

Table 19 - User Statistics

Douglas, WY; Sewer Rates, Model 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:

3,662 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.

284,428,000 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
0.75 Inch and Smaller Meters	0	999	0.950	17,760,000.0	78.0	3.3%	6.2%	25.9%	100.0%	6.1%	5.1%
	1,000	1,999	0.836	14,856,000.0	242.0	10.3%	5.2%	47.6%	74.1%	5.5%	6.2%
	2,000	2,999	0.741	11,012,000.0	320.3	13.6%	3.9%	63.7%	52.4%	4.4%	6.1%
	3,000	3,999	0.682	7,512,000.0	291.7	12.4%	2.6%	74.7%	36.3%	3.1%	4.9%
	4,000	4,999	0.629	4,724,000.0	232.3	9.9%	1.7%	81.6%	25.3%	2.1%	3.6%
	5,000	5,999	0.633	2,988,000.0	144.7	6.2%	1.1%	86.0%	18.4%	1.3%	2.3%
	6,000	6,999	0.651	1,944,000.0	87.0	3.7%	0.7%	88.8%	14.0%	0.8%	1.4%
	7,000	7,999	0.646	1,256,000.0	57.3	2.4%	0.4%	90.6%	11.2%	0.5%	0.9%
	8,000	8,999	0.653	820,000.0	36.3	1.5%	0.3%	91.8%	9.4%	0.4%	0.6%
	9,000	9,999	0.737	604,000.0	18.0	0.8%	0.2%	92.7%	8.2%	0.2%	0.3%
	10,000	14,999	2.755	1,664,000.0	32.0	1.4%	0.6%	95.2%	7.3%	0.6%	0.7%
	15,000	19,999	3.109	684,000.0	9.3	0.4%	0.2%	96.1%	4.8%	0.2%	0.3%
	20,000	24,999	4.630	500,000.0	2.0	0.1%	0.2%	96.9%	3.9%	0.2%	0.1%
	25,000	29,999	4.048	340,000.0	1.7	0.1%	0.1%	97.4%	3.1%	0.1%	0.1%
	30,000	30,999	1.000	64,000.0	0.0	0.0%	0.0%	97.5%	2.6%	0.0%	0.0%
	31,000	39,999	8.438	540,000.0	1.0	0.0%	0.2%	98.3%	2.5%	0.2%	0.1%
	40,000	89,999	16.923	880,000.0	4.0	0.2%	0.3%	99.5%	1.7%	0.3%	0.3%
	90,000	139,999	50.000	200,000.0	0.0	0.0%	0.1%	99.8%	0.5%	0.1%	0.0%
	140,000	189,999	28.000	112,000.0	0.3	0.0%	0.0%	100.0%	0.2%	0.0%	0.0%
	190,000	239,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	240,000	289,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	290,000	339,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	340,000	389,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	390,000	489,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	490,000	589,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	168,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			68,460,000.0	1,558.0	66.4%	24.1%			26.2%	33.3%

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	0.960	7,708,000.0	27.1	1.2%	2.7%	16.6%	100.0%	2.6%	2.2%
	1,000	1,999	0.872	6,720,000.0	82.3	3.5%	2.4%	31.0%	83.4%	2.4%	2.5%
	2,000	2,999	0.793	5,332,000.0	115.7	4.9%	1.9%	42.5%	69.0%	2.0%	2.5%
	3,000	3,999	0.720	3,840,000.0	124.3	5.3%	1.4%	50.8%	57.5%	1.6%	2.3%
	4,000	4,999	0.683	2,624,000.0	101.3	4.3%	0.9%	56.4%	49.2%	1.1%	1.7%
	5,000	5,999	0.671	1,760,000.0	72.0	3.1%	0.6%	60.2%	43.6%	0.7%	1.2%
	6,000	6,999	0.670	1,180,000.0	48.3	2.1%	0.4%	62.7%	39.8%	0.5%	0.8%
	7,000	7,999	0.742	876,000.0	25.3	1.1%	0.3%	64.6%	37.3%	0.3%	0.5%
	8,000	8,999	0.731	640,000.0	19.7	0.8%	0.2%	66.0%	35.4%	0.3%	0.4%
	9,000	9,999	0.881	564,000.0	6.3	0.3%	0.2%	67.2%	34.0%	0.2%	0.2%
	10,000	14,999	3.787	2,136,000.0	16.7	0.7%	0.8%	71.8%	32.8%	0.7%	0.7%
	15,000	19,999	4.088	1,488,000.0	9.3	0.4%	0.5%	75.0%	28.2%	0.5%	0.5%
	20,000	24,999	3.905	984,000.0	7.0	0.3%	0.3%	77.1%	25.0%	0.3%	0.3%
1 Inch Meters	25,000	29,999	4.357	732,000.0	2.7	0.1%	0.3%	78.7%	22.9%	0.3%	0.2%
	30,000	30,999	0.971	132,000.0	0.3	0.0%	0.0%	79.0%	21.3%	0.0%	0.0%
	31,000	39,999	7.121	940,000.0	3.0	0.1%	0.3%	81.0%	21.0%	0.3%	0.3%
	40,000	89,999	24.458	2,348,000.0	6.0	0.3%	0.8%	86.1%	19.0%	0.8%	0.6%
	90,000	139,999	41.833	1,004,000.0	0.3	0.0%	0.4%	88.2%	13.9%	0.3%	0.2%
	140,000	189,999	50.000	1,000,000.0	0.0	0.0%	0.4%	90.4%	11.8%	0.3%	0.2%
	190,000	239,999	48.000	960,000.0	0.3	0.0%	0.3%	92.4%	9.6%	0.3%	0.2%
	240,000	289,999	50.000	800,000.0	0.0	0.0%	0.3%	94.2%	7.6%	0.3%	0.2%
	290,000	339,999	50.000	800,000.0	0.0	0.0%	0.3%	95.9%	5.8%	0.3%	0.2%
	340,000	389,999	38.250	612,000.0	0.3	0.0%	0.2%	97.2%	4.1%	0.2%	0.2%
	390,000	489,999	89.333	1,072,000.0	0.3	0.0%	0.4%	99.5%	2.8%	0.4%	0.3%
	490,000	589,999	29.000	232,000.0	0.7	0.0%	0.1%	100.0%	0.5%	0.1%	0.1%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	520,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			46,484,000.0	669.4	28.5%	16.3%			17.0%	18.4%
	0	999	0.956	703,000.0	2.7	0.1%	0.2%	3.4%	100.0%	0.2%	0.2%
	1,000	1,999	0.927	652,000.0	4.3	0.2%	0.2%	6.6%	96.6%	0.2%	0.3%
	2,000	2,999	0.923	602,000.0	4.2	0.2%	0.2%	9.5%	93.4%	0.2%	0.3%
	3,000	3,999	0.977	588,000.0	1.2	0.0%	0.2%	12.4%	90.5%	0.2%	0.2%
	4,000	4,999	0.968	569,000.0	1.6	0.1%	0.2%	15.1%	87.6%	0.2%	0.2%
	5,000	5,999	0.956	544,000.0	2.1	0.1%	0.2%	17.8%	84.9%	0.2%	0.2%
	6,000	6,999	0.932	507,000.0	3.1	0.1%	0.2%	20.2%	82.2%	0.2%	0.2%
	7,000	7,999	0.951	482,000.0	2.1	0.1%	0.2%	22.6%	79.8%	0.2%	0.2%
	8,000	8,999	0.944	455,000.0	2.3	0.1%	0.2%	24.8%	77.4%	0.2%	0.2%
	9,000	9,999	0.932	424,000.0	2.6	0.1%	0.1%	26.9%	75.2%	0.1%	0.2%
	10,000	14,999	4.285	1,817,000.0	7.3	0.3%	0.6%	35.7%	73.1%	0.6%	0.7%
	15,000	19,999	4.265	1,433,000.0	6.3	0.3%	0.5%	42.7%	64.3%	0.5%	0.5%
	20,000	24,999	4.531	1,178,000.0	3.1	0.1%	0.4%	48.4%	57.3%	0.4%	0.4%
1.5 Inch Meters	25,000	29,999	4.592	1,024,000.0	2.5	0.1%	0.4%	53.4%	51.6%	0.3%	0.3%
	30,000	30,999	0.969	187,000.0	0.5	0.0%	0.1%	54.3%	46.6%	0.1%	0.1%
	31,000	39,999	7.840	1,466,000.0	3.3	0.1%	0.5%	61.4%	45.7%	0.5%	0.5%
	40,000	89,999	26.735	3,930,000.0	8.6	0.4%	1.4%	80.5%	38.6%	1.3%	1.2%
	90,000	139,999	30.318	1,334,000.0	2.2	0.1%	0.5%	87.0%	19.5%	0.4%	0.4%
	140,000	189,999	39.222	706,000.0	0.4	0.0%	0.2%	90.4%	13.0%	0.2%	0.2%
	190,000	239,999	43.462	565,000.0	0.2	0.0%	0.2%	93.2%	9.6%	0.2%	0.1%
	240,000	289,999	41.727	459,000.0	0.3	0.0%	0.2%	95.4%	6.8%	0.2%	0.1%
	290,000	339,999	35.750	286,000.0	0.3	0.0%	0.1%	96.8%	4.6%	0.1%	0.1%
	340,000	389,999	44.200	221,000.0	0.1	0.0%	0.1%	97.9%	3.2%	0.1%	0.1%
	390,000	489,999	96.500	386,000.0	0.1	0.0%	0.1%	99.7%	2.1%	0.1%	0.1%
	490,000	589,999	17.667	53,000.0	0.3	0.0%	0.0%	100.0%	0.3%	0.0%	0.0%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	528,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			20,571,000.0	61.3	2.6%	7.2%			7.0%	6.8%

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	0.929	341,000.0	2.2	0.1%	0.1%	0.5%	100.0%	0.1%	0.2%
	1,000	1,999	0.953	325,000.0	1.3	0.1%	0.1%	1.0%	99.5%	0.1%	0.1%
	2,000	2,999	0.985	320,000.0	0.4	0.0%	0.1%	1.5%	99.0%	0.1%	0.1%
	3,000	3,999	0.972	311,000.0	0.8	0.0%	0.1%	2.0%	98.5%	0.1%	0.1%
	4,000	4,999	0.965	300,000.0	0.9	0.0%	0.1%	2.4%	98.0%	0.1%	0.1%
	5,000	5,999	0.980	294,000.0	0.5	0.0%	0.1%	2.8%	97.6%	0.1%	0.1%
	6,000	6,999	0.986	290,000.0	0.3	0.0%	0.1%	3.3%	97.2%	0.1%	0.1%
	7,000	7,999	0.976	283,000.0	0.6	0.0%	0.1%	3.7%	96.7%	0.1%	0.1%
	8,000	8,999	0.982	278,000.0	0.4	0.0%	0.1%	4.1%	96.3%	0.1%	0.1%
	9,000	9,999	0.989	275,000.0	0.3	0.0%	0.1%	4.5%	95.9%	0.1%	0.1%
	10,000	14,999	4.811	1,323,000.0	1.3	0.1%	0.5%	6.5%	95.5%	0.4%	0.4%
	15,000	19,999	4.854	1,262,000.0	0.9	0.0%	0.4%	8.4%	93.5%	0.4%	0.3%
	20,000	24,999	4.795	1,194,000.0	1.3	0.1%	0.4%	10.2%	91.6%	0.4%	0.3%
2 Inch Meters	25,000	29,999	4.722	1,105,000.0	1.8	0.1%	0.4%	11.9%	89.8%	0.4%	0.3%
	30,000	30,999	0.972	206,000.0	0.5	0.0%	0.1%	12.2%	88.1%	0.1%	0.1%
	31,000	39,999	8.131	1,675,000.0	3.1	0.1%	0.6%	14.7%	87.8%	0.6%	0.5%
	40,000	89,999	35.604	6,017,000.0	6.5	0.3%	2.1%	23.8%	85.3%	2.0%	1.7%
	90,000	139,999	42.297	3,849,000.0	2.4	0.1%	1.4%	29.6%	76.2%	1.3%	1.0%
	140,000	189,999	44.597	2,765,000.0	0.9	0.0%	1.0%	33.7%	70.4%	0.9%	0.7%
	190,000	239,999	47.863	2,441,000.0	0.3	0.0%	0.9%	37.4%	66.3%	0.8%	0.6%
	240,000	289,999	42.787	2,011,000.0	0.9	0.0%	0.7%	40.5%	62.6%	0.7%	0.5%
	290,000	339,999	43.500	1,566,000.0	0.7	0.0%	0.6%	42.8%	59.5%	0.5%	0.4%
	340,000	389,999	43.786	1,226,000.0	0.8	0.0%	0.4%	44.7%	57.2%	0.4%	0.3%
	390,000	489,999	72.579	1,379,000.0	0.8	0.0%	0.5%	46.7%	55.3%	0.5%	0.4%
	490,000	589,999	97.000	970,000.0	0.1	0.0%	0.3%	48.2%	53.3%	0.3%	0.2%
	590,000	689,999	97.667	879,000.0	0.2	0.0%	0.3%	49.5%	51.8%	0.3%	0.2%
	690,000	11,570,000	4,789.857	33,529,000.0	0.6	0.0%	11.8%	100.0%	50.5%	11.2%	8.1%
	Totals for Class			66,414,000.0	30.6	1.3%	23.4%			22.2%	17.3%
	0	999	0.940	157,000.0	0.8	0.0%	0.1%	0.5%	100.0%	0.1%	0.1%
	1,000	1,999	1.000	157,000.0	0.0	0.0%	0.1%	0.9%	99.5%	0.1%	0.0%
	2,000	2,999	0.975	153,000.0	0.3	0.0%	0.1%	1.3%	99.1%	0.1%	0.1%
	3,000	3,999	0.987	151,000.0	0.2	0.0%	0.1%	1.8%	98.7%	0.1%	0.0%
	4,000	4,999	0.993	150,000.0	0.1	0.0%	0.1%	2.2%	98.2%	0.1%	0.0%
	5,000	5,999	0.993	149,000.0	0.1	0.0%	0.1%	2.6%	97.8%	0.0%	0.0%
	6,000	6,999	0.980	146,000.0	0.3	0.0%	0.1%	3.1%	97.4%	0.0%	0.1%
	7,000	7,999	0.986	144,000.0	0.2	0.0%	0.1%	3.5%	96.9%	0.0%	0.0%
	8,000	8,999	0.993	143,000.0	0.1	0.0%	0.1%	3.9%	96.5%	0.0%	0.0%
	9,000	9,999	0.986	141,000.0	0.2	0.0%	0.0%	4.3%	96.1%	0.0%	0.0%
	10,000	14,999	4.894	690,000.0	0.4	0.0%	0.2%	6.3%	95.7%	0.2%	0.2%
	15,000	19,999	4.926	670,000.0	0.3	0.0%	0.2%	8.2%	93.7%	0.2%	0.2%
	20,000	24,999	4.955	654,000.0	0.3	0.0%	0.2%	10.1%	91.8%	0.2%	0.2%
3 Inch Meters	25,000	29,999	4.705	607,000.0	1.1	0.0%	0.2%	11.9%	89.9%	0.2%	0.2%
	30,000	30,999	0.991	115,000.0	0.1	0.0%	0.0%	12.2%	88.1%	0.0%	0.0%
	31,000	39,999	8.383	964,000.0	1.3	0.1%	0.3%	15.0%	87.8%	0.3%	0.3%
	40,000	89,999	39.060	3,906,000.0	2.5	0.1%	1.4%	26.3%	85.0%	1.3%	1.1%
	90,000	139,999	46.443	3,251,000.0	0.6	0.0%	1.1%	35.6%	73.7%	1.1%	0.8%
	140,000	189,999	45.413	2,861,000.0	0.9	0.0%	1.0%	43.9%	64.4%	1.0%	0.8%
	190,000	239,999	44.635	2,321,000.0	1.2	0.0%	0.8%	50.6%	56.1%	0.8%	0.7%
	240,000	289,999	46.763	1,777,000.0	0.4	0.0%	0.6%	55.7%	49.4%	0.6%	0.5%
	290,000	339,999	47.909	1,581,000.0	0.3	0.0%	0.6%	60.3%	44.3%	0.5%	0.4%
	340,000	389,999	48.900	1,467,000.0	0.3	0.0%	0.5%	64.5%	39.7%	0.5%	0.4%
	390,000	489,999	95.481	2,578,000.0	0.3	0.0%	0.9%	72.0%	35.5%	0.9%	0.6%
	490,000	589,999	95.826	2,204,000.0	0.2	0.0%	0.8%	78.3%	28.0%	0.7%	0.5%
	590,000	689,999	96.524	2,027,000.0	0.1	0.0%	0.7%	84.2%	21.7%	0.7%	0.5%
	690,000	1,564,000	273.650	5,473,000.0	1.7	0.1%	1.9%	100.0%	15.8%	1.8%	1.5%
	Totals for Class			34,637,000.0	13.9	0.6%	12.2%			11.6%	9.5%

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
	0	999	1.000	12,000.0	0.0	0.0%	0.0%	0.3%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	12,000.0	0.0	0.0%	0.0%	0.7%	99.7%	0.0%	0.0%
	2,000	2,999	1.000	12,000.0	0.0	0.0%	0.0%	1.0%	99.3%	0.0%	0.0%
	3,000	3,999	1.000	12,000.0	0.0	0.0%	0.0%	1.4%	99.0%	0.0%	0.0%
	4,000	4,999	1.000	12,000.0	0.0	0.0%	0.0%	1.7%	98.6%	0.0%	0.0%
	5,000	5,999	1.000	12,000.0	0.0	0.0%	0.0%	2.1%	98.3%	0.0%	0.0%
	6,000	6,999	1.000	12,000.0	0.0	0.0%	0.0%	2.4%	97.9%	0.0%	0.0%
	7,000	7,999	1.000	12,000.0	0.0	0.0%	0.0%	2.7%	97.6%	0.0%	0.0%
	8,000	8,999	1.000	12,000.0	0.0	0.0%	0.0%	3.1%	97.3%	0.0%	0.0%
	9,000	9,999	1.000	12,000.0	0.0	0.0%	0.0%	3.4%	96.9%	0.0%	0.0%
	10,000	14,999	5.000	60,000.0	0.0	0.0%	0.0%	5.2%	96.6%	0.0%	0.0%
	15,000	19,999	5.000	60,000.0	0.0	0.0%	0.0%	6.9%	94.8%	0.0%	0.0%
	20,000	24,999	5.000	60,000.0	0.0	0.0%	0.0%	8.6%	93.1%	0.0%	0.0%
3 Inch Meters - City Use	25,000	29,999	5.000	60,000.0	0.0	0.0%	0.0%	10.3%	91.4%	0.0%	0.0%
	30,000	30,999	1.000	12,000.0	0.0	0.0%	0.0%	10.6%	89.7%	0.0%	0.0%
	31,000	39,999	9.000	108,000.0	0.0	0.0%	0.0%	13.7%	89.4%	0.0%	0.0%
	40,000	89,999	50.000	600,000.0	0.0	0.0%	0.2%	30.9%	86.3%	0.2%	0.1%
	90,000	139,999	50.000	600,000.0	0.0	0.0%	0.2%	48.1%	69.1%	0.2%	0.1%
	140,000	189,999	43.333	520,000.0	0.3	0.0%	0.2%	63.0%	51.9%	0.2%	0.1%
	190,000	239,999	44.556	401,000.0	0.3	0.0%	0.1%	74.4%	37.0%	0.1%	0.1%
	240,000	289,999	47.000	282,000.0	0.1	0.0%	0.1%	82.5%	25.6%	0.1%	0.1%
	290,000	339,999	48.600	243,000.0	0.1	0.0%	0.1%	89.5%	17.5%	0.1%	0.1%
	340,000	389,999	41.750	167,000.0	0.1	0.0%	0.1%	94.2%	10.5%	0.1%	0.0%
	390,000	489,999	51.667	155,000.0	0.2	0.0%	0.1%	98.7%	5.8%	0.1%	0.1%
	490,000	589,999	46.000	46,000.0	0.1	0.0%	0.0%	100.0%	1.3%	0.0%	0.0%
	590,000	689,999	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	690,000	536,000	0.000	0.0	0.0	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Totals for Class			3,494,000.0	1.0	0.0%	1.2%			1.2%	0.9%
	0	999	0.911	92,000.0	0.8	0.0%	0.0%	0.5%	100.0%	0.0%	0.1%
	1,000	1,999	0.891	82,000.0	0.8	0.0%	0.0%	0.9%	99.5%	0.0%	0.1%
	2,000	2,999	0.963	79,000.0	0.3	0.0%	0.0%	1.3%	99.1%	0.0%	0.0%
	3,000	3,999	1.000	79,000.0	0.0	0.0%	0.0%	1.7%	98.7%	0.0%	0.0%
	4,000	4,999	0.987	78,000.0	0.1	0.0%	0.0%	2.0%	98.3%	0.0%	0.0%
	5,000	5,999	0.987	77,000.0	0.1	0.0%	0.0%	2.4%	98.0%	0.0%	0.0%
	6,000	6,999	1.000	77,000.0	0.0	0.0%	0.0%	2.8%	97.6%	0.0%	0.0%
	7,000	7,999	1.000	77,000.0	0.0	0.0%	0.0%	3.2%	97.2%	0.0%	0.0%
	8,000	8,999	0.987	76,000.0	0.1	0.0%	0.0%	3.6%	96.8%	0.0%	0.0%
	9,000	9,999	1.000	76,000.0	0.0	0.0%	0.0%	3.9%	96.4%	0.0%	0.0%
	10,000	14,999	4.895	372,000.0	0.3	0.0%	0.1%	5.8%	96.1%	0.1%	0.1%
	15,000	19,999	4.822	352,000.0	0.3	0.0%	0.1%	7.6%	94.2%	0.1%	0.1%
	20,000	24,999	4.812	332,000.0	0.3	0.0%	0.1%	9.2%	92.4%	0.1%	0.1%
4 Inch Meters	25,000	29,999	4.877	317,000.0	0.3	0.0%	0.1%	10.8%	90.8%	0.1%	0.1%
	30,000	30,999	1.000	62,000.0	0.0	0.0%	0.0%	11.1%	89.2%	0.0%	0.0%
	31,000	39,999	8.403	521,000.0	0.5	0.0%	0.2%	13.7%	88.9%	0.2%	0.2%
	40,000	89,999	38.875	2,177,000.0	1.8	0.1%	0.8%	24.5%	86.3%	0.7%	0.7%
	90,000	139,999	41.657	1,458,000.0	0.9	0.0%	0.5%	31.8%	75.5%	0.5%	0.5%
	140,000	189,999	44.875	1,077,000.0	0.3	0.0%	0.4%	37.2%	68.2%	0.4%	0.3%
	190,000	239,999	47.950	959,000.0	0.1	0.0%	0.3%	41.9%	62.8%	0.3%	0.2%
	240,000	289,999	46.105	876,000.0	0.2	0.0%	0.3%	46.3%	58.1%	0.3%	0.2%
	290,000	339,999	50.000	850,000.0	0.0	0.0%	0.3%	50.5%	53.7%	0.3%	0.2%
	340,000	389,999	49.824	847,000.0	0.1	0.0%	0.3%	54.7%	49.5%	0.3%	0.2%
	390,000	489,999	100.000	1,600,000.0	0.0	0.0%	0.6%	62.7%	45.3%	0.5%	0.4%
	490,000	589,999	93.938	1,503,000.0	0.3	0.0%	0.5%	70.2%	37.3%	0.5%	0.4%
	590,000	689,999	72.462	942,000.0	0.6	0.0%	0.3%	74.9%	29.8%	0.3%	0.3%
	690,000	3,061,000	840.333	5,042,000.0	0.5	0.0%	1.8%	100.0%	25.1%	1.7%	1.3%
	Totals for Class			20,080,000.0	8.4	0.4%	7.1%			6.7%	5.9%

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	0.886	31,000.0	0.3	0.0%	0.0%	0.2%	100.0%	0.0%	0.1%
	1,000	1,999	1.000	31,000.0	0.0	0.0%	0.0%	0.4%	99.8%	0.0%	0.0%
	2,000	2,999	0.968	30,000.0	0.1	0.0%	0.0%	0.7%	99.6%	0.0%	0.0%
	3,000	3,999	1.000	30,000.0	0.0	0.0%	0.0%	0.9%	99.3%	0.0%	0.0%
	4,000	4,999	1.000	30,000.0	0.0	0.0%	0.0%	1.1%	99.1%	0.0%	0.0%
	5,000	5,999	1.000	30,000.0	0.0	0.0%	0.0%	1.3%	98.9%	0.0%	0.0%
	6,000	6,999	1.000	30,000.0	0.0	0.0%	0.0%	1.5%	98.7%	0.0%	0.0%
	7,000	7,999	1.000	30,000.0	0.0	0.0%	0.0%	1.7%	98.5%	0.0%	0.0%
	8,000	8,999	1.000	30,000.0	0.0	0.0%	0.0%	2.0%	98.3%	0.0%	0.0%
	9,000	9,999	1.000	30,000.0	0.0	0.0%	0.0%	2.2%	98.0%	0.0%	0.0%
	10,000	14,999	4.800	144,000.0	0.2	0.0%	0.1%	3.2%	97.8%	0.0%	0.1%
	15,000	19,999	4.321	121,000.0	0.6	0.0%	0.0%	4.1%	96.8%	0.0%	0.2%
	20,000	24,999	4.476	94,000.0	0.4	0.0%	0.0%	4.8%	95.9%	0.0%	0.1%
6 Inch Meters	25,000	29,999	4.750	76,000.0	0.2	0.0%	0.0%	5.3%	95.2%	0.0%	0.1%
	30,000	30,999	1.000	14,000.0	0.0	0.0%	0.0%	5.4%	94.7%	0.0%	0.0%
	31,000	39,999	8.500	119,000.0	0.2	0.0%	0.0%	6.3%	94.6%	0.0%	0.1%
	40,000	89,999	34.167	410,000.0	0.5	0.0%	0.1%	9.2%	93.7%	0.1%	0.2%
	90,000	139,999	41.167	247,000.0	0.2	0.0%	0.1%	11.0%	90.8%	0.1%	0.1%
	140,000	189,999	50.000	200,000.0	0.0	0.0%	0.1%	12.5%	89.0%	0.1%	0.0%
	190,000	239,999	50.000	200,000.0	0.0	0.0%	0.1%	13.9%	87.5%	0.1%	0.0%
	240,000	289,999	50.000	200,000.0	0.0	0.0%	0.1%	15.4%	86.1%	0.1%	0.0%
	290,000	339,999	50.000	200,000.0	0.0	0.0%	0.1%	16.8%	84.6%	0.1%	0.0%
	340,000	389,999	50.000	200,000.0	0.0	0.0%	0.1%	18.3%	83.2%	0.1%	0.0%
	390,000	489,999	100.000	400,000.0	0.0	0.0%	0.1%	21.1%	81.7%	0.1%	0.1%
	490,000	589,999	100.000	400,000.0	0.0	0.0%	0.1%	24.0%	78.9%	0.1%	0.1%
	590,000	689,999	100.000	400,000.0	0.0	0.0%	0.1%	26.9%	76.0%	0.1%	0.1%
	690,000	4,436,000	2,528.250	10,113,000.0	0.3	0.0%	3.6%	100.0%	73.1%	3.4%	2.5%
	Totals for Class			13,840,000.0	2.9	0.1%	4.9%			4.6%	4.0%
	0	999	0.667	8,000.0	0.3	0.0%	0.0%	0.2%	100.0%	0.0%	0.1%
	1,000	1,999	0.875	7,000.0	0.1	0.0%	0.0%	0.3%	99.8%	0.0%	0.0%
	2,000	2,999	1.000	7,000.0	0.0	0.0%	0.0%	0.4%	99.7%	0.0%	0.0%
	3,000	3,999	1.000	7,000.0	0.0	0.0%	0.0%	0.6%	99.6%	0.0%	0.0%
	4,000	4,999	1.000	7,000.0	0.0	0.0%	0.0%	0.7%	99.4%	0.0%	0.0%
	5,000	5,999	1.000	7,000.0	0.0	0.0%	0.0%	0.8%	99.3%	0.0%	0.0%
	6,000	6,999	1.000	7,000.0	0.0	0.0%	0.0%	1.0%	99.2%	0.0%	0.0%
	7,000	7,999	1.000	7,000.0	0.0	0.0%	0.0%	1.1%	99.0%	0.0%	0.0%
	8,000	8,999	1.000	7,000.0	0.0	0.0%	0.0%	1.2%	98.9%	0.0%	0.0%
	9,000	9,999	1.000	7,000.0	0.0	0.0%	0.0%	1.4%	98.8%	0.0%	0.0%
	10,000	14,999	5.000	35,000.0	0.0	0.0%	0.0%	2.1%	98.6%	0.0%	0.0%
	15,000	19,999	5.000	35,000.0	0.0	0.0%	0.0%	2.7%	97.9%	0.0%	0.0%
	20,000	24,999	5.000	35,000.0	0.0	0.0%	0.0%	3.4%	97.3%	0.0%	0.0%
6 Inch Meters - City Use	25,000	29,999	5.000	35,000.0	0.0	0.0%	0.0%	4.1%	96.6%	0.0%	0.0%
	30,000	30,999	1.000	7,000.0	0.0	0.0%	0.0%	4.2%	95.9%	0.0%	0.0%
	31,000	39,999	9.000	63,000.0	0.0	0.0%	0.0%	5.4%	95.8%	0.0%	0.0%
	40,000	89,999	50.000	350,000.0	0.0	0.0%	0.1%	12.2%	94.6%	0.1%	0.1%
	90,000	139,999	46.000	322,000.0	0.1	0.0%	0.1%	18.5%	87.8%	0.1%	0.1%
	140,000	189,999	41.833	251,000.0	0.1	0.0%	0.1%	23.3%	81.5%	0.1%	0.1%
	190,000	239,999	50.000	250,000.0	0.0	0.0%	0.1%	28.2%	76.7%	0.1%	0.1%
	240,000	289,999	50.000	250,000.0	0.0	0.0%	0.1%	33.0%	71.8%	0.1%	0.1%
	290,000	339,999	50.000	250,000.0	0.0	0.0%	0.1%	37.9%	67.0%	0.1%	0.1%
	340,000	389,999	50.000	250,000.0	0.0	0.0%	0.1%	42.7%	62.1%	0.1%	0.1%
	390,000	489,999	100.000	500,000.0	0.0	0.0%	0.2%	52.4%	57.3%	0.2%	0.1%
	490,000	589,999	100.000	500,000.0	0.0	0.0%	0.2%	62.1%	47.6%	0.2%	0.1%
	590,000	689,999	84.400	422,000.0	0.1	0.0%	0.1%	70.3%	37.9%	0.1%	0.1%
	690,000	1,480,000	383.000	1,532,000.0	0.3	0.0%	0.5%	100.0%	29.7%	0.5%	0.4%
	Totals for Class			5,158,000.0	1.0	0.0%	1.8%			1.7%	1.5%

