

HANSFORD

ECONOMIC CONSULTING LLC

Gold Mountain Community Services District

A graphic of a water splash with bubbles, transitioning from white at the top to light blue at the bottom.

Utility Rates Study

DRAFT

January 2022

HEC No. 210348

The following report was prepared by Hansford Economic Consulting LLC.

The analyses and findings contained within this report are based on primary data provided by the Gold Mountain Community Services District, as well as additional secondary sources of data available as of the date of this report. Updates to information used in this report could change or invalidate the findings contained herein. While it is believed that the primary and secondary sources of information are accurate, this is not guaranteed.

Every reasonable effort has been made in order that the data contained in this study reflect the most accurate and timely information possible. No responsibility is assumed for inaccuracies in reporting by the client, its consultants and representatives, or any other data source used in the preparation of this study. No warranty or representation is made that any of the projected values or results contained in this study will actually be achieved. There will usually be differences between forecasted or projected results and actual results due to changes in events and circumstances.

Changes in economic and social conditions due to events including, but not limited to, major recessions, droughts, major environmental problems or disasters that would negatively affect operations, expenses and revenues may affect the result of the findings in this study. In addition, other factors not considered in the study may influence actual revenues achieved. Any applications for financing, or bond sales analyses, should re-evaluate the financial health and projection of revenues and expenses at the time of the application or preparation for bond sale.

TABLE OF CONTENTS

SECTION	PAGE
1. INTRODUCTION AND SUMMARY OF FINDINGS	1
1.1 Background and Purpose of the Study	1
1.2 Rate Setting Principles and Report Organization	2
1.3 Major Changes to the Fee Schedules	2
1.4 Water Fees Findings	4
1.5 Sewer Fees Findings	6
1.6 Combined Utilities Impacts	8
2. CUSTOMER BASE, FINANCIAL HEALTH AND CAPITAL PROJECTS	12
2.1 Customer Base	12
2.2 Financial Health	14
2.3 Capital Projects	18
3. WATER FEE CALCULATIONS	22
3.1 Water Revenue Requirement	22
3.2 Cost Classification and Allocation	24
3.3 Water Fee Calculations	26
3.4 Water Bill Impact	31
4. SEWER FEE CALCULATIONS	33
4.1 Sewer Revenue Requirement	33
4.2 Cost Classification and Allocation	34
4.3 Sewer Fee Calculations	35
5. DISTRICT AND CUSTOMER IMPACTS	39
5.1 District Financial Impacts	39
5.2 Customer Bill Impacts	41

Appendix A: Financial Data

Appendix B: Water Fees Support Tables

Appendix C: Sewer Fees Support Tables

LIST OF TABLES

	PAGE
SECTION 1 – SUMMARY OF FINDINGS	
1	Calculated Five-Year Water Fee Schedule 6
2	Calculated Five-Year Sewer Fee Schedule 7
SECTION 2 – CUSTOMER BASE, DISTRICT FINANCIAL HEALTH AND CAPITAL PROJECTS	
3	Summary of Connected and Unconnected Lots GMCSO Customers 12
4	Historical Water Production 13
5	Current Fees and Assessments 16
6	Depreciation of Current Assets 18
7	Estimated CIP Items and Costs in Inflated Dollars 19
8	Estimated Loan Terms and Debt Service 20
9	Estimated New Asset Depreciation 21
10	System Rehabilitation Costs in Rates 21
SECTION 3- WATER FEE TABLES	
11	Projected Water Revenue Requirement 23
12	Water Revenue Requirement Allocation 26
13	Fixed Charges (Connected and Unconnected Lots) Calculation 27
14	Projected Water Demand by Customer Type 28
15	Calculated Use Charges 29
16	Summary of Calculated Water Rates 30
SECTION 4 - SEWER FEE TABLES	
17	Projected Sewer Revenue Requirement 34
18	Calculated Sewer Rate Components 36
19	Projected Number of Sewer EDUs by Customer Type 36
20	Summary of Calculated Sewer Rates 38
SECTION 5 – DISTRICT AND CUSTOMER IMPACTS TABLES	
21	Estimated District Cash Balances 39
22	Estimated District Cash Balances by Fund 40
23	Example Quarterly Water Bills 42
24	Unconnected Lots Bill Impact 44
25	Non-Residential Accounts Estimated Year 1 Bill Impact 44

LIST OF FIGURES

PAGE

SECTION 1 – SUMMARY OF FINDINGS

1	Projected District Year-End Cash Balances	9
2	Annual Utility Bill Projection for a Residential Lot using 72,000 Gallons	10
3	Annual Utility Bill Projection for an Unconnected Lot	10
4	Year 1 Bill Impact to Non-Residential Accounts	11

SECTION 2 – CUSTOMER BASE, DISTRICT FINANCIAL HEALTH AND CAPITAL PROJECTS

5	Water Use by Customer Type (2019-2021)	13
6	Historical Revenues, Expenses, and Fund Balance	14
7	Historical Water Revenues	15
8	Historical Sewer Revenues	15
9	Budgeted FY 2022 Operating Expenses	17

SECTION 3 - WATER RATE STUDY FIGURES

10	Components of Water Revenue Requirement	24
11	Water Production and Electricity Consumption	25
12	Differences in Annual Water Bill for a Residential Lot using FY2023 Rates	32
13	Water Bills at Different Annual Water Usage Levels	32

SECTION 4 - SEWER RATE STUDY FIGURES

14	Components of Sewer Revenue Requirement	33
----	---	----

SECTION 5 – DISTRICT AND CUSTOMER IMPACTS FIGURES

15	Projected Cash Balances and Target Cash Balances	41
16	Utility Bill Impact for a Typical Home	42
17	Utilities Bill Comparison for a Typical Residence	43
18	Unconnected Lot Calculated Annual Charges	43
19	Year 1 Bill Impact to Non-Residential Accounts	45

Section 1: INTRODUCTION AND SUMMARY OF FINDINGS

1.1 BACKGROUND AND PURPOSE OF THE STUDY

The Gold Mountain Community Services District (District or GMCSD) provides water and wastewater utility services to residents and businesses in Gold Mountain, Plumas County, California. The purpose of this Utilities Rate Study (Study) is to determine the level of funding required over the next five years (fiscal years 2023 through 2027) to adequately fund the District so that it can safely operate both utility systems meeting State and Federal regulatory requirements, and to determine a schedule of property-related fees to support that level of funding.

The District last conducted a utilities rate study in 2006, which is 15 years ago, well beyond best practice of conducting a rate study every five years. Utility rate updates are necessary at this time to a) ensure revenue sufficiency of the utility systems for the next five years, b) demonstrate cost of service (proportionality of rates), and c) show the District's ability to repay potential future debts for capital projects.

Rate studies are typically conducted every three to five years to ensure revenue sufficiency. As part of the regular periodic review of the rates, best practices include maintaining financially self-sustaining utilities, setting policies or guidelines on appropriate reserve levels, including depreciation in the rates, and continual customer outreach to educate on the value of the services provided.

This report provides an explanation and justification of the calculated water and sewer utility rates for the next five years and it documents adherence to the law regarding setting of rates by a special district. Per California Constitution Article 13D, these types of utility rates shall not be extended, imposed, or increased by any agency unless it meets all of the following requirements:

- (1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- (2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- (3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- (4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted.
- (5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library, services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The utilities financial model presented in this report projects revenues and expenses and calculates water and sewer rates for the next five fiscal years with the first change in utility rates implemented July 1, 2022.

1.2 RATE SETTING PRINCIPLES AND REPORT ORGANIZATION

This report was prepared using the principles established by the American Water Works Association (AWWA), the Water Environment Federation (WEF), and Government Finance Officers Association (GFOA).

The AWWA “Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1 (the “M1 Manual”) establishes commonly accepted professional standards for water cost-of-service studies. This manual is referenced in the water rate study.

The sewer rate study uses standard industry practices outlined in the WEF Manual of Practice No. 27 and guidelines prepared by the California State Water Resources Control Board for State Revolving Fund financing.

The GFOA publishes guidelines on sufficient cash balances for enterprise funds. Minimum cash balance targets for GMCSO presented in this Study are based on the GFOA guidelines.

The Study is presented in five sections. Following this introduction and summary of findings, Section 2 describes the historical and financial health of the District, its sources of revenues and major expense categories, the customer base and needed capital improvements. Section 3 provides the water fees methodology and calculations. Section 4 provides the sewer fees methodology and calculations. Section 5 provides a summary of the impact of the calculated five-year projection of rates on the District’s financial health and provides a bill impact analysis for customers of the District.

Study support tables are provided in Appendices A through C.

1.3 MAJOR CHANGES TO THE FEE SCHEDULES

There are several changes to the current fee schedules proposed. The two major changes are:

- (1) Water and sewer fees are being clearly separated into their own rate schedules. Currently, customers are not aware of how much they pay for water versus sewer.
- (2) Assessments (or “standby fees”) will be abandoned. Unconnected lots (defined on page 4), which currently pay the assessments, will pay rates from July 1, 2022.

Summary of Changes

	Water	Sewer
Changes in property-related fees structure	<p>Removal of water usage tiers – the same rate will apply to every 1,000 gallons of water used and users will be billed for use every quarter rather than annually;</p> <p><u>Residential and Commercial Residential</u> Lots will pay fixed charges per Living Unit (with exceptions) and Commercial Lots will pay by water meter size; and</p> <p>Addition of customer charges.</p>	<p><u>Residential and Commercial Residential</u> Lots will pay by number of Living Units (with exceptions) and Commercial Lots will pay per Equivalent Dwelling Unit as measured by wintertime water use, not by meter size;</p> <p>Addition of customer charges.</p>
All fees will be property-related fees	Assessments abandoned; Unconnected Lots will be included in the rates schedule	Assessments abandoned; Unconnected Lots will be included in the rates schedule

Currently, Unconnected Lots pay a quarterly assessment. Assessments are not property-related fees and they require a separate adoption process. To make the total cost allocation equitable, and the administration of charges simpler for the District, assessments are abandoned at the end of fiscal year 2022. Going forward, from July 1, 2022, charges to all properties are included in the fees schedule presented in this study.

Due to the number of changes proposed, definitions are provided as follows.

Definitions

Account Holder – a property owner, a renter, lessee, condominium association, or rental company with an Account for water service with the District.

Additional Quarters (AQ) - space in a Dwelling Unit for occupancy for living or sleeping purposes. The floor area of additional quarters shall not exceed thirty (30%) percent of the floor area of the Dwelling Unit, excluding garages and carports. (Plumas County Code Sec. 9-2.201.2).

Commercial Lot – Lots that are not Commercial Residential or Residential. May include governmental and quasi-governmental uses.

Commercial Residential Lot – Lots excluded from the Nakoma Community Association as of June 1, 2022 permitted to develop residential uses only by Plumas County and lots in Planning Areas 1, 10, and 14 permitted by Plumas County to have more than one Living Unit per Lot.

Connected Lot – a lot that has connected to the District’s water and sewer infrastructure.

Dwelling Unit (DU) – primary structure on a Residential or a Commercial Residential Lot, intended for living or sleeping purposes with cooking and sanitation provisions.

Equivalent Dwelling Unit (EDU) – a measurement of wintertime wastewater flow from a typical Dwelling Unit with year-round occupancy. One EDU is measured as average use of 115 gallons per day of water in the winter months between November and February, inclusive.

Guest House (GH) - an independent structure of an area of no more than 1,200 square feet, excluding garages and carports (Plumas County Code Sec. 9-2.240).

Living Unit (LU) - a building, or portion of a building on a Residential or Commercial Residential Lot, intended for living or sleeping purposes with cooking and sanitation provisions.

Non-Residential Lot – the same as a Commercial Lot.

Residential Lot – lots permitted one Dwelling Unit, Additional Quarters, and a Guest House with the total number of Living Units not to exceed three.

Unconnected Lot – a lot that has service immediately available to it but has not yet connected to the District’s water and sewer infrastructure.

1.4 WATER FEES FINDINGS

The proposed rate structure will be applied to three customer types as follows:

Customer Type 1. Residential and Residential Commercial Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed per Living Unit (LU). All Living Units, except for Additional Quarters on Residential Lots, pay the quarterly charge for a 1” meter, regardless whether the LU has a separate water meter or not. Meters that do not service LUs exclusively are billed according to water meter size.
3. Water usage cost: A fee charged per thousand gallons of water recorded through each metered connection *every three months*.

Customer Type 2. Commercial Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed by water meter size.
3. Water usage cost: A fee charged per thousand gallons of water recorded through each metered connection *every three months*.

Customer Type 3. Unconnected Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee for a 1" water meter.

Unconnected Lots only pay customer and service charges because they are not yet using the water system. They still incur customer-related costs and costs to maintain capacity in the water system, which are recouped in the service charge.

Exemptions. There are two exemptions applicable to Residential and Commercial Residential water billing as follows:

- Existing Residential and Commercial Residential Lots as of June 1, 2022 are grandfathered in and will continue to pay charges for a single LU per Lot, regardless of the number of LUs associated with the Lot. Upon sale or transfer of ownership, these Accounts will pay per LU, except that Additional Quarters on Residential Lots will not be charged as a LU.
- Additional Quarters in newly constructed Dwelling Units on Residential Lots will not be charged as a LU.

The calculated and proposed water rate schedule is provided in **Table 1**. The proposed rate schedule increases fees to customers to keep pace with inflation, add needed staffing, keep up with needed system rehabilitation costs, and to maintain prudent levels as recommended by GFOA.

The District will be updating its Policy Handbook to provide for billing under the new water and sewer rate structures. With new construction after July 1, 2022, the District will require separate water meters for each DU and each GH on a Residential Lot, and for each LU in a multi-unit residential structure or other LU structure arrangement on a Commercial Residential Lot.

Table 1
Calculated Five-Year Water Fee Schedule

Charge Type	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
CONNECTED CUSTOMERS					
	<i>per Customer Account, per Quarter</i>				
Customer Charge	\$49.51	\$52.26	\$55.32	\$68.85	\$71.62
Service Charges	<i>Per Living Unit & Non-Residential Meter, per Quarter [1]</i>				
Per Living Unit [2]	\$98.40	\$100.98	\$106.68	\$132.22	\$136.96
Per Non-Residential Meter					
1"	\$98.40	\$100.98	\$106.68	\$132.22	\$136.96
1.5"	\$196.80	\$201.96	\$213.36	\$264.44	\$273.92
2"	\$314.88	\$323.14	\$341.38	\$423.10	\$438.27
3"	\$590.40	\$605.88	\$640.08	\$793.32	\$821.76
4"	\$984.00	\$1,009.80	\$1,066.80	\$1,322.20	\$1,369.60
6"	\$1,968.00	\$2,019.60	\$2,133.60	\$2,644.40	\$2,739.20
8"	\$3,148.80	\$3,231.36	\$3,413.76	\$4,231.04	\$4,382.72
	<i>Per Thousand Gallons</i>				
Use Charge	\$7.33	\$7.34	\$7.67	\$9.38	\$9.59
UNCONNECTED CUSTOMERS					
	<i>Per Undeveloped Lot, per Quarter</i>				
Customer & Service Charge	\$147.91	\$153.24	\$162.00	\$201.07	\$208.58

Source: GMCSO financial and customer data, and HEC 2021 rate study.

[1] All water accounts with more than one Living Unit as of 6/1/2022 will only pay for one Living Unit until the property sells or is transferred to new ownership.

[2] Residential Lots with Additional Quarters pay for a maximum of two Living Units (Dwelling Unit plus Guest House). Commercial Residential Lots pay for every Living Unit.

1.5 SEWER FEES FINDINGS

The calculated and proposed sewer rate schedule is provided in **Table 2** on page 7. The proposed rate structure will be applied to three customer types as follows:

Customer Type 1. Residential and Residential Commercial Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed per EDU. Each Living Units counts as one EDU with the exception of Additional Quarters on a Residential Lot, which shall not be counted. Residential and Commercial Residential Lots as of June 1, 2022 will be billed one (1) LU until the lot is sold or transferred to new ownership.
3. Flow charge: A flat quarterly fee billed per EDU. Each Living Unit counts as one EDU.

Customer Type 2. Commercial Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed per EDU. The District assigns the number of EDUs to each Commercial Lot based on historical wintertime water use.
3. Flow charge: A flat quarterly fee billed per EDU. The District assigns the number of EDUs to each Commercial Lot based on historical wintertime water use.

For new Non-Residential Accounts, Commercial Lots shall be assigned a number of EDUs based on the Project Engineer’s estimates of wintertime water use. Once actual water use has been established (2 winter periods), the District will adjust the number of EDUs assigned to each Commercial Lot for quarterly billing purposes.

Customer Type 3. Unconnected Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed per EDU. Every Unconnected Lot is assigned one EDU.

Unconnected Lots only pay customer and service charges because they are not yet using the sewer system. They still incur customer-related costs and costs to maintain capacity in the sewer system, which are recouped in the service charge.

**Table 2
Calculated Five-Year Sewer Fee Schedule**

Customer Type	EDUs per Account	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Residential and Commercial Residential Lots		<i>Quarterly Rate</i>				
Per EDU [1], [2]		\$272.42	\$315.95	\$326.92	\$338.48	\$349.91
Non-Residential Lots						
Nakoma Lodge	14.5	\$3,156.37	\$3,620.49	\$3,737.02	\$3,853.44	\$3,967.78
Altitude Recreation Center	9.0	\$1,981.43	\$2,274.20	\$2,347.72	\$2,421.42	\$2,493.84
Golf Course	24.0	\$5,185.81	\$5,945.91	\$6,136.72	\$6,326.93	\$6,513.69
Nakoma Market [3]	9.0	\$1,981.43	\$2,274.20	\$2,347.72	\$2,421.42	\$2,493.84
Unconnected Lots						
Each Lot	1.0	\$146.12	\$174.87	\$182.38	\$191.22	\$200.05

Source: GMCS D Master Plan Update, July 2017, Shaw Engineering, and HEC 2021 rate study.

sewer

[1] Each Living Unit counts as one EDU. All sewer accounts with more than one Living Unit as of 6/1/2022 will only pay for one Living Unit until the property sells or is transferred to new ownership.

[2] Residential Lots with Additional Quarters pay for a maximum of two Living Units (Dwelling Unit plus Guest House). Commercial Residential Lots pay for every Living Unit.

[3] Planning documents estimate Nakoma Market will have 9 EDUs. After two winter periods of water use the District will determine the actual number of EDUs and adjust for quarterly billing if needed.

Exemptions. There are two exemptions applicable to Residential and Commercial Residential sewer billing as follows:

- Existing Residential and Commercial Residential Lots as of June 1, 2022 are grandfathered in and will continue to pay charges for a single EDU per Lot, regardless of the number of EDUs associated with the Lot. Upon sale or transfer of ownership, these Accounts will pay per EDU, except that Additional Quarters on Residential Lots will not be charged an EDU.
- Additional Quarters in newly constructed Dwelling Units on Residential Lots will not be charged an EDU.

1.6 COMBINED UTILITIES IMPACTS

District. The impact of adopting the proposed water and sewer rates would be to keep the District in a financially-sound position while completing needed planned capital improvements and maintaining a prudent cash reserve.

As a best management practice, utility providers need sufficient cash balance to:

- Serve cash flow needs
- Pay for emergency and unplanned necessary repairs
- Accumulate for system rehabilitation (planned improvements)
- Provide rate stabilization

While each utility needs to assess its risks on an individual basis using knowledge of the current status of infrastructure, regulatory requirements, cash flow “bumps” and so forth, there are some general guidelines to measure what a prudent reserve would be for the utility. The GFOA best practice is to start with a baseline of 90 days of operating expenses and adjust depending on local circumstance. GFOA guidelines to adjust the target for local circumstances include:

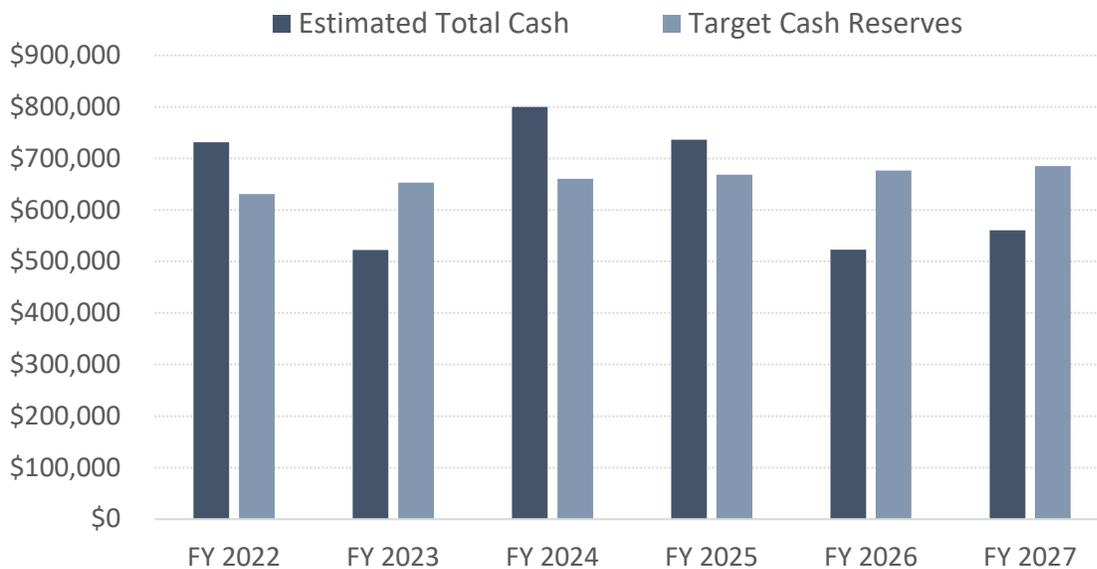
- Frequency of revenue collection - GMCS D has very predictable sewer revenues and historically has had very predictable water revenues; however, the water revenue stream would vary by season under the proposed new water rate structure. Nevertheless, GMCS D bills quarterly and does not have a pressing cash flow concern.
- Diversity of the customer base – timely payments and cash flow is less of a concern with a diverse customer base. GMCS D has a predominantly residential database and a few Commercial customers that currently use a large amount of the water and sewer infrastructure capacity.
- Unpredictable weather events – large weather events can cause need for costly emergency work. The community is located in elevated, forested terrain that receives colder temperatures and snow during the winter months. Cold temperatures during the winter and wildfires during the summer are probably of greatest concern, landslides can also occur.
- Ever-increasing California environmental standards / requirements for wastewater and water treatment – may require new infrastructure and/or monitoring expenses. The District is subject to potential large increased costs due to new State regulations.

- Rate stabilization – raising rates is unappealing; especially with a small customer base such as GMCSD’s. When there are sufficient reserves, more gradual rate increases can be introduced.

Given the above GFOA guidelines, it is recommended that the District have an overall target (water and sewer combined) unrestricted operating fund cash balance of three months (90 days) of projected operating expenses and a target capital fund cash balance of 50% of accumulated depreciation.

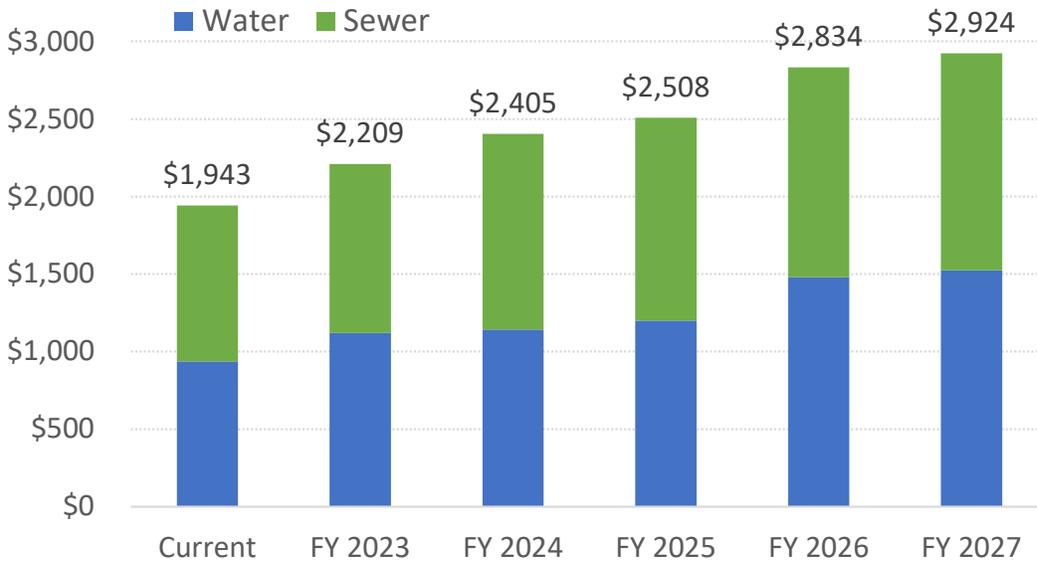
Figure 1 shows the projected total District cash balance and the target cash balance (operating and capital combined) over the next five fiscal years.

Figure 1
Projected District Year-End Cash Balances



Customers. District Account Holders receive quarterly utility bills that include charges for water and sewer services; therefore, it is important to look at the combined impact of increases on customer bills. **Figure 2** shows the total annual bill impact to a typical home using 6,000 gallons per month (72,000 annually).

Figure 2
Annual Utility Bill Projection for a Typical Residential Lot using 72,000 Gallons



Since three-quarters of the residential lots remain undeveloped, it is also important to show the combined impact of increases on the Unconnected Lot customer bills. **Figure 3** shows the annual bill impact to an undeveloped property.

Figure 3
Annual Utility Bill Projection for an Unconnected Lot

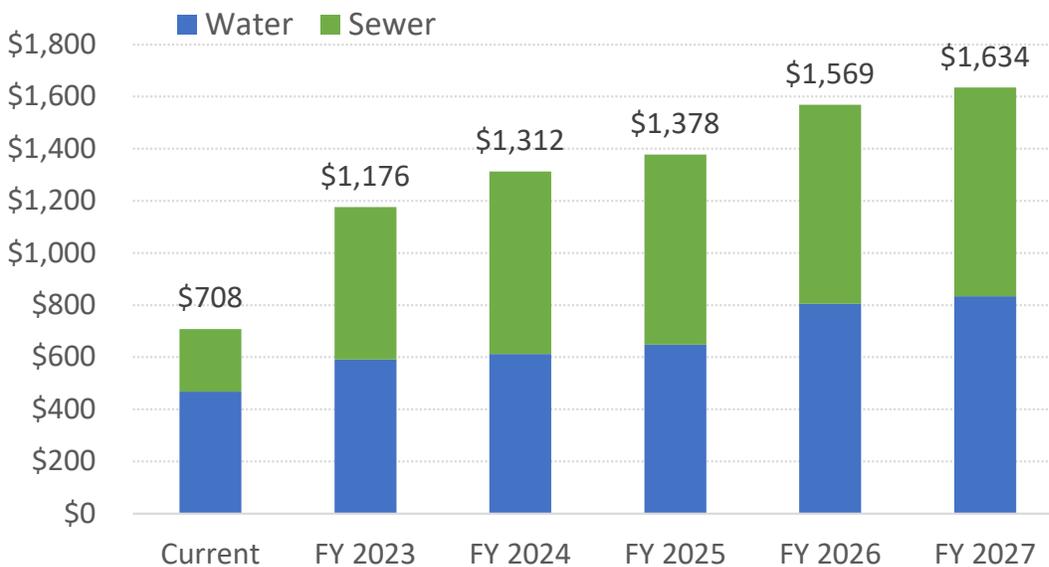
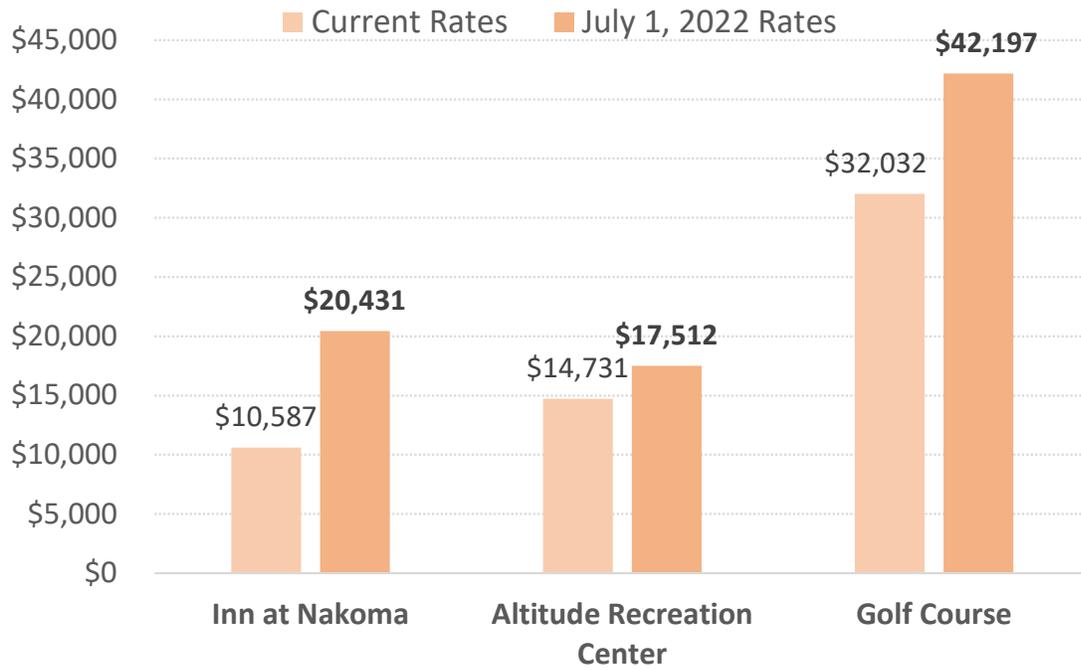


Figure 4 shows the estimated bill impact from current rates to July 1, 2022 rates for each of the three Non-Residential accounts, based on their fiscal year 2021 water use.

Figure 4
Year 1 Impact to Non-Residential Accounts



Section 2: CUSTOMER BASE, FINANCIAL HEALTH AND CAPITAL PROJECTS

2.1 CUSTOMER BASE

The District serves the Gold Mountain development, which has a total of 483 lots currently, and at buildout is anticipated to have about 440 residential customers and up to 43 commercial customers. **Table 3** below shows the current number billed Connected and Unconnected Lot units and accounts. The development is, at most, only 25% built.

Table 3
Summary of Connected and Unconnected GMCS D Customers

Customer Type	Connected	Unconnected [1]	Total
Residential	<i>Residential Units</i>		
Dwelling Unit (R)	86	310	396
Multiple Living Units (CR)	7	28	35
Fractional Ownership (CR)	8	0	8
Est. Total Residential Units	101	338	439
Non-Residential	<i>Non-Residential Accounts</i>		
Nakoma Lodge	1		1
Altitude Recreation Center	1		1
Golf Course	1		1
Nakoma Market		1	1
Est. Total Non-Residential Accounts	3	1	4

Source: GMCS D and Plumas County Assessor's office.

tot cust

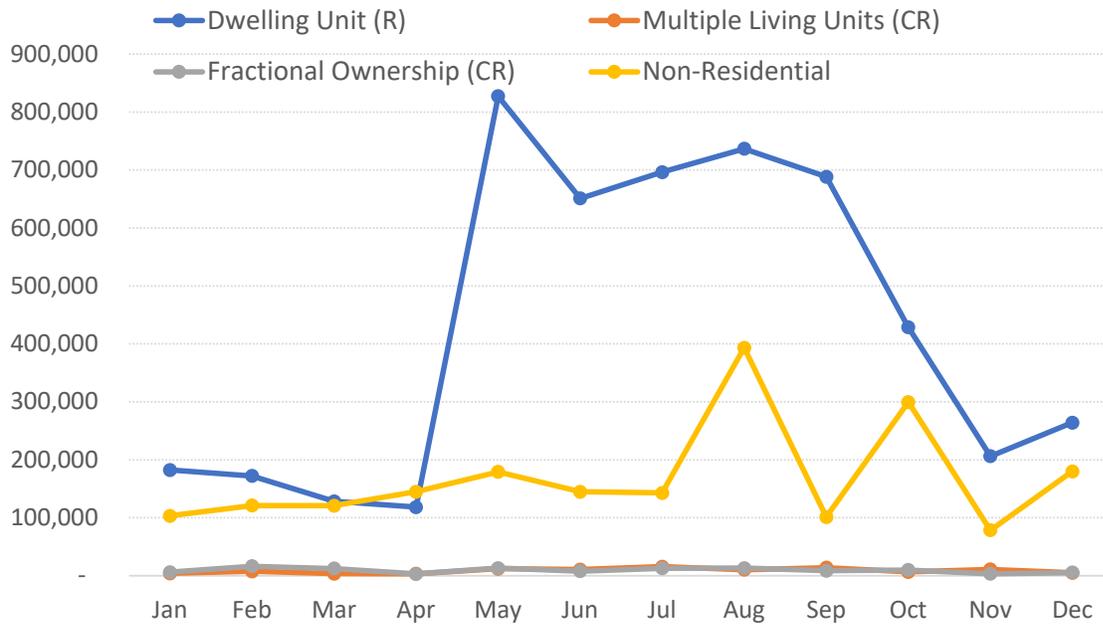
[1] Estimate of future Living Units and Non-Residential accounts.

There are several more lots that can be built on that are not billable at this time.

Figure 5 shows the pattern of water use by customer category. Residential is sub-categorized into Dwelling Units, which are all built on Residential Lots; Multiple Living Units, which are all built on Commercial Residential Lots; and Fractional Ownership, which are all built on Commercial Residential Lots.

Although there are only three Non-Residential Accounts, Non-Residential currently comprises 27% of annual water use. As the community develops, the Non-Residential share of total water use will decrease.

Figure 5
Water Use by Customer Type (2019-2021)



The District delivers the development’s water demands by pumping groundwater. **Table 4** shows monthly water production since 2013. About 60% of water production satisfies a base demand, as measured by consumption during the winter months of November through February, and 40% of water production satisfies the additional water demands of spring, summer, and fall.