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
	0	999	1.000	6,000.0	0.0	0.0%	0.0%	0.2%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	6,000.0	0.0	0.0%	0.0%	0.4%	99.8%	0.0%	0.0%
	2,000	2,999	1.000	6,000.0	0.0	0.0%	0.0%	0.7%	99.6%	0.0%	0.0%
	3,000	3,999	1.000	6,000.0	0.0	0.0%	0.0%	0.9%	99.3%	0.0%	0.0%
	4,000	4,999	1.000	6,000.0	0.0	0.0%	0.0%	1.1%	99.1%	0.0%	0.0%
	5,000	5,999	1.000	6,000.0	0.0	0.0%	0.0%	1.3%	98.9%	0.0%	0.0%
	6,000	6,999	1.000	6,000.0	0.0	0.0%	0.0%	1.6%	98.7%	0.0%	0.0%
	7,000	7,999	1.000	6,000.0	0.0	0.0%	0.0%	1.8%	98.4%	0.0%	0.0%
	8,000	8,999	1.000	6,000.0	0.0	0.0%	0.0%	2.0%	98.2%	0.0%	0.0%
	9,000	9,999	1.000	6,000.0	0.0	0.0%	0.0%	2.2%	98.0%	0.0%	0.0%
	10,000	14,999	5.000	30,000.0	0.0	0.0%	0.0%	3.4%	97.8%	0.0%	0.0%
	15,000	19,999	5.000	30,000.0	0.0	0.0%	0.0%	4.5%	96.6%	0.0%	0.0%
	20,000	24,999	5.000	30,000.0	0.0	0.0%	0.0%	5.6%	95.5%	0.0%	0.0%
8 Inch Meters	25,000	29,999	5.000	30,000.0	0.0	0.0%	0.0%	6.7%	94.4%	0.0%	0.0%
	30,000	30,999	1.000	6,000.0	0.0	0.0%	0.0%	6.9%	93.3%	0.0%	0.0%
	31,000	39,999	9.000	54,000.0	0.0	0.0%	0.0%	8.9%	93.1%	0.0%	0.0%
	40,000	89,999	50.000	300,000.0	0.0	0.0%	0.1%	20.1%	91.1%	0.1%	0.1%
	90,000	139,999	50.000	300,000.0	0.0	0.0%	0.1%	31.3%	79.9%	0.1%	0.1%
	140,000	189,999	50.000	300,000.0	0.0	0.0%	0.1%	42.5%	68.7%	0.1%	0.1%
	190,000	239,999	50.000	300,000.0	0.0	0.0%	0.1%	53.6%	57.5%	0.1%	0.1%
	240,000	289,999	47.000	282,000.0	0.1	0.0%	0.1%	64.1%	46.4%	0.1%	0.1%
	290,000	339,999	46.400	232,000.0	0.1	0.0%	0.1%	72.8%	35.9%	0.1%	0.1%
	340,000	389,999	34.500	138,000.0	0.2	0.0%	0.0%	77.9%	27.2%	0.0%	0.1%
	390,000	489,999	62.500	125,000.0	0.1	0.0%	0.0%	82.6%	22.1%	0.0%	0.1%
	490,000	589,999	100.000	100,000.0	0.0	0.0%	0.0%	86.3%	17.4%	0.0%	0.0%
	590,000	689,999	100.000	100,000.0	0.0	0.0%	0.0%	90.0%	13.7%	0.0%	0.0%
	690,000	958,000	268.000	268,000.0	0.1	0.0%	0.1%	100.0%	10.0%	0.1%	0.1%
	Totals for Class			2,685,000.0	0.5	0.0%	0.9%			0.9%	0.8%
	0	999	1.000	12,000.0	0.0	0.0%	0.0%	0.5%	100.0%	0.0%	0.0%
	1,000	1,999	1.000	12,000.0	0.0	0.0%	0.0%	0.9%	99.5%	0.0%	0.0%
	2,000	2,999	1.000	12,000.0	0.0	0.0%	0.0%	1.4%	99.1%	0.0%	0.0%
	3,000	3,999	1.000	12,000.0	0.0	0.0%	0.0%	1.8%	98.6%	0.0%	0.0%
	4,000	4,999	1.000	12,000.0	0.0	0.0%	0.0%	2.3%	98.2%	0.0%	0.0%
	5,000	5,999	1.000	12,000.0	0.0	0.0%	0.0%	2.8%	97.7%	0.0%	0.0%
	6,000	6,999	1.000	12,000.0	0.0	0.0%	0.0%	3.2%	97.2%	0.0%	0.0%
	7,000	7,999	1.000	12,000.0	0.0	0.0%	0.0%	3.7%	96.8%	0.0%	0.0%
	8,000	8,999	1.000	12,000.0	0.0	0.0%	0.0%	4.1%	96.3%	0.0%	0.0%
	9,000	9,999	1.000	12,000.0	0.0	0.0%	0.0%	4.6%	95.9%	0.0%	0.0%
	10,000	14,999	5.000	60,000.0	0.0	0.0%	0.0%	6.9%	95.4%	0.0%	0.0%
	15,000	19,999	5.000	60,000.0	0.0	0.0%	0.0%	9.2%	93.1%	0.0%	0.0%
	20,000	24,999	5.000	60,000.0	0.0	0.0%	0.0%	11.5%	90.8%	0.0%	0.0%
10 Inch Meters	25,000	29,999	5.000	60,000.0	0.0	0.0%	0.0%	13.8%	88.5%	0.0%	0.0%
	30,000	30,999	1.000	12,000.0	0.0	0.0%	0.0%	14.3%	86.2%	0.0%	0.0%
	31,000	39,999	8.333	100,000.0	0.1	0.0%	0.0%	18.1%	85.7%	0.0%	0.1%
	40,000	89,999	32.000	352,000.0	0.5	0.0%	0.1%	31.6%	81.9%	0.1%	0.6%
	90,000	139,999	50.000	250,000.0	0.0	0.0%	0.1%	41.2%	68.4%	0.1%	0.1%
	140,000	189,999	45.200	226,000.0	0.1	0.0%	0.1%	49.9%	58.8%	0.1%	0.1%
	190,000	239,999	35.750	143,000.0	0.2	0.0%	0.1%	55.4%	50.1%	0.0%	0.2%
	240,000	289,999	50.000	100,000.0	0.0	0.0%	0.0%	59.2%	44.6%	0.0%	0.0%
	290,000	339,999	50.000	100,000.0	0.0	0.0%	0.0%	63.1%	40.8%	0.0%	0.0%
	340,000	389,999	50.000	100,000.0	0.0	0.0%	0.0%	66.9%	36.9%	0.0%	0.0%
	390,000	489,999	65.500	131,000.0	0.1	0.0%	0.0%	71.9%	33.1%	0.0%	0.1%
	490,000	589,999	100.000	100,000.0	0.0	0.0%	0.0%	75.8%	28.1%	0.0%	0.0%
	590,000	689,999	100.000	100,000.0	0.0	0.0%	0.0%	79.6%	24.2%	0.0%	0.0%
	690,000	1,221,000	531.000	531,000.0	0.1	0.0%	0.2%	100.0%	20.4%	0.2%	0.2%
	Totals for Class			2,605,000.0	1.0	0.0%	0.9%			0.9%	1.6%
	Grand Totals			284,428,000.0		100.00%	100.00%			100.00%	100.00%

Chart 1 - Operating Ratio

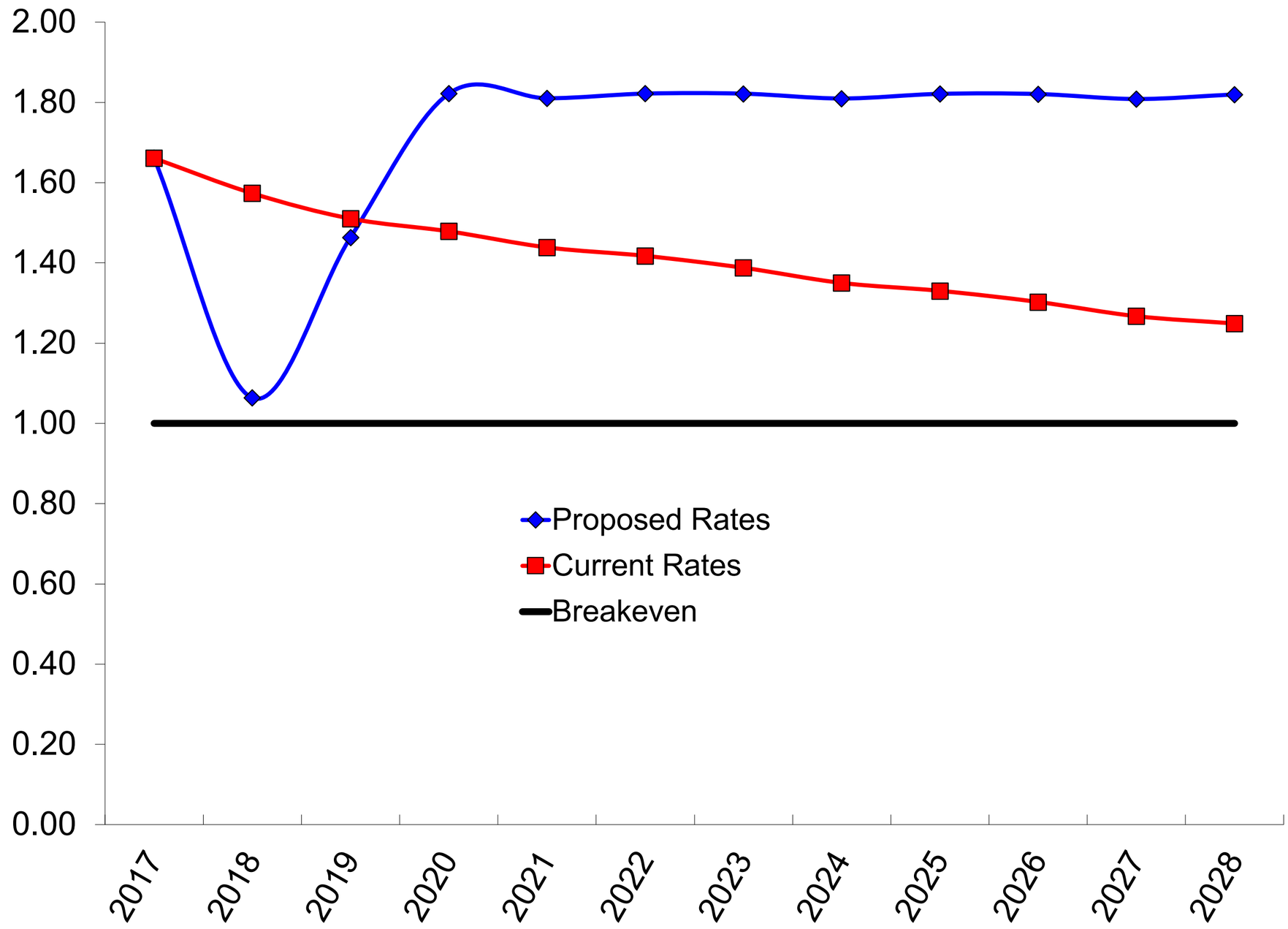


Chart 2 - Coverage Ratio

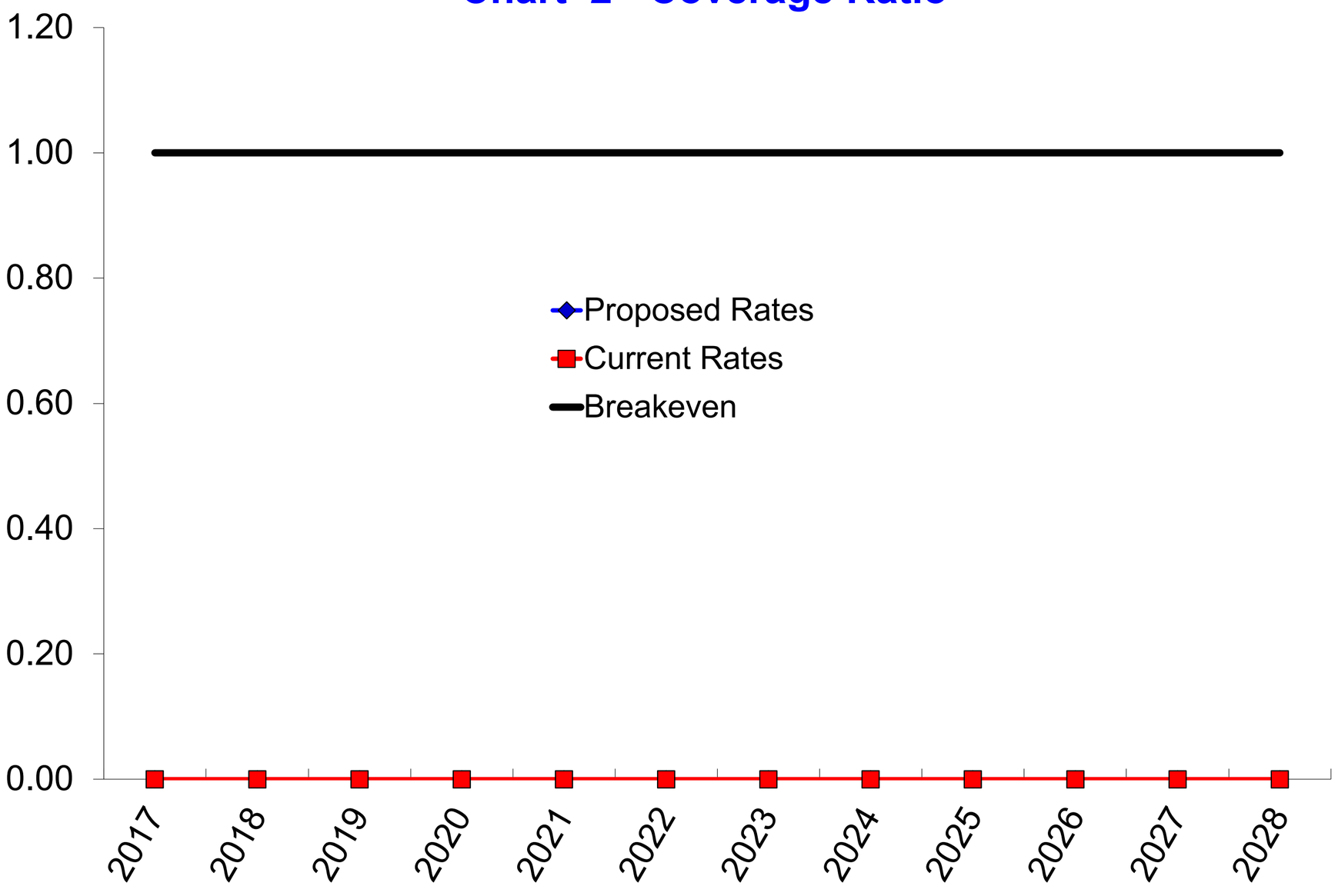


Chart 3 - 5,000 Gal Residential User's Bill

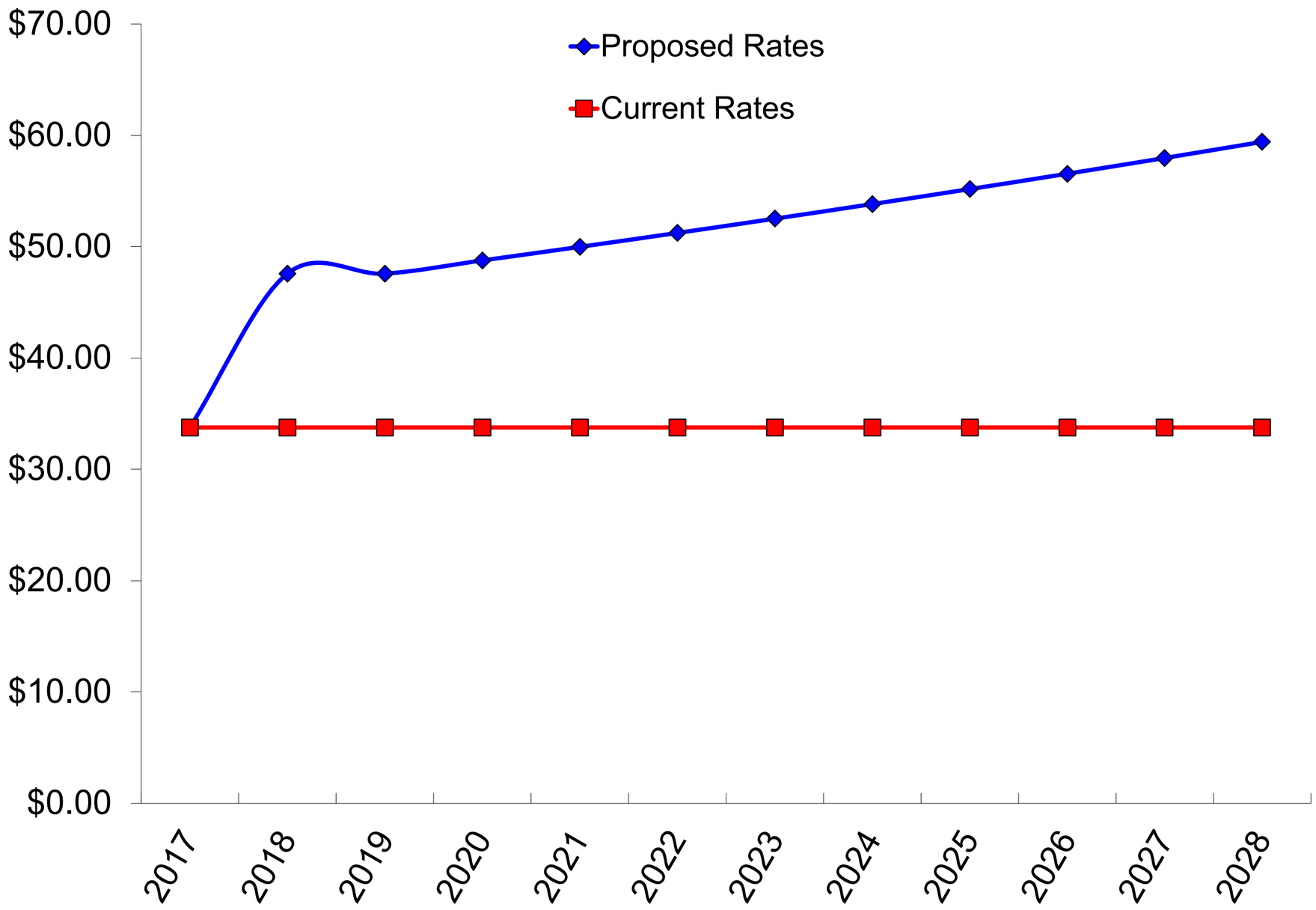


Chart 4 - Affordability Index

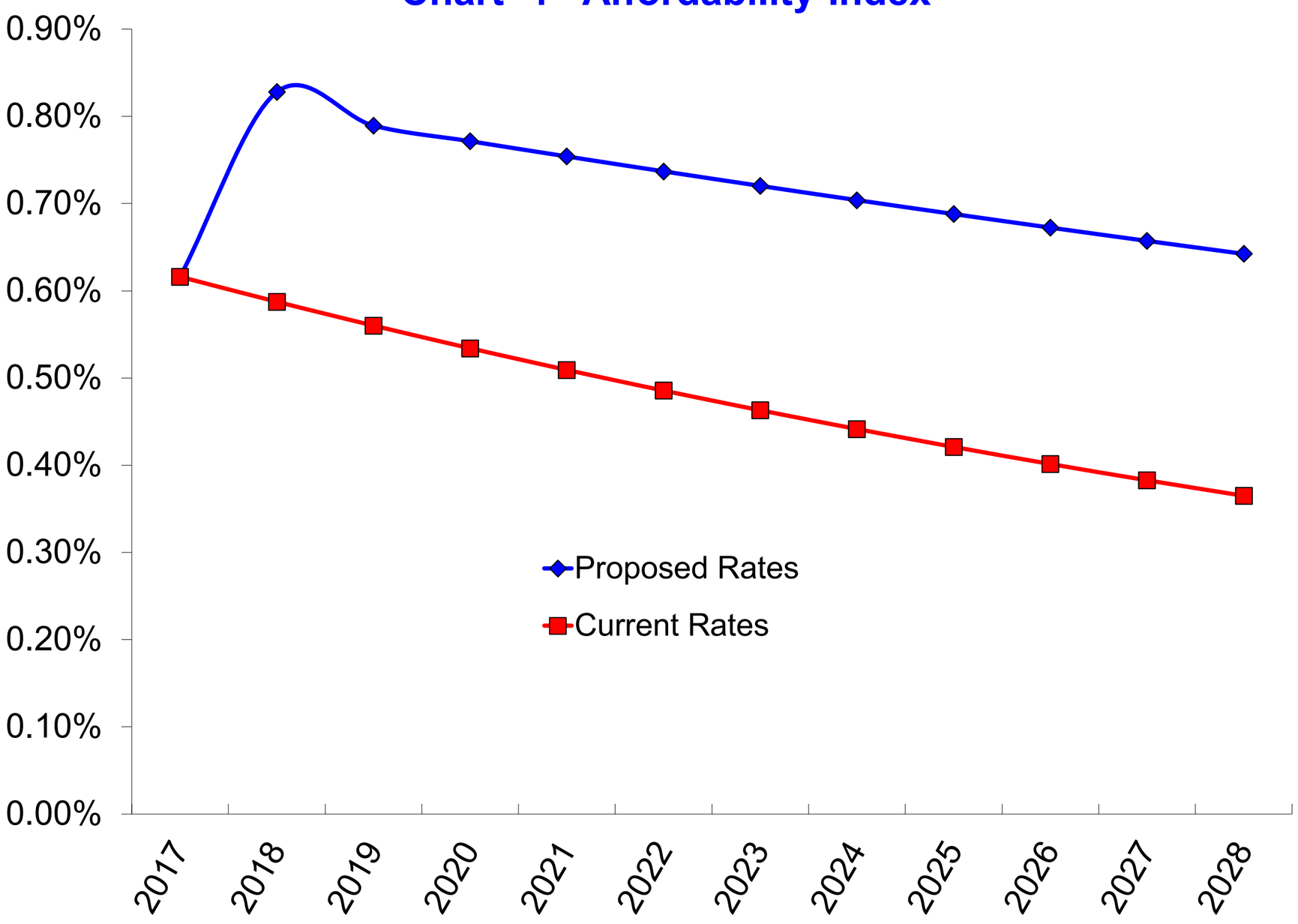


Chart 5 - Working Capital vs Goal

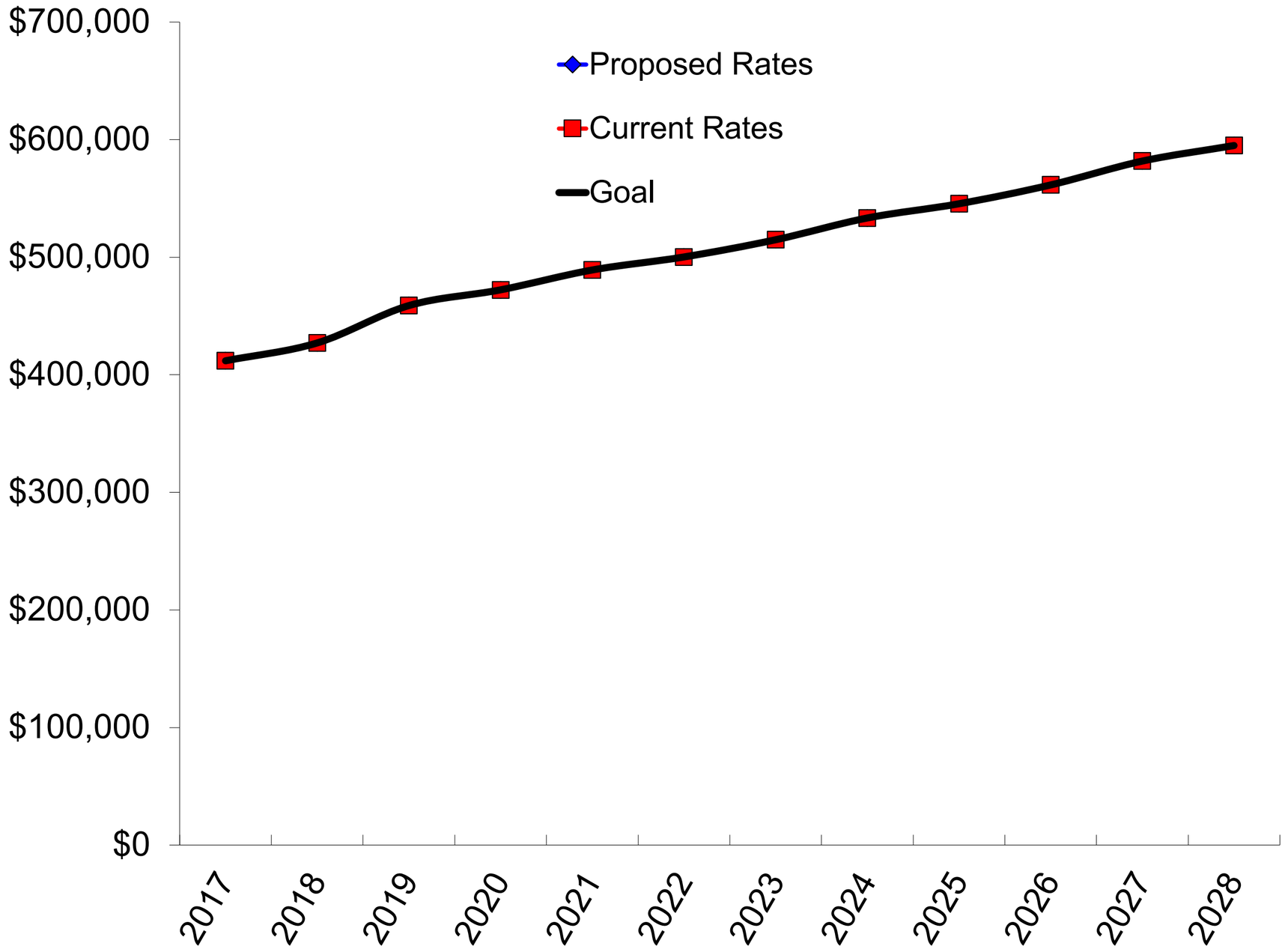


Chart 6 - Value of Cash Assets Before Inflation

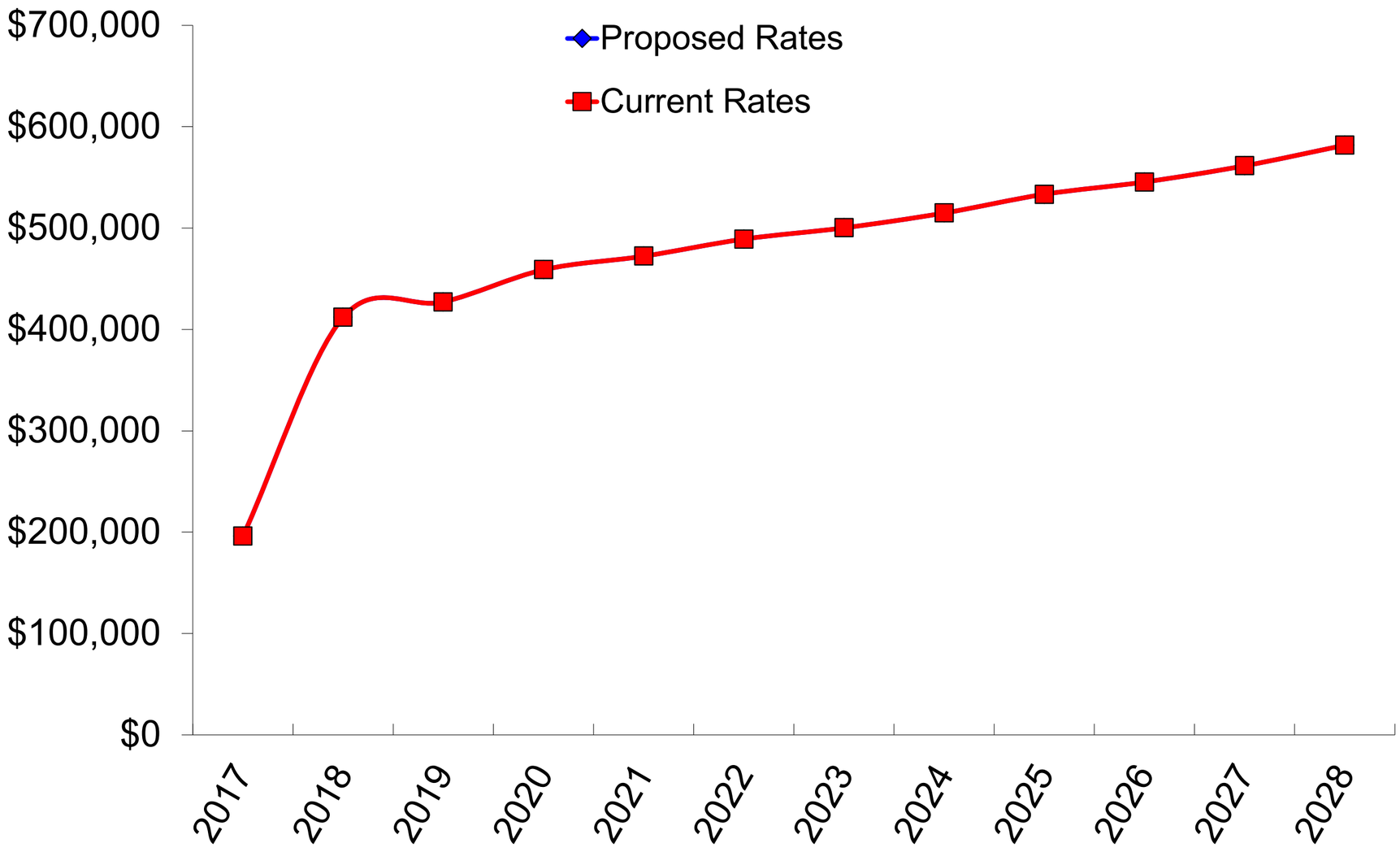


Chart 7 - Value of Cash Assets After Inflation

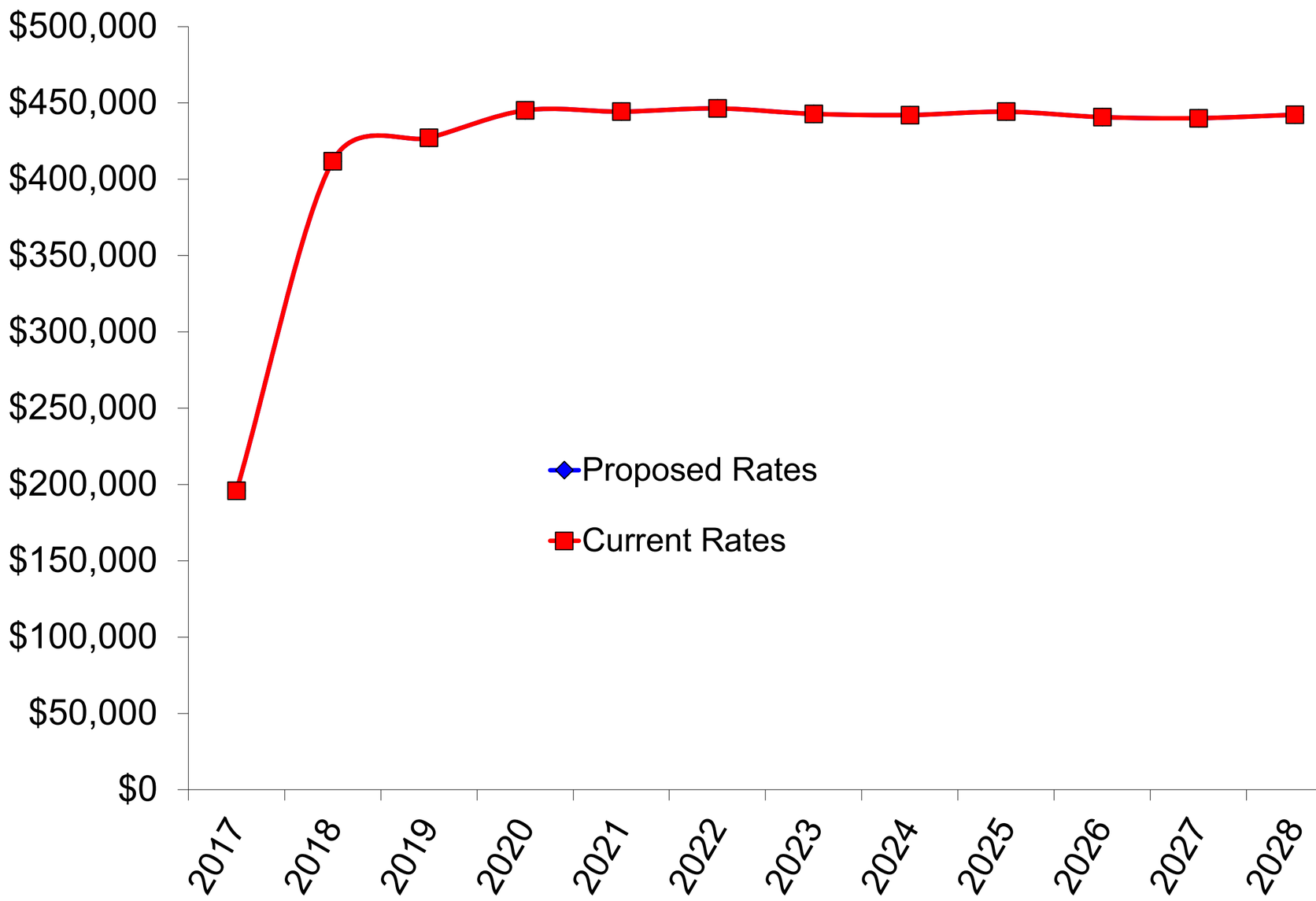
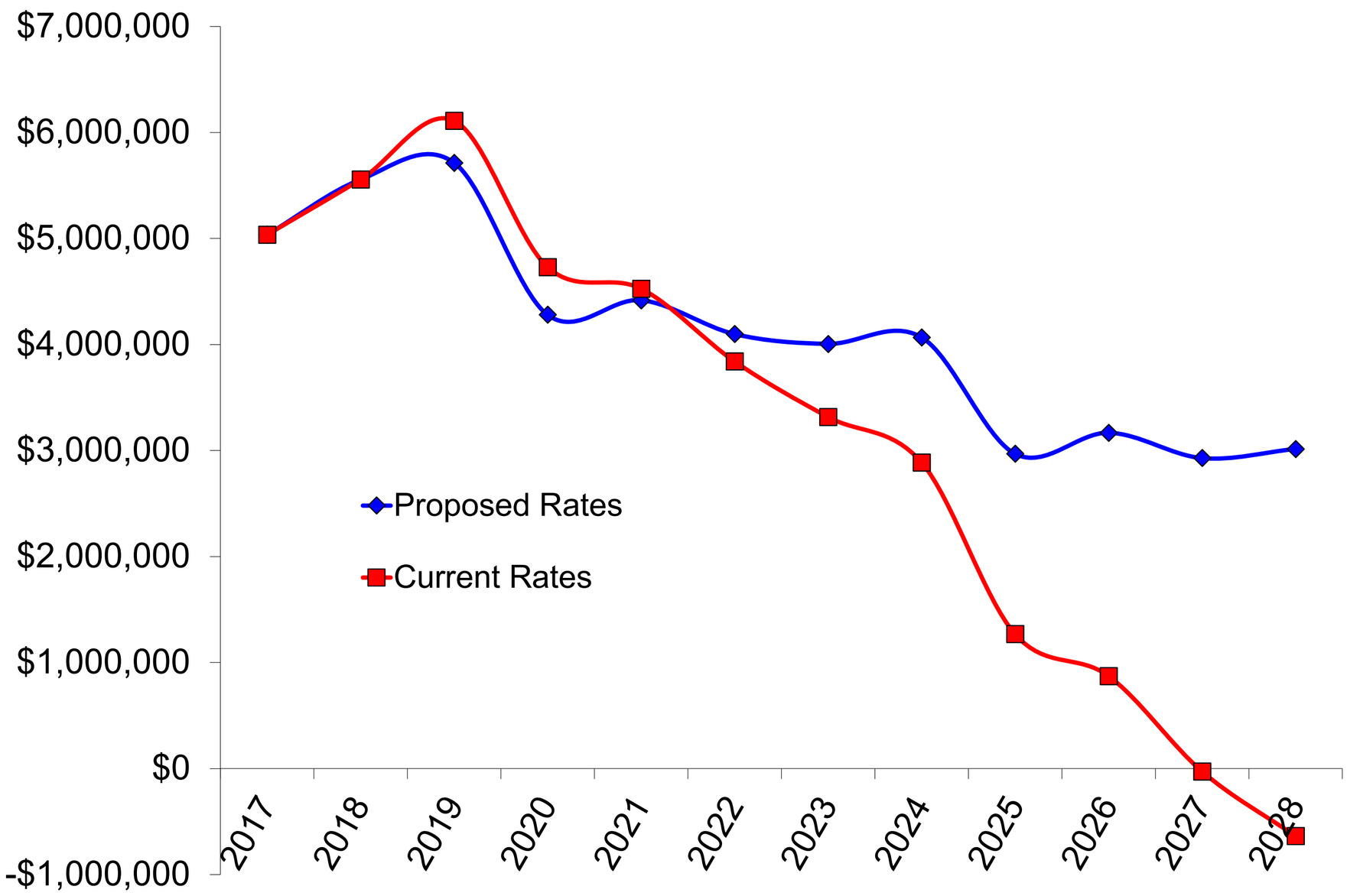


Chart 8 - Sum of All Reserves



Douglas, WY; Sanitation Rates, Model 2019-3

(This model moves the rates as close to a cost-to-serve structure as is possible at this time.)

February 22, 2019

This rate analysis scenario was produced by
Carl E. Brown, GettingGreatRates.com
1014 Carousel Drive, Jefferson City, Missouri 65101
(573) 619-3411
www.gettinggreatrates.com
carl1@gettinggreatrates.com

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

Douglas, 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

$5,661	Fees to GettingGreatRates.com
$500	Estimated value of system staff time and incidentals to assemble needed information
$6,161	Total Investment for This Analysis
$3,211,762	Five-year Increase in Revenue Due at Least Partly to This Analysis
52129%	Five-year Return on Investment (increase in revenues / investment)
$7,911,511	Ten-year Improvement in Cash Position Due at Least Partly to This Analysis
128,409%	Ten-year Return on Investment (increase in revenues / investment)

Table 1 - Rates

Douglas, WY; Sanitation Rates, Model 2019-3

Below are the recommended rates calculated by this model.

Rates Calculated by This Model

Customer Class, Container Size, Pick ups per Month	Count of Bills Receiving Each Service	0.75 Cu Yd Container Size Factor	Minimum Charge	Container Pick ups per Month	Volume in Annual 0.75 Cu Yd Container Equivalents	Collection Charge	Monthly Collection Charge	Monthly Collection + Min Charge	Disposal Charge per Container Size Factor	Disposal Charge per Month This Container Size & PU Freq	Total Monthly Collection and Disposal Charge	Total Monthly Charges	Full Year Minimum Charge Revenues	Full Year Collection Charge Revenue	Full Year Disposal Charge Revenue	Full Year, All Revenues
In-City Customers																
541, 0.75 Cu Yd, 4 Container Pick ups	29,048	1	$18.99	4	116,192	$3.37	$13.49	$32.48	$3.02	$12.08	$25.57	$44.56	$551,571	$391,865	$350,900	$742,765
541, 1.5 Cu Yd, 4 Container Pick ups	0	2	$18.99	4	0	$3.37	$13.49	$32.48	$3.02	$24.16	$51.14	$56.64	$0	$0	$0	$0
541, 3 Cu Yd, 4 Container Pick ups	0	4	$18.99	4	0	$3.37	$13.49	$32.48	$3.02	$48.32	$102.28	$80.80	$0	$0	$0	$0
542, 0.75 Cu Yd, 4 Container Pick ups	0	1	$18.99	4	0	$3.37	$13.49	$32.48	$3.02	$12.08	$25.57	$44.56	$0	$0	$0	$0
542, 1.5 Cu Yd, 4 Container Pick ups	0	2	$18.99	4	0	$3.37	$13.49	$32.48	$3.02	$24.16	$51.14	$56.64	$0	$0	$0	$0
542, 3 Cu Yd, 4 Container Pick ups	2,319	4	$18.99	4	37,104	$3.37	$13.49	$32.48	$3.02	$48.32	$102.28	$80.80	$44,034	$125,136	$112,054	$237,190
543, 0.75 Cu Yd, 8 Container Pick ups	0	1	$18.99	8	0	$3.37	$26.98	$45.97	$3.02	$24.16	$51.14	$70.13	$0	$0	$0	$0
543, 1.5 Cu Yd, 8 Container Pick ups	0	2	$18.99	8	0	$3.37	$26.98	$45.97	$3.02	$48.32	$102.28	$94.29	$0	$0	$0	$0
543, 3 Cu Yd, 8 Container Pick ups	388	4	$18.99	8	12,416	$3.37	$26.98	$45.97	$3.02	$96.64	$204.56	$142.61	$7,367	$41,874	$37,496	$79,370
544, 0.75 Cu Yd, 12 Container Pick ups	0	1	$18.99	12	0	$3.37	$40.47	$59.46	$3.02	$36.24	$76.71	$95.70	$0	$0	$0	$0
544, 1.5 Cu Yd, 12 Container Pick ups	0	2	$18.99	12	0	$3.37	$40.47	$59.46	$3.02	$72.48	$153.42	$131.94	$0	$0	$0	$0
544, 3 Cu Yd, 12 Container Pick ups	555	4	$18.99	12	26,640	$3.37	$40.47	$59.46	$3.02	$144.96	$306.84	$204.42	$10,538	$89,845	$80,453	$170,298
545, 0.75 Cu Yd, 16 Container Pick ups	0	1	$18.99	16	0	$3.37	$53.96	$72.95	$3.02	$48.32	$102.28	$121.27	$0	$0	$0	$0
545, 1.5 Cu Yd, 16 Container Pick ups	0	2	$18.99	16	0	$3.37	$53.96	$72.95	$3.02	$96.64	$204.56	$169.59	$0	$0	$0	$0
545, 3 Cu Yd, 16 Container Pick ups	62	4	$18.99	16	3,968	$3.37	$53.96	$72.95	$3.02	$193.28	$409.12	$266.23	$1,177	$13,382	$11,983	$25,366
546, 0.75 Cu Yd, 20 Container Pick ups	0	1	$18.99	20	0	$3.37	$67.45	$86.44	$3.02	$60.40	$127.85	$146.84	$0	$0	$0	$0
546, 1.5 Cu Yd, 20 Container Pick ups	0	2	$18.99	20	0	$3.37	$67.45	$86.44	$3.02	$120.80	$255.70	$207.24	$0	$0	$0	$0
546, 3 Cu Yd, 20 Container Pick ups	251	4	$18.99	20	20,080	$3.37	$67.45	$86.44	$3.02	$241.60	$511.40	$328.04	$4,766	$67,721	$60,642	$128,363
Out of City Customers																
551, 0.75 Cu Yd, 4 Container Pick ups	156	1	$18.99	4	624	$4.22	$16.86	$35.85	$3.02	$12.08	$28.94	$47.93	$2,962	$2,631	$1,884	$4,515
551, 1.5 Cu Yd, 4 Container Pick ups	0	2	$18.99	4	0	$4.22	$16.86	$35.85	$3.02	$24.16	$57.89	$60.01	$0	$0	$0	$0
551, 3 Cu Yd, 4 Container Pick ups	0	4	$18.99	4	0	$4.22	$16.86	$35.85	$3.02	$48.32	$115.77	$84.17	$0	$0	$0	$0
552, 0.75 Cu Yd, 4 Container Pick ups	114	1	$18.99	4	456	$4.22	$16.86	$35.85	$3.02	$12.08	$28.94	$47.93	$2,165	$1,922	$1,377	$3,299
552, 1.5 Cu Yd, 4 Container Pick ups	0	2	$18.99	4	0	$4.22	$16.86	$35.85	$3.02	$24.16	$57.89	$60.01	$0	$0	$0	$0
552, 3 Cu Yd, 4 Container Pick ups	0	4	$18.99	4	0	$4.22	$16.86	$35.85	$3.02	$48.32	$115.77	$84.17	$0	$0	$0	$0
553, 0.75 Cu Yd, 8 Container Pick ups	60	1	$18.99	8	480	$4.22	$33.73	$52.71	$3.02	$24.16	$57.89	$76.87	$1,139	$2,024	$1,450	$3,473
553, 1.5 Cu Yd, 8 Container Pick ups	0	2	$18.99	8	0	$4.22	$33.73	$52.71	$3.02	$48.32	$115.77	$101.03	$0	$0	$0	$0
553, 3 Cu Yd, 8 Container Pick ups	0	4	$18.99	8	0	$4.22	$33.73	$52.71	$3.02	$96.64	$231.54	$149.35	$0	$0	$0	$0
554, 0.75 Cu Yd, 12 Container Pick ups	24	1	$18.99	12	288	$4.22	$50.59	$69.58	$3.02	$36.24	$86.83	$105.82	$456	$1,214	$870	$2,084
554, 1.5 Cu Yd, 12 Container Pick ups	0	2	$18.99	12	0	$4.22	$50.59	$69.58	$3.02	$72.48	$173.66	$142.06	$0	$0	$0	$0
554, 3 Cu Yd, 12 Container Pick ups	0	4	$18.99	12	0	$4.22	$50.59	$69.58	$3.02	$144.96	$347.31	$214.54	$0	$0	$0	$0
555, 0.75 Cu Yd, 16 Container Pick ups	0	1	$18.99	16	0	$4.22	$67.45	$86.44	$3.02	$48.32	$115.77	$134.76	$0	$0	$0	$0
555, 1.5 Cu Yd, 16 Container Pick ups	0	2	$18.99	16	0	$4.22	$67.45	$86.44	$3.02	$96.64	$231.54	$183.08	$0	$0	$0	$0
555, 3 Cu Yd, 16 Container Pick ups	0	4	$18.99	16	0	$4.22	$67.45	$86.44	$3.02	$193.28	$463.08	$279.72	$0	$0	$0	$0
556, 0.75 Cu Yd, 20 Container Pick ups	12	1	$18.99	20	240	$4.22	$84.31	$103.30	$3.02	$60.40	$144.71	$163.70	$228	$1,012	$725	$1,737
556, 1.5 Cu Yd, 20 Container Pick ups	0	2	$18.99	20	0	$4.22	$84.31	$103.30	$3.02	$120.80	$289.43	$224.10	$0	$0	$0	$0
556, 3 Cu Yd, 20 Container Pick ups	0	4	$18.99	20	0	$4.22	$84.31	$103.30	$3.02	$241.60	$578.86	$344.90	$0	$0	$0	$0

Table 1 - Rates

Rates Calculated by This Model

Customer Class, Container Size, Pick ups per Month	Count of Bills Receiving Each Service	0.75 Cu Yd Container Size Factor	Minimum Charge	Container Pick ups per Month	Volume in Annual 0.75 Cu Yd Container Equivalents	Collection Charge	Monthly Collection Charge	Monthly Collection + Min Charge	Disposal Charge per Container Size Factor	Disposal Charge per Month This Container Size & PU Freq	Total Monthly Collection and Disposal Charge	Total Monthly Charges	Full Year Minimum Charge Revenues	Full Year Collection Charge Revenue	Full Year Disposal Charge Revenue	Full Year, All Revenues
In-City Customers																
541, 0.75 Cu Yd, Extra Container	624	1	$0.00	4	2,496	$1.47	$5.89	$5.89	$3.02	$12.08	$17.97	$17.97	$0	$3,675	$7,538	$11,213
541, 1.5 Cu Yd, Extra Container	0	2	$0.00	4	0	$1.47	$5.89	$5.89	$3.02	$24.16	$35.94	$30.05	$0	$0	$0	$0
541, 3 Cu Yd, Extra Container	0	4	$0.00	4	0	$1.47	$5.89	$5.89	$3.02	$48.32	$71.88	$54.21	$0	$0	$0	$0
542, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$1.47	$5.89	$5.89	$3.02	$12.08	$17.97	$17.97	$0	$0	$0	$0
542, 1.5 Cu Yd, Extra Container	0	2	$0.00	4	0	$1.47	$5.89	$5.89	$3.02	$24.16	$35.94	$30.05	$0	$0	$0	$0
542, 3 Cu Yd, Extra Container	492	4	$0.00	4	7,872	$1.47	$5.89	$5.89	$3.02	$48.32	$71.88	$54.21	$0	$11,590	$23,773	$35,364
543, 0.75 Cu Yd, Extra Container	0	1	$0.00	8	0	$1.47	$11.78	$11.78	$3.02	$24.16	$35.94	$35.94	$0	$0	$0	$0
543, 1.5 Cu Yd, Extra Container	0	2	$0.00	8	0	$1.47	$11.78	$11.78	$3.02	$48.32	$71.88	$60.10	$0	$0	$0	$0
543, 3 Cu Yd, Extra Container	672	4	$0.00	8	21,504	$1.47	$11.78	$11.78	$3.02	$96.64	$143.75	$108.42	$0	$31,661	$64,942	$96,603
544, 0.75 Cu Yd, Extra Container	0	1	$0.00	12	0	$1.47	$17.67	$17.67	$3.02	$36.24	$53.91	$53.91	$0	$0	$0	$0
544, 1.5 Cu Yd, Extra Container	0	2	$0.00	12	0	$1.47	$17.67	$17.67	$3.02	$72.48	$107.82	$90.15	$0	$0	$0	$0
544, 3 Cu Yd, Extra Container	468	4	$0.00	12	22,464	$1.47	$17.67	$17.67	$3.02	$144.96	$215.63	$162.63	$0	$33,074	$67,841	$100,915
545, 0.75 Cu Yd, Extra Container	0	1	$0.00	16	0	$1.47	$23.56	$23.56	$3.02	$48.32	$71.88	$71.88	$0	$0	$0	$0
545, 1.5 Cu Yd, Extra Container	0	2	$0.00	16	0	$1.47	$23.56	$23.56	$3.02	$96.64	$143.75	$120.20	$0	$0	$0	$0
545, 3 Cu Yd, Extra Container	120	4	$0.00	16	7,680	$1.47	$23.56	$23.56	$3.02	$193.28	$287.51	$216.84	$0	$11,307	$23,194	$34,501
546, 0.75 Cu Yd, Extra Container	0	1	$0.00	20	0	$1.47	$29.45	$29.45	$3.02	$60.40	$89.85	$89.85	$0	$0	$0	$0
546, 1.5 Cu Yd, Extra Container	0	2	$0.00	20	0	$1.47	$29.45	$29.45	$3.02	$120.80	$179.69	$150.25	$0	$0	$0	$0
546, 3 Cu Yd, Extra Container	444	4	$0.00	20	35,520	$1.47	$29.45	$29.45	$3.02	$241.60	$359.39	$271.05	$0	$52,297	$107,270	$159,567
Out of City Customers																
551, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$1.84	$7.36	$7.36	$3.02	$12.08	$19.44	$19.44	$0	$0	$0	$0
551, 1.5 Cu Yd, Extra Container	0	2	$0.00	4	0	$1.84	$7.36	$7.36	$3.02	$24.16	$38.88	$31.52	$0	$0	$0	$0
551, 3 Cu Yd, Extra Container	6	4	$0.00	4	93	$1.84	$7.36	$7.36	$3.02	$48.32	$77.77	$55.68	$0	$172	$282	$454
552, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$1.84	$7.36	$7.36	$3.02	$12.08	$19.44	$19.44	$0	$0	$0	$0
552, 1.5 Cu Yd, Extra Container	0	2	$0.00	4	0	$1.84	$7.36	$7.36	$3.02	$24.16	$38.88	$31.52	$0	$0	$0	$0
552, 3 Cu Yd, Extra Container	0	4	$0.00	4	0	$1.84	$7.36	$7.36	$3.02	$48.32	$77.77	$55.68	$0	$0	$0	$0
553, 0.75 Cu Yd, Extra Container	0	1	$0.00	8	0	$1.84	$14.72	$14.72	$3.02	$24.16	$38.88	$38.88	$0	$0	$0	$0
553, 1.5 Cu Yd, Extra Container	0	2	$0.00	8	0	$1.84	$14.72	$14.72	$3.02	$48.32	$77.77	$63.04	$0	$0	$0	$0
553, 3 Cu Yd, Extra Container	1	4	$0.00	8	29	$1.84	$14.72	$14.72	$3.02	$96.64	$155.53	$111.36	$0	$54	$89	$143
554, 0.75 Cu Yd, Extra Container	0	1	$0.00	12	0	$1.84	$22.08	$22.08	$3.02	$36.24	$58.32	$58.32	$0	$0	$0	$0
554, 1.5 Cu Yd, Extra Container	0	2	$0.00	12	0	$1.84	$22.08	$22.08	$3.02	$72.48	$116.65	$94.56	$0	$0	$0	$0
554, 3 Cu Yd, Extra Container	0	4	$0.00	12	0	$1.84	$22.08	$22.08	$3.02	$144.96	$233.30	$167.04	$0	$0	$0	$0
555, 0.75 Cu Yd, Extra Container	2,453	1	$0.00	16	39,249	$1.84	$29.45	$29.45	$3.02	$48.32	$77.77	$77.77	$0	$72,234	$118,533	$190,767
555, 1.5 Cu Yd, Extra Container	0	2	$0.00	16	0	$1.84	$29.45	$29.45	$3.02	$96.64	$155.53	$126.09	$0	$0	$0	$0
555, 3 Cu Yd, Extra Container	0	4	$0.00	16	0	$1.84	$29.45	$29.45	$3.02	$193.28	$311.07	$222.73	$0	$0	$0	$0
556, 0.75 Cu Yd, Extra Container	0	1	$0.00	20	0	$1.84	$36.81	$36.81	$3.02	$60.40	$97.21	$97.21	$0	$0	$0	$0
556, 1.5 Cu Yd, Extra Container	0	2	$0.00	20	0	$1.84	$36.81	$36.81	$3.02	$120.80	$194.42	$157.61	$0	$0	$0	$0
556, 3 Cu Yd, Extra Container	0	4	$0.00	20	0	$1.84	$36.81	$36.81	$3.02	$241.60	$388.83	$278.41	$0	$0	$0	$0
Totals	38,269				355,396			2,777					$626,404	$954,689	$1,073,296	$2,027,984

Table 1 - Rates

Douglas, WY; Sanitation Rates, Model 2019-3

These are the recently adjusted, now current rates.