Table 4
Historical Water Production

Month	2013	2014	2015	2016	2017	2018	2019	2020	Average	Percentage	
<i>All figures in Gallons</i>											
Jan	398,100	473,450	171,630	264,700	282,549	411,953	488,177	103,600	324,270	4.5%	
Feb	227,630	310,442	249,214	220,690	333,304	273,510	559,598	131,970	288,295	4.0%	
March	233,900	323,840	365,420	214,740	275,358	318,023	422,324	288,560	305,271	4.3%	
April	491,870	432,290	335,230	199,900	369,636	448,821	440,016	414,597	391,545	5.5%	
May	826,630	699,000	433,000	466,529	629,704	772,684	1,084,013	747,296	707,357	9.9%	
June	1,018,570	915,870	529,240	600,454	850,361	880,190	801,466	944,908	817,632	11.4%	
July	1,037,390	917,960	559,960	827,157	925,499	904,552	1,166,103	1,426,298	970,615	13.6%	
August	889,000	779,570	625,000	809,108	946,863	1,132,365	1,045,391	1,314,909	942,776	13.2%	
Sept	778,000	655,040	653,000	629,876	951,765	1,062,545	1,336,658	1,293,019	919,988	12.9%	
October	470,000	568,950	536,760	532,024	736,743	788,100	644,098	950,899	653,447	9.1%	
Nov	235,710	316,230	367,100	166,878	454,029	791,312	365,644	370,800	383,463	5.4%	
Dec	545,240	281,440	221,000	540,178	443,006	638,051	318,083	531,827	439,853	6.2%	
Total	7,152,040	6,674,082	5,046,554	5,472,234	7,198,817	8,422,106	8,671,571	8,518,683	7,144,511	100.0%	
Base Monthly Flow (November through February)								<i>B</i>	358,970		
Base Annual Flow								<i>C = D*12</i>	4,307,642		
<i>Base Flow as Percentage of Total</i>									60%		
Additional Flow								<i>D = A-C</i>	2,836,869		
<i>Additional Flow as Percentage of Total</i>									40%		

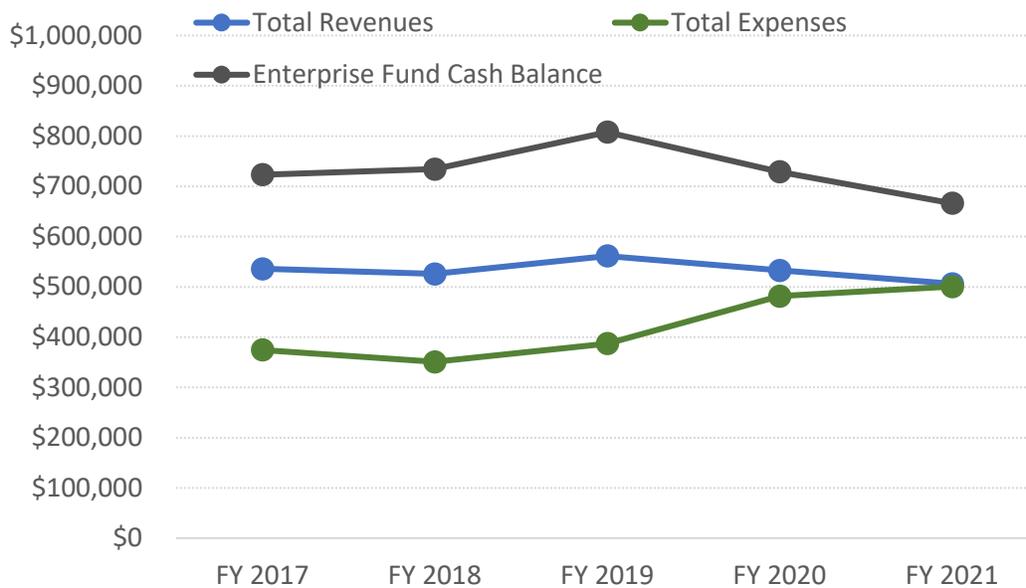
Source: GMCS D well production records.

prodn

2.2 FINANCIAL HEALTH

The District is currently in a healthy financial position. Revenues have exceeded expenses in all of the past five fiscal years, and a reserve has been maintained for emergencies and planned repairs, as well as facility additions to the water and sewer systems. **Figure 6** shows that with some restructuring in the last two years, District expenses have increased, while revenues have remained flat. The District has drawn down on its reserves the last two fiscal years to complete needed capital improvements.

Figure 6
Historical Revenues, Expenses and Fund Balance



Sources of water and sewer revenues are illustrated in **Figures 7** and **8** respectively. About 50% of water revenues are generated by quarterly assessments (currently termed ‘Standby Fees’) that are charged to Unconnected Lots, 32% by property-related fees (rates) charged to Connected Lots, and the remaining revenues are from new connection/capacity fees, administrative fees, and other sources.

About 35% of sewer revenues are generated by quarterly assessments charged to Unconnected Lots, 50% by property-related fees charged to Connected Lots, and the remaining revenues are from new connection/capacity fees, administrative fees, and other sources.

Figure 7
Historical Water Revenues

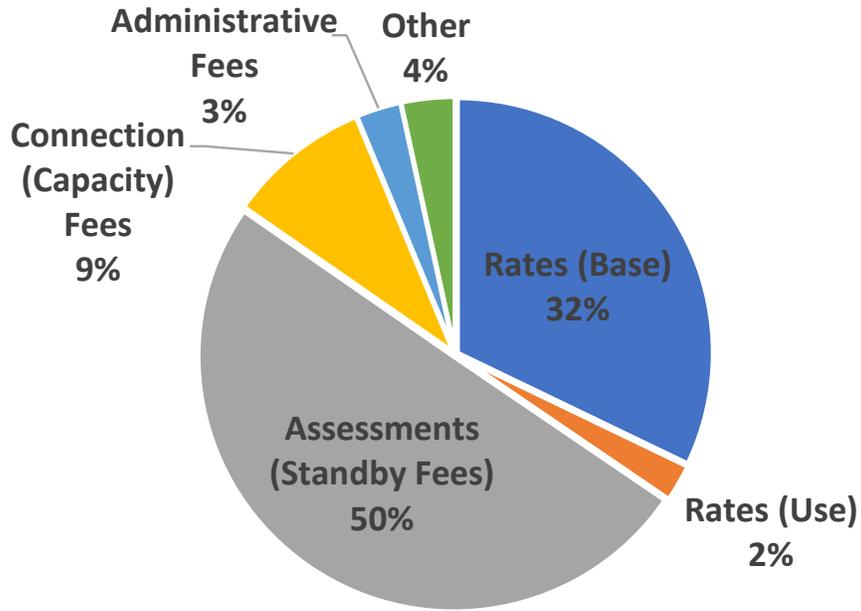
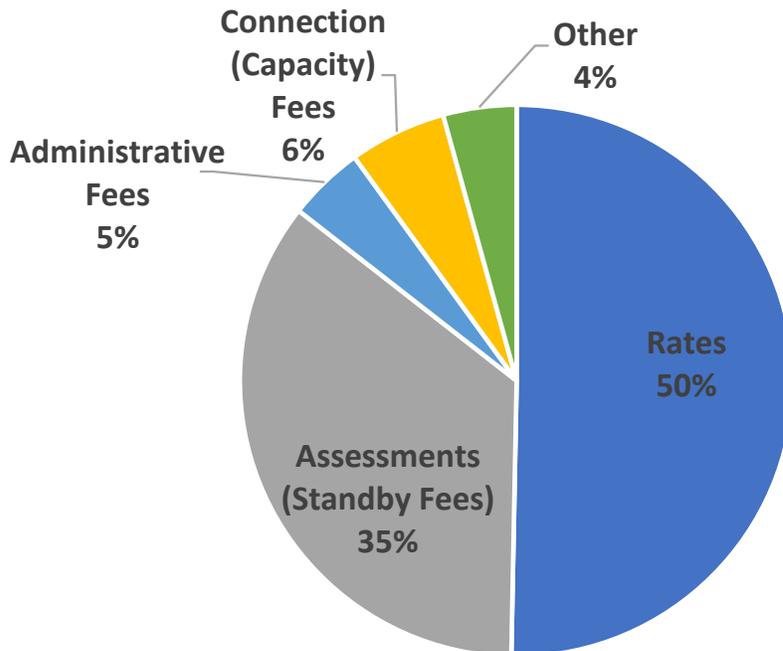


Figure 8
Historical Sewer Revenues



The current Connected Lots property-related fee schedule, and Unconnected Lots assessments, are shown in **Table 5**. The District allocates the fixed portion of property-related fees 53% to sewer operations and 47% to water operations, and water use fees 100% to water capital. The assessments are allocated 34% to sewer and 66% to water. The fees and assessments were adopted in 2008, with some authorized changes through 2011, and have not been adjusted since.

Table 5
Current Fees and Assessments

Customer Service	Current Fixed Charges		
	Year	Quarter	
<i>Bills are issued quarterly</i>			
Connected Properties	per Water Meter [1], [2]		
Residential	\$1,888.00	\$472.00	
Non-Residential	1-inch	\$1,888.00	\$472.00
	2-inch	\$3,836.00	\$959.00
	3-inch	\$6,320.00	\$1,580.00
	4-inch	\$8,853.00	\$2,213.25
	6-inch	\$18,724.00	\$4,681.00
Water Use Charges			
Residential	<i>Billed annually</i>		
0-10,000 gallons	\$0.55	per 1,000 galls	
10,001-20,000 gallons	\$0.60	per 1,000 galls	
20,001-30,000 gallons	\$0.65	per 1,000 galls	
30,001-40,000 gallons	\$0.70	per 1,000 galls	
40,001-50,000 gallons	\$0.75	per 1,000 galls	
50,001-80,000 gallons	\$0.80	per 1,000 galls	
80,001-100,000 gallons	\$0.90	per 1,000 galls	
100,001-120,000 gallons	\$1.00	per 1,000 galls	
120,001-160,000 gallons	\$1.10	per 1,000 galls	
160,001-200,000 gallons	\$1.20	per 1,000 galls	
More than 200,000 gallons	\$3.00	per 1,000 galls	
All Other			
First 40,000 gallons	\$2.20	per 1,000 galls	
Next 40,000 gallons	\$2.75	per 1,000 galls	
More than 80,000 gallons	\$3.75	per 1,000 galls	
Assessments (Undeveloped Lots)	[3]		
Water	per Parcel	\$467	\$116.82
Sewer	per Parcel	\$241	\$60.18
Total Assessments		\$708	\$177.00

Source: GMCSO.

curr

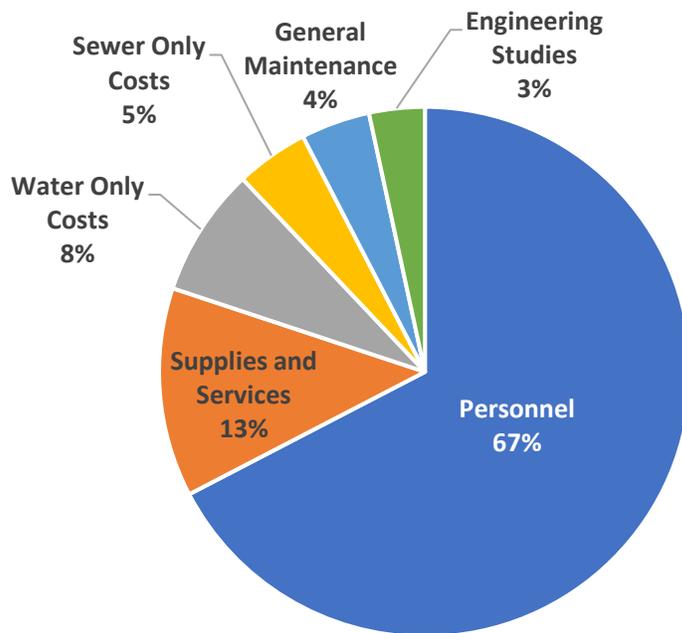
[1] Charges authorized per Resolution 2007/08-11, June 13, 2008.

[2] The District allocates 53% of fixed charges to sewer, and 47% to water.

[3] Assessments authorized per Resolution 2008/09-01, August 9th, 2008.

Operating expenses include costs for personnel (salaries, wages, and benefits), power, chemicals, routine maintenance of infrastructure, office supplies, vehicle costs, and other miscellaneous costs. **Tables A-1 and A-2 in Appendix A** show the District’s operating and capital budgets for fiscal year 2022. The largest cost category is for personnel, which costs make up about two-thirds of all operating costs (this is typical of small special districts with little automation of their systems), as shown in **Figure 9** below.

Figure 9
Budgeted FY2022 Operating Expenses



The fiscal year 2022 budget forms the basis for the projection of expenses of the next five years in the financial model. Historical financial data reported in the District’s audits is provided in **Appendix Table A-3**, and the historical enterprise fund balances are provided in **Appendix Table A-4**.

In addition to accounting for the District’s operating expenses, utility rates should collect for future costs to rehabilitate existing assets. **Table 6** on the next page shows the depreciation for water and sewer assets included in the District’s annual audited financial records. Depreciation is used as the basis for which to collect rates to cover system rehabilitation costs. Inclusion of system rehabilitation costs demonstrates fiscal responsibility toward the assets to potential future investors and helps to establish good credit¹.

¹ Per Governmental Accounting Standards Board (GASB) 34, local governments must report on the value of their infrastructure assets and plan for asset maintenance (including collecting sufficient revenue) to obtain good credit when issuing bonds or procuring other forms of financing for long-term construction projects.

Table 6
Depreciation of Current Assets

Assets	Asset Value	Average Life	Cost per Year
Water			<i>rounded</i>
Plant	\$720,517	35	\$20,600
Distribution	\$1,149,372	25	\$46,000
Equipment	\$30,441	10	\$3,000
Vehicles	\$18,470	5	\$3,700
Total Water	\$1,918,800		\$73,300
Sewer			
Collection	\$415,042	35	\$11,900
Equipment	\$7,546	20	\$400
Disposal	\$229,553	35	\$6,600
Vehicles	\$18,470	5	\$3,700
Total Sewer	\$670,611		\$22,600
Total Assets	\$2,589,411		\$95,900

Source: GMCSD financials and HEC, July 2021.

rehab

2.3 CAPITAL PROJECTS

The District has several key projects that need to be completed in the next five years or so (depending on the actual pace of development). **Table 7** shows that water projects are estimated to cost \$1.5 million, and sewer projects \$1.3 million, for a total CIP estimated cost of at least \$2.8 million. Key projects in the water system include construction of the high elevation tank and rehabilitation of well 29. Key projects in the sewer system include leach field expansion and a package water reclamation plant.

Identified funding sources for the CIP include (G) a grant from Plumas County, (F) money transferred from the fire fund, (C) cash from reserves and cash generated by fees, and (D) debt. Debt financing is assumed for the high elevation tank and the water reclamation plant. The estimated cost of these projects would place an unacceptably high burden on ratepayers if they were cash-funded. Both of these projects are eligible for low-cost financing through State and Federal agencies.

The figures in **Table 7** are based on cost estimates in today's dollars that have been inflated at a rate of 3.5% per year. The cost estimates in today's dollars are provided in **Appendix A Table A-5**.

Table 7
Estimated CIP Items and Costs in Inflated Dollars

Water & Sewer CIP Items		Estimated 5-Year Total	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
<i>Estimated Costs Inflated each Year 3.5%</i>							
Water							
<i>Timing of Projects may Deviate from this Schedule</i>							
High Elevation Tank	D	\$802,000	\$0	\$0	\$84,000	\$718,000	\$0
Well 29 Rehabilitation	C	\$270,000	\$0	\$0	\$23,000	\$247,000	\$0
Water SCADA	C	\$81,000	\$0	\$81,000	\$0	\$0	\$0
Booster Station #8	C	\$134,000	\$0	\$0	\$134,000	\$0	\$0
Well 36 Connections	C	\$84,000	\$0	\$0	\$0	\$0	\$84,000
Various Upgrades	C	\$29,000	\$0	\$0	\$0	\$29,000	\$0
New Office Building (50%)	C F	\$156,000	\$156,000	\$0	\$0	\$0	\$0
Total Water		\$1,556,000	\$156,000	\$81,000	\$241,000	\$994,000	\$84,000
Sewer							
Water Reclamation Plant	D	\$686,000	\$311,000	\$375,000	\$0	\$0	\$0
Leach Field Expansion	C G	\$251,000	\$0	\$0	\$78,000	\$173,000	\$0
Pumping Trailer	C	\$52,000	\$52,000	\$0	\$0	\$0	\$0
Sewer SCADA	C	\$119,000	\$0	\$0	\$0	\$0	\$119,000
New Office Building (50%)	C F	\$156,000	\$156,000	\$0	\$0	\$0	\$0
Total Sewer		\$1,264,000	\$519,000	\$375,000	\$78,000	\$173,000	\$119,000
Total CIP		\$2,820,000	\$675,000	\$456,000	\$319,000	\$1,167,000	\$203,000
Estimated Funding Sources							
Plumas County Grant	G	\$84,000	\$84,000	\$0	\$0	\$0	\$0
Fire Fund [1]	F	\$260,000	\$260,000	\$0	\$0	\$0	\$0
Cash	C	\$988,000	\$20,000	\$81,000	\$235,000	\$449,000	\$203,000
Debt	D	\$1,488,000	\$311,000	\$375,000	\$84,000	\$718,000	\$0
Total		\$2,820,000	\$675,000	\$456,000	\$319,000	\$1,167,000	\$203,000

Source: GMCSD and HEC, July 2021.

cip inf

[1] Fire fund reserves put toward the new office building.