Rates in Effect at End of Test Year

Customer Class, Container Size, Pick ups per Month	Count of Bills Receiving Each Service	0.75 Cu Yd Container Size Factor	Minimum Charge	Container Pick ups per Month	Volume in Annual 0.75 Cu Yd Container Equivalents	Collection Charge	Monthly Collection Charge	Monthly Collection + Min Charge	Disposal Charge per Container Size Factor	Disposal Charge per Month This Container Size & PU Freq	Total Monthly Collection and Disposal Charge	Total Monthly Charges	Full Year Minimum Charge Revenues	Full Year Collection Charge Revenue	Full Year Disposal Charge Revenue	Full Year, All Revenues
In-City Customers																
541, 0.75 Cu Yd, 4 Container Pick ups	29,048	1	$4.23	4	116,192	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$122,873	$274,213	$558,884	$833,097
541, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
541, 3 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
542, 0.75 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
542, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
542, 3 Cu Yd, 4 Container Pick ups	2,319	1	$4.23	4	9,276	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$9,809	$21,891	$44,618	$66,509
543, 0.75 Cu Yd, 8 Container Pick ups	0	1	$4.23	8	0	$2.36	$18.88	$23.11	$4.81	$38.48	$57.36	$61.59	$0	$0	$0	$0
543, 1.5 Cu Yd, 8 Container Pick ups	0	1	$4.23	8	0	$2.36	$18.88	$23.11	$4.81	$38.48	$57.36	$61.59	$0	$0	$0	$0
543, 3 Cu Yd, 8 Container Pick ups	388	1	$4.23	8	3,104	$2.36	$18.88	$23.11	$4.81	$38.48	$57.36	$61.59	$1,641	$7,325	$14,930	$22,256
544, 0.75 Cu Yd, 12 Container Pick ups	0	1	$4.23	12	0	$2.36	$28.32	$32.55	$4.81	$57.72	$86.04	$90.27	$0	$0	$0	$0
544, 1.5 Cu Yd, 12 Container Pick ups	0	1	$4.23	12	0	$2.36	$28.32	$32.55	$4.81	$57.72	$86.04	$90.27	$0	$0	$0	$0
544, 3 Cu Yd, 12 Container Pick ups	555	1	$4.23	12	6,660	$2.36	$28.32	$32.55	$4.81	$57.72	$86.04	$90.27	$2,348	$15,718	$32,035	$47,752
545, 0.75 Cu Yd, 16 Container Pick ups	0	1	$4.23	16	0	$2.36	$37.76	$41.99	$4.81	$76.96	$114.72	$118.95	$0	$0	$0	$0
545, 1.5 Cu Yd, 16 Container Pick ups	0	1	$4.23	16	0	$2.36	$37.76	$41.99	$4.81	$76.96	$114.72	$118.95	$0	$0	$0	$0
545, 3 Cu Yd, 16 Container Pick ups	62	1	$4.23	16	992	$2.36	$37.76	$41.99	$4.81	$76.96	$114.72	$118.95	$262	$2,341	$4,772	$7,113
546, 0.75 Cu Yd, 20 Container Pick ups	0	1	$4.23	20	0	$2.36	$47.20	$51.43	$4.81	$96.20	$143.40	$147.63	$0	$0	$0	$0
546, 1.5 Cu Yd, 20 Container Pick ups	0	1	$4.23	20	0	$2.36	$47.20	$51.43	$4.81	$96.20	$143.40	$147.63	$0	$0	$0	$0
546, 3 Cu Yd, 20 Container Pick ups	251	1	$4.23	20	5,020	$2.36	$47.20	$51.43	$4.81	$96.20	$143.40	$147.63	$1,062	$11,847	$24,146	$35,993
Out of City Customers																
551, 0.75 Cu Yd, 4 Container Pick ups	156	1	$4.23	4	624	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$660	$1,473	$3,001	$4,474
551, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
551, 3 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
552, 0.75 Cu Yd, 4 Container Pick ups	114	1	$4.23	4	456	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$482	$1,076	$2,193	$3,270
552, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
552, 3 Cu Yd, 4 Container Pick ups	0	1	$4.23	4	0	$2.36	$9.44	$13.67	$4.81	$19.24	$28.68	$32.91	$0	$0	$0	$0
553, 0.75 Cu Yd, 8 Container Pick ups	60	1	$4.23	8	480	$2.36	$18.88	$23.11	$4.81	$38.48	$57.36	$61.59	$254	$1,133	$2,309	$3,442
553, 1.5 Cu Yd, 8 Container Pick ups	0	1	$4.23	8	0	$2.36	$18.88	$23.11	$4.81	$38.48	$57.36	$61.59	$0	$0	$0	$0
553, 3 Cu Yd, 8 Container Pick ups	0	1	$4.23	8	0	$2.36	$18.88	$23.11	$4.81	$38.48	$57.36	$61.59	$0	$0	$0	$0
554, 0.75 Cu Yd, 12 Container Pick ups	24	1	$4.23	12	288	$2.36	$28.32	$32.55	$4.81	$57.72	$86.04	$90.27	$102	$680	$1,385	$2,065
554, 1.5 Cu Yd, 12 Container Pick ups	0	1	$4.23	12	0	$2.36	$28.32	$32.55	$4.81	$57.72	$86.04	$90.27	$0	$0	$0	$0
554, 3 Cu Yd, 12 Container Pick ups	0	1	$4.23	12	0	$2.36	$28.32	$32.55	$4.81	$57.72	$86.04	$90.27	$0	$0	$0	$0
555, 0.75 Cu Yd, 16 Container Pick ups	0	1	$4.23	16	0	$2.36	$37.76	$41.99	$4.81	$76.96	$114.72	$118.95	$0	$0	$0	$0
555, 1.5 Cu Yd, 16 Container Pick ups	0	1	$4.23	16	0	$2.36	$37.76	$41.99	$4.81	$76.96	$114.72	$118.95	$0	$0	$0	$0
555, 3 Cu Yd, 16 Container Pick ups	0	1	$4.23	16	0	$2.36	$37.76	$41.99	$4.81	$76.96	$114.72	$118.95	$0	$0	$0	$0
556, 0.75 Cu Yd, 20 Container Pick ups	12	1	$4.23	20	240	$2.36	$47.20	$51.43	$4.81	$96.20	$143.40	$147.63	$51	$566	$1,154	$1,721
556, 1.5 Cu Yd, 20 Container Pick ups	0	1	$4.23	20	0	$2.36	$47.20	$51.43	$4.81	$96.20	$143.40	$147.63	$0	$0	$0	$0
556, 3 Cu Yd, 20 Container Pick ups	0	1	$4.23	20	0	$2.36	$47.20	$51.43	$4.81	$96.20	$143.40	$147.63	$0	$0	$0	$0

Table 1 - Rates

Rates in Effect at End of Test Year

Customer Class, Container Size, Pick ups per Month	Count of Bills Receiving Each Service	0.75 Cu Yd Container Size Factor	Minimum Charge	Container Pick ups per Month	Volume in Annual 0.75 Cu Yd Container Equivalents	Collection Charge	Monthly Collection Charge	Monthly Collection + Min Charge	Disposal Charge per Container Size Factor	Disposal Charge per Month This Container Size & PU Freq	Total Monthly Collection and Disposal Charge	Total Monthly Charges	Full Year Minimum Charge Revenues	Full Year Collection Charge Revenue	Full Year Disposal Charge Revenue	Full Year, All Revenues
In-City Customers																
541, 0.75 Cu Yd, Extra Container	624	1	$0.00	4	2,496	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$5,891	$12,006	$17,896
541, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
541, 3 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
542, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
542, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
542, 3 Cu Yd, Extra Container	492	1	$0.00	4	1,968	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$4,644	$9,466	$14,111
543, 0.75 Cu Yd, Extra Container	0	1	$0.00	8	0	$2.36	$18.88	$18.88	$4.81	$38.48	$57.36	$57.36	$0	$0	$0	$0
543, 1.5 Cu Yd, Extra Container	0	1	$0.00	8	0	$2.36	$18.88	$18.88	$4.81	$38.48	$57.36	$57.36	$0	$0	$0	$0
543, 3 Cu Yd, Extra Container	672	1	$0.00	8	5,376	$2.36	$18.88	$18.88	$4.81	$38.48	$57.36	$57.36	$0	$12,687	$25,859	$38,546
544, 0.75 Cu Yd, Extra Container	0	1	$0.00	12	0	$2.36	$28.32	$28.32	$4.81	$57.72	$86.04	$86.04	$0	$0	$0	$0
544, 1.5 Cu Yd, Extra Container	0	1	$0.00	12	0	$2.36	$28.32	$28.32	$4.81	$57.72	$86.04	$86.04	$0	$0	$0	$0
544, 3 Cu Yd, Extra Container	468	1	$0.00	12	5,616	$2.36	$28.32	$28.32	$4.81	$57.72	$86.04	$86.04	$0	$13,254	$27,013	$40,267
545, 0.75 Cu Yd, Extra Container	0	1	$0.00	16	0	$2.36	$37.76	$37.76	$4.81	$76.96	$114.72	$114.72	$0	$0	$0	$0
545, 1.5 Cu Yd, Extra Container	0	1	$0.00	16	0	$2.36	$37.76	$37.76	$4.81	$76.96	$114.72	$114.72	$0	$0	$0	$0
545, 3 Cu Yd, Extra Container	120	1	$0.00	16	1,920	$2.36	$37.76	$37.76	$4.81	$76.96	$114.72	$114.72	$0	$4,531	$9,235	$13,766
546, 0.75 Cu Yd, Extra Container	0	1	$0.00	20	0	$2.36	$47.20	$47.20	$4.81	$96.20	$143.40	$143.40	$0	$0	$0	$0
546, 1.5 Cu Yd, Extra Container	0	1	$0.00	20	0	$2.36	$47.20	$47.20	$4.81	$96.20	$143.40	$143.40	$0	$0	$0	$0
546, 3 Cu Yd, Extra Container	444	1	$0.00	20	8,880	$2.36	$47.20	$47.20	$4.81	$96.20	$143.40	$143.40	$0	$20,957	$42,713	$63,670
Out of City Customers																
551, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
551, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
551, 3 Cu Yd, Extra Container	6	1	$0.00	4	23	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$55	$112	$167
552, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
552, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
552, 3 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.36	$9.44	$9.44	$4.81	$19.24	$28.68	$28.68	$0	$0	$0	$0
553, 0.75 Cu Yd, Extra Container	0	1	$0.00	8	0	$2.36	$18.88	$18.88	$4.81	$38.48	$57.36	$57.36	$0	$0	$0	$0
553, 1.5 Cu Yd, Extra Container	0	1	$0.00	8	0	$2.36	$18.88	$18.88	$4.81	$38.48	$57.36	$57.36	$0	$0	$0	$0
553, 3 Cu Yd, Extra Container	1	1	$0.00	8	7	$2.36	$18.88	$18.88	$4.81	$38.48	$57.36	$57.36	$0	$17	$35	$53
554, 0.75 Cu Yd, Extra Container	0	1	$0.00	12	0	$2.36	$28.32	$28.32	$4.81	$57.72	$86.04	$86.04	$0	$0	$0	$0
554, 1.5 Cu Yd, Extra Container	0	1	$0.00	12	0	$2.36	$28.32	$28.32	$4.81	$57.72	$86.04	$86.04	$0	$0	$0	$0
554, 3 Cu Yd, Extra Container	0	1	$0.00	12	0	$2.36	$28.32	$28.32	$4.81	$57.72	$86.04	$86.04	$0	$0	$0	$0
555, 0.75 Cu Yd, Extra Container	2,453	1	$0.00	16	39,249	$2.36	$37.76	$37.76	$4.81	$76.96	$114.72	$114.72	$0	$92,628	$188,789	$281,418
555, 1.5 Cu Yd, Extra Container	0	1	$0.00	16	0	$2.36	$37.76	$37.76	$4.81	$76.96	$114.72	$114.72	$0	$0	$0	$0
555, 3 Cu Yd, Extra Container	0	1	$0.00	16	0	$2.36	$37.76	$37.76	$4.81	$76.96	$114.72	$114.72	$0	$0	$0	$0
556, 0.75 Cu Yd, Extra Container	0	1	$0.00	20	0	$2.36	$47.20	$47.20	$4.81	$96.20	$143.40	$143.40	$0	$0	$0	$0
556, 1.5 Cu Yd, Extra Container	0	1	$0.00	20	0	$2.36	$47.20	$47.20	$4.81	$96.20	$143.40	$143.40	$0	$0	$0	$0
556, 3 Cu Yd, Extra Container	0	1	$0.00	20	0	$2.36	$47.20	$47.20	$4.81	$96.20	$143.40	$143.40	$0	$0	$0	$0
Totals	38,269				208,868			1,965				5,659	$139,543	$492,928	$1,004,655	$1,497,584

Table 1 - Rates

Douglas, WY; Sanitation Rates, Model 2019-3

These are the rates in effect at the beginning of the test year.

Rates in Effect at Beginning of Test Year

Customer Class, Container Size, Pick ups per Month	Count of Bills Receiving Each Service	0.75 Cu Yd Container Size Factor	Minimum Charge	Container Pick ups per Month	Volume in Annual 0.75 Cu Yd Container Equivalents	Collection Charge	Monthly Collection Charge	Monthly Collection + Min Charge	Disposal Charge per Container Size Factor	Disposal Charge per Month This Container Size & PU Freq	Total Monthly Collection and Disposal Charge	Total Monthly Charges	Full Year Minimum Charge Revenues	Full Year Collection Charge Revenue	Full Year Disposal Charge Revenue	Full Year, All Revenues
In-City Customers																
541, 0.75 Cu Yd, 4 Container Pick ups	29,048	1	$4.09	4	116,192	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$118,806	$256,784	$436,882	$812,473
541, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
541, 3 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
542, 0.75 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
542, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
542, 3 Cu Yd, 4 Container Pick ups	2,319	1	$4.09	4	9,276	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$9,485	$20,500	$34,878	$64,862
543, 0.75 Cu Yd, 8 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
543, 1.5 Cu Yd, 8 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
543, 3 Cu Yd, 8 Container Pick ups	388	1	$4.09	4	1,552	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$1,587	$3,430	$5,836	$10,852
544, 0.75 Cu Yd, 12 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
544, 1.5 Cu Yd, 12 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
544, 3 Cu Yd, 12 Container Pick ups	555	1	$4.09	4	2,220	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$2,270	$4,906	$8,347	$15,523
545, 0.75 Cu Yd, 16 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
545, 1.5 Cu Yd, 16 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
545, 3 Cu Yd, 16 Container Pick ups	62	1	$4.09	4	248	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$254	$548	$932	$1,734
546, 0.75 Cu Yd, 20 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
546, 1.5 Cu Yd, 20 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
546, 3 Cu Yd, 20 Container Pick ups	251	1	$4.09	4	1,004	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$1,027	$2,219	$3,775	$7,020
Out of City Customers																
551, 0.75 Cu Yd, 4 Container Pick ups	156	1	$4.09	4	624	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$638	$1,379	$2,346	$4,363
551, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
551, 3 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
552, 0.75 Cu Yd, 4 Container Pick ups	114	1	$4.09	4	456	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$466	$1,008	$1,715	$3,189
552, 1.5 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
552, 3 Cu Yd, 4 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
553, 0.75 Cu Yd, 8 Container Pick ups	60	1	$4.09	4	240	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$245	$530	$902	$1,678
553, 1.5 Cu Yd, 8 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
553, 3 Cu Yd, 8 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
554, 0.75 Cu Yd, 12 Container Pick ups	24	1	$4.09	4	96	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$98	$212	$361	$671
554, 1.5 Cu Yd, 12 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
554, 3 Cu Yd, 12 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
555, 0.75 Cu Yd, 16 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
555, 1.5 Cu Yd, 16 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
555, 3 Cu Yd, 16 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
556, 0.75 Cu Yd, 20 Container Pick ups	12	1	$4.09	4	48	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$49	$106	$180	$336
556, 1.5 Cu Yd, 20 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0
556, 3 Cu Yd, 20 Container Pick ups	0	1	$4.09	4	0	$2.21	$8.84	$12.93	$3.76	$15.04	$23.88	$27.97	$0	$0	$0	$0

Table 1 - Rates

Rates in Effect at Beginning of Test Year

Customer Class, Container Size, Pick ups per Month	Count of Bills Receiving Each Service	0.75 Cu Yd Container Size Factor	Minimum Charge	Container Pick ups per Month	Volume in Annual 0.75 Cu Yd Container Equivalents	Collection Charge	Monthly Collection Charge	Monthly Collection + Min Charge	Disposal Charge per Container Size Factor	Disposal Charge per Month This Container Size & PU Freq	Total Monthly Collection and Disposal Charge	Total Monthly Charges	Full Year Minimum Charge Revenues	Full Year Collection Charge Revenue	Full Year Disposal Charge Revenue	Full Year, All Revenues
In-City Customers																
541, 0.75 Cu Yd, Extra Container	624	1	$0.00	4	2,496	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$5,516	$9,385	$14,901
541, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
541, 3 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
542, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
542, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
542, 3 Cu Yd, Extra Container	492	1	$0.00	4	1,968	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$4,349	$7,400	$11,749
543, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
543, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
543, 3 Cu Yd, Extra Container	672	1	$0.00	4	2,688	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$5,940	$10,107	$16,047
544, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
544, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
544, 3 Cu Yd, Extra Container	468	1	$0.00	4	1,872	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$4,137	$7,039	$11,176
545, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
545, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
545, 3 Cu Yd, Extra Container	120	1	$0.00	4	480	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$1,061	$1,805	$2,866
546, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
546, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
546, 3 Cu Yd, Extra Container	444	1	$0.00	4	1,776	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$3,925	$6,678	$10,603
Out of City Customers																
551, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
551, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
551, 3 Cu Yd, Extra Container	6	1	$0.00	4	23	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$52	$88	$139
552, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
552, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
552, 3 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
553, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
553, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
553, 3 Cu Yd, Extra Container	1	1	$0.00	4	4	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$8	$14	$22
554, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
554, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
554, 3 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
555, 0.75 Cu Yd, Extra Container	2,453	1	$0.00	4	9,812	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$21,685	$36,894	$58,580
555, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
555, 3 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
556, 0.75 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
556, 1.5 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
556, 3 Cu Yd, Extra Container	0	1	$0.00	4	0	$2.21	$8.84	$8.84	$3.76	$15.04	$23.88	$23.88	$0	$0	$0	$0
Totals					153,075			784		1,083		1,867	$134,925	$338,296	$575,563	$1,048,785

Table 3 - Operating Incomes
(and User Base Data)
Douglas, 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)

$65,758 Census Bureau estimate of AMHI for the year: 2016

$36,944 Census Bureau estimate of AMHI for the year: 2000

$28,814 AMHI growth during this time period

4.87% 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)									
				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
		7/1/16	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
Average Number of Customers for the Year	N.A.	2,749	2,759	2,769	2,779	2,789	2,799	2,809	2,819	2,829	2,839	2,849	2,859
Actual (Test Year) and Projected 0.75 Cu Yd Bin Equivalents	N.A.	355,396	356,689	357,982	359,274	360,567	361,860	363,153	364,445	365,738	367,031	368,324	369,617
Customers Added or Lost (-) During the Year	N.A.	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Customer Growth or Loss (-) Rate	N.A.	0.36%	0.36%	0.36%	0.36%	0.36%	0.36%	0.36%	0.35%	0.35%	0.35%	0.35%	0.35%
Rate Increases Projected for Future Years	N.A.	N.A.	N.A.	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

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		$1,048,785	$1,497,584	$2,027,984	$2,086,191	$2,146,068	$2,207,606	$2,270,881	$2,335,939	$2,402,831	$2,471,607	$2,542,320	$2,615,025
Additional Sales Revenues From New Customers			$15	$7,324	$7,534	$7,695	$7,887	$8,084	$8,286	$8,493	$8,706	$8,923	$9,146
Total Calculated Revenues (User Charge Fees)		$1,048,785	$1,497,598	$2,035,308	$2,093,725	$2,153,762	$2,215,493	$2,278,965	$2,344,225	$2,411,324	$2,480,313	$2,551,244	$2,624,171

Operating Incomes

USER CHARGES	N.A.	$1,041,247	$1,486,820	$2,020,660	$2,078,656	$2,138,262	$2,199,548	$2,262,563	$2,327,354	$2,393,970	$2,462,462	$2,532,883	$2,605,285
Late Payment Charge	N.A.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SANITATION ACTIVATION FEE (Current Fee Structure)	% Above	$1,250	$1,247	$0	$0	$0	$0	$0	$0	$0	$0	$1	$2
SANITATION ACTIVATION FEE (Based on Table 13)	% Above	$0	$3	$1,247	$1,278	$1,310	$1,343	$1,376	$1,411	$1,446	$1,482	$1,519	$1,557
INTEREST INCOME	N.A.	$3,105	$1,233	-$14,000	-$16,834	-$16,429	-$13,562	-$10,093	-$6,117	-$1,746	$1,660	$4,470	$7,484
Loss Due to Customers Downsizing Container Size or Reducing Pick-up Frequency	10.0%	$0	$0	$0	-$111,375	-$2,784	-$2,784	-$2,784	-$2,784	-$2,784	-$2,784	-$2,784	-$2,784
Revenue Loss Due to Late Rate Adjustment on 3/1/2019	N.A.	$0	-$530,401	-$397,801	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Incomes		**$1,045,602**	**$958,902**	**$1,610,106**	**$1,951,725**	**$2,120,359**	**$2,184,544**	**$2,251,062**	**$2,319,863**	**$2,390,886**	**$2,462,820**	**$2,536,088**	**$2,611,544**

Table 4 - Operating Costs
(and Net Income)
Douglas, 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 7/1/16	Analysis (This) Year Starting 7/1/17	Years Following the Analysis Year (for Which Results Have Been Projected) 1st Year Starting 7/1/18	2nd Year Starting 7/1/19	3rd Year Starting 7/1/20	4th Year Starting 7/1/21	5th Year Starting 7/1/22	6th Year Starting 7/1/23	7th Year Starting 7/1/24	8th Year Starting 7/1/25	9th Year Starting 7/1/26	10th Year Starting 7/1/27
DEPRECIATION	3.0%	0.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
EMPLOYEE BENEFITS - DFRRD COMP	3.0%	$719	$741	$763	$786	$810	$834	$859	$885	$911	$939	$967	$996
EMPLOYEE BENEFITS - HEALTH INS	3.0%	$50,936	$52,464	$54,038	$55,659	$57,328	$59,048	$60,820	$62,644	$64,524	$66,459	$68,453	$70,507
EMPLOYEE BENEFITS - SCL SCRTY	3.0%	$10,704	$11,026	$11,356	$11,697	$12,048	$12,409	$12,782	$13,165	$13,560	$13,967	$14,386	$14,817
EMPLOYEE BENEFITS - WRKRS COMP	3.0%	$5,983	$6,163	$6,347	$6,538	$6,734	$6,936	$7,144	$7,358	$7,579	$7,807	$8,041	$8,282
EMPLOYEE BENEFITS - WY RTRMNT	3.0%	$22,747	$23,430	$24,133	$24,857	$25,602	$26,370	$27,161	$27,976	$28,816	$29,680	$30,570	$31,487
EQUIPMENT/TOOLS-NON CAPITALIZE	3.0%	$14,840	$15,285	$15,744	$16,216	$16,703	$17,204	$17,720	$18,251	$18,799	$19,363	$19,944	$20,542
FUEL	3.0%	$17,212	$17,728	$18,260	$18,808	$19,372	$19,953	$20,552	$21,168	$21,803	$22,457	$23,131	$23,825
MISC CONTRACTUAL SERVICES	3.0%	$2,259	$2,326	$2,396	$2,468	$2,542	$2,618	$2,697	$2,778	$2,861	$2,947	$3,035	$3,127
OPERATING SUPPLIES	3.0%	$22,039	$22,700	$23,381	$24,083	$24,805	$25,550	$26,316	$27,106	$27,919	$28,756	$29,619	$30,508
REFUNDS/REIMBURSEMENTS	3.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
REPAIRS/MAINTENANCE	3.0%	$129	$133	$137	$141	$145	$150	$154	$159	$163	$168	$173	$179
REPLACEMENT RESERVE	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
SALARIES/WAGES - ALLOWANCES	3.0%	$300	$309	$318	$328	$338	$348	$358	$369	$380	$391	$403	$415
SALARIES/WAGES - INCENTIVE	3.0%	$582	$600	$618	$636	$655	$675	$695	$716	$738	$760	$783	$806
SALARIES/WAGES - LONGEVITY	3.0%	$1,068	$1,100	$1,133	$1,167	$1,202	$1,238	$1,275	$1,314	$1,353	$1,394	$1,435	$1,478
SALARIES/WAGES - OVERTIME	3.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SALARIES/WAGES - REGULAR	3.0%	$136,867	$140,973	$145,202	$149,558	$154,045	$158,667	$163,427	$168,329	$173,379	$178,581	$183,938	$189,456
TRAINING/DEVELOPMENT	3.0%	$240	$247	$255	$262	$270	$278	$287	$295	$304	$313	$323	$332
OPERATING TRANSFERS MANAGEMENT FEES	3.0%	$44,061	$45,383	$46,744	$48,147	$49,591	$51,079	$52,611	$54,189	$55,815	$57,490	$59,214	$60,991
CAPITALIZED EXP EQUIPMENT/FURNITURE	3.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer to Douglas Landfill for Services Rendered to Sanitation Utility (Recycling, Yard Waste, Transfer Station Operation, etc.)	0.0%	$575,563	$1,004,655	$928,204	$1,084,029	$1,098,795	$1,113,747	$1,128,889	$1,144,223	$1,159,750	$1,175,473	$1,191,395	$1,207,518
34-5340-2158 MISC CONTRACTUAL SERVICES (Pay Hauling Contractor and Pay Tipping Fees to Casper)	3.0%	$91,811	$431,300	$444,239	$457,566	$471,293	$485,432	$499,995	$514,995	$530,445	$546,358	$562,749	$579,631
One-time Reduction of R&R Annuity	0.0%	-$28,518	-$28,518	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
One-time Transfer to Repair & Replacement	0.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Annual Payment to Repair & Replacement (Table 7)	0.0%	$28,518	$28,518	$28,518	$28,518	$28,518	$28,518	$28,518	$28,518	$28,518	$28,518	$28,518	$28,518
User Charge Analysis Services	5.0%	$0	$5,661	$0	$0	$6,241	$0	$0	$6,881	$0	$0	$7,587	$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		**$998,061**	**$1,782,224**	**$1,751,787**	**$1,931,463**	**$1,977,038**	**$2,011,054**	**$2,052,260**	**$2,101,320**	**$2,137,617**	**$2,181,821**	**$2,234,664**	**$2,273,415**
Net Income (or Loss)		$47,540	-$823,321	-$141,681	$20,262	$143,320	$173,490	$198,803	$218,544	$253,269	$280,999	$301,425	$338,129
Working Capital Goal: 50%	In Dollars, That is:	$499,031	$891,112	$875,893	$965,732	$988,519	$1,005,527	$1,026,130	$1,050,660	$1,068,808	$1,090,910	$1,117,332	$1,136,707

Notes: The City includes individual capital and equipment replacement costs in its operating budget, which is normal. However, for rate calculation purposes, we account for capital costs in Table 5 and replacement costs in Table 6. Therefore, the "test year" costs in the above table do not add up to the same total as the City's expense statement did, but the remainder of those costs are in the other two tables. As to future costs, they were increased by an inflation factor and some, those that are related to the number of customers served and the volumes they use, are also increased by the growth rate each year. Those are highlighted yellow.

Table 5 - Capital Improvement Program (CIP)

Douglas, WY; Sanitation Rates, Model 2019-3

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)									
	7/1/16	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
Planned Spending, Debt-paid Portion of Projects (CIP costs to be funded with loans are shown in this section.)												
None	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Debt-paid Portion of Projects	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Planned Spending, Grant-paid Portion of Projects (CIP costs to be grant-funded are shown here.)												
None	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Grant-paid Portion of Projects	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Planned Spending, Cash-paid Portion of Projects (CIP costs to be funded from reserves are shown here.)												
None	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Grant Acquisition Costs, Estimated at: 2.50%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Cash-paid Portion of Projects	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total CIP Costs	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Planned Spending, Debt Repayment												
Existing Debt Payments (Following is debt that was initiated during the test year or earlier.)												
None	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
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.)												
None		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Debt Payments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total, All CIP-related Payouts	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
(This is the Total Cash Required for This CIP Schedule. These amounts must come from utility income, reserves or outside sources.)												
CIP Funding Plan (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	-$127,930	-$127,930	-$130,488	-$133,098	-$135,760	-$138,475	-$141,245	-$144,070	-$146,951	-$149,890	-$152,888	-$155,946
Working Capital Transferred in	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Debt and CIP Reserves Interest Earned (or Paid)	$0	-$2,559	-$2,610	-$2,662	-$2,715	-$2,770	-$2,825	-$2,881	-$2,939	-$2,998	-$3,058	-$3,119
Internal Income Source (Name it)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Available Internal Funds	-$127,930	-$130,488	-$133,098	-$135,760	-$138,475	-$141,245	-$144,070	-$146,951	-$149,890	-$152,888	-$155,946	-$159,064
Grant and Loan Proceeds (External Funds)												
None	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Available External Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Available Funds	**-$127,930**	**-$130,488**	**-$133,098**	**-$135,760**	**-$138,475**	**-$141,245**	**-$144,070**	**-$146,951**	**-$149,890**	**-$152,888**	**-$155,946**	**-$159,064**
Outcomes (This CIP spending and funding plan will result in the following cash needs and ending balances each year.)												
Total Available Funds	**-$127,930**	**-$130,488**	**-$133,098**	**-$135,760**	**-$138,475**	**-$141,245**	**-$144,070**	**-$146,951**	**-$149,890**	**-$152,888**	**-$155,946**	**-$159,064**
Total, All CIP-related Payouts	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Debt and CIP Reserves Ending Balances	**-$127,930**	**-$130,488**	**-$133,098**	**-$135,760**	**-$138,475**	**-$141,245**	**-$144,070**	**-$146,951**	**-$149,890**	**-$152,888**	**-$155,946**	**-$159,064**

Notes: Other than collection trucks, which have been entered into the R&R schedule for periodic replacement, there is little infrastructure to the collection service. No CIP projects are planned.

Table 6 - Equipment Replacement Schedule - Detailed

Year Beginning	Sanitation Truck								Total Annual Replacement Costs
7/1/17	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/18	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/19	$210,000	$0	$0	$0	$0	$0	$0	$0	$210,000
7/1/20	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/21	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/22	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/23	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/24	$210,000	$0	$0	$0	$0	$0	$0	$0	$210,000
7/1/25	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/26	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/27	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/29	$210,000	$0	$0	$0	$0	$0	$0	$0	$210,000
7/1/30	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/31	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/32	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/33	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/34	$210,000	$0	$0	$0	$0	$0	$0	$0	$210,000
7/1/35	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/36	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/37	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/38	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/39	$210,000	$0	$0	$0	$0	$0	$0	$0	$210,000
7/1/40	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/41	$0	$0	$0	$0	$0	$0	$0	$0	$0

Table 7 - Equipment Replacement Annuity Calculation
Douglas, WY; Sanitation Rates, Model 2019-3

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
7/1/17	Analysis Year	$0	$0	$12,140	$619,124	$378,000
7/1/18	1st Year	$0	$0	$12,382	$660,025	$389,340
7/1/19	2nd Year	$210,000	$222,789	$13,200	$478,954	$401,020
7/1/20	3rd Year	$0	$0	$9,579	$517,051	$413,051
7/1/21	4th Year	$0	$0	$10,341	$555,910	$425,442
7/1/22	5th Year	$0	$0	$11,118	$595,547	$438,206
7/1/23	6th Year	$0	$0	$11,911	$635,976	$451,352
7/1/24	7th Year	$210,000	$258,274	$12,720	$418,940	$464,892
7/1/25	8th Year	$0	$0	$8,379	$455,837	$478,839
7/1/26	9th Year	$0	$0	$9,117	$493,471	$493,204
7/1/27	10th Year	$0	$0	$9,869	$531,859	$508,000
7/1/28	11th Year	$0	$0	$10,637	$571,014	$523,240
7/1/29	12th Year	$210,000	$299,410	$11,420	$311,543	$538,938
7/1/30	13th Year	$0	$0	$6,231	$346,292	$555,106
7/1/31	14th Year	$0	$0	$6,926	$381,735	$571,759
7/1/32	15th Year	$0	$0	$7,635	$417,888	$588,912
7/1/33	16th Year	$0	$0	$8,358	$454,764	$606,579
7/1/34	17th Year	$210,000	$347,098	$9,095	$145,279	$624,776
7/1/35	18th Year	$0	$0	$2,906	$176,703	$643,520
7/1/36	19th Year	$0	$0	$3,534	$208,755	$662,825
				Starting Account Balance	$606,985	$378,000
				Minimum Annual Annuity	$20,153	Minimum Desired Balance in Today's Dollars
				Discretionary Annuity	$8,365	

Notes: R&R costs for this service are scant. A Discretionary Annuity amount was added so that at the end of the 20-year modeling period, the balance will equal the highest annual replacement cost amount.

Required Annual Deposit (Annuity) to Replacement Account **$28,518**

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

Table 8 - Equipment Replacement Annuity Calculation
Douglas, 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: 7/1/2021 through 6/30/2022

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Disposal Variable Cost Percentage	Collection Cost Percentage	Average Fixed Cost	Average Disposal Variable Cost	Average Collection Cost
DEPRECIATION	$0	100.0%	0.0%	0.0%	$0	$0	$0
EMPLOYEE BENEFITS - DFRRD COMP	$834	25.0%	0.0%	75.0%	$208	$0	$625
EMPLOYEE BENEFITS - HEALTH INS	$59,048	25.0%	0.0%	75.0%	$14,762	$0	$44,286
EMPLOYEE BENEFITS - SCL SCRTY	$12,409	25.0%	0.0%	75.0%	$3,102	$0	$9,307
EMPLOYEE BENEFITS - WRKRS COMP	$6,936	25.0%	0.0%	75.0%	$1,734	$0	$5,202
EMPLOYEE BENEFITS - WY RTRMNT	$26,370	25.0%	0.0%	75.0%	$6,593	$0	$19,778
EQUIPMENT/TOOLS-NON CAPITALIZE	$17,204	50.0%	0.0%	50.0%	$8,602	$0	$8,602
FUEL	$19,953	0.0%	0.0%	100.0%	$0	$0	$19,953
MISC CONTRACTUAL SERVICES	$2,618	25.0%	0.0%	75.0%	$655	$0	$1,964
OPERATING SUPPLIES	$25,550	0.0%	0.0%	100.0%	$0	$0	$25,550
REFUNDS/REIMBURSEMENTS	$0	25.0%	0.0%	75.0%	$0	$0	$0
REPAIRS/MAINTENANCE	$150	50.0%	0.0%	50.0%	$75	$0	$75
REPLACEMENT RESERVE	$0	50.0%	0.0%	50.0%	$0	$0	$0
SALARIES/WAGES - ALLOWANCES	$348	25.0%	0.0%	75.0%	$87	$0	$261
SALARIES/WAGES - INCENTIVE	$675	25.0%	0.0%	75.0%	$169	$0	$506
SALARIES/WAGES - LONGEVITY	$1,238	25.0%	0.0%	75.0%	$310	$0	$929
SALARIES/WAGES - OVERTIME	$0	25.0%	0.0%	75.0%	$0	$0	$0
SALARIES/WAGES - REGULAR	$158,667	25.0%	0.0%	75.0%	$39,667	$0	$119,000
TRAINING/DEVELOPMENT	$278	25.0%	0.0%	75.0%	$70	$0	$209
OPERATING TRANSFERS MANAGEMENT FEES	$51,079	100.0%	0.0%	0.0%	$51,079	$0	$0
CAPITALIZED EXP EQUIPMENT/FURNITURE	$0	50.0%	0.0%	50.0%	$0	$0	$0
Transfer to Douglas Landfill for Services Rendered to Sanitation Utility (Recycling, Yard Waste, Transfer Station Operation, etc.)	$1,113,747	0.0%	100.0%	0.0%	$0	$1,113,747	$0
34-5340-2158 MISC CONTRACTUAL SERVICES (Pay Hauling Contractor and Pay Tipping Fees to Casper)	$485,432	0.0%	100.0%	0.0%	$0	$485,432	$0
Annual Payment to Repair & Replacement (Table 7)	$28,518	50.0%	0.0%	50.0%	$14,259	$0	$14,259
User Charge Analysis Services	$0	55.4%	0.0%	44.6%	$0	$0	$0
Total, All CIP-related Payouts	$0	50.0%	0.0%	50.0%	$0	$0	$0
Grand Total Costs, Weighted Avg Percentages	$2,011,054	7.0%	79.5%	13.5%	$141,370	$1,599,179	$270,505
			100%			$2,011,054	

Bases for Cost to Serve Rate Structure

Number of Customers During Year Defined Above =	2,799
Billed Volume, in 0.75 Cu Yd Bin Equivalents During Year Defined Above =	361,860
Average Fixed Cost per Customer per Month During Year Defined Above =	$9.21
Average Fixed Cost per Customer per Month Discounted to the Present =	$8.68
Average Disposal Cost per 0.75 Cu Yd Bin Equivalent During Year Defined Above =	$4.42
Average Disposal Cost per 0.75 Cu Yd Bin Equivalent Discounted to the Present =	$4.16
Average Collection Cost per 0.75 Cu Yd Bin Equivalent During Year Defined Above =	$1.64
Average Collection Cost per 0.75 Cu Yd Bin Equivalent Discounted to the Present =	$1.54

Table 9 - Marginal Cost Classification
Douglas, WY; Sanitation Rates, Model 2019-3

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

In the calculations below, it is assumed that marginal disposal costs are being calculated for: Extra Bins/Dumpsters

In the calculations below, it is assumed that marginal other variable costs are being calculated for: Extra Pick-ups

The marginal rate structure basis year runs from: 7/1/2021 through 6/30/2022

Cost Items	Average Fixed Cost	Average Disposal Variable Cost	Average Collection Cost	Marginal Fixed Cost Percentage	Marginal Disposal Variable Cost Percentage	Marginal Other Variable Cost Percentage	Marginal Fixed Cost	Marginal Disposal Variable Cost	Marginal Other Variable Cost
DEPRECIATION	$0	$0	$0	25%	100%	25%	$0	$0	$0
EMPLOYEE BENEFITS - DFRRD COMP	$208	$0	$625	50%	100%	50%	$104	$0	$313
EMPLOYEE BENEFITS - HEALTH INS	$14,762	$0	$44,286	50%	100%	50%	$7,381	$0	$22,143
EMPLOYEE BENEFITS - SCL SCRTY	$3,102	$0	$9,307	50%	100%	50%	$1,551	$0	$4,653
EMPLOYEE BENEFITS - WRKRS COMP	$1,734	$0	$5,202	50%	100%	50%	$867	$0	$2,601
EMPLOYEE BENEFITS - WY RTRMNT	$6,593	$0	$19,778	50%	100%	50%	$3,296	$0	$9,889
EQUIPMENT/TOOLS-NON CAPITALIZE	$8,602	$0	$8,602	25%	100%	25%	$2,150	$0	$2,150
FUEL	$0	$0	$19,953	25%	100%	25%	$0	$0	$4,988
MISC CONTRACTUAL SERVICES	$655	$0	$1,964	50%	100%	50%	$327	$0	$982
OPERATING SUPPLIES	$0	$0	$25,550	25%	100%	25%	$0	$0	$6,387
REFUNDS/REIMBURSEMENTS	$0	$0	$0	25%	100%	25%	$0	$0	$0
REPAIRS/MAINTENANCE	$75	$0	$75	25%	100%	25%	$19	$0	$19
REPLACEMENT RESERVE	$0	$0	$0	25%	100%	25%	$0	$0	$0
SALARIES/WAGES - ALLOWANCES	$87	$0	$261	50%	100%	50%	$43	$0	$130
SALARIES/WAGES - INCENTIVE	$169	$0	$506	50%	100%	50%	$84	$0	$253
SALARIES/WAGES - LONGEVITY	$310	$0	$929	50%	100%	50%	$155	$0	$464
SALARIES/WAGES - OVERTIME	$0	$0	$0	50%	100%	50%	$0	$0	$0
SALARIES/WAGES - REGULAR	$39,667	$0	$119,000	50%	100%	50%	$19,833	$0	$59,500
TRAINING/DEVELOPMENT	$70	$0	$209	25%	100%	25%	$17	$0	$52
OPERATING TRANSFERS MANAGEMENT FEES	$51,079	$0	$0	25%	100%	25%	$12,770	$0	$0
CAPITALIZED EXP EQUIPMENT/FURNITURE	$0	$0	$0	25%	100%	25%	$0	$0	$0
Transfer to Douglas Landfill for Services Rendered to Sanitation Utility (Recycling, Yard Waste, Transfer Station Operation, etc.)	$0	$1,113,747	$0	100%	100%	100%	$0	$1,113,747	$0
Annual Payment to Repair & Replacement (Table 7)	$14,259	$0	$14,259	25%	100%	25%	$3,565	$0	$3,565
User Charge Analysis Services	$0	$0	$0	25%	100%	25%	$0	$0	$0
Total, All CIP-related Payouts	$0	$0	$0	25%	100%	25%	$0	$0	$0
Grand Total All Costs	$141,370	$1,599,179	$270,505				$52,164	$1,599,179	$118,091
		$2,011,054						$1,769,434	

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

	Monthly Marginal Fixed Cost per Customer	Marginal Disposal Variable Cost per 0.75 Cu Yd Bin Equivalent	Marginal Other Variable Cost per 0.75 Cu Yd Bin Equivalent
	$1.55		
Marginal Fixed Cost as a Percent of Total Fixed Cost:	37%	$4.42	
Marginal Disposal Variable Cost as a Percent of Total Disposal Variable Cost:		100%	$0.33
Marginal Other Variable Cost as a Percent of Total Other Variable Cost:			44%

Table 11 - Capacity Costs

Douglas, WY; Sanitation Rates, Model 2019-3

In water and sewer systems, system capacity costs are commonly paid, at least partially, by system development fees. That is not the case in sanitation services. Therefore, this table is used only for recovery of costs associated with "signing up" new sanitation customers. Likewise, Table 12 is not needed for this analysis, so it has been left out of the model.

Peak and Base Capacity Costs

	Fixed Assets Original Value (Capacity Cost)	% of Value Attributable to Peak Capacity	Peak Capacity Cost	Annual Peak Capacity Cost (15-year Depreciation)	% of Value Attributable to Base Capacity	Base Capacity Cost	Annual Base Capacity Cost (15-year Depreciation)
	$613,481	50.0%	$306,740	$29,552	50.0%	$306,740	$29,552
Totals	$613,481		$306,740	$29,552		$306,740	$29,552

How Capacity Costs Will Be Recovered

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

Peak Capacity Costs to be Recovered by System Development Fees

0.00%	Target Percentage of Costs to Recover
$0	Target Portion of Costs to Recover
$0	Cost per Peak Capacity Share

Base Capacity Costs to be Recovered by System Development Fees

4.22%	Target Percentage of Costs to Recover
$1,247	Target Portion of Costs to Recover
$125	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:

$0	Average Field Cost per New Customer
$0	Average Administration Cost per New Customer
$0	Field and Admin Cost per New Customer
$125	Total Base Cost to Recover per New Customer

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

Peak Capacity Costs to be Recovered by Minimum Charge Surcharges

0.00%	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 Surcharge per Peak Capacity Share

Base Capacity Costs to be Recovered by Minimum Charge Surcharges

0.00%	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 Surcharge per Bill

Table 13 - System Development Fees

Douglas, WY; Sanitation Rates, Model 2019-3

In water and sewer systems, system capacity costs are commonly paid, at least partially, by system development fees. That is not the case in sanitation services. Therefore, this table is used only for recovery of costs associated with "signing up" new sanitation customers. That being the case, Tables 14 and 15, which calculate recovery of system development costs over time, are not needed at all for this analysis and have been left out of this model.

Note: Larger meter sizes are available in two or more types, each having different 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.

Customer	Container Pick ups per Month	0.75 Cu Yd Container Size Factor	Cu Ft Capacity per Month	Unadjusted Peak Capacity Shares Each Customer	Out of City Multiplier	Uniform Adjustment to Peak Capacity Shares	Peak Capacity Shares Each Customer	Peak Capacity SDF Each New Customer	Base Capacity Cost per New Customer	Field and Admin Cost per New Customer	Fully Adjusted Base SDF per New Customer	Full Activation Fee, per New Customer
In-City Customers												
541, 0.75 Cu Yd, 4 Container Pick ups	4	1	4	1.0	100%	0.0	1.0	$0	$125	$0	$125	$125
541, 1.5 Cu Yd, 4 Container Pick ups	4	2	8	2.0	100%	0.0	2.0	$0	$125	$0	$125	$125
541, 3 Cu Yd, 4 Container Pick ups	4	4	16	4.0	100%	0.0	4.0	$0	$125	$0	$125	$125
542, 0.75 Cu Yd, 4 Container Pick ups	4	1	4	1.0	100%	0.0	1.0	$0	$125	$0	$125	$125
542, 1.5 Cu Yd, 4 Container Pick ups	4	2	8	2.0	100%	0.0	2.0	$0	$125	$0	$125	$125
542, 3 Cu Yd, 4 Container Pick ups	4	4	16	4.0	100%	0.0	4.0	$0	$125	$0	$125	$125
543, 0.75 Cu Yd, 8 Container Pick ups	8	1	8	2.0	100%	0.0	2.0	$0	$125	$0	$125	$125
543, 1.5 Cu Yd, 8 Container Pick ups	8	2	16	4.0	100%	0.0	4.0	$0	$125	$0	$125	$125
543, 3 Cu Yd, 8 Container Pick ups	8	4	32	8.0	100%	0.0	8.0	$0	$125	$0	$125	$125
544, 0.75 Cu Yd, 12 Container Pick ups	12	1	12	3.0	100%	0.0	3.0	$0	$125	$0	$125	$125
544, 1.5 Cu Yd, 12 Container Pick ups	12	2	24	6.0	100%	0.0	6.0	$0	$125	$0	$125	$125
544, 3 Cu Yd, 12 Container Pick ups	12	4	48	12.0	100%	0.0	12.0	$0	$125	$0	$125	$125
545, 0.75 Cu Yd, 16 Container Pick ups	16	1	16	4.0	100%	0.0	4.0	$0	$125	$0	$125	$125
545, 1.5 Cu Yd, 16 Container Pick ups	16	2	32	8.0	100%	0.0	8.0	$0	$125	$0	$125	$125
545, 3 Cu Yd, 16 Container Pick ups	16	4	64	16.0	100%	0.0	16.0	$0	$125	$0	$125	$125
546, 0.75 Cu Yd, 20 Container Pick ups	20	1	20	5.0	100%	0.0	5.0	$0	$125	$0	$125	$125
546, 1.5 Cu Yd, 20 Container Pick ups	20	2	40	10.0	100%	0.0	10.0	$0	$125	$0	$125	$125
546, 3 Cu Yd, 20 Container Pick ups	20	4	80	20.0	100%	0.0	20.0	$0	$125	$0	$125	$125
Out of City Customers												
551, 0.75 Cu Yd, 4 Container Pick ups	4	1	4	1.0	125%	0.0	1.3	$0	$125	$0	$156	$156
551, 1.5 Cu Yd, 4 Container Pick ups	4	2	8	2.0	125%	0.0	2.5	$0	$125	$0	$156	$156
551, 3 Cu Yd, 4 Container Pick ups	4	4	16	4.0	125%	0.0	5.0	$0	$125	$0	$156	$156
552, 0.75 Cu Yd, 4 Container Pick ups	4	1	4	1.0	125%	0.0	1.3	$0	$125	$0	$156	$156
552, 1.5 Cu Yd, 4 Container Pick ups	4	2	8	2.0	125%	0.0	2.5	$0	$125	$0	$156	$156
552, 3 Cu Yd, 4 Container Pick ups	4	4	16	4.0	125%	0.0	5.0	$0	$125	$0	$156	$156
553, 0.75 Cu Yd, 8 Container Pick ups	8	1	8	2.0	125%	0.0	2.5	$0	$125	$0	$156	$156
553, 1.5 Cu Yd, 8 Container Pick ups	8	2	16	4.0	125%	0.0	5.0	$0	$125	$0	$156	$156
553, 3 Cu Yd, 8 Container Pick ups	8	4	32	8.0	125%	0.0	10.0	$0	$125	$0	$156	$156
554, 0.75 Cu Yd, 12 Container Pick ups	12	1	12	3.0	125%	0.0	3.8	$0	$125	$0	$156	$156
554, 1.5 Cu Yd, 12 Container Pick ups	12	2	24	6.0	125%	0.0	7.5	$0	$125	$0	$156	$156
554, 3 Cu Yd, 12 Container Pick ups	12	4	48	12.0	125%	0.0	15.0	$0	$125	$0	$156	$156
555, 0.75 Cu Yd, 16 Container Pick ups	16	1	16	4.0	125%	0.0	5.0	$0	$125	$0	$156	$156
555, 1.5 Cu Yd, 16 Container Pick ups	16	2	32	8.0	125%	0.0	10.0	$0	$125	$0	$156	$156
555, 3 Cu Yd, 16 Container Pick ups	16	4	64	16.0	125%	0.0	20.0	$0	$125	$0	$156	$156
556, 0.75 Cu Yd, 20 Container Pick ups	20	1	20	5.0	125%	0.0	6.3	$0	$125	$0	$156	$156
556, 1.5 Cu Yd, 20 Container Pick ups	20	2	40	10.0	125%	0.0	12.5	$0	$125	$0	$156	$156
556, 3 Cu Yd, 20 Container Pick ups	20	4	80	20.0	125%	0.0	25.0	$0	$125	$0	$156	$156

Table 13 - System Development Fees

Customer	Container Pick ups per Month	0.75 Cu Yd Container Size Factor	Cu Ft Capacity per Month	Unadjusted Peak Capacity Shares Each Customer	Out of City Multiplier	Uniform Adjustment to Peak Capacity Shares	Peak Capacity Shares Each Customer	Peak Capacity SDF Each New Customer	Base Capacity Cost per New Customer	Field and Admin Cost per New Customer	Fully Adjusted Base SDF per New Customer	Full Activation Fee, per New Customer
In-City Customers												
541, 0.75 Cu Yd, Extra Container	4	1	4	1.0	0%	0.0	0.0	$0	$125	$0	$0	$0
541, 1.5 Cu Yd, Extra Container	4	2	8	2.0	0%	0.0	0.0	$0	$125	$0	$0	$0
541, 3 Cu Yd, Extra Container	4	4	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
542, 0.75 Cu Yd, Extra Container	4	1	4	1.0	0%	0.0	0.0	$0	$125	$0	$0	$0
542, 1.5 Cu Yd, Extra Container	4	2	8	2.0	0%	0.0	0.0	$0	$125	$0	$0	$0
542, 3 Cu Yd, Extra Container	4	4	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
543, 0.75 Cu Yd, Extra Container	8	1	8	2.0	0%	0.0	0.0	$0	$125	$0	$0	$0
543, 1.5 Cu Yd, Extra Container	8	2	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
543, 3 Cu Yd, Extra Container	8	4	32	8.0	0%	0.0	0.0	$0	$125	$0	$0	$0
544, 0.75 Cu Yd, Extra Container	12	1	12	3.0	0%	0.0	0.0	$0	$125	$0	$0	$0
544, 1.5 Cu Yd, Extra Container	12	2	24	6.0	0%	0.0	0.0	$0	$125	$0	$0	$0
544, 3 Cu Yd, Extra Container	12	4	48	12.0	0%	0.0	0.0	$0	$125	$0	$0	$0
545, 0.75 Cu Yd, Extra Container	16	1	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
545, 1.5 Cu Yd, Extra Container	16	2	32	8.0	0%	0.0	0.0	$0	$125	$0	$0	$0
545, 3 Cu Yd, Extra Container	16	4	64	16.0	0%	0.0	0.0	$0	$125	$0	$0	$0
546, 0.75 Cu Yd, Extra Container	20	1	20	5.0	0%	0.0	0.0	$0	$125	$0	$0	$0
546, 1.5 Cu Yd, Extra Container	20	2	40	10.0	0%	0.0	0.0	$0	$125	$0	$0	$0
546, 3 Cu Yd, Extra Container	20	4	80	20.0	0%	0.0	0.0	$0	$125	$0	$0	$0
Out of City Customers												
551, 0.75 Cu Yd, Extra Container	4	1	4	1.0	0%	0.0	0.0	$0	$125	$0	$0	$0
551, 1.5 Cu Yd, Extra Container	4	2	8	2.0	0%	0.0	0.0	$0	$125	$0	$0	$0
551, 3 Cu Yd, Extra Container	4	4	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
552, 0.75 Cu Yd, Extra Container	4	1	4	1.0	0%	0.0	0.0	$0	$125	$0	$0	$0
552, 1.5 Cu Yd, Extra Container	4	2	8	2.0	0%	0.0	0.0	$0	$125	$0	$0	$0
552, 3 Cu Yd, Extra Container	4	4	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
553, 0.75 Cu Yd, Extra Container	8	1	8	2.0	0%	0.0	0.0	$0	$125	$0	$0	$0
553, 1.5 Cu Yd, Extra Container	8	2	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
553, 3 Cu Yd, Extra Container	8	4	32	8.0	0%	0.0	0.0	$0	$125	$0	$0	$0
554, 0.75 Cu Yd, Extra Container	12	1	12	3.0	0%	0.0	0.0	$0	$125	$0	$0	$0
554, 1.5 Cu Yd, Extra Container	12	2	24	6.0	0%	0.0	0.0	$0	$125	$0	$0	$0
554, 3 Cu Yd, Extra Container	12	4	48	12.0	0%	0.0	0.0	$0	$125	$0	$0	$0
555, 0.75 Cu Yd, Extra Container	16	1	16	4.0	0%	0.0	0.0	$0	$125	$0	$0	$0
555, 1.5 Cu Yd, Extra Container	16	2	32	8.0	0%	0.0	0.0	$0	$125	$0	$0	$0
555, 3 Cu Yd, Extra Container	16	4	64	16.0	0%	0.0	0.0	$0	$125	$0	$0	$0
556, 0.75 Cu Yd, Extra Container	20	1	20	5.0	0%	0.0	0.0	$0	$125	$0	$0	$0
556, 1.5 Cu Yd, Extra Container	20	2	40	10.0	0%	0.0	0.0	$0	$125	$0	$0	$0
556, 3 Cu Yd, Extra Container	20	4	80	20.0	0%	0.0	0.0	$0	$125	$0	$0	$0

Table 14 - Revenues From System Development Fees

Douglas, WY; Sanitation Rates, Model 2019-3

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

Note: Larger meter sizes are available in two of more types that have different 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.