Assumed loan terms for the high elevation tank and the water reclamation plant are shown in **Table 8** on the next page. For purposes of the rate study, both loans are assumed to be with the State Water Resources Control Board State Revolving Funds.

Table 8
Estimated Loan Terms and Debt Service

Item	Fiscal Year Loan Secured		Total Estimate
	2023	2025	
			<i>rounded</i>
Water			
High Elevation Tank		\$802,000	\$802,000
Subtotal Water	\$0	\$802,000	\$802,000
Sewer			
Water Reclamation Plant	\$686,000		\$686,000
Subtotal Sewer	\$686,000	\$0	\$686,000
Total Bond Proceeds	\$686,000	\$802,000	\$1,488,000
Estimated Annual Debt Service [1]	\$44,100	\$51,500	\$95,600
Water	\$0	\$51,500	\$51,500
Sewer	\$44,100	\$0	\$44,100
Total Payments	\$882,000	\$1,030,000	\$1,912,000
Estimated Total Financing Costs	\$196,000	\$228,000	\$424,000
SRF loan assumptions:	Interest Rate [2]	2.500%	2.500%
	Term (years)	20	20

Source: GMCSO estimated CIP and HEC 2021 rate study.

debt

[1] The State requires an additional 10% collection the first 10 years as reserve (or last payment).

[2] Estimate based on historical rates; the interest rate fluctuates year to year.

As new assets are added to the District, these too should be accounted for in annual depreciation. **Table 9** on the following page shows the estimated additional depreciation that would be added upon completion of the new facilities listed in the CIP.

Table 9
Estimated New Asset Depreciation

New Infrastructure	Average Life (years)	Budgeted FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Water							
High Elevation Tank	60	\$0	\$0	\$0	\$1,400	\$13,367	\$13,367
Well 29 Rehabilitation	40	\$0	\$0	\$0	\$575	\$6,750	\$6,750
Water SCADA	20	\$0	\$0	\$4,050	\$4,050	\$4,050	\$4,050
Booster Station #8	35	\$0	\$0	\$0	\$3,829	\$3,829	\$3,829
Well 36 Connections	80	\$0	\$0	\$0	\$0	\$0	\$1,050
Various Upgrades	20	\$0	\$0	\$0	\$0	\$1,450	\$1,450
New Office Building (50%)	100	\$0	\$1,560	\$1,560	\$1,560	\$1,560	\$1,560
Total Water		\$0	\$1,560	\$5,610	\$11,414	\$31,005	\$32,055
Sewer							
Water Reclamation Plant	40	\$0	\$7,775	\$17,150	\$17,150	\$17,150	\$17,150
Leach Field Expansion	25	\$0	\$0	\$0	\$3,120	\$10,040	\$10,040
Pumping Trailer	15	\$0	\$3,467	\$3,467	\$3,467	\$3,467	\$3,467
Sewer SCADA	20	\$0	\$0	\$0	\$0	\$0	\$5,950
New Office Building (50%)	100	\$0	\$1,560	\$1,560	\$1,560	\$1,560	\$1,560
Total Sewer		\$0	\$12,802	\$22,177	\$25,297	\$32,217	\$38,167
Total New Assets		\$0	\$14,362	\$27,787	\$36,710	\$63,222	\$70,222

Source: GMCS D financials.

new dep

The rate study includes 75% of annual depreciation in the rates to be used for system rehabilitation. This rate revenue may be used for capital improvement projects as they arise; and, until they do, they will remain as District cash on hand (reserves). **Table 10** shows the total amount of depreciation included in the rate model for system rehabilitation.

Table 10
System Rehabilitation Costs in Rates

Item	Budgeted FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Water						
Existing Assets	\$73,300	\$73,300	\$73,300	\$73,300	\$73,300	\$73,300
New Assets	\$0	\$1,560	\$5,610	\$11,414	\$31,005	\$32,055
Total Depreciation Water	\$73,300	\$74,860	\$78,910	\$84,714	\$104,305	\$105,355
Collection in Rates		75%	75%	75%	75%	75%
Rehabilitation Budget - Water		\$56,145	\$59,183	\$63,535	\$78,229	\$79,016
Sewer						
Existing Assets	\$22,600	\$22,600	\$22,600	\$22,600	\$22,600	\$22,600
New Assets	\$0	\$12,802	\$22,177	\$25,297	\$32,217	\$38,167
Total Depreciation Water	\$22,600	\$35,402	\$44,777	\$47,897	\$54,817	\$60,767
Collection in Rates		75%	75%	75%	75%	75%
Rehabilitation Budget - Sewer		\$26,551	\$33,583	\$35,923	\$41,113	\$45,575

Source: GMCS D financials and HEC, July 2021.

depr

Section 3: WATER FEE CALCULATIONS

3.1 WATER REVENUE REQUIREMENT

According to the AWWA M1 Manual, the first step in the ratemaking analysis is to determine the adequate and appropriate funding of a utility. This is referred to as the “revenue requirement” analysis. This analysis considers the short-term and long-term service objectives of the utility over a given planning horizon, including capital facilities and system operations and maintenance, to determine the adequacy of a utility’s existing rates to recover its costs. Specifically, the revenue requirement refers to the amount of money that must be raised for revenue sufficiency of the water fund through rates. The projection of the revenue requirement is the cornerstone for the calculation of rates. This section explains the derivation of revenue requirement for the water system. Components of the revenue requirement include:

- Operating Expenses
- System Rehabilitation
- Debt Service

Table 11 shows the projected revenue requirement for the water system for fiscal years 2023 through 2027. Operating expenses are increased from the fiscal year 2022 budget based on historical annual percentage increases for each of the cost categories and interviews with staff regarding future operations. Due to an anticipated change in personnel costs in the first year of the study (fiscal year 2023), operating costs are projected to increase 16% in year one, and just shy of 5% each year thereafter.

As previously mentioned, system rehabilitation costs are included at 75% of estimated annual depreciation. Most governmental utility providers fund depreciation at some level, but it is very rare that they fund all their depreciation expenses. Funding of depreciation is a philosophical approach that must be decided by the governing board of the utility provider.

Water system debt service includes an assumed loan from the State Water Resources Control Board (SWRCB) to fund the high elevation water tank.

Credited against the described costs are non-operating credits; namely, administrative fees, interest and late charges (none budgeted for fiscal year 2022), interest income, and some smaller miscellaneous revenues.

The total water system revenue requirement is projected to increase from \$220,500 in fiscal year 2022 to \$463,800 in fiscal year 2027. If the District did not construct the high elevation tank in the next five years, or was able to find grant-funding for the tank, the revenue requirement would increase to \$407,200 in fiscal year 2027, as the annual debt service beginning in the fourth year of the projection is estimated at \$56,600 for this project.

Table 11
Projected Water Revenue Requirement

Capital Improvement Project	Inflation Factor	Budgeted FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Operating Costs							
Personnel [1]	5.5%	\$184,151	\$225,930	\$238,360	\$251,470	\$265,310	\$279,910
Supplies and Services	3.0%	\$32,862	\$33,850	\$34,870	\$35,920	\$37,000	\$38,110
Water System Maintenance	3.0%	\$17,500	\$18,030	\$18,580	\$19,140	\$19,720	\$20,320
Water Electricity	3.0%	\$25,500	\$26,270	\$27,060	\$27,880	\$28,720	\$29,590
General Maintenance	2.5%	\$11,500	\$11,790	\$12,090	\$12,400	\$12,710	\$13,030
Engineering Studies	2.0%	\$7,250	\$7,400	\$7,550	\$7,710	\$7,870	\$8,030
Total Operating Costs		\$278,762	\$323,270	\$338,510	\$354,520	\$371,330	\$388,990
Capital Costs							
System Rehabilitation	Table 10	\$0	\$56,145	\$59,183	\$63,535	\$78,229	\$79,016
Debt Service	Table 8	\$0	\$0	\$0	\$0	\$56,650	\$56,650
Total Capital Costs		\$0	\$56,145	\$59,183	\$63,535	\$134,879	\$135,666
Total Estimated Costs		\$278,762	\$379,415	\$397,693	\$418,055	\$506,209	\$524,656
Credits							
Administrative Fees	2.0%	\$24,490	\$24,980	\$25,480	\$25,990	\$26,510	\$27,050
Interest and Late Charges	proportional	\$0	\$0	\$0	\$0	\$0	\$0
Other	constant	\$32,350	\$32,350	\$32,350	\$32,350	\$32,350	\$32,350
Interest Income	constant	\$1,410	\$1,410	\$1,410	\$1,410	\$1,410	\$1,410
Total Credits		\$58,250	\$58,740	\$59,240	\$59,750	\$60,270	\$60,810
Revenue Requirement		\$220,512	\$320,675	\$338,453	\$358,305	\$445,939	\$463,846
Budgeted FY22 Fees Collection		\$270,021	\$270,021	\$270,021	\$270,021	\$270,021	\$270,021
Increase in Fees Needed			\$50,654	\$68,432	\$88,284	\$175,918	\$193,826

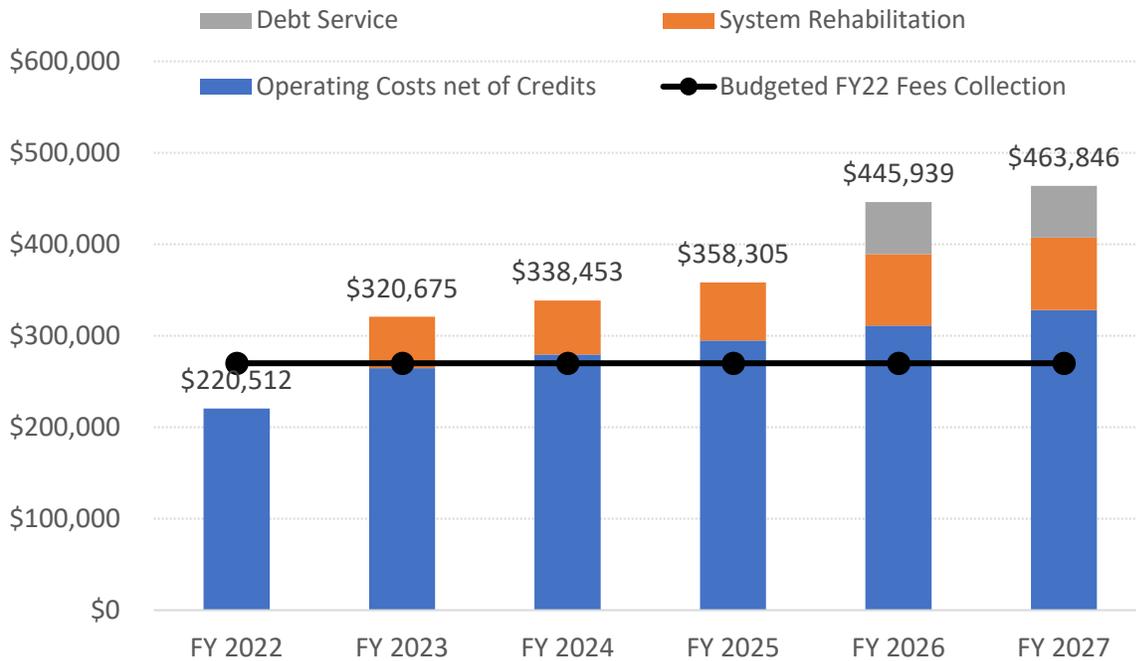
Source: GMCSO financials and HEC, Oct. 2021.

req water

[1] Increase in FY23 reflects staffing changes to includes a full-time General Manager and an additional part-time office support position.

Components of the projected water revenue requirement are illustrated in **Figure 10**. Budgeted fiscal year 2022 fees and assessments are shown in the figure. The District would be able to cover operating costs in fiscal year 2023 but not collect any money for system rehabilitation without a rate change.

Figure 10
Components of Water Revenue Requirement



3.2 COST CLASSIFICATION AND ALLOCATION

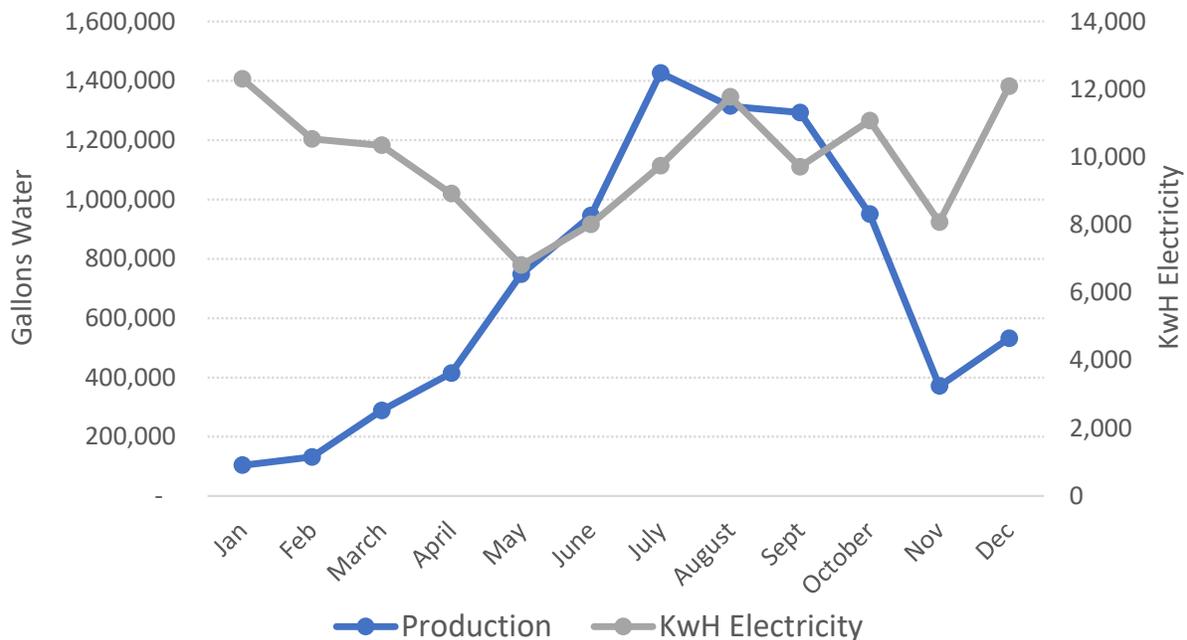
After determining a utility’s revenue requirements, a utility’s next step is determining the cost of service. Utilizing a public agency’s approved budget, financial reports, operating data, and capital improvement plans, the rate study categorizes (functionalizes) the assets and costs of the water system among major operating functions to determine the cost of service. Functional cost allocation for the water system is provided in **Appendix B Table B-1**.

Budgeted fiscal year 2022 water fund expenditures were allocated to the different functions of water service based on one of four methodologies described below.

1. **Plant in Service.** Plant in service allocation is shown in **Table B-2**. Plant in service costs include the original cost of current water system assets. Total cost is allocated 8% to customers, 75% to capacity, and 17% to commodity costs.
2. **Utilities.** Utilities costs (electricity) are allocated 40% to capacity and 60% to use. Electricity costs are typically almost all driven by water demand; however, in Gold Mountain’s water system, a large amount of electricity is needed in the wintertime to keep the booster stations warm. **Figure 11** shows water production and electricity consumption by the District in calendar year 2020.

3. **Customers.** Costs such as administrative staff costs, office supplies, telephones, and water membership/dues are allocated 100% to customer costs. These costs are not affected by the amount of capacity available, or the quantity of water delivered.
4. **Average of Classified Costs.** Some expenses are allocated to multiple functions of water service because they do not directly relate to customer functions, capacity of the water system, or quantity of water deliveries. These expenses are allocated among the customer, capacity, and commodity functions based on the combined percentage allocation of all other classified costs.

Figure 11
Water Production and Electricity Consumption



The cost classification provides a *guideline* for the District in determining the portion of revenue requirement to collect through customer and service charges versus usage charges.

Customer and service charges are fixed as they remain the same each quarter. Usage charges are variable because they depend on the quantity of water consumed.

Fixed Costs. Fixed costs generally consist of costs that a utility incurs to serve customers irrespective of the amount or rate of water they use.² These typically include (1) customer-related

² M1 Manual, pp. 137-138.

costs such as administrative and billing costs associated with meter reading, postage, and billing, and (2) the infrastructure (capacity-related facilities) required to provide service to customers. Customer costs are allocated to customers based on the number of water accounts. Capacity costs are allocated to customers based on the number equivalent meter units, determined by the relative hydraulic capacity of the meter size relative to a one-inch water meter. **Table B-3** shows the calculation of equivalent meter units for GMCS D.

Variable Costs. Variable costs are those that change in total as the volume of water consumption changes, as measured in a specific time period. These include well pumping and distribution electricity costs, and costs related to plant in service, the largest of which is field personnel costs, as well as other costs as determined in the functional allocation. Variable costs are recovered through use charges applied per thousand gallons consumed.