Customer	Mix of New Customers in a Typical Year	Peak Capacity Shares Each Customer	Out of City Multiplier	Peak Capacity SDF This Customer Class	Projected Annual Growth in Capacity Shares	Peak Capacity Fee Revenues 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	New Customer Activation Fee Revenues for One Full Year
In-City Customers										
541, 0.75 Cu Yd, 4 Container Pick ups	4.0	1.0	100%	$0.00	4.0	$0	$498	$498	$0	$498
541, 1.5 Cu Yd, 4 Container Pick ups	0.0	2.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
541, 3 Cu Yd, 4 Container Pick ups	0.0	4.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
542, 0.75 Cu Yd, 4 Container Pick ups	0.0	1.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
542, 1.5 Cu Yd, 4 Container Pick ups	0.0	2.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
542, 3 Cu Yd, 4 Container Pick ups	0.4	4.0	100%	$0.00	1.5	$0	$45	$45	$0	$45
543, 0.75 Cu Yd, 8 Container Pick ups	0.0	2.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
543, 1.5 Cu Yd, 8 Container Pick ups	0.0	4.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
543, 3 Cu Yd, 8 Container Pick ups	0.1	8.0	100%	$0.00	0.5	$0	$8	$8	$0	$8
544, 0.75 Cu Yd, 12 Container Pick ups	0.0	3.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
544, 1.5 Cu Yd, 12 Container Pick ups	0.0	6.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
544, 3 Cu Yd, 12 Container Pick ups	0.1	12.0	100%	$0.00	1.0	$0	$11	$11	$0	$11
545, 0.75 Cu Yd, 16 Container Pick ups	0.0	4.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
545, 1.5 Cu Yd, 16 Container Pick ups	0.0	8.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
545, 3 Cu Yd, 16 Container Pick ups	0.0	16.0	100%	$0.00	0.2	$0	$1	$1	$0	$1
546, 0.75 Cu Yd, 20 Container Pick ups	0.0	5.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
546, 1.5 Cu Yd, 20 Container Pick ups	0.0	10.0	100%	$0.00	0.0	$0	$0	$0	$0	$0
546, 3 Cu Yd, 20 Container Pick ups	0.0	20.0	100%	$0.00	0.8	$0	$5	$5	$0	$5
Subtotals	4.5				7.9	$0	$567	$567	$0	$567
Out of City Customers										
551, 0.75 Cu Yd, 4 Container Pick ups	0.0	1.3	125%	$0.00	0.0	$0	$3	$3	$0	$3
551, 1.5 Cu Yd, 4 Container Pick ups	0.0	2.5	125%	$0.00	0.0	$0	$0	$0	$0	$0
551, 3 Cu Yd, 4 Container Pick ups	0.0	5.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
552, 0.75 Cu Yd, 4 Container Pick ups	0.0	1.3	125%	$0.00	0.0	$0	$2	$2	$0	$2
552, 1.5 Cu Yd, 4 Container Pick ups	0.0	2.5	125%	$0.00	0.0	$0	$0	$0	$0	$0
552, 3 Cu Yd, 4 Container Pick ups	0.0	5.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
553, 0.75 Cu Yd, 8 Container Pick ups	0.0	2.5	125%	$0.00	0.0	$0	$1	$1	$0	$1
553, 1.5 Cu Yd, 8 Container Pick ups	0.0	5.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
553, 3 Cu Yd, 8 Container Pick ups	0.0	10.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
554, 0.75 Cu Yd, 12 Container Pick ups	0.0	3.8	125%	$0.00	0.0	$0	$0	$0	$0	$0
554, 1.5 Cu Yd, 12 Container Pick ups	0.0	7.5	125%	$0.00	0.0	$0	$0	$0	$0	$0
554, 3 Cu Yd, 12 Container Pick ups	0.0	15.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
555, 0.75 Cu Yd, 16 Container Pick ups	0.0	5.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
555, 1.5 Cu Yd, 16 Container Pick ups	0.0	10.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
555, 3 Cu Yd, 16 Container Pick ups	0.0	20.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
556, 0.75 Cu Yd, 20 Container Pick ups	0.0	6.3	125%	$0.00	0.0	$0	$0	$0	$0	$0
556, 1.5 Cu Yd, 20 Container Pick ups	0.0	12.5	125%	$0.00	0.0	$0	$0	$0	$0	$0
556, 3 Cu Yd, 20 Container Pick ups	0.0	25.0	125%	$0.00	0.0	$0	$0	$0	$0	$0
Subtotals	0.1				0.1	$0	$7	$7	$0	$7

Table 14 - Revenues From System Development Fees

Customer	Mix of New Customers in a Typical Year	Peak Capacity Shares Each Customer	Out of City Multiplier	Peak Capacity SDF This Customer Class	Projected Annual Growth in Capacity Shares	Peak Capacity Fee Revenues 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	New Customer Activation Fee Revenues for One Full Year
In-City Customers										
541, 0.75 Cu Yd, Extra Container	1.2	0.0	0%	$0.00	0.0	$0	$146	$146	$0	$146
541, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
541, 3 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
542, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
542, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
542, 3 Cu Yd, Extra Container	0.9	0.0	0%	$0.00	0.0	$0	$115	$115	$0	$115
543, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
543, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
543, 3 Cu Yd, Extra Container	1.3	0.0	0%	$0.00	0.0	$0	$157	$157	$0	$157
544, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
544, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
544, 3 Cu Yd, Extra Container	0.9	0.0	0%	$0.00	0.0	$0	$110	$110	$0	$110
545, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
545, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
545, 3 Cu Yd, Extra Container	0.2	0.0	0%	$0.00	0.0	$0	$28	$28	$0	$28
546, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
546, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
546, 3 Cu Yd, Extra Container	0.8	0.0	0%	$0.00	0.0	$0	$104	$104	$0	$104
Subtotals	5.3				0.0	$0	$660	$660	$0	$660
Out of City Customers										
551, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$3	$3	$0	$3
551, 3 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
552, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$3	$3	$0	$3
552, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
552, 3 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
553, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$2	$2	$0	$2
553, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
553, 3 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
554, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$2	$2	$0	$2
554, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
554, 3 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
555, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$1	$1	$0	$1
555, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
555, 3 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
556, 0.75 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
556, 1.5 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
556, 3 Cu Yd, Extra Container	0.0	0.0	0%	$0.00	0.0	$0	$0	$0	$0	$0
Subtotals	0.1				0.0	$0	$12	$12	$0	$12
Totals	10.0				8.0	$0	$1,247	$1,247	$0	$1,247

This is the amount used to calculate the New Customer Fees income in Table 3.

Table 17 - Financial Capacity Indicators and Reserves
Douglas, 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 7/1/16	Analysis (This) Year Starting 7/1/17	1st Year Starting 7/1/18	2nd Year Starting 7/1/19	3rd Year Starting 7/1/20	4th Year Starting 7/1/21	5th Year Starting 7/1/22	6th Year Starting 7/1/23	7th Year Starting 7/1/24	8th Year Starting 7/1/25	9th Year Starting 7/1/26	10th Year Starting 7/1/27
Monthly Bill for a '541, 0.75 Cu Yd, 4 Container Pick ups Customer	$32.91	$44.56	$44.56	$45.67	$46.81	$47.98	$49.18	$50.41	$51.67	$52.97	$54.29	$55.65
Annual Median Household Income (AMHI) Within Service Area	$65,758	$68,963	$72,325	$75,851	$79,548	$83,426	$87,492	$91,757	$96,230	$100,921	$105,841	$111,000
Affordability Index: Current Rates First Column, Then Proposed Rates	0.60%	0.78%	0.74%	0.72%	0.71%	0.69%	0.67%	0.66%	0.64%	0.63%	0.62%	0.60%

Affordability Index (AI) goes to the willingness and ability of customers to pay. AI is the percent of AMHI needed by a small bin, residential user to pay their bill.

Monthly Bill for a '541, 0.75 Cu Yd, 4 Container Pick ups Low-income Customer	$32.91	$44.56	$44.56	$45.67	$46.81	$47.98	$49.18	$50.41	$51.67	$52.97	$54.29	$55.65
Income at One-half the AMHI Above	$32,879	$33,680	$34,501	$35,342	$36,204	$37,086	$37,990	$38,916	$39,864	$40,836	$41,831	$42,851
Bill Affordability for Low-income Customer for Same Service: Current Rates First Column, Then Proposed Rates	1.20%	1.59%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.56%	1.56%	1.56%	1.56%

This additional indicator of affordability assumes a residential customer with income at one-half of the median household income above and that income is growing at one-half the rate of the median household income. 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	1.05	0.54	0.92	1.01	1.07	1.09	1.10	1.10	1.12	1.13	1.13	1.15

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	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

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 6/30/16	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
Cash and Cash Equivalents	$75,760	$123,300	-$700,021	-$841,702	-$821,440	-$678,119	-$504,629	-$305,826	-$87,283	$165,986	$446,985	$748,410	$1,086,539
Other Liquid Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Undedicated Cash Assets, Before Inflation	$75,760	$123,300	-$700,021	-$841,702	-$821,440	-$678,119	-$504,629	-$305,826	-$87,283	$165,986	$446,985	$748,410	$1,086,539
Total Cash Assets Discounted for Inflation (Future Unrestricted Purchasing Power)	$75,760	$123,300	-$700,021	-$867,734	-$873,036	-$743,004	-$570,014	-$356,136	-$104,785	$134,114	$350,322	$568,964	$826,021
Repair & Replacement	$606,985	$619,124	$660,025	$478,954	$517,051	$555,910	$595,547	$635,976	$418,940	$455,837	$493,471	$531,859	$571,014
Debt and CIP Reserves	-$127,930	-$127,930	-$130,488	-$133,098	-$135,760	-$138,475	-$141,245	-$144,070	-$146,951	-$149,890	-$152,888	-$155,946	-$159,064
Sum of All Reserves	$554,815	$614,495	-$170,484	-$495,845	-$440,148	-$260,684	-$50,327	$186,080	$184,706	$471,933	$787,569	$1,124,323	$1,498,489

Table 18 - Comparison of Bills Before and After Rate Adjustments
Douglas, WY; Sanitation Rates, Model 2019-3

The weighted-average revenue (bill) increase for all customers combined, including container downsizing losses, will be 35.4%

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.

Customer or Rate Class	0.75 Cu Yd Container Size Factor	Container Pick ups per Month	Customers (or Extra Containers) in This Class	Current Bill for This Customer Class	Modeled Bill for This Customer Class	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
In-City Customers							
541, 0.75 Cu Yd, 4 Container Pick ups	1	4	2,421	$32.91	$44.56	$11.65	35%
541, 1.5 Cu Yd, 4 Container Pick ups	2	4	0	$32.91	$56.64	$23.73	72%
541, 3 Cu Yd, 4 Container Pick ups	4	4	0	$32.91	$80.80	$47.89	146%
542, 0.75 Cu Yd, 4 Container Pick ups	1	4	0	$32.91	$44.56	$11.65	35%
542, 1.5 Cu Yd, 4 Container Pick ups	2	4	0	$32.91	$56.64	$23.73	72%
542, 3 Cu Yd, 4 Container Pick ups	4	4	193	$32.91	$80.80	$47.89	146%
543, 0.75 Cu Yd, 8 Container Pick ups	1	8	0	$61.59	$70.13	$8.54	14%
543, 1.5 Cu Yd, 8 Container Pick ups	2	8	0	$61.59	$94.29	$32.70	53%
543, 3 Cu Yd, 8 Container Pick ups	4	8	32	$61.59	$142.61	$81.02	132%
544, 0.75 Cu Yd, 12 Container Pick ups	1	12	0	$90.27	$95.70	$5.43	6%
544, 1.5 Cu Yd, 12 Container Pick ups	2	12	0	$90.27	$131.94	$41.67	46%
544, 3 Cu Yd, 12 Container Pick ups	4	12	46	$90.27	$204.42	$114.15	126%
545, 0.75 Cu Yd, 16 Container Pick ups	1	16	0	$118.95	$121.27	$2.32	2%
545, 1.5 Cu Yd, 16 Container Pick ups	2	16	0	$118.95	$169.59	$50.64	43%
545, 3 Cu Yd, 16 Container Pick ups	4	16	5	$118.95	$266.23	$147.28	124%
546, 0.75 Cu Yd, 20 Container Pick ups	1	20	0	$147.63	$146.84	-$0.79	-1%
546, 1.5 Cu Yd, 20 Container Pick ups	2	20	0	$147.63	$207.24	$59.61	40%
546, 3 Cu Yd, 20 Container Pick ups	4	20	21	$147.63	$328.04	$180.41	122%
Out of City Customers							
551, 0.75 Cu Yd, 4 Container Pick ups	1	4	13	$32.91	$47.93	$15.02	46%
551, 1.5 Cu Yd, 4 Container Pick ups	2	4	0	$32.91	$60.01	$27.10	82%
551, 3 Cu Yd, 4 Container Pick ups	4	4	0	$32.91	$84.17	$51.26	156%
552, 0.75 Cu Yd, 4 Container Pick ups	1	4	10	$32.91	$47.93	$15.02	46%
552, 1.5 Cu Yd, 4 Container Pick ups	2	4	0	$32.91	$60.01	$27.10	82%
552, 3 Cu Yd, 4 Container Pick ups	4	4	0	$32.91	$84.17	$51.26	156%
553, 0.75 Cu Yd, 8 Container Pick ups	1	8	5	$61.59	$76.87	$15.28	25%
553, 1.5 Cu Yd, 8 Container Pick ups	2	8	0	$61.59	$101.03	$39.44	64%
553, 3 Cu Yd, 8 Container Pick ups	4	8	0	$61.59	$149.35	$87.76	142%
554, 0.75 Cu Yd, 12 Container Pick ups	1	12	2	$90.27	$105.82	$15.55	17%
554, 1.5 Cu Yd, 12 Container Pick ups	2	12	0	$90.27	$142.06	$51.79	57%
554, 3 Cu Yd, 12 Container Pick ups	4	12	0	$90.27	$214.54	$124.27	138%
555, 0.75 Cu Yd, 16 Container Pick ups	1	16	0	$118.95	$134.76	$15.81	13%
555, 1.5 Cu Yd, 16 Container Pick ups	2	16	0	$118.95	$183.08	$64.13	54%
555, 3 Cu Yd, 16 Container Pick ups	4	16	0	$118.95	$279.72	$160.77	135%
556, 0.75 Cu Yd, 20 Container Pick ups	1	20	1	$147.63	$163.70	$16.07	11%
556, 1.5 Cu Yd, 20 Container Pick ups	2	20	0	$147.63	$224.10	$76.47	52%
556, 3 Cu Yd, 20 Container Pick ups	4	20	0	$147.63	$344.90	$197.27	134%

Table 18 - Comparison of Bills Before and After Rate Adjustments

Customer or Rate Class	0.75 Cu Yd Container Size Factor	Container Pick ups per Month	Customers (or Extra Containers) in This Class	Current Bill for This Customer Class	Modeled Bill for This Customer Class	Bill Increase or Decrease (-)	Percent Increase or Decrease (-)
In-City Customers							
541, 0.75 Cu Yd, Extra Container	1	4	624	$28.68	$17.97	-$10.71	-37%
541, 1.5 Cu Yd, Extra Container	2	4	0	$28.68	$30.05	$1.37	5%
541, 3 Cu Yd, Extra Container	4	4	0	$28.68	$54.21	$25.53	89%
542, 0.75 Cu Yd, Extra Container	1	4	0	$28.68	$17.97	-$10.71	-37%
542, 1.5 Cu Yd, Extra Container	2	4	0	$28.68	$30.05	$1.37	5%
542, 3 Cu Yd, Extra Container	4	4	492	$28.68	$54.21	$25.53	89%
543, 0.75 Cu Yd, Extra Container	1	8	0	$57.36	$35.94	-$21.42	-37%
543, 1.5 Cu Yd, Extra Container	2	8	0	$57.36	$60.10	$2.74	5%
543, 3 Cu Yd, Extra Container	4	8	672	$57.36	$108.42	$51.06	89%
544, 0.75 Cu Yd, Extra Container	1	12	0	$86.04	$53.91	-$32.13	-37%
544, 1.5 Cu Yd, Extra Container	2	12	0	$86.04	$90.15	$4.11	5%
544, 3 Cu Yd, Extra Container	4	12	468	$86.04	$162.63	$76.59	89%
545, 0.75 Cu Yd, Extra Container	1	16	0	$114.72	$71.88	-$42.84	-37%
545, 1.5 Cu Yd, Extra Container	2	16	0	$114.72	$120.20	$5.48	5%
545, 3 Cu Yd, Extra Container	4	16	120	$114.72	$216.84	$102.12	89%
546, 0.75 Cu Yd, Extra Container	1	20	0	$143.40	$89.85	-$53.55	-37%
546, 1.5 Cu Yd, Extra Container	2	20	0	$143.40	$150.25	$6.85	5%
546, 3 Cu Yd, Extra Container	4	20	444	$143.40	$271.05	$127.65	89%
Out of City Customers							
551, 0.75 Cu Yd, Extra Container	1	4	0	$28.68	$19.44	-$9.24	-32%
551, 1.5 Cu Yd, Extra Container	2	4	0	$28.68	$31.52	$2.84	10%
551, 3 Cu Yd, Extra Container	4	4	6	$28.68	$55.68	$27.00	94%
552, 0.75 Cu Yd, Extra Container	1	4	0	$28.68	$19.44	-$9.24	-32%
552, 1.5 Cu Yd, Extra Container	2	4	0	$28.68	$31.52	$2.84	10%
552, 3 Cu Yd, Extra Container	4	4	0	$28.68	$55.68	$27.00	94%
553, 0.75 Cu Yd, Extra Container	1	8	0	$57.36	$38.88	-$18.48	-32%
553, 1.5 Cu Yd, Extra Container	2	8	0	$57.36	$63.04	$5.68	10%
553, 3 Cu Yd, Extra Container	4	8	1	$57.36	$111.36	$54.00	94%
554, 0.75 Cu Yd, Extra Container	1	12	0	$86.04	$58.32	-$27.72	-32%
554, 1.5 Cu Yd, Extra Container	2	12	0	$86.04	$94.56	$8.52	10%
554, 3 Cu Yd, Extra Container	4	12	0	$86.04	$167.04	$81.00	94%
555, 0.75 Cu Yd, Extra Container	1	16	2,453	$114.72	$77.77	-$36.95	-32%
555, 1.5 Cu Yd, Extra Container	2	16	0	$114.72	$126.09	$11.37	10%
555, 3 Cu Yd, Extra Container	4	16	0	$114.72	$222.73	$108.01	94%
556, 0.75 Cu Yd, Extra Container	1	20	0	$143.40	$97.21	-$46.19	-32%
556, 1.5 Cu Yd, Extra Container	2	20	0	$143.40	$157.61	$14.21	10%
556, 3 Cu Yd, Extra Container	4	20	0	$143.40	$278.41	$135.01	94%

Chart 1 - Operating Ratio

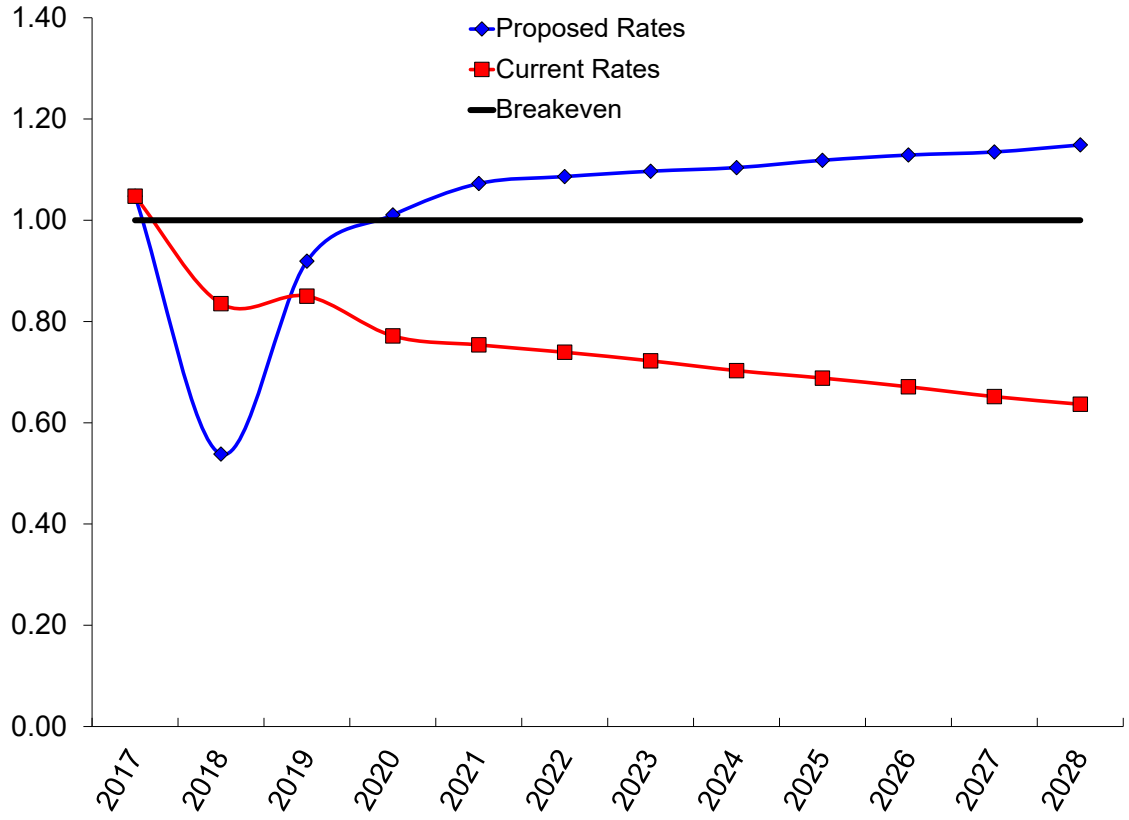


Chart 2 - Coverage Ratio

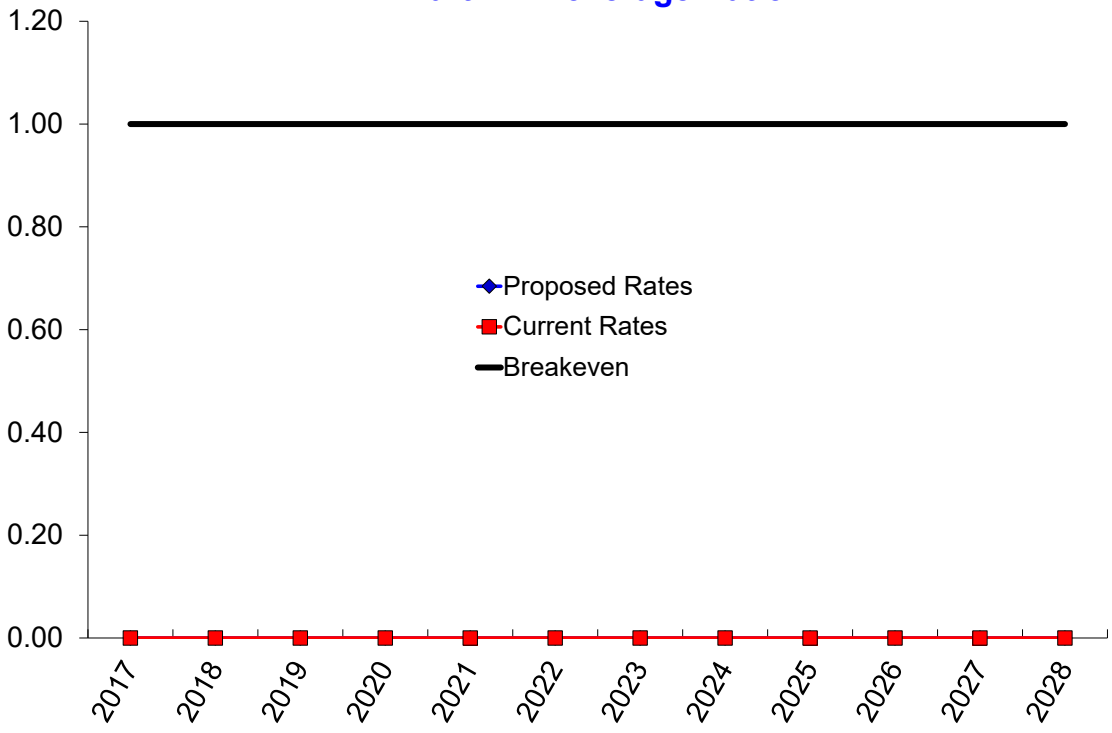


Chart 3 - 0.75 Cu Yd Bin Residential User's Bill

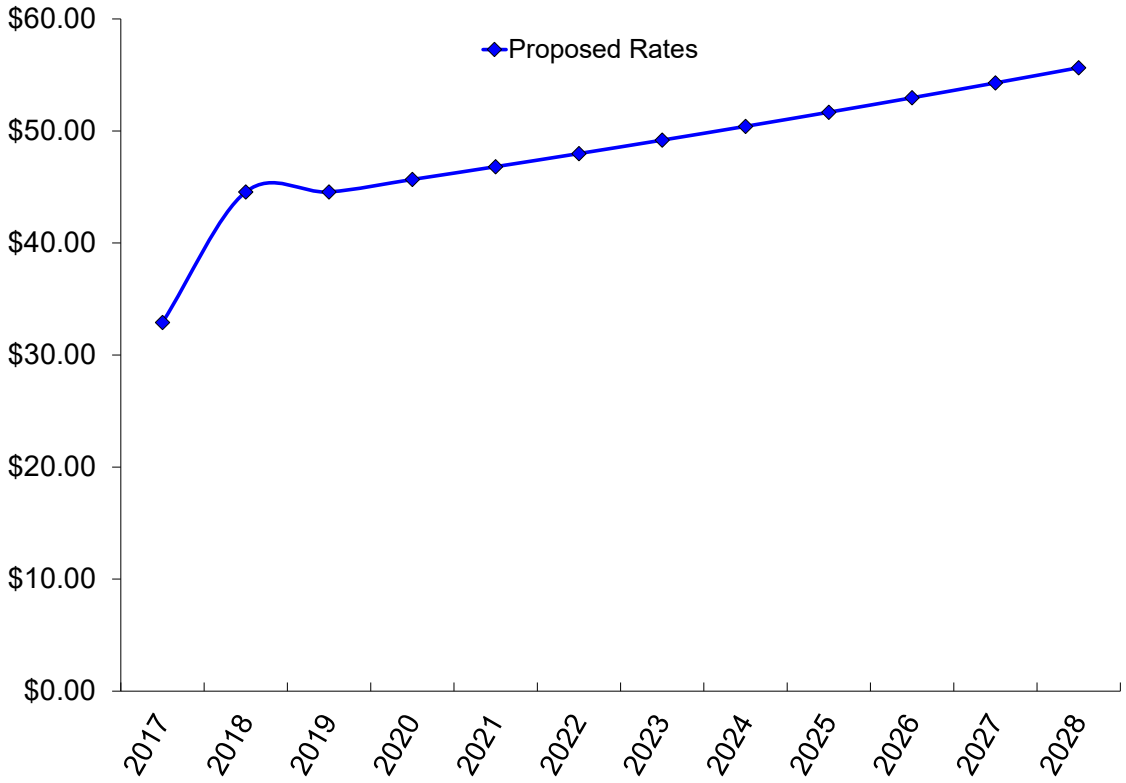


Chart 4 - Affordability Index

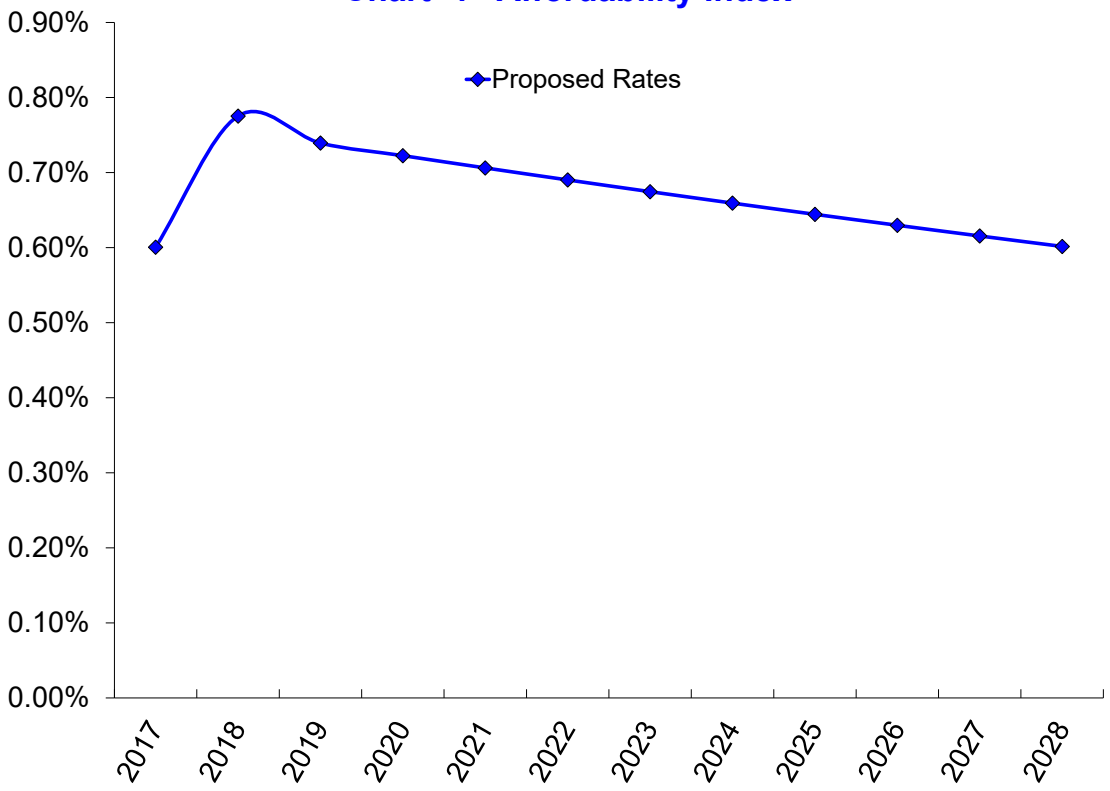


Chart 5 - Working Capital vs Goal

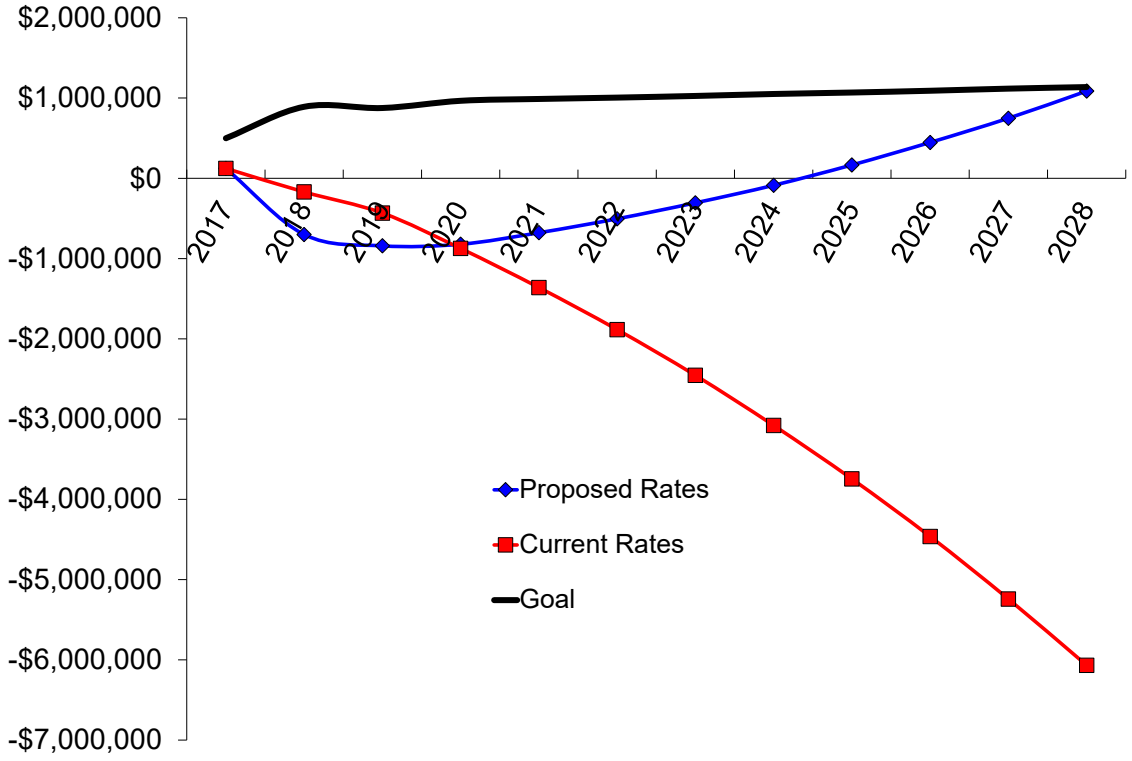


Chart 6 - Value of Cash Assets Before Inflation

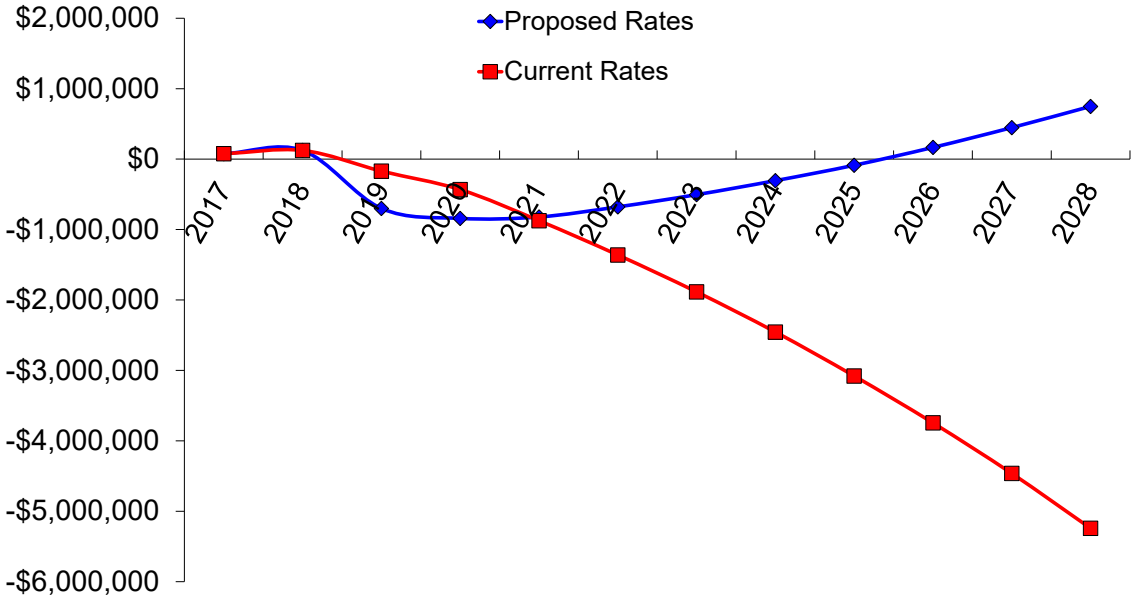


Chart 7 - Value of Cash Assets After Inflation

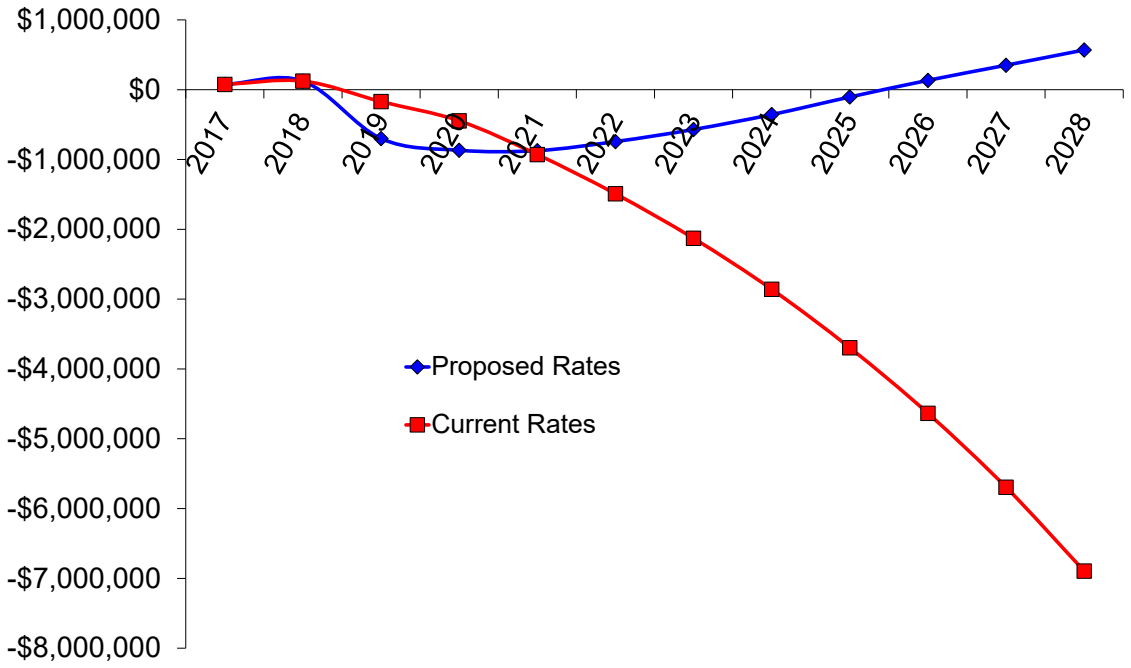
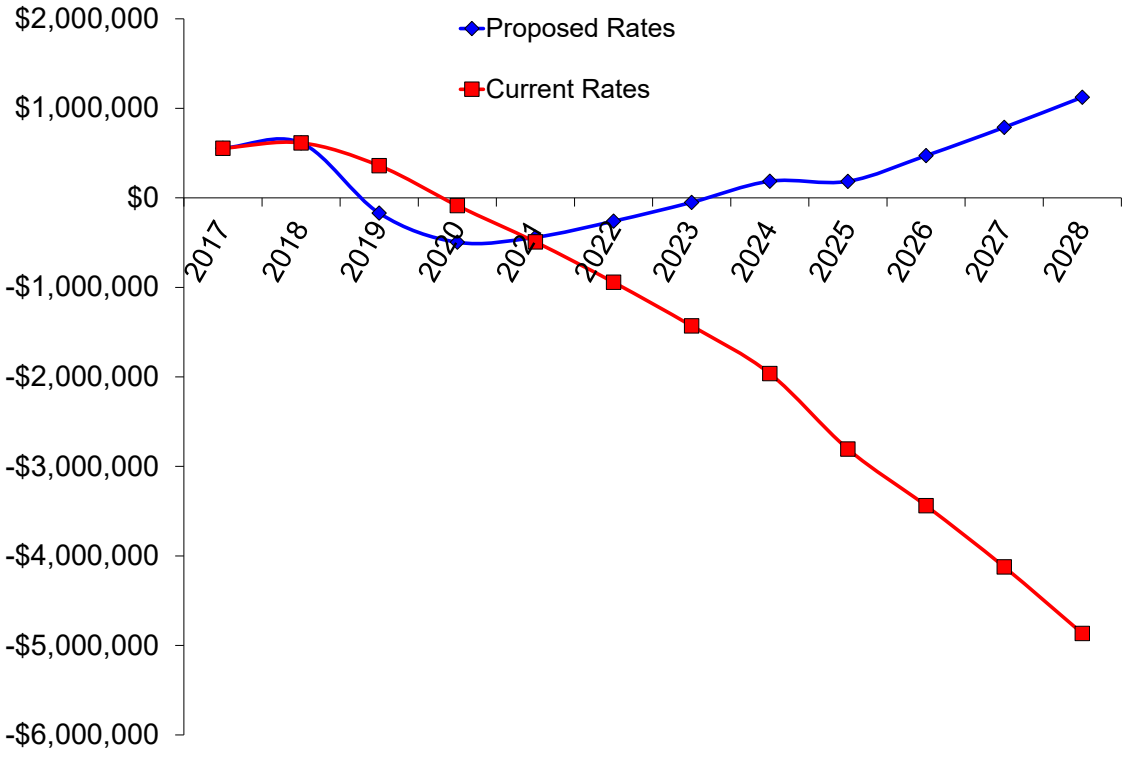


Chart 8 - Sum of All Reserves



Douglas, WY; Landfill Rates, Model 2019-4

(This model moves the rates close to a cost-to-serve structure.)

February 22, 2019

This rate analysis scenario was produced by
Carl E. Brown, GettingGreatRates.com
1014 Carousel Drive, Jefferson City, Missouri 65101
(573) 619-3411
www.gettinggreatrates.com
carl1@gettinggreatrates.com

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

Douglas, WY; Landfill Rates, Model 2019-4

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

$5,661	Fees to GettingGreatRates.com
$500	Estimated value of system staff time and incidentals to assemble needed information
$6,161	Total Investment for This Analysis
$410,058	Five-year Increase in Revenue Due at Least Partly to This Analysis
6656%	Five-year Return on Investment (increase in revenues / investment)
$1,303,470	Ten-year Improvement in Cash Position Due at Least Partly to This Analysis
21,156%	Ten-year Return on Investment (increase in revenues / investment)

Table 3 - Operating Incomes
(and User Base Data)
Douglas, WY; Landfill Rates, Model 2019-4

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)

$65,758 Census Bureau estimate of AMHI for the year: 2016

$36,944 Census Bureau estimate of AMHI for the year: 2000

$28,814 AMHI growth during this time period

4.87% 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

10 Number of new connections made during the test year

$0 Average system development 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.

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)									
				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
		7/1/16	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
Average Number of City of Douglas Customers for the Year	N.A.	2,749	2,759	2,769	2,779	2,789	2,799	2,809	2,819	2,829	2,839	2,849	2,859
0.75 Cu Yd Bin Equivalents of Volume Contributed by City	N.A.	355,396	356,689	357,982	359,274	360,567	361,860	363,153	364,445	365,738	367,031	368,324	369,617
Cu Yd Equivalent of Values Above	N.A.	266,547	267,517	268,486	269,456	270,425	271,395	272,365	273,334	274,304	275,273	276,243	277,212
Cu Yds Above, Converted to Tons	N.A.	5,956	5,978	6,000	6,022	6,043	6,065	6,087	6,108	6,130	6,152	6,173	6,195
Transfer to Douglas Landfill for Services Rendered to Sanitation Utility (Recycling, Yard Waste, Transfer Station Operation, etc.), on a	N.A.	$96.64	$168.06	$154.70	$180.02	$181.82	$183.64	$185.47	$187.32	$189.19	$191.08	$192.99	$194.92
Customers Added or Lost (-) During the Year	N.A.	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Customer Growth or Loss (-) Rate	N.A.	0.36%	0.36%	0.36%	0.36%	0.36%	0.36%	0.36%	0.35%	0.35%	0.35%	0.35%	0.35%
Rate Increases Projected for Future Years	N.A.	N.A.	N.A.	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%

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.

Operating Incomes

Transfer to Douglas Landfill for Services Rendered to Sanitation Utility (Recycling, Yard Waste, Transfer Station Operation, etc.)	N.A.	$575,563	$1,004,655	$928,204	$1,084,029	$1,098,795	$1,113,747	$1,128,889	$1,144,223	$1,159,750	$1,175,473	$1,191,395	$1,207,518
User Charges From Other Customers, Including 25% Premium on Sanitary Waste Starting in FY 2018-19	N.A.	$229,931	$152,488	$176,105	$178,508	$180,940	$183,402	$185,896	$188,421	$190,977	$193,567	$196,188	$198,843
Total USER CHARGES	N.A.	$805,494	$1,157,143	$1,104,309	$1,262,537	$1,279,735	$1,297,150	$1,314,785	$1,332,643	$1,350,727	$1,369,040	$1,387,583	$1,406,361
Late Payment Charge	N.A.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
INTEREST INCOME	N.A.	$14,668	$13,168	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LOAN PROCEEDS	N.A.	Table 5	Table 5	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SLIB	N.A.	Table 5	Table 5	Table 5	$0	$0	$0	$0	$0	$0	$0	$0	$0
OTHER (Sale of Recyclables)	N.A.	$22,921	$11,933	$11,933	$11,933	$11,933	$11,933	$11,933	$11,933	$11,933	$11,933	$11,933	$11,933
REIMBURSEMENTS	N.A.	$0	$4,422	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Loss Due to Late Rate Adjustment on 3/1/2019	N.A.	$0	$76,451	$57,338	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Incomes		**$843,084**	**$1,263,117**	**$1,173,580**	**$1,274,470**	**$1,291,668**	**$1,309,083**	**$1,326,718**	**$1,344,577**	**$1,362,661**	**$1,380,973**	**$1,399,518**	**$1,418,296**

Table 4 - Operating Costs
(and Net Income)
Douglas, WY; Landfill Rates, Model 2019-4

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 7/1/16	Analysis (This) Year Starting 7/1/17	Years Following the Analysis Year (for Which Results Have Been Projected) 1st Year Starting 7/1/18	2nd Year Starting 7/1/19	3rd Year Starting 7/1/20	4th Year Starting 7/1/21	5th Year Starting 7/1/22	6th Year Starting 7/1/23	7th Year Starting 7/1/24	8th Year Starting 7/1/25	9th Year Starting 7/1/26	10th Year Starting 7/1/27
SALARIES/WAGES - REGULAR	3.0%	$259,268	$265,231	$273,188	$281,384	$289,825	$298,520	$307,475	$316,700	$326,201	$335,987	$346,066	$356,448
SALARIES/WAGES - OVERTIME	3.0%	$243	$1,500	$1,545	$1,591	$1,639	$1,688	$1,739	$1,791	$1,845	$1,900	$1,957	$2,016
SALARIES/WAGES - LONGEVITY	3.0%	$1,866	$2,029	$2,090	$2,153	$2,217	$2,284	$2,352	$2,423	$2,495	$2,570	$2,647	$2,727
SALARIES/WAGES - ALLOWANCES	3.0%	$600	$600	$618	$637	$656	$675	$696	$716	$738	$760	$783	$806
SALARIES/WAGES - INCENTIVE	3.0%	$1,939	$2,006	$2,066	$2,128	$2,192	$2,258	$2,326	$2,395	$2,467	$2,541	$2,617	$2,696
EMPLOYEE BENEFITS - SCL SCRTY	3.0%	$20,815	$21,390	$22,032	$22,693	$23,373	$24,075	$24,797	$25,541	$26,307	$27,096	$27,909	$28,746
EMPLOYEE BENEFITS - HEALTH INS	3.0%	$99,908	$106,394	$109,586	$112,873	$116,260	$119,747	$123,340	$127,040	$130,851	$134,777	$138,820	$142,985
EMPLOYEE BENEFITS - WRKRS COMP	3.0%	$11,375	$11,485	$11,830	$12,184	$12,550	$12,926	$13,314	$13,714	$14,125	$14,549	$14,985	$15,435
EMPLOYEE BENEFITS - DFRRD COMP	3.0%	$7,787	$7,463	$7,687	$7,917	$8,155	$8,400	$8,652	$8,911	$9,179	$9,454	$9,738	$10,030
EMPLOYEE BENEFITS - WY RTRMNT	3.0%	$35,221	$36,868	$37,974	$39,113	$40,287	$41,495	$42,740	$44,022	$45,343	$46,703	$48,104	$49,548
DUES/MEMBERSHIPS/SUBSCRIPTIONS	3.0%	$250	$250	$258	$265	$273	$281	$290	$299	$307	$317	$326	$336
TRAINING/DEVELOPMENT	3.0%	$720	$775	$798	$822	$847	$872	$898	$925	$953	$982	$1,011	$1,042
MEALS/LODGING/TRAVEL	3.0%	$0	$750	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6	Table 6
UTILITY SERVICES - ELECTRICITY	3.0%	$8,054	$9,000	$9,270	$9,548	$9,835	$10,130	$10,433	$10,746	$11,069	$11,401	$11,743	$12,095
UTILITY SERVICES - NATURAL GAS	3.0%	$8,109	$7,500	$7,725	$7,957	$8,195	$8,441	$8,695	$8,955	$9,224	$9,501	$9,786	$10,079
TELECOMMUNICATIONS	3.0%	$217	$125	$129	$133	$137	$141	$145	$149	$154	$158	$163	$168
EQUIPMENT - RENT	3.0%	$0	$200	$206	$212	$219	$225	$232	$239	$246	$253	$261	$269
34-5340-2153 ARCHITECT/ENGINEERING/SURVEY	3.0%	$0	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159	$1,194	$1,230	$1,267	$1,305	$1,344
REPAIRS/MAINTENANCE	3.0%	$2,526	$15,000	$15,450	$15,914	$16,391	$16,883	$17,389	$17,911	$18,448	$19,002	$19,572	$20,159
MAINTENANCE AGREEMENT	3.0%	$2,493	$6,000	$6,180	$6,365	$6,556	$6,753	$6,956	$7,164	$7,379	$7,601	$7,829	$8,063
INSURANCE	3.0%	$0	$1,500	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5	Table 5
34-5340-2158 MISC CONTRACTUAL SERVICES (Pay Hauling Contractor and Pay Tipping Fees to Casper)	3.0%	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4	Sanitation Model, Table 4
COLLECTION FEES	3.0%	$34	$300	$309	$318	$328	$338	$348	$358	$369	$380	$391	$403
OPERATING SUPPLIES	3.0%	$23,119	$45,000	$46,350	$47,741	$49,173	$50,648	$52,167	$53,732	$55,344	$57,005	$58,715	$60,476
EQUIPMENT/TOOLS-NON CAPITALIZE	3.0%	$0	$7,000	$7,210	$7,426	$7,649	$7,879	$8,115	$8,358	$8,609	$8,867	$9,133	$9,407
FUEL	3.0%	$23,015	$35,000	$36,050	$37,132	$38,245	$39,393	$40,575	$41,792	$43,046	$44,337	$45,667	$47,037
DEBT PAYMENT - CAPITAL LEASE (Caterpillar)	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
MANAGEMENT FEES	3.0%	$88,121	$88,121	$90,765	$93,488	$96,292	$99,181	$102,156	$105,221	$108,378	$111,629	$114,978	$118,427
34-5340-6547 EQUIPMENT/FURNITURE	3.0%	$0	$7,500	$7,725	$7,957	$8,195	$8,441	$8,695	$8,955	$9,224	$9,501	$9,786	$10,079
34-5895-2153 ARCHITECT/ENGINEERING/SURVEY	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
34-5895-2158 MISC CONTRACTUAL SERVICES	3.0%	$87,200	$35,000	$36,050	$37,132	$38,245	$39,393	$40,575	$41,792	$43,046	$44,337	$45,667	$47,037
BUILDINGS/IMPROVEMENTS	3.0%	$0	$10,000	$10,300	$10,609	$10,927	$11,255	$11,593	$11,941	$12,299	$12,668	$13,048	$13,439
34-5895-6544 IMPRVMNTS OTHER THAN BLDG	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
Depreciation	3.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
One-time Reduction of R&R Annuity	0.0%	-$68,855	-$68,855	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
One-time Transfer to Repair & Replacement	0.0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Annual Payment to Repair & Replacement (Table 7)	0.0%	$68,855	$68,855	$68,855	$68,855	$68,855	$68,855	$68,855	$68,855	$68,855	$68,855	$68,855	$68,855
User Charge Analysis Services	5.0%	$0	$5,661	$0	$0	$6,241	$0	$0	$6,881	$0	$0	$7,587	$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		**$682,881**	**$730,648**	**$813,274**	**$835,607**	**$864,851**	**$882,302**	**$906,705**	**$938,722**	**$957,730**	**$984,397**	**$1,019,449**	**$1,040,153**
Net Income (or Loss)		$160,203	$532,469	$360,306	$438,864	$426,817	$426,781	$420,013	$405,854	$404,930	$396,576	$380,068	$378,143
Working Capital Goal: 50%	In Dollars, That is:	$341,440	$365,324	$406,637	$417,803	$432,425	$441,151	$453,353	$469,361	$478,865	$492,198	$509,725	$520,077

Notes: The City includes individual capital and equipment replacement costs in its operating budget, which is normal. However, for rate calculation purposes, we account for capital costs in Table 5 and replacement costs in Table 6. Therefore, the "test year" costs in the above table do not add up to the same total as the City's expense statement did, but the remainder of those costs are in the other two tables. As to future costs, they were increased by an inflation factor and some, those that are related to the number of customers served and the volumes they use, are also increased by the growth rate each year. Those are highlighted yellow.

Table 5 - Capital Improvement Program (CIP)
Douglas, WY; Landfill Rates, Model 2019-4

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)									
	7/1/16	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
Planned Spending, Debt-paid Portion of Projects (CIP costs to be funded with loans are shown in this section.)												
Cell Closing	$0	$384,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
34-5895-2153 ARCHITECT/ENGINEERING/SURVEY	$20,080	$10,517	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
34-5895-6544 IMPRVMNTS OTHER THAN BLDG	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loader	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Recycling Building	$0	$0	$0	$0	$0	$0	$255,040	$0	$0	$0	$0	$0
Loan Closing Costs, Estimated at: 2.50%	$502	$9,863	$0	$0	$0	$0	$7,392	$0	$0	$0	$0	$0
Total Debt-paid Portion of Projects	$20,582	$404,380	$0	$0	$0	$0	$262,432	$0	$0	$0	$0	$0
Planned Spending, Grant-paid Portion of Projects (CIP costs to be grant-funded are shown here.)												
Cell Closing	$0	$1,536,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
34-5895-2153 ARCHITECT/ENGINEERING/SURVEY	$80,322	$42,067	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
34-5895-6544 IMPRVMNTS OTHER THAN BLDG	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loader	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Recycling Building	$0	$0	$0	$0	$0	$0	$1,020,161	$0	$0	$0	$0	$0
Total Grant-paid Portion of Projects	$80,322	$1,578,067	$0	$0	$0	$0	$1,020,161	$0	$0	$0	$0	$0
Planned Spending, Cash-paid Portion of Projects (CIP costs to be funded from reserves are shown here.)												
Cell Closing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
34-5895-2153 ARCHITECT/ENGINEERING/SURVEY	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
34-5895-6544 IMPRVMNTS OTHER THAN BLDG	$26,586	$488,620	$0	$0	$0	$29,923	$566,445	$0	$0	$0	$34,689	$656,665
Balers	$0	$0	$30,900	$0	$0	$0	$0	$35,822	$0	$0	$0	$0
Loader	$0	$0	$0	$238,703	$0	$0	$0	$0	$276,722	$0	$0	$0
Recycling Building	$0	$0	$0	$0	$0	$0	$1,275,201	$0	$0	$0	$0	$0
Grant Acquisition Costs, Estimated at: 2.50%	$2,008	$39,452	$0	$0	$0	$0	$29,566	$0	$0	$0	$0	$0
Total Cash-paid Portion of Projects	$28,594	$528,072	$30,900	$238,703	$0	$29,923	$1,871,213	$35,822	$276,722	$0	$34,689	$656,665
Total CIP Costs	**$129,499**	**$2,510,519**	**$30,900**	**$238,703**	**$0**	**$29,923**	**$3,153,806**	**$35,822**	**$276,722**	**$0**	**$34,689**	**$656,665**
Planned Spending, Debt Repayment												
Existing Debt Payments (Following is debt that was initiated during the test year or earlier.)												
DEBT PAYMENT - CAPITAL LEASE (Caterpillar)	$58,675	$58,676	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
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.)												
Cell Closing Loan		$496	$496	$496	$496	$496	$496	$496	$496	$496	$496	$496
Cell Closing Loan			$24,731	$24,731	$24,731	$24,731	$24,731	$24,731	$24,731	$24,731	$24,731	$24,731
Recycling Building								$16,049	$16,049	$16,049	$16,049	$16,049
Total Debt Payments	$58,675	$59,172	$25,226	$25,226	$25,226	$25,226	$25,226	$41,276	$41,276	$41,276	$41,276	$41,276
Total, All CIP-related Payouts	**$188,174**	**$2,569,691**	**$56,126**	**$263,929**	**$25,226**	**$55,149**	**$3,179,032**	**$77,097**	**$317,997**	**$41,276**	**$75,965**	**$697,941**

(This is the Total Cash Required for This CIP Schedule. These amounts must come from utility income, reserves or outside sources.)