For GMCS D, fixed costs are about 83% of the functional allocation, and 17% of costs are variable. **Table 12** shows allocation of the revenue requirement between fixed charges (customer and service charges), and variable charges (use charges).

Table 12
Water Revenue Requirement Allocation

Collection Method	Functional Allocation		Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Proj. Rev. Requirement			\$320,675	\$338,453	\$358,305	\$445,939	\$463,846
Fixed Charges							
Customer Charges	a	26%	\$83,376	\$87,998	\$93,159	\$115,944	\$120,600
Service Charges	b	57%	\$182,785	\$192,918	\$204,234	\$254,185	\$264,392
Total Fixed Charges	c = a+b		\$266,160	\$280,916	\$297,393	\$370,129	\$384,993
Use Charges	d	17%	\$54,515	\$57,537	\$60,912	\$75,810	\$78,854
Total Use Charges	e = d+c		\$320,675	\$338,453	\$358,305	\$445,939	\$463,846

Source: GMCS D financial data, and HEC 2021 rate study.

rev alloc

3.3 WATER RATE CALCULATIONS

Fixed Charges (Connected and Unconnected Lots)

Fixed charges include two components:

1. Customer charge
2. Service charge

Calculations for both charges are shown in **Table 13**.

Table 13
Fixed Charges (Connected and Unconnected Lots) Calculation

Item	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027	
CUSTOMER CHARGE						
Allocated Costs	\$83,376	\$87,998	\$93,159	\$115,944	\$120,600	
Number of Accounts	421	421	421	421	421	
Cost per Account	\$198.04	\$209.02	\$221.28	\$275.40	\$286.46	
Quarterly Customer Charge	\$49.51	\$52.26	\$55.32	\$68.85	\$71.62	
SERVICE CHARGE						
Allocated Costs	\$182,785	\$192,918	\$204,234	\$254,185	\$264,392	
Unconnected Lots	323	320	318	315	312	
Residential Meter Equiv.	96	99	102	107	112	
Non-Residential Meter Equiv.	45	59	59	59	59	
Total Meter Equivalents	464	478	479	481	483	
Meter Size	Quarterly Service Charge per Meter					
1"	1.00	\$98.40	\$100.98	\$106.68	\$132.22	\$136.96
1.5"	2.00	\$196.80	\$201.96	\$213.36	\$264.44	\$273.92
2"	3.20	\$314.88	\$323.14	\$341.38	\$423.10	\$438.27
3"	6.00	\$590.40	\$605.88	\$640.08	\$793.32	\$821.76
4"	10.00	\$984.00	\$1,009.80	\$1,066.80	\$1,322.20	\$1,369.60
6"	20.00	\$1,968.00	\$2,019.60	\$2,133.60	\$2,644.40	\$2,739.20
8"	32.00	\$3,148.80	\$3,231.36	\$3,413.76	\$4,231.04	\$4,382.72

Source: GMCSO financial and customer data, and HEC 2021 rate study.

fixed calc

The customer charge is calculated as customer charge costs divided by the number of Accounts.

The service charge is calculated as the capacity costs divided by the number of equivalent meter units. The service charge is paid by Living Unit for Residential and Commercial Residential Lots and by meter size for Commercial Lots. All Living Units (with the exception of AQ on a Residential Lot), whether they have a separate water meter or not, are treated as having a one-inch meter. Meter size is an indicator of potential capacity or demand requirement that each customer places on the water system. The ratio at which the meter charge increases is a function of the meter's safe operating capacity as established by the AWWA. These meter ratios are used because a significant portion of a water system's design, and in turn, the utility's operating and capital costs, are related to meeting capacity needs.

For example, a one-inch meter has a maximum flow rate of 50 gpm and a two-inch meter has a maximum flow rate of 160 gpm. The flow rate of a 2.0" meter is 3.2 times that of a one-inch meter therefore the ratio for a 2.0" meter is 3.2. The calculation of equivalent meter units for GMCSO is

provided in **Appendix B Table B-3**. Note, all existing Living Units are on grandfathered lots; therefore, the number of meter equivalents on these lots is equal to the number of meters serving these lots.

Growth assumptions, which form the basis for the number of meter equivalents each year in the five-year projection, are provided in **Appendix B Tables B-4** and **B-5**.

Use Charges

The calculation of use charges is based on allocated cost and projected water demand. Total projected metered water demand by customer type is presented in **Table 14** below. Projected water demand is based on historical demand shown in **Tables B-6** and **B-7** and estimated new demand shown in **Table B-8**. The projection of water demand is based on average water use by customer type for the period 2019-2021.

Table 14
Projected Water Demand by Customer Type

Customer Type	Estimated FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Residential						
Dwelling Unit (R) [1]	5,100,304	5,169,855	5,239,405	5,308,955	5,378,506	5,448,056
Multiple Living Units (CR)	105,148	140,198	175,247	210,297	280,395	350,494
Fractional Ownership (CR)	113,671	113,671	113,671	113,671	113,671	113,671
Total Residential	5,205,453	5,310,052	5,414,652	5,519,252	5,658,901	5,798,550
Non-Residential	2,010,279	2,010,279	2,310,279	2,310,279	2,310,279	2,310,279
Total Water Use	7,329,402	7,434,002	7,838,602	7,943,202	8,082,851	8,222,500

Source: GMCSD historical water consumption records and HEC 2021 rate study.

grow use

[1] May have a guest house.

The rate study examined different use charges by customer type (Residential and Non-Residential); however, because the development is still in its infancy and true peaking factors by customer type are not well established, this idea was not pursued. The calculated cost per thousand gallons shown in **Table 15** would apply to all users.

The rate study also looked at the potential of implementing a seasonal water rate structure with on-peak charges during the months of July through September, and off-peak charges during the months of October through June. The calculated seasonal rates are also shown in **Table 15**. Due to the relative difference in cost being very small between the peak and off-peak seasons, this rate structure is not recommended. A supporting table for the ratio of peak to off-peak costs is provided in **Appendix B Table B-9**.

Table 15
Calculated Use Charges

Item		Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Allocated Cost		\$54,515	\$57,537	\$60,912	\$75,810	\$78,854
ALTERNATIVE 1A: UNIFORM CHARGE						
Water Use All Customer Groups		7,434,002	7,838,602	7,943,202	8,082,851	8,222,500
Cost per Thousand Gallons		\$7.33	\$7.34	\$7.67	\$9.38	\$9.59
ALTERNATIVE 2: ON-PEAK, OFF-PEAK CHARGES						
All Customer Groups						
Off-Peak (Oct-Jun)	61%	4,524,921	4,771,193	4,834,860	4,919,862	5,004,864
Peak (Jul-Sep)	39%	2,909,081	3,067,409	3,108,341	3,162,989	3,217,636
Total Water Use		7,434,002	7,838,602	7,943,202	8,082,851	8,222,500
Off-Peak Cost per 1,000 Gall.		\$7.21	\$7.21	\$7.54	\$9.22	\$9.42
Peak Cost per 1,000 Gall.	1.045	\$7.53	\$7.54	\$7.87	\$9.63	\$9.85

Source: GMCSO financial and water meter data, and HEC 2021 rate study.

use calc

New Water Rate Schedule

The new water rate schedule includes the fixed monthly customer and service charges and variable use charges per thousand gallons. Tiered water rates that are currently in place were removed because the District does not experience greater production costs at higher levels of water consumption. In 2015, the San Juan Capistrano decision reaffirmed that water rates must be proportional to the costs of service received.

The calculated water rates schedule for the next five fiscal years is provided in **Table 16** on page 30.

Exemptions. There are two exemptions applicable to Residential and Commercial Residential water billing as follows:

- Existing Residential and Commercial Residential Lots as of June 1, 2022 are grandfathered in and will continue to pay charges for a single LU per Lot, regardless of the number of LUs associated with the Lot. Upon sale or transfer of ownership, these Accounts will pay per LU, except that Additional Quarters on Residential Lots will not be charged as a LU.
- Additional Quarters in newly constructed Dwelling Units on Residential Lots will not be charged as a LU.

Table 16
Summary of Calculated Water Rates

Charge Type	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
CONNECTED CUSTOMERS					
	<i>per Customer Account, per Quarter</i>				
Customer Charge	\$49.51	\$52.26	\$55.32	\$68.85	\$71.62
Service Charges	<i>Per Living Unit & Non-Residential Meter, per Quarter [1]</i>				
Per Living Unit [2]	\$98.40	\$100.98	\$106.68	\$132.22	\$136.96
Per Non-Residential Meter					
1"	\$98.40	\$100.98	\$106.68	\$132.22	\$136.96
1.5"	\$196.80	\$201.96	\$213.36	\$264.44	\$273.92
2"	\$314.88	\$323.14	\$341.38	\$423.10	\$438.27
3"	\$590.40	\$605.88	\$640.08	\$793.32	\$821.76
4"	\$984.00	\$1,009.80	\$1,066.80	\$1,322.20	\$1,369.60
6"	\$1,968.00	\$2,019.60	\$2,133.60	\$2,644.40	\$2,739.20
8"	\$3,148.80	\$3,231.36	\$3,413.76	\$4,231.04	\$4,382.72
	<i>Per Thousand Gallons</i>				
Use Charge	\$7.33	\$7.34	\$7.67	\$9.38	\$9.59
UNCONNECTED CUSTOMERS					
	<i>Per Undeveloped Lot, per Quarter</i>				
Customer & Service Charge	\$147.91	\$153.24	\$162.00	\$201.07	\$208.58

Source: GMCSO financial and customer data, and HEC 2021 rate study.

[1] All water accounts with more than one Living Unit as of 6/1/2022 will only pay for one Living Unit until the property sells or is transferred to new ownership.

[2] Residential Lots with Additional Quarters pay for a maximum of two Living Units (Dwelling Unit plus Guest House). Commercial Residential Lots pay for every Living Unit.

In summary, the proposed rate structure is applied to three customer types as follows:

Customer Type 1. Residential and Residential Commercial Lots

4. Customer charge: A flat quarterly fee billed to the Account Holder.
5. Service charge: A flat quarterly fee billed per Living Unit (LU). All Living Units, except for Additional Quarters on Residential Lots, pay the quarterly charge for a 1" meter, regardless whether the LU has a separate water meter or not. Meters that do not service LUs exclusively are billed according to water meter size.
6. Water usage cost: A fee charged per thousand gallons of water recorded through each metered connection *every three months*.

Customer Type 2. Commercial Lots

4. Customer charge: A flat quarterly fee billed to the Account Holder.
5. Service charge: A flat quarterly fee billed by water meter size.
6. Water usage cost: A fee charged per thousand gallons of water recorded through each metered connection *every three months*.

Customer Type 3. Unconnected Lots

3. Customer charge: A flat quarterly fee billed to the Account Holder.
4. Service charge: A flat quarterly fee for a 1" water meter.

Unconnected Lots only pay customer and service charges because they are not yet using the water system. They still incur customer-related costs and costs to maintain capacity in the water system, which are recouped in the service charge.

3.4 WATER BILL IMPACT

Appendix Table B-10 provides a comparison of water bills at different annual water usage levels. The table shows that a Residential Lot would have to use more than 40,000 gallons per year before its water bill increases over its current level.

Figure 12 on the next page illustrates the difference in total annual water costs for homes in Gold Mountain between the costs under the current rates and the costs under the calculated new July 1, 2022 rates (fiscal year 2023 rates). The average monthly water use by all Residential Lots in Gold Mountain in the period 2019-2021 was 5,800 gallons. The average monthly water use by year-round occupied Residential Lots during the same period was 6,100 gallons. A typical Residential Lot would see an annual increase of about \$180 per year (about \$15 per month).

Figure 12
Difference in Annual Water Bill for a Residential Lot using FY2023 Rates

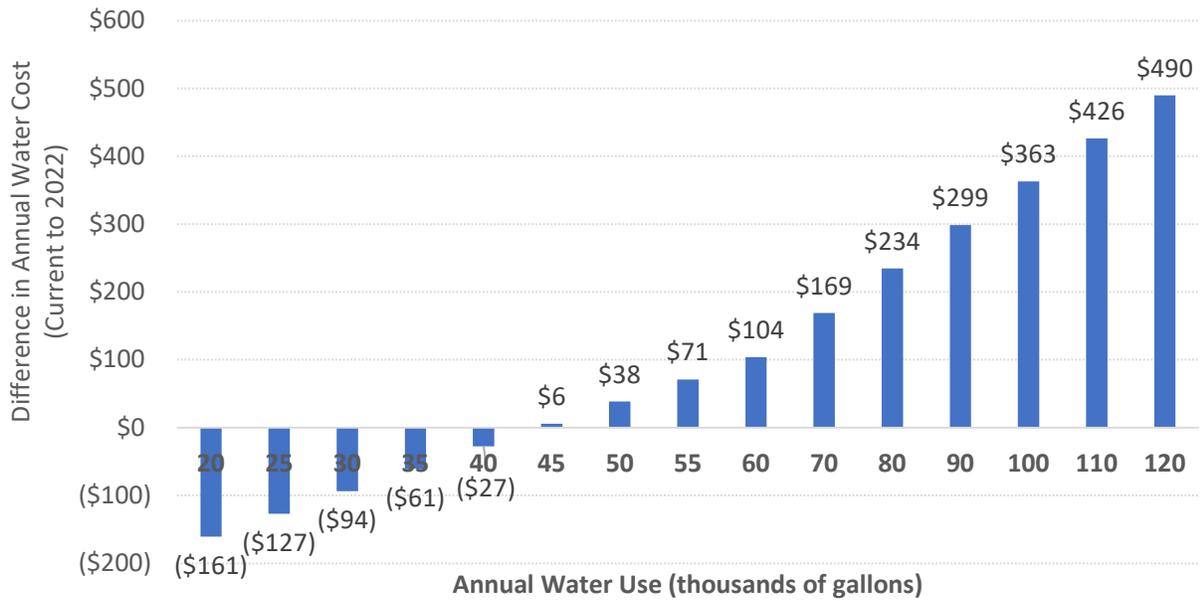
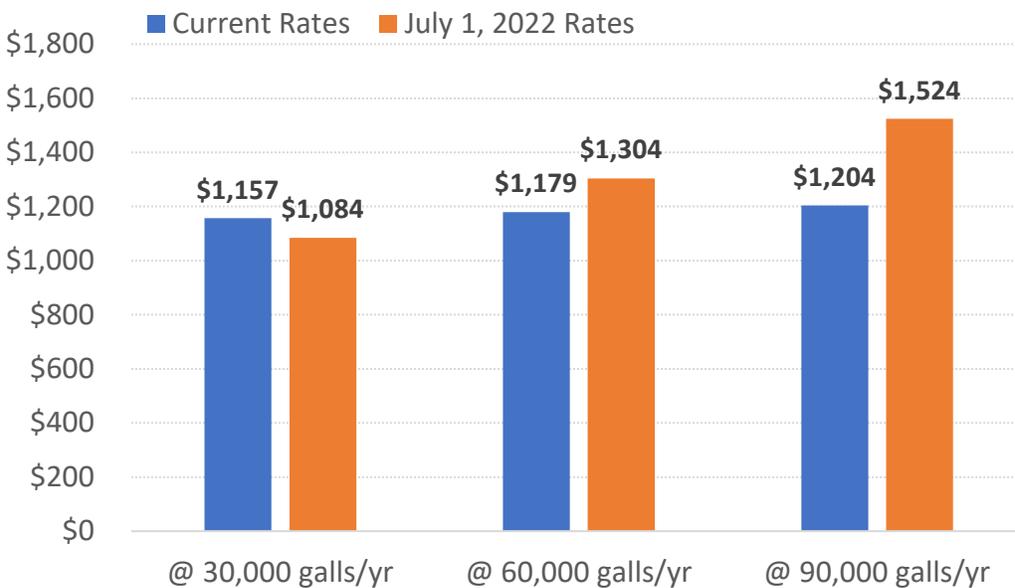


Figure 13 show the impact of first-year calculated rates on water bills at different usage levels.

Figure 13
Water Bills at Different Annual Usage Levels



Section 4: SEWER FEE CALCULATIONS

The sewer rate study was prepared using the principles established by the WEF Manual of Practice No. 27 and guidelines prepared by the California SWRCB.

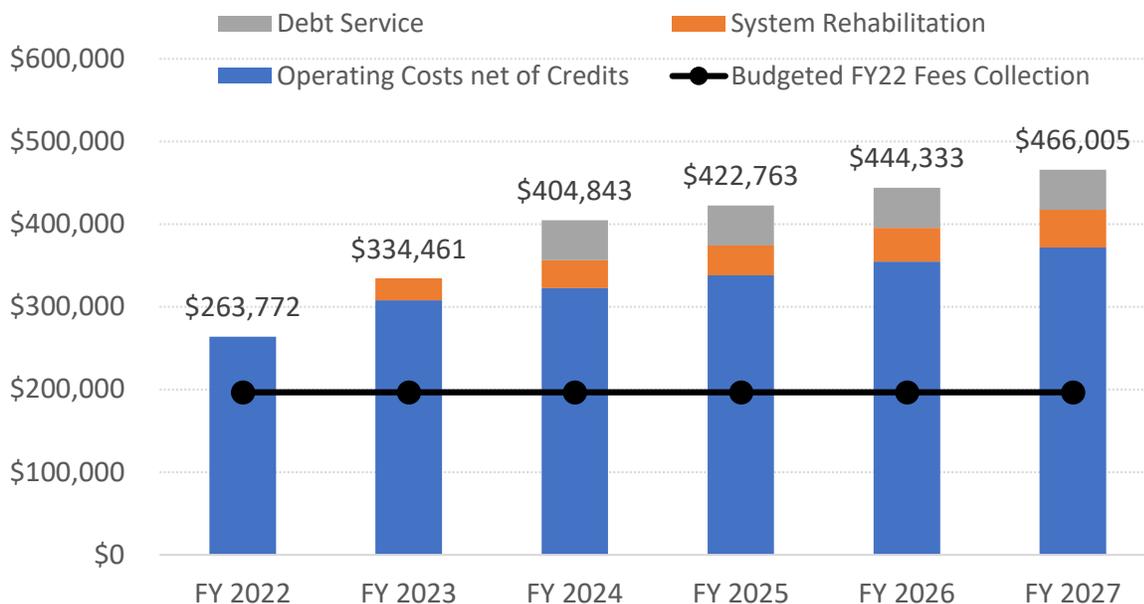
4.1 SEWER REVENUE REQUIREMENT

As previously described for the water fees calculations, the revenue requirement describes the amount of money that must be raised through collection of quarterly fees (or “rates”). Components of the sewer revenue requirement include:

- Operating Expenses
- System Rehabilitation
- Debt Service

The projected revenue requirement through fiscal year 2027 for sewer is presented in **Table 17**. The total revenue requirement is projected to increase from \$263,800 in fiscal year 2022 to \$466,000 in fiscal year 2027. If the District did not construct the water reclamation plant in the next five years, or was able to find grant-funding for the project, the revenue requirement would increase to \$417,500 in fiscal year 2027, as the annual debt service beginning in the second year of the projection is estimated at \$48,500 for this project. Components of the projected revenue requirement are shown in **Figure 14**. The figure shows current fee and assessment collection is insufficient to fund sewer operations costs.

Figure 14
Components of Sewer Revenue Requirement



As for water, system rehabilitation costs are included at 75% of estimated annual depreciation. Assumed sewer debt service includes a loan from the SWRCB for the package water reclamation plant as previously shown in **Table 8**. Credited against the described costs are non-operating credits; namely, administrative fees, interest and late charges (none budgeted for fiscal year 2022), interest income, and some smaller miscellaneous revenues.

Table 17
Projected Sewer Revenue Requirement

Capital Improvement Project	Inflation Factor	Budgeted FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Operating Costs							
Personnel [1]	5.5%	\$184,151	\$225,930	\$238,360	\$251,470	\$265,300	\$279,890
Supplies and Services	3.0%	\$36,862	\$37,970	\$39,110	\$40,280	\$41,490	\$42,730
Sewer System Maintenance	3.0%	\$23,250	\$23,950	\$24,670	\$25,410	\$26,170	\$26,960
Leachfield Electricity	3.0%	\$1,000	\$1,030	\$1,060	\$1,090	\$1,120	\$1,150
General Maintenance	2.5%	\$11,500	\$11,790	\$12,080	\$12,380	\$12,690	\$13,010
Engineering Studies	2.0%	\$11,250	\$11,480	\$11,710	\$11,940	\$12,180	\$12,420
Total Operating Costs		\$268,012	\$312,150	\$326,990	\$342,570	\$358,950	\$376,160
Capital Costs							
System Rehabilitation	Table 10	\$0	\$26,551	\$33,583	\$35,923	\$41,113	\$45,575
Debt Service	Table 8	\$0	\$0	\$48,510	\$48,510	\$48,510	\$48,510
Total Capital Costs		\$0	\$26,551	\$82,093	\$84,433	\$89,623	\$94,085
Total Costs		\$268,012	\$338,701	\$409,083	\$427,003	\$448,573	\$470,245
Credits							
Administrative Fees	2%	\$0	\$0	\$0	\$0	\$0	\$0
Interest and Late Charges	proportional	\$0	\$0	\$0	\$0	\$0	\$0
Other	constant	\$2,650	\$2,650	\$2,650	\$2,650	\$2,650	\$2,650
Interest Income	constant	\$1,590	\$1,590	\$1,590	\$1,590	\$1,590	\$1,590
Total Credits		\$4,240	\$4,240	\$4,240	\$4,240	\$4,240	\$4,240
Revenue Requirement		\$263,772	\$334,461	\$404,843	\$422,763	\$444,333	\$466,005
Budgeted FY22 Fees Collection		\$196,492	\$196,492	\$196,492	\$196,492	\$196,492	\$196,492
Increase in Fees Needed			\$137,969	\$208,350	\$226,270	\$247,840	\$269,513

Source: GMCSD financials and HEC, Oct. 2021.

req sewer

[1] Includes a full-time General Manager and an additional part-time office support position.

4.2 COST CLASSIFICATION AND ALLOCATION

Cost classification and functional allocation for the sewer system is provided in **Appendix C Table C-1**. Budgeted fiscal year 2022 sewer fund expenditures were allocated to the different functions of sewer service based on one of four methodologies, as described below.

1. **Plant in Service.** Plant in service allocation is shown in **Table C-2**. Plant in service costs include the original cost of current sewer system assets. Total cost is allocated 5% to customers, 73% to capacity, and 22% to commodity costs.

2. **Utilities.** Utilities costs (electricity), septic tank pumping and maintenance costs are allocated 100% to use because these costs are directly related to the quantity of effluent generated.
3. **Customers.** Costs such as administrative staff costs, office supplies, telephones, and water membership/dues are allocated 100% to customer costs. These costs are not affected by the amount of capacity available, or the quantity of effluent disposed of.
4. **Average of Classified Costs.** Some expenses are allocated to multiple functions of sewer service because they do not directly relate to customer functions, capacity of the sewer system, or quantity of effluent disposed of. These expenses are allocated among the customer, capacity, and flow functions based on the combined percentage allocation of all other classified costs.

4.3 SEWER FEE CALCULATIONS

As a result of the functional cost allocation, the revenue requirement is split 30% to customer-related charges, 49% to capacity-related charges, and 22% to flow-related charges. Customer costs are charged by Account and the capacity-related costs and flow-related costs are charged by EDU. Unconnected Lots are not charged the flow-related costs as they are not generating any effluent to be disposed. The calculation of annual and quarterly fees per Account and per EDU are shown in **Table 18**.

Customer-related costs. The customer-related costs are divided by the number of Accounts to determine the annual charge per account.

Service-related costs. The allocated service charge costs are divided by the number of total EDUs from Connected Lots and Unconnected Lots to determine the annual service charge per EDU.

Flow-related costs. The allocated flow charge costs are divided by the number of Connected Lot EDUs to determine the annual service charge per Connected EDU.

The calculation of EDUs is provided in **Table 19** and supported by **Appendix C Tables C-1 through C-3**. Residential and Commercial Residential Lots are assigned one EDU per Lot until they are sold, or ownership is transferred. All new Living Units on Residential and Commercial Residential Lots (and those that are sold, or ownership is transferred) are assigned one EDU, with the exception of Residential Lots Dwelling Units with Additional Quarters, which are assigned one EDU for the Dwelling Unit and, if applicable, one EDU for a Guest House. The number of Non-Residential EDUs has been calculated based on the wintertime water use of Residential Lots with full-time occupancy. These Residential Lots have an estimated wastewater generation of about 115 gallons per day. Existing Non-Residential Accounts have been assigned EDUs based on their historical wintertime water use compared to a fully occupied Residential Lot. Any new Non-Residential building would be assigned EDUs based on their projected number of EDUs. Once their wintertime water use has been established (2 winter periods), their quarterly billing will be adjusted to reflect actual indoor water use / effluent generation.

Table 18
Calculated Sewer Rate Components

Item	Functional Allocation	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Projected Revenue Requirement		\$334,461	\$404,843	\$422,763	\$444,333	\$466,005
Customer Charge	30%	\$99,017	\$119,854	\$125,159	\$131,545	\$137,961
Service Charge	49%	\$162,947	\$197,236	\$205,967	\$216,475	\$227,034
Flow Charge	22%	\$72,497	\$87,753	\$91,637	\$96,312	\$101,010
Projected Number of Accounts		421	421	421	421	421
Projected Number of EDUs						
Service Charge		467	476	477	479	481
Flow Charge		144	156	159	164	169
Customer Charge per Account		\$235.20	\$284.69	\$297.29	\$312.46	\$327.70
Quarterly Rate per Account		\$58.80	\$71.17	\$74.32	\$78.11	\$81.92
Service Charge per EDU		\$349.30	\$414.80	\$432.25	\$452.40	\$472.50
Quarterly Service Rate per EDU		\$87.32	\$103.70	\$108.06	\$113.10	\$118.12
Flow Charge per Connected EDU		\$505.20	\$564.32	\$578.15	\$589.07	\$599.47
Quarterly Flow Rate per EDU		\$126.30	\$141.08	\$144.54	\$147.27	\$149.87

Source: GMCS D Master Plan Update, July 2017, Shaw Engineering, and HEC 2021 rate study.

ww calc

Table 19
Projected Number of Sewer EDUs by Customer Type

Customer Type	Budgeted FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Residential and Commercial Residential Lots						
Dwelling Unit (R)	86	87	88	89	90	91
Multiple Living Units (CR)	3	5	7	9	13	17
Fractional Ownership (CR)	4	4	4	4	4	4
Cumulative Residential EDUs	93	96	99	102	107	112
Non-Residential Lots						
Inn at Nakoma	15	15	15	15	15	15
Altitude Recreation Center	9	9	9	9	9	9
Golf Course	24	24	24	24	24	24
Nakoma Market	0	0	9	9	9	9
Est. New Non-Residential EDUs	48	48	57	57	57	57
Cumulative Total EDUs - Connected Lots	141	144	156	159	164	169
Cumulative Unconnected Lots EDUs	325	323	320	318	315	312
Cumulative EDUs with Unconnected Lots	466	467	476	477	479	481

Source: GMCS D Master Plan Update, July 2017, Shaw Engineering, and HEC 2021 rate study.

ww edus

In summary, the proposed rate structure is applied to three customer types as follows:

Customer Type 1. Residential and Residential Commercial Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed per EDU. Each Living Units counts as one EDU with the exception of Additional Quarters on a Residential Lot, which shall not be counted. Residential and Commercial Residential Lots as of June 1, 2022 will be billed one (1) LU until the lot is sold or transferred to new ownership.
3. Flow charge: A flat quarterly fee billed per EDU. Each Living Unit counts as one EDU.

Customer Type 2. Commercial Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed per EDU. The District assigns the number of EDUs to each Commercial Lot based on historical wintertime water use.
3. Flow charge: A flat quarterly fee billed per EDU. The District assigns the number of EDUs to each Commercial Lot based on historical wintertime water use.

For new Non-Residential Accounts, Commercial Lots shall be assigned a number of EDUs based on the Project Engineer’s estimates of wintertime water use. Once actual water use has been established (2 winter periods), the District will adjust the number of EDUs assigned to each Commercial Lot for quarterly billing purposes.

Customer Type 3. Unconnected Lots

1. Customer charge: A flat quarterly fee billed to the Account Holder.
2. Service charge: A flat quarterly fee billed per EDU. Every Unconnected Lot is assigned one EDU.

Unconnected Lots only pay customer and service charges because they are not yet using the sewer system. They still incur customer-related costs and costs to maintain capacity in the sewer system, which are recouped in the service charge.

Exemptions. There are two exemptions applicable to Residential and Commercial Residential sewer billing as follows:

- Existing Residential and Commercial Residential Lots as of June 1, 2022 are grandfathered in and will continue to pay charges for a single EDU per Lot, regardless of the number of EDUs associated with the Lot. Upon sale or transfer of ownership, these Accounts will pay per EDU, except that Additional Quarters on Residential Lots will not be charged an EDU.
- Additional Quarters in newly constructed Dwelling Units on Residential Lots will not be charged an EDU.

The calculated sewer rate schedule is shown in **Table 20**.

Table 20
Summary of Calculated Sewer Rates

Customer Type	EDUs per Account	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Residential and Commercial Residential Lots			<i>Quarterly Rate</i>			
Per EDU [1], [2]		\$272.42	\$315.95	\$326.92	\$338.48	\$349.91
Non-Residential Lots						
Inn at Nakoma	14.5	\$3,156.37	\$3,620.49	\$3,737.02	\$3,853.44	\$3,967.78
Altitude Recreation Center	9.0	\$1,981.43	\$2,274.20	\$2,347.72	\$2,421.42	\$2,493.84
Golf Course	24.0	\$5,185.81	\$5,945.91	\$6,136.72	\$6,326.93	\$6,513.69
Nakoma Market [3]	9.0	\$1,981.43	\$2,274.20	\$2,347.72	\$2,421.42	\$2,493.84
Unconnected Lots						
Each Lot	1.0	\$146.12	\$174.87	\$182.38	\$191.22	\$200.05

Source: GMCSD Master Plan Update, July 2017, Shaw Engineering, and HEC 2021 rate study.

sewer

- [1] Each Living Unit counts as one EDU. All sewer accounts with more than one Living Unit as of 6/1/2022 will only pay for one Living Unit until the property sells or is transferred to new ownership.
- [2] Residential Lots with Additional Quarters pay for a maximum of two Living Units (Dwelling Unit plus Guest House). Commercial Residential Lots pay for every Living Unit.
- [3] Planning documents estimate Nakoma Market will have 9 EDUs. After two winter periods of water use the District will determine the actual number of EDUs and adjust for quarterly billing if needed.

Section 5: DISTRICT AND CUSTOMER IMPACTS

5.1 DISTRICT FINANCIAL IMPACTS

This section of the report describes impacts of the proposed new rates on the District and its customers. The projected cash flow for all water and sewer funds combined is presented in **Table 21**, and the cash flow by fund is presented in **Table 22**.

Table 21
Estimated District Cash Balances

Revenues and Expenses	Budgeted FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Revenues						
Water User Fees	\$102,949	\$320,675	\$338,453	\$358,305	\$445,939	\$463,846
Sewer User Fees	\$116,092	\$334,461	\$404,843	\$422,763	\$444,333	\$466,005
Water Assessments	\$156,070	\$0	\$0	\$0	\$0	\$0
Sewer Assessments	\$80,400	\$0	\$0	\$0	\$0	\$0
Administrative Fees	\$24,490	\$24,980	\$25,480	\$25,990	\$26,510	\$27,050
Interest and Late Charges	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000
Interest Income	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Total Revenues	\$518,001	\$718,116	\$806,775	\$845,058	\$954,781	\$994,901
Operating Expenses						
Water Expenses	\$278,762	\$323,270	\$338,510	\$354,520	\$371,330	\$388,990
Sewer Expenses	\$268,012	\$312,150	\$326,990	\$342,570	\$358,950	\$376,160
Total Operating Expenses	\$546,775	\$635,420	\$665,500	\$697,090	\$730,280	\$765,150
Net Operating Income	(\$28,774)	\$82,696	\$141,275	\$147,968	\$224,501	\$229,751
Debt Service	\$0	\$0	\$48,510	\$48,510	\$105,160	\$105,160
Debt Service Coverage	-	-	2.91	3.05	2.13	2.18
Net Revenue	(\$28,774)	\$82,696	\$92,765	\$99,458	\$119,341	\$124,591
Beginning Cash	\$666,363	\$731,218	\$522,157	\$799,890	\$736,591	\$522,934
Net Revenue	(\$28,774)	\$82,696	\$92,765	\$99,458	\$119,341	\$124,591
Water Capacity Fees	\$23,760	\$53,149	\$193,462	\$53,149	\$85,038	\$85,038
Wastewater Capacity Fees	\$12,240	\$17,804	\$71,216	\$17,804	\$29,673	\$29,673
Completion of Grant Project	(\$242,661)	\$0	\$0	\$0	\$0	\$0
Capital Fund Interest	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290
Plumas County Grant	\$84,000	\$0	\$0	\$0	\$0	\$0
Transfer from Fire Fund	\$260,000	\$0	\$0	\$0	\$0	\$0
Rate Study	(\$45,000)	\$0	\$0	\$0	\$0	\$0
Water CIP [1]	\$0	(\$156,000)	(\$81,000)	(\$157,000)	(\$276,000)	(\$84,000)
Sewer CIP [1]	\$0	(\$208,000)	\$0	(\$78,000)	(\$173,000)	(\$119,000)
Ending Cash	\$731,218	\$522,157	\$799,890	\$736,591	\$522,934	\$560,526

Source: GMCSD financial information and HEC 2021 rate study.

flow

[1] Excludes debt-funded improvements.