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)									
	7/1/16	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
CIP Funding Plan (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	$329,771	$182,137	-$1,313,072	$363,533	$534,572	$932,232	$1,313,783	-$148,569	$161,208	$241,861	$588,665	$887,016
Working Capital Transferred in	$0	$459,998	$318,993	$427,697	$412,195	$418,055	$407,811	$389,846	$395,426	$383,243	$362,542	$367,791
Debt and CIP Reserves Interest Earned (or Paid)	$0	$3,643	-$26,261	$7,271	$10,691	$18,645	$26,276	-$2,971	$3,224	$4,837	$11,773	$17,740
Internal Income Source (Name it)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Available Internal Funds	$329,771	$645,778	-$1,020,340	$798,501	$957,459	$1,368,932	$1,747,870	$238,305	$559,858	$629,941	$962,980	$1,272,547
Grant and Loan Proceeds (External Funds)												
SLIB (Cell Closing, Related and Recycling Building)	$32,431	$165,169	$1,440,000	$0	$0	$0	$1,020,161	$0	$0	$0	$0	$0
LOAN PROCEEDS	$8,108	$41,292	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cell Closing Loan		$404,380	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Recycling Building							$262,432	$0	$0	$0	$0	$0
Total Available External Funds	$40,539	$610,841	$1,440,000	$0	$0	$0	$1,282,593	$0	$0	$0	$0	$0
Total Available Funds	**$370,310**	**$1,256,619**	**$419,660**	**$798,501**	**$957,459**	**$1,368,932**	**$3,030,463**	**$238,305**	**$559,858**	**$629,941**	**$962,980**	**$1,272,547**
Outcomes	(This CIP spending and funding plan will result in the following cash needs and ending balances each year.)											
Total Available Funds	**$370,310**	**$1,256,619**	**$419,660**	**$798,501**	**$957,459**	**$1,368,932**	**$3,030,463**	**$238,305**	**$559,858**	**$629,941**	**$962,980**	**$1,272,547**
Total, All CIP-related Payouts	**$188,174**	**$2,569,691**	**$56,126**	**$263,929**	**$25,226**	**$55,149**	**$3,179,032**	**$77,097**	**$317,997**	**$41,276**	**$75,965**	**$697,941**
Debt and CIP Reserves Ending Balances	**$182,137**	**-$1,313,072**	**$363,533**	**$534,572**	**$932,232**	**$1,313,783**	**-$148,569**	**$161,208**	**$241,861**	**$588,665**	**$887,016**	**$574,606**

Notes: Primary landfill CIP projects included closing of the sanitary cells of the landfill and building a transfer station. Fortunately, those were funded largely with grants. In a later year, the City will construct a recycling building, assumed to be funded like the cell closing. I also assumed smaller projects were typical of what would be needed each five years, so those repeat in the last five years.

Table 6 - Equipment Replacement Schedule - Detailed
Douglas, WY; Landfill Rates, Model 2019-4

Year Beginning	Sanitation Truck - Used	Steel sided trailer	Recycle drop off trailers - 2	Semi Tractor	Backhoe	Scraper (Replace #73)	Perimeter fence	Forklift			Total Annual Replacement Costs
7/1/17	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/18	$0	$100,000	$0	$0	$0	$0	$0	$30,000	$0	$0	$130,000
7/1/19	$0	$0	$0	$100,000	$0	$0	$0	$0	$0	$0	$100,000
7/1/20	$0	$0	$40,000	$0	$0	$0	$100,000	$0	$0	$0	$140,000
7/1/21	$50,000	$0	$0	$0	$130,000	$0	$0	$0	$0	$0	$180,000
7/1/22	$0	$0	$0	$0	$0	$350,000	$0	$0	$0	$0	$350,000
7/1/23	$0	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$100,000
7/1/24	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/25	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/26	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/27	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/28	$0	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$100,000
7/1/29	$0	$0	$0	$100,000	$0	$0	$0	$0	$0	$0	$100,000
7/1/30	$0	$0	$40,000	$0	$0	$0	$0	$0	$0	$0	$40,000
7/1/31	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
7/1/32	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/33	$0	$100,000	$0	$0	$0	$0	$0	$30,000	$0	$0	$130,000
7/1/34	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7/1/35	$0	$0	$0	$0	$0	$0	$100,000	$0	$0	$0	$100,000
7/1/36	$50,000	$0	$0	$0	$130,000	$0	$0	$0	$0	$0	$180,000
7/1/37	$0	$0	$0	$0	$0	$350,000	$0	$0	$0	$0	$350,000
7/1/38	$0	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$100,000
7/1/39	$0	$0	$0	$100,000	$0	$0	$0	$0	$0	$0	$100,000
7/1/40	$0	$0	$40,000	$0	$0	$0	$0	$0	$0	$0	$40,000
7/1/41	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000

Table 7 - Equipment Replacement Annuity Calculation
Douglas, WY; Landfill Rates, Model 2019-4

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
7/1/17	Analysis Year	$0	$0	$20,130	$1,026,651	$350,000
7/1/18	1st Year	$130,000	$133,900	$20,533	$982,139	$360,500
7/1/19	2nd Year	$100,000	$106,090	$19,643	$964,547	$371,315
7/1/20	3rd Year	$140,000	$152,982	$19,291	$899,711	$382,454
7/1/21	4th Year	$180,000	$202,592	$17,994	$783,969	$393,928
7/1/22	5th Year	$350,000	$405,746	$15,679	$462,758	$405,746
7/1/23	6th Year	$100,000	$119,405	$9,255	$421,463	$417,918
7/1/24	7th Year	$0	$0	$8,429	$498,747	$430,456
7/1/25	8th Year	$0	$0	$9,975	$577,577	$443,370
7/1/26	9th Year	$50,000	$65,239	$11,552	$592,745	$456,671
7/1/27	10th Year	$0	$0	$11,855	$673,455	$470,371
7/1/28	11th Year	$100,000	$138,423	$13,469	$617,356	$484,482
7/1/29	12th Year	$100,000	$142,576	$12,347	$555,982	$499,016
7/1/30	13th Year	$40,000	$58,741	$11,120	$577,215	$513,987
7/1/31	14th Year	$50,000	$75,629	$11,544	$581,985	$529,406
7/1/32	15th Year	$0	$0	$11,640	$662,480	$545,289
7/1/33	16th Year	$130,000	$208,612	$13,250	$535,973	$561,647
7/1/34	17th Year	$0	$0	$10,719	$615,547	$578,497
7/1/35	18th Year	$100,000	$170,243	$12,311	$526,470	$595,852
7/1/36	19th Year	$180,000	$315,631	$10,529	$290,223	$613,727
				Starting Account Balance	$1,006,521	$350,000
				Minimum Annual Annuity	$57,433	Minimum Desired Balance in Today's Dollars
				Discretionary Annuity	$11,423	

Notes: R&R costs for this service are scant. A Discretionary Annuity amount was added so that at the end of the 20-year modeling period, the balance will equal the highest annual replacement cost amount.

Required Annual Deposit (Annuity) to Replacement Account **$68,855**

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

Table 8 - Average Cost Classification
Douglas, WY; Landfill Rates, Model 2019-4

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: 7/1/2021 through 6/30/2022

Cost Items	Cost During Average Rate Structure Basis Year	Fixed Cost Percentage	Variable Cost Percentage	Average Fixed Cost	Average Variable Cost
SALARIES/WAGES - REGULAR	$298,520	0.0%	100.0%	$0	$298,520
SALARIES/WAGES - OVERTIME	$1,688	0.0%	100.0%	$0	$1,688
SALARIES/WAGES - LONGEVITY	$2,284	0.0%	100.0%	$0	$2,284
SALARIES/WAGES - ALLOWANCES	$675	0.0%	100.0%	$0	$675
SALARIES/WAGES - INCENTIVE	$2,258	0.0%	100.0%	$0	$2,258
EMPLOYEE BENEFITS - SCL SCRTY	$24,075	0.0%	100.0%	$0	$24,075
EMPLOYEE BENEFITS - HEALTH INS	$119,747	0.0%	100.0%	$0	$119,747
EMPLOYEE BENEFITS - WRKRS COMP	$12,926	0.0%	100.0%	$0	$12,926
EMPLOYEE BENEFITS - DFRRD COMP	$8,400	0.0%	100.0%	$0	$8,400
EMPLOYEE BENEFITS - WY RTRMNT	$41,495	0.0%	100.0%	$0	$41,495
DUES/MEMBERSHIPS/SUBSCRIPTIONS	$281	0.0%	100.0%	$0	$281
TRAINING/DEVELOPMENT	$872	0.0%	100.0%	$0	$872
MEALS/LODGING/TRAVEL	$0	0.0%	100.0%	$0	$0
UTILITY SERVICES - ELECTRICITY	$10,130	0.0%	100.0%	$0	$10,130
UTILITY SERVICES - NATURAL GAS	$8,441	0.0%	100.0%	$0	$8,441
TELECOMMUNICATIONS	$141	0.0%	100.0%	$0	$141
EQUIPMENT - RENT	$225	0.0%	100.0%	$0	$225
34-5340-2153 ARCHITECT/ENGINEERING/SURVEY	$1,126	0.0%	100.0%	$0	$1,126
REPAIRS/MAINTENANCE	$16,883	0.0%	100.0%	$0	$16,883
MAINTENANCE AGREEMENT	$6,753	0.0%	100.0%	$0	$6,753
INSURANCE	$0	0.0%	100.0%	$0	$0
34-5340-2158 MISC CONTRACTUAL SERVICES (Pay Hauling Contractor and Pay Tipping Fees to Casper)	$0	0.0%	100.0%	$0	$0
COLLECTION FEES	$338	0.0%	100.0%	$0	$338
OPERATING SUPPLIES	$50,648	0.0%	100.0%	$0	$50,648
EQUIPMENT/TOOLS-NON CAPITALIZE	$7,879	0.0%	100.0%	$0	$7,879

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
FUEL	$39,393	0.0%	100.0%	$0	$39,393
DEBT PAYMENT - CAPITAL LEASE (Caterpillar)	$0	0.0%	100.0%	$0	$0
MANAGEMENT FEES	$99,181	0.0%	100.0%	$0	$99,181
34-5340-6547 EQUIPMENT/FURNITURE	$8,441	0.0%	100.0%	$0	$8,441
34-5895-2153 ARCHITECT/ENGINEERING/SURVEY	$0	0.0%	100.0%	$0	$0
34-5895-2158 MISC CONTRACTUAL SERVICES	$39,393	0.0%	100.0%	$0	$39,393
BUILDINGS/IMPROVEMENTS	$11,255	0.0%	100.0%	$0	$11,255
34-5895-6544 IMPRVMNTS OTHER THAN BLDG	$0	0.0%	100.0%	$0	$0
Depreciation	$0	0.0%	100.0%	$0	$0
One-time Reduction of R&R Annuity	$0	0.0%	100.0%	$0	$0
One-time Transfer to Repair & Replacement	$0	0.0%	100.0%	$0	$0
Annual Payment to Repair & Replacement (Table 7)	$68,855	0.0%	100.0%	$0	$68,855
User Charge Analysis Services	$0	0.0%	100.0%	$0	$0
Total, All CIP-related Payouts	$55,149	0.0%	100.0%	$0	$55,149
Grand Total Costs, Weighted Avg Percentages	$937,451	0.0%	100.0%	$0	$937,451

Bases for Cost to Serve Rate Structure		100%	$937,451
Number of Customers During Year Defined Above =	2,799		
Billed Volume, in Tons, During Year Defined Above =	6,065		
Average Fixed Cost per Customer per Month During Year Defined Above =	$0.00		
Average Fixed Cost per Customer per Month Discounted to the Present =	$0.00		
Average Variable Cost per Ton During Year Defined Above =	$176.98		
Average Variable Cost per Ton Discounted to the Present =	$171.77		

Table 17 - Financial Capacity Indicators and Reserves

Douglas, WY; Landfill Rates, Model 2019-4

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	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
	7/1/16	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
Estimated Operating Ratio: Current Rates First Column, Then Proposed Rates	1.23	1.73	1.44	1.53	1.49	1.48	1.46	1.43	1.42	1.40	1.37	1.36

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	7.77	12.65	16.95	16.34	16.57	16.17	9.44	9.58	9.28	8.78	8.91

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 6/30/16	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
Cash and Cash Equivalents	$132,650	$292,853	$365,324	$406,637	$417,803	$432,425	$441,151	$453,353	$469,361	$478,865	$492,198	$509,725	$520,077
Other Liquid Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Undedicated Cash Assets, Before Inflation	$132,650	$292,853	$365,324	$406,637	$417,803	$432,425	$441,151	$453,353	$469,361	$478,865	$492,198	$509,725	$520,077
Total Cash Assets Discounted for Inflation (Future Unrestricted Purchasing Power)	$132,650	$292,853	$365,324	$394,438	$393,111	$394,663	$390,548	$389,309	$390,965	$386,915	$385,757	$387,509	$395,378
Repair & Replacement	$1,006,521	$1,026,651	$982,139	$964,547	$899,711	$783,969	$462,758	$421,463	$498,747	$577,577	$592,745	$673,455	$617,356
Debt and CIP Reserves	$329,771	$182,137	-$1,313,072	$363,533	$534,572	$932,232	$1,313,783	-$148,569	$161,208	$241,861	$588,665	$887,016	$574,606
Sum of All Reserves	$1,468,942	$1,501,641	$34,391	$1,734,717	$1,852,087	$2,148,627	$2,217,691	$726,246	$1,129,316	$1,298,303	$1,673,608	$2,070,195	$1,712,038

Chart 1 - Operating Ratio

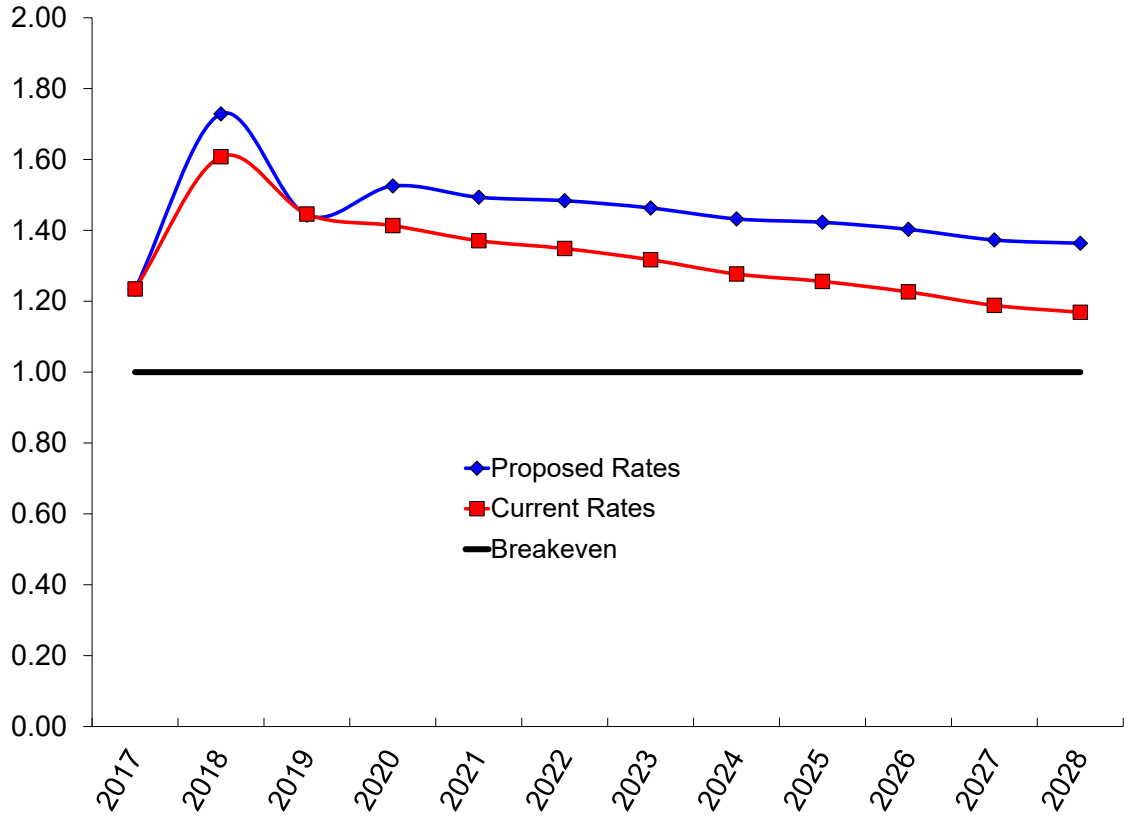


Chart 2 - Coverage Ratio

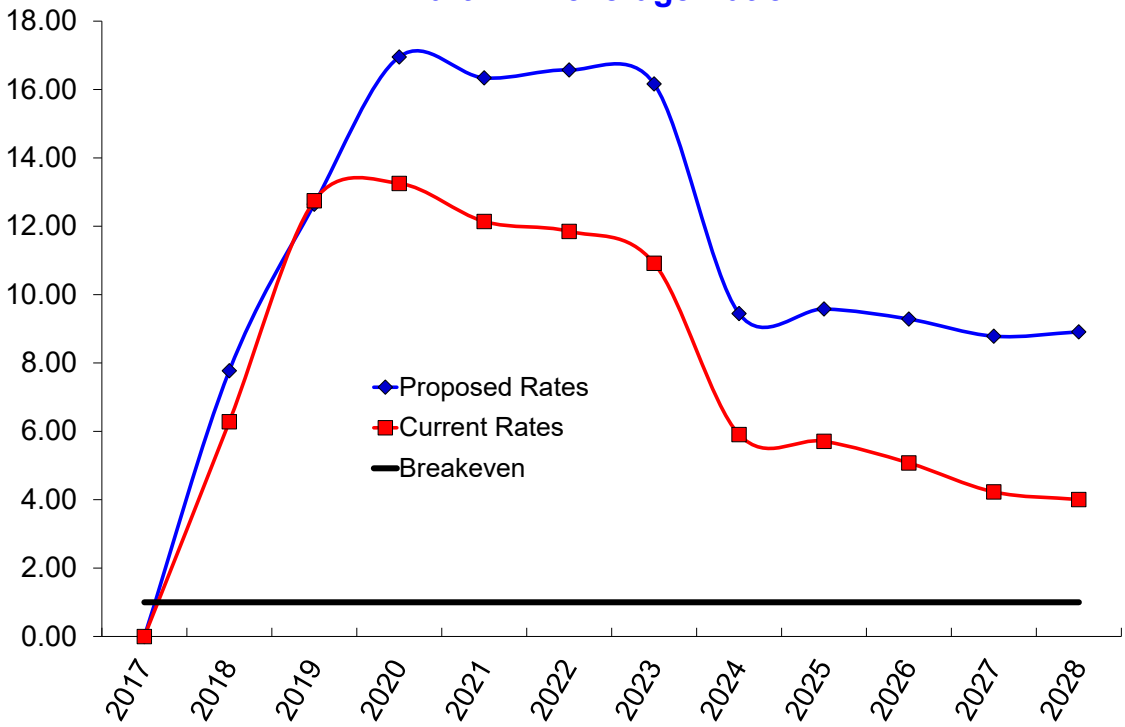


Chart 5 - Working Capital vs Goal

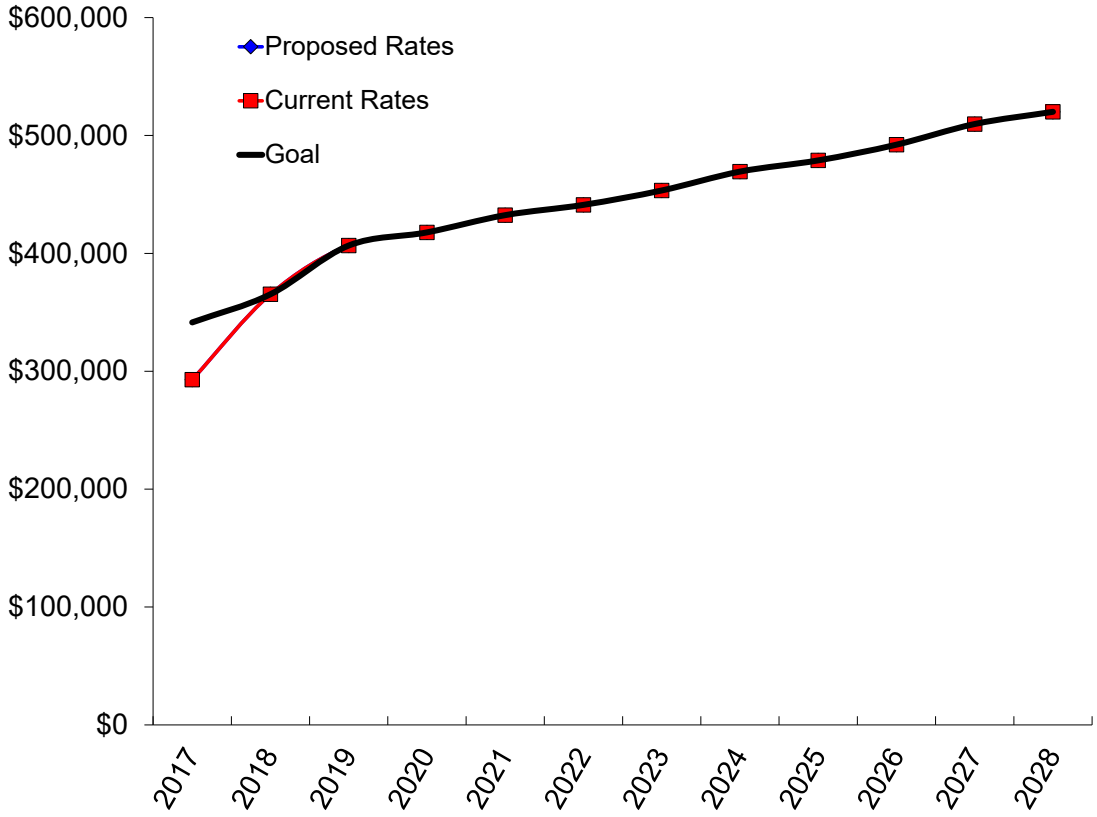


Chart 6 - Value of Cash Assets Before Inflation

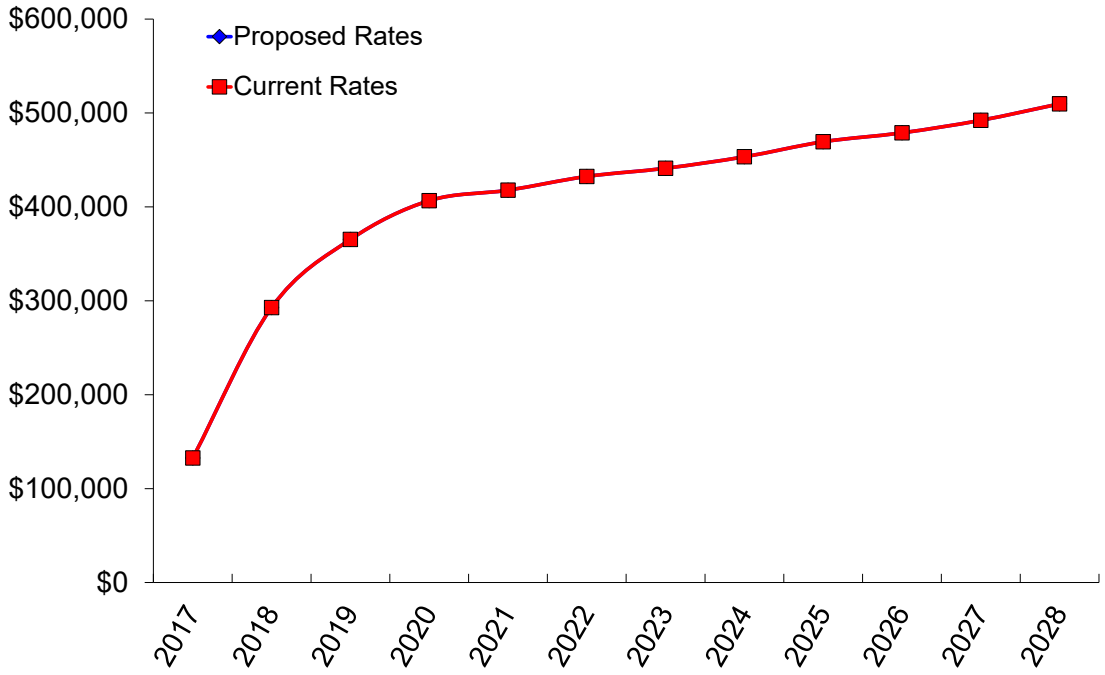


Chart 7 - Value of Cash Assets After Inflation

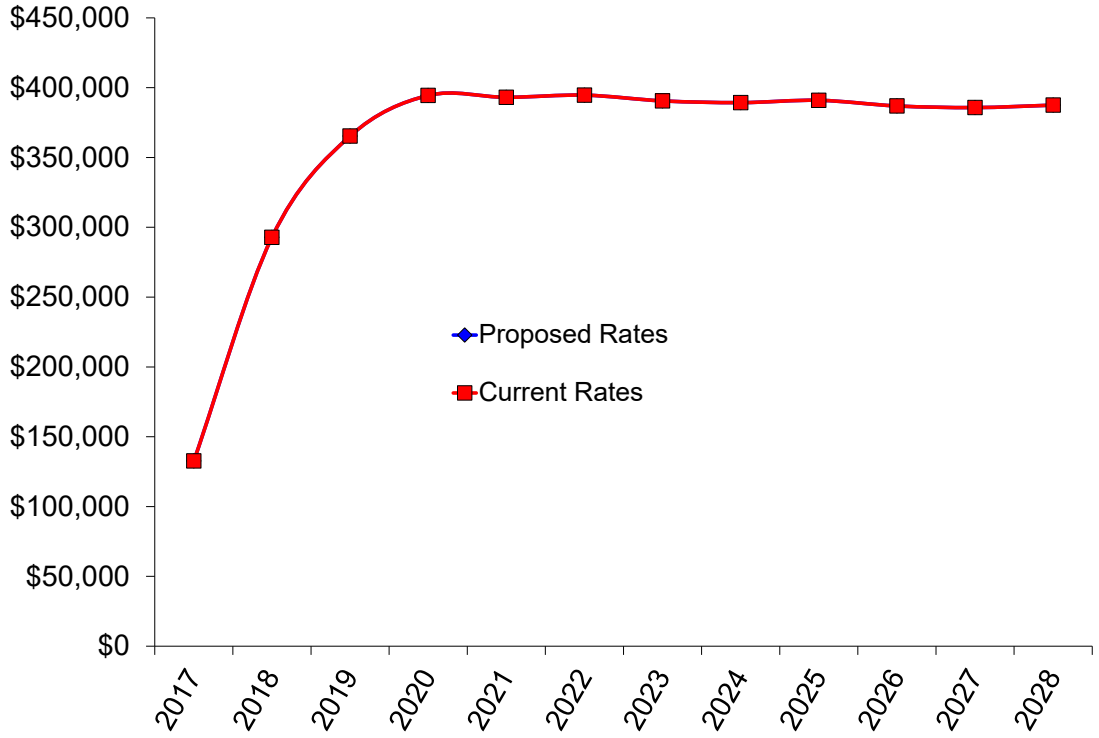


Chart 8 - Sum of All Reserves