Table 22
Estimated District Cash Balances by Fund

Revenues and Expenses	Budgeted FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
OPERATING						
Water						
Beginning Balance	\$25,000	\$23,230	\$26,939	\$28,209	\$29,543	\$30,944
Revenues	\$317,269	\$379,415	\$397,693	\$418,055	\$506,209	\$524,656
Op. Expenses	(\$278,762)	(\$323,270)	(\$338,510)	(\$354,520)	(\$371,330)	(\$388,990)
Debt Service	\$0	\$0	\$0	\$0	(\$56,650)	(\$56,650)
Estimated Ending Water Ops.	\$63,507	\$79,375	\$86,122	\$91,744	\$107,772	\$109,961
<i>Min. Balance 30 days</i>	<i>\$23,230</i>	<i>\$26,939</i>	<i>\$28,209</i>	<i>\$29,543</i>	<i>\$30,944</i>	<i>\$32,416</i>
Transfer to Operating Reserve	(\$40,277)	(\$52,436)	(\$57,913)	(\$62,201)	(\$76,828)	(\$77,545)
Estimated Ending Balance	\$23,230	\$26,939	\$28,209	\$29,543	\$30,944	\$32,416
Sewer						
Beginning Balance	\$25,000	(\$42,281)	(\$15,729)	\$17,853	\$28,548	\$29,913
Revenues	\$200,732	\$338,701	\$409,083	\$427,003	\$448,573	\$470,245
Op. Expenses	(\$268,012)	(\$312,150)	(\$326,990)	(\$342,570)	(\$358,950)	(\$376,160)
Debt Service	\$0	\$0	(\$48,510)	(\$48,510)	(\$48,510)	(\$48,510)
Estimated Ending Sewer Ops.	(\$42,281)	(\$15,729)	\$17,853	\$53,776	\$69,660	\$75,488
<i>Min. Balance 30 days</i>	<i>\$22,334</i>	<i>\$26,013</i>	<i>\$27,249</i>	<i>\$28,548</i>	<i>\$29,913</i>	<i>\$31,347</i>
Transfer to Operating Reserve	\$0	\$0	\$0	(\$25,228)	(\$39,748)	(\$44,141)
Estimated Ending Balance	(\$42,281)	(\$15,729)	\$17,853	\$28,548	\$29,913	\$31,347
OPERATING RESERVE						
Water						
Beginning Balance	\$125,363	\$143,140	\$135,576	\$133,488	\$135,689	\$132,517
Rate Study 50%	(\$22,500)	\$0	\$0	\$0	\$0	\$0
Transfer from Operating	\$40,277	\$52,436	\$57,913	\$62,201	\$76,828	\$77,545
Transfer to Capital Fund	\$0	(\$60,000)	(\$60,000)	(\$60,000)	(\$80,000)	(\$80,000)
Est. Ending Op. Reserve Water	\$143,140	\$135,576	\$133,488	\$135,689	\$132,517	\$130,062
Sewer						
Beginning Balance	\$141,367	\$118,867	\$88,867	\$53,867	\$44,095	\$43,842
Rate Study 50%	(\$22,500)	\$0	\$0	\$0	\$0	\$0
Transfer from Operating	\$0	\$0	\$0	\$25,228	\$39,748	\$44,141
Transfer to Capital Fund	\$0	(\$30,000)	(\$35,000)	(\$35,000)	(\$40,000)	(\$45,000)
Est. Ending Op. Reserve Sewer	\$118,867	\$88,867	\$53,867	\$44,095	\$43,842	\$42,983
CAPACITY FEES (NEW)						
Beginning Balance	\$0	\$36,000	\$56,953	\$81,631	\$102,583	\$137,295
Water Capacity Fees	\$23,760	\$53,149	\$193,462	\$53,149	\$85,038	\$85,038
Sewer Capacity Fees	\$12,240	\$17,804	\$71,216	\$17,804	\$29,673	\$29,673
Transfer to Capital Fund	\$0	(\$50,000)	(\$240,000)	(\$50,000)	(\$80,000)	(\$80,000)
Est. Ending Capacity Fees Fund	\$36,000	\$56,953	\$81,631	\$102,583	\$137,295	\$172,006
CAPITAL FUND						
Beginning Balance	\$172,471	\$517,761	\$295,051	\$550,341	\$461,631	\$213,921
Interest Income	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290
Plumas County Grant	\$84,000	\$0	\$0	\$0	\$0	\$0
Transfer from Water Op. Reserve	\$0	\$60,000	\$60,000	\$60,000	\$80,000	\$80,000
Transfer from Sewer Op. Reserve	\$0	\$30,000	\$35,000	\$35,000	\$40,000	\$45,000
Transfer from Capacity Fees Fund	\$0	\$50,000	\$240,000	\$50,000	\$80,000	\$80,000
Transfer from Fire Fund	\$260,000	\$0	\$0	\$0	\$0	\$0
Water Capital Improvements [1]	\$0	(\$156,000)	(\$81,000)	(\$157,000)	(\$276,000)	(\$84,000)
Sewer Capital Improvements [1]	\$0	(\$208,000)	\$0	(\$78,000)	(\$173,000)	(\$119,000)
Est. Ending Capital Fund	\$517,761	\$295,051	\$550,341	\$461,631	\$213,921	\$217,211
Total Utilities Funds Beginning	\$489,200	\$796,717	\$587,656	\$865,389	\$802,089	\$588,432
Total Utilities Funds End	\$796,717	\$587,656	\$865,389	\$802,089	\$588,432	\$626,025
FIRE FUND						
Beginning Balance	\$324,405	\$64,405	\$0	\$0	\$0	\$0
Revenues (assessments & interest)	\$116,000	\$116,000	assumed consolidated into new entity			
Expenses	(\$86,000)	(\$86,000)	assumed consolidated into new entity			
Transfer to Enterprise Fund Capital [2]	(\$260,000)	\$0				
Transfer to New Entity [3]	(\$30,000)	(\$94,405)	assumed consolidated into new entity			
Est. Ending Fire Fund	\$64,405	\$0	\$0	\$0	\$0	\$0

Source: GMCSD financial information and HEC 2021 rate study.

flow fund

[1] Excludes debt-funded improvements.

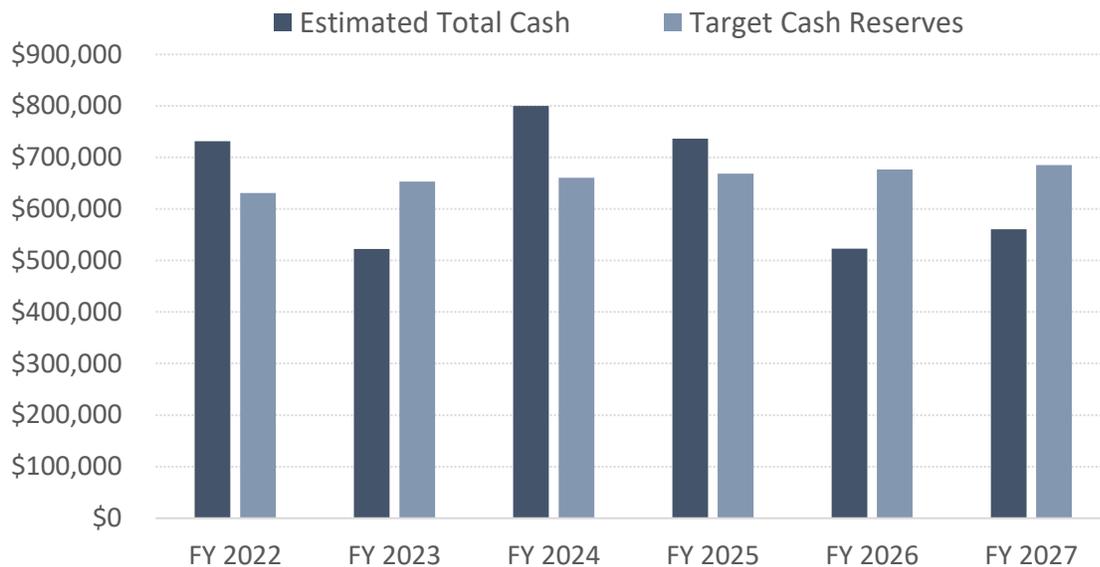
[2] Assigned to the new CSD office building.

[3] \$30,000 for annexation costs; all remaining cash and assets will be transferred to the new fire service entity.

Cash collected to build up one year’s debt service for the two loans will be Restricted.

Throughout the rate study timeline, with implementation of the proposed rates, it is projected that revenue sufficiency will be achieved to cover all projected costs and that the District will be at or close to target levels of operating and capital reserves. The targeted cash balances for the District is three months of operating expenses, and 50% of accumulated depreciation in the capital fund. The projected District cash balance compared with target reserves is illustrated in **Figure 15**.

Figure 15
Projected Cash Balances and Target Cash Balances



5.2 CUSTOMER BILL IMPACTS

Residential Lots

Under the new rate structure, customers will be billed for water use every quarter rather than every year. The quarterly bills will fluctuate because most homes use a lot more water during the summer months. July and October bills will be greater than January and April bills. A comparison of water bills under the current rate schedule and under the calculated 2022 rate schedule is shown in **Table 23** on the next page. In the first year of the rate adjustment, a home that uses 72,000 gallons per year (which averages 6,000 gallons per month), would pay \$182.17 more (\$15.18 per month more).

For water and sewer combined, a Residential Lot with one LU (could include Additional Quarters, but no Guest House) using 72,000 gallons per year would see their annual bill increase from \$1,943 to \$2,209, as shown in **Figure 16**.

Table 23
Example Quarterly Water Bills

Revenue Source	Current		1-Jul-22				
	per Quarter	Annual	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Annual
Customer	\$0.00	\$0.00	\$49.51	\$49.51	\$49.51	\$49.51	\$198.04
Service	\$221.84	\$887.36	\$98.40	\$98.40	\$98.40	\$98.40	\$393.60
Total Fixed	\$221.84	\$887.36	\$147.91	\$147.91	\$147.91	\$147.91	\$591.64
<i>Thousands of gallons</i>		72	27	13	10	22	72
Use Charge	\$12.53	\$50.10	\$198.00	\$95.33	\$73.33	\$161.33	\$527.99
Total Water Bill	\$234.37	\$937.46	\$345.91	\$243.24	\$221.24	\$309.24	\$1,119.63

Source: GMCS D existing rate schedule and HEC 2021 rate study.

sf impact

Figure 16
Utilities Bill Impact for a Typical Home

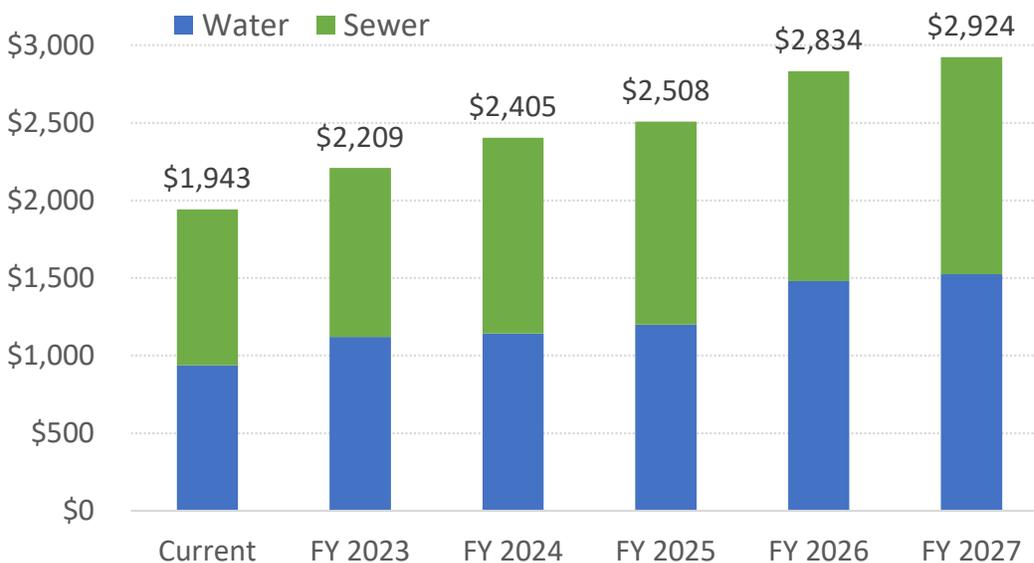
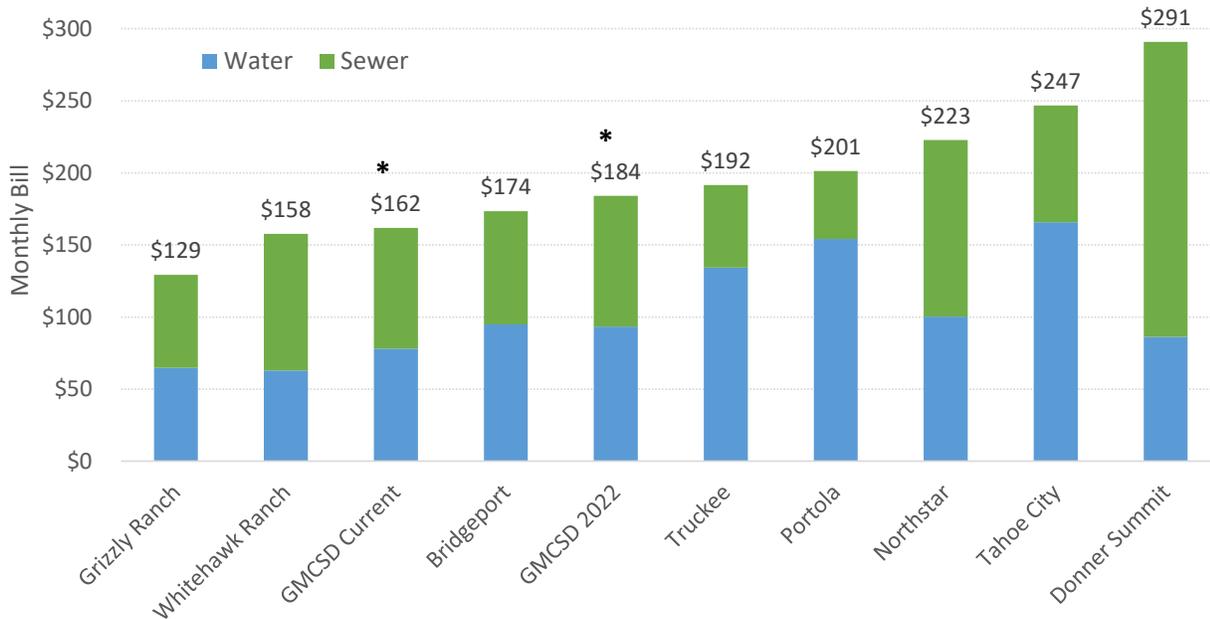


Figure 17 compares the current and 2022 projected GMCS D utility bills on a monthly basis³ with those of other regional communities and other comparable communities. In a month in which the typical home with a one-inch water uses 6,000 gallons, the total utilities bill would increase from \$162 to \$184 (an increase of \$22). Such a home in Portola would pay \$201, and \$158 in Whitehawk Ranch. GMCS D customer bills would stay within the middle of the range of comparable communities.

³ GMCS D bills quarterly but most of the service providers bill monthly; therefore, it is better to make a monthly comparison.

Figure 17
Utilities Bill Comparison for a Typical Residence



Unconnected Lots

The annual utilities bill impact on Unconnected Lots is shown in **Figure 18** below and in **Table 24**. Currently, Unconnected Lots pay “standby fees” which are assessments. Assessments will discontinue June 30, 2022 and Unconnected Lots will pay rates beginning July 1, 2022 to provide an equitable distribution of costs to all customers.

Figure 18
Unconnected Lot Calculated Annual Charges

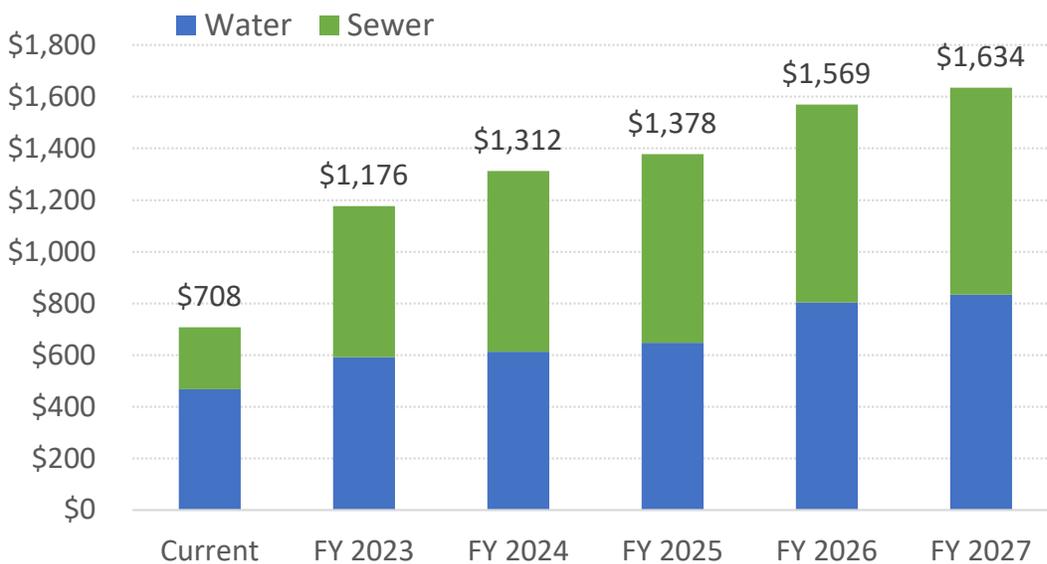


Table 24
Unconnected Lots Bill Impact

Water and Sewer	Current Assessments	FY 2023 Rates	FY 2024 Rates	FY 2025 Rates	FY 2026 Rates	FY 2027 Rates
Water	Annual			Annual		
Customer Charge		\$198.04	\$209.02	\$221.28	\$275.40	\$286.46
Service Charge		\$393.60	\$403.92	\$426.72	\$528.88	\$547.84
Total Water	\$467.28	\$591.64	\$612.94	\$648.00	\$804.28	\$834.30
Sewer						
Customer Charge		\$235.20	\$284.69	\$297.29	\$312.46	\$327.70
Service Charge		\$349.30	\$414.80	\$432.25	\$452.40	\$472.50
Total Sewer	\$240.72	\$584.49	\$699.49	\$729.54	\$764.86	\$800.19
Annual Charges per Lot	\$708.00	\$1,176.13	\$1,312.43	\$1,377.54	\$1,569.14	\$1,634.49

Source: GMCSD HEC 2021 rate study.

standby bill

Commercial Lots

The estimated annual change in utility bills in 2022 for Non-Residential Accounts is shown in **Table 25**. The estimate is based on fiscal year 2021 water use. Sewer costs increase for all three of the Non-Residential Accounts. Water costs increase for the Nakoma Lodge and Golf Course, but decrease for the Altitude Recreation Center.

Table 25
Non-Residential Accounts Estimated Year 1 Bill Impact

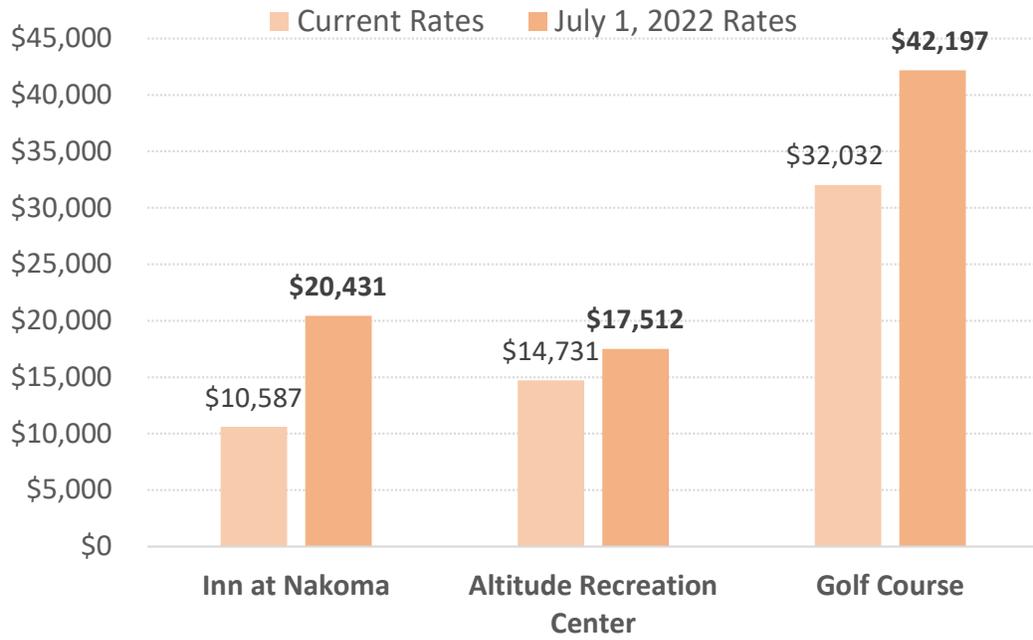
Nonresidential Account	Current		1-Jul-22		Change	
	Water *	Sewer	Water *	Sewer	Water *	Sewer
	<i>* Based on fiscal year 2021 water use.</i>					
Inn at Nakoma	\$6,237	\$4,350	\$7,805	\$12,625	\$1,568	\$8,275
Altitude Recreation Center	\$12,698	\$2,033	\$9,586	\$7,926	(\$3,112)	\$5,893
Golf Course	\$18,074	\$13,958	\$21,454	\$20,743	\$3,381	\$6,785

Source: GMCSD and HEC 2021 rate study.

nr impact

The estimated total annual impact to each Non-Residential Account is illustrated in **Figure 19**.

Figure 19
Non-Residential Accounts Annual Bill Impact – Year 1



APPENDIX A

FINANCIAL DATA

**Table A-1
Gold Mountain CSD Rate & Fee Study**

Budgeted Fiscal Year 2022 Operating Income and Expenses

Draft

INCOME AND EXPENSES	Budget Jul '21 - Jun 22		
	Total	Water	Sewer
6200 · INCOME			
6201 · Water & Sewer Service Fees			
6201-1 · Water & Sewer - Connected	\$171,808	\$80,750	\$91,058
6201-2 · Water & Sewer - Standby	\$234,348	\$154,670	\$79,678
6201-3 · W&S- Commercial-Connected	\$47,233	\$22,200	\$25,033
6201-4 · W&S- Commercial Standby	\$2,124	\$1,402	\$722
Total 6201 · Water & Sewer Service Fees	\$455,513	\$259,021	\$196,492
6202 · Interest & Late Charges	\$3,000	\$1,410	\$1,590
6203-1 · Fire Labor - Reimbursement	\$30,000	\$30,000	\$0
6203 · Admin Fee - Fire	\$24,484	\$24,484	\$0
6204 · Interest Charges	\$0	\$0	\$0
6205 · Late Charges	\$0	\$0	\$0
6206 · Miscellaneous Charges	\$5,000	\$2,350	\$2,650
6207 · Interest Income - Investments	\$0	\$0	\$0
6209 · Fidelity Investments - Income	\$0	\$0	\$0
Total 6200 · INCOME (excludes grants for capital)	\$517,997	\$317,265	\$200,732
7200 · Operating Expenses			
7000 · PERSONNEL			
7001 · Salaries			
7001-1 · General Manager	\$28,800	\$14,400	\$14,400
7001-10 · Fire Manager	\$0	\$0	\$0
7001-11 · Fire Coordinator	\$12,000	\$6,000	\$6,000
7001-13 · Operator 1	\$41,600	\$20,800	\$20,800
7001-2 · Administrative Manager	\$57,720	\$28,860	\$28,860
7001-20 · Clerical Assistant	\$2,000	\$1,000	\$1,000
7001-21 · Comptroller	\$0	\$0	\$0
7001-3 · Maintenance Lead	\$0	\$0	\$0
7001-4 · OPT 1 In Training.	\$40,518	\$20,259	\$20,259
7001-5 · Utility Operator 2 PT	\$0	\$0	\$0
7001-6 · Asst. General Mgr/ Lead OPT	\$84,890	\$42,445	\$42,445
7001-7 · Holiday Pay	\$0	\$0	\$0
7001-8 · Emergency Phone Coverage	\$0	\$0	\$0
7001-90 · Laborer	\$0	\$0	\$0
Total 7001 · Salaries	\$267,529	\$133,764	\$133,764
7010 · Payroll Expenses Dir Dep Fee	\$0	\$0	\$0
7020 · Payroll Taxes	\$23,600	\$11,800	\$11,800
7021 · Workers Compensation Insur.	\$4,336	\$2,168	\$2,168
7023 · Performance Incentives	\$5,000	\$2,500	\$2,500
7035 · Flexible Compensation	\$46,732	\$23,366	\$23,366
7036 · Employee Insurance	\$16,104	\$8,052	\$8,052
7042 · TRAINING	\$5,000	\$2,500	\$2,500
Total 7000 · PERSONNEL	\$368,301	\$184,151	\$184,151

Table A-1
Gold Mountain CSD Rate & Fee Study

Budgeted Fiscal Year 2022 Operating Income and Expenses

Draft

INCOME AND EXPENSES	Budget Jul '21 - Jun 22		
	Total	Water	Sewer
7050 · SERVICES and SUPPLIES			
7045 · Water Licenses/Fees	\$1,500	\$1,500	\$0
7046 · Sewer Licenses/Fees	\$5,500	\$0	\$5,500
7047 · Insurance	\$15,123	\$7,562	\$7,562
7048 · Rents & Leases			
7048-1 · Storage Building Lease	\$0	\$0	\$0
7048-2 · Rent Admin.	\$11,000	\$5,500	\$5,500
7048-3 · Storage Building Expenses	\$750	\$375	\$375
Total 7048 · Rents & Leases	\$11,750	\$5,875	\$5,875
7049 · Utilities	\$2,000	\$1,000	\$1,000
7051 · Communications	\$4,500	\$2,250	\$2,250
7054 · Miscellaneous	\$3,000	\$1,500	\$1,500
7055 · Elections	\$0	\$0	\$0
7056 · Publications	\$250	\$125	\$125
7057 · Memberships	\$3,000	\$1,500	\$1,500
7058 · Bank charges	\$0	\$0	\$0
7059 · Office Furniture & Equipment	\$500	\$250	\$250
7060 · Office Expense & Supplies	\$4,000	\$2,000	\$2,000
7061 · PROFESSIONAL Services		\$0	\$0
7061-1 · Accounting	\$0	\$0	\$0
7061-2 · Legal	\$5,000	\$2,500	\$2,500
7061-3 · Audit	\$6,600	\$3,300	\$3,300
7061-4 · Comptroller Consultant	\$0	\$0	\$0
7061-5 · Professional Services - Other	\$5,000	\$2,500	\$2,500
Total 7061 · PROFESSIONAL Services	\$16,600	\$8,300	\$8,300
7062 · EQUIPMENT RENTAL	\$0	\$0	\$0
7063 · HOA/CSD Fees	\$0	\$0	\$0
7065 · Travel & Accomodations	\$2,000	\$1,000	\$1,000
Total 7050 · SERVICES and SUPPLIES	\$69,723	\$32,862	\$36,862
7100-01 · Bad debt	\$0	\$0	\$0
7200-1 · MAINTENANCE			
7203 · Water Maintenance			
7203-1 · WATER PRODUCTION			
72031.1 · Wells	\$500	\$500	\$0
72031.2 · Electric	\$11,500	\$11,500	\$0
72031.3 · Testing	\$4,500	\$4,500	\$0
72031.4 · Other - water production	\$500	\$500	\$0
Total 7203-1 · WATER PRODUCTION	\$17,000	\$17,000	\$0

**Table A-1
Gold Mountain CSD Rate & Fee Study**

Budgeted Fiscal Year 2022 Operating Income and Expenses

Draft

INCOME AND EXPENSES	Budget Jul '21 - Jun 22		
	Total	Water	Sewer
7203-2 · WATER DISTRIBUTION			
72032.1 · Distribution - Pipes	\$4,000	\$4,000	\$0
72032.2 · Booster Stations	\$3,000	\$3,000	\$0
72032.3 · Electric	\$14,000	\$14,000	\$0
72032.4 · Meter Maintenance	\$2,000	\$2,000	\$0
72032.5 · Storage Tanks	\$2,500	\$2,500	\$0
72032.6 · Other - water distribution	\$500	\$500	\$0
Total 7203-2 · WATER DISTRIBUTION	\$26,000	\$26,000	\$0
Total 7203 · Water Maintenance	\$43,000	\$43,000	\$0
7209 · SEWER SYSTEM			
72032.7 · Leachfield Electric	\$1,000	\$0	\$1,000
7209-1 · Transmission	\$1,500	\$0	\$1,500
7209-2 · Disposal/Treatment	\$250	\$0	\$250
7209-3 · Testing - sewer	\$3,500	\$0	\$3,500
7209-4 · Septic tank maintenance	\$2,000	\$0	\$2,000
7209-5 · Septic Pumping	\$15,000	\$0	\$15,000
7209-6 · Sewer System - Other	\$1,000	\$0	\$1,000
Total 7209 · SEWER SYSTEM	\$24,250	\$0	\$24,250
7210 · GENERAL MAINTENANCE			
7202 · Maintenance-Structure & Grounds	\$12,500	\$6,250	\$6,250
7210-1 · Equipment & Tools	\$2,000	\$1,000	\$1,000
7210-2 · Auto Fuel & Maintenance	\$7,500	\$3,750	\$3,750
7210-4 · Miscellaneous	\$0	\$0	\$0
7210-5 · Maintenance Supplies	\$1,000	\$500	\$500
Total 7210 · GENERAL MAINTENANCE	\$23,000	\$11,500	\$11,500
Total 7200-1 · MAINTENANCE	\$90,250	\$54,500	\$35,750
7300 · ENGINEERING STUDIES			
7003-1 · General Engineering	\$8,000	\$4,000	\$4,000
7003-2 · Master Plan	\$2,500	\$1,250	\$1,250
7003-3 · Leachfield Studies	\$0	\$0	\$0
7003-4 · Rate Study	\$0	\$0	\$0
7003-5 · System Mapping	\$4,000	\$2,000	\$2,000
7003-6 · Sewer System Studies	\$4,000	\$0	\$4,000
7003-7 · Groundwater Management	\$0	\$0	\$0
Total 7300 · ENGINEERING STUDIES	\$18,500	\$7,250	\$11,250
8051 · Water & Sewer Oper Contingency	\$0	\$0	\$0
Total 7200 · Operating Expenses	\$546,775	\$278,762	\$268,012

Source: GMCSD.

budget22

Table A-2
Gold Mountain CSD Rate & Fee Study

Budgeted Fiscal Year 2022 Capital Expenses and Other Income & Expenses

Draft

INCOME AND EXPENSES	Budget Jul '21 - Jun 22		
	Total	Water	Sewer
INCOME			
6303 · Grant Funding - Generators	\$242,714	\$242,714	\$0
9201 · Fee Income -Connection Fees	\$36,000	\$23,760	\$12,240
9203 · Water consumption charges	\$11,000	\$11,000	\$0
TOTAL INCOME	\$289,714	\$277,474	\$12,240
EXPENSES			
8500 · CAPITAL PROJECTS-WATER	\$0	\$0	\$0
8501 · CAPITAL PROJECTS-SEWER	\$0	\$0	\$0
8800 · OPEATIONAL RESERVES			
8800-1 · Rate Study	\$15,000	\$7,500	\$7,500
8800-2 · System Development Charge Study	\$0	\$0	\$0
8800-3 · Phase 2 of Meter Replacement	\$0	\$0	\$0
TOTAL EXPENSES	\$15,000	\$7,500	\$7,500

Source: GMCSO.

capital22

**Table A-3
Gold Mountain CSD Rate & Fee Study**

Draft

Historical Financial Data

Revenues and Expenses	FY 2017			FY 2018			FY 2019			FY 2020		
	Water	Sewer	Total	Water	Sewer	Total	Water	Sewer	Total	Water	Sewer	Total
Revenues												
Charges for Service												
Water Base Charges	\$93,891		\$93,891	\$101,248		\$101,248	\$103,838		\$103,838	\$103,837		\$103,837
Water Consumption	\$4,105		\$4,105	\$6,183		\$6,183	\$8,859		\$8,859	\$10,569		\$10,569
Sewer Charges		\$105,877	\$105,877		\$114,174	\$114,174		\$117,092	\$117,092		\$117,092	\$117,092
Undeveloped Lots	\$158,303	\$80,785	\$239,088	\$157,844	\$80,398	\$238,242	\$155,135	\$78,151	\$233,286	\$156,901	\$79,040	\$235,941
Subtotal Charges for Service	\$256,299	\$186,662	\$442,961	\$265,275	\$194,572	\$459,847	\$267,832	\$195,243	\$463,075	\$271,307	\$196,132	\$467,439
Connection Fees	\$46,859	\$23,606	\$70,465	\$21,775	\$10,969	\$32,744	\$33,189	\$16,719	\$49,908	\$12,184	\$0	\$12,184
Administrative Fees	\$5,736	\$6,469	\$12,205	\$10,003	\$11,280	\$21,283	\$10,003	\$11,281	\$21,284	\$10,003	\$11,280	\$21,283
Interest and Late Charges			\$0			\$0			\$0	\$10,355	\$11,654	\$22,009
Other	\$5,680	\$4,481	\$10,161	\$2,302	\$2,595	\$4,897	\$7,828	\$8,827	\$16,655	\$118	\$133	\$251
Interest Income			\$0	\$4,691	\$2,362	\$7,053	\$6,980	\$3,516	\$10,496	\$4,553	\$5,135	\$9,688
Total Revenues	\$314,574	\$221,218	\$535,792	\$304,046	\$221,778	\$525,824	\$325,832	\$235,586	\$561,418	\$308,520	\$224,334	\$532,854
Expenses												
Source of Supply	\$27,161		\$27,161	\$30,815		\$30,815	\$32,650		\$32,650	\$50,411		\$50,411
Pumping	\$42,528		\$42,528	\$27,271		\$27,271	\$38,542		\$38,542	\$31,569		\$31,569
Transmission and Distribution	\$11,886		\$11,886	\$17,010		\$17,010	\$24,102		\$24,102	\$29,804		\$29,804
Administration and General	\$123,644	\$126,555	\$250,199	\$110,865	\$123,598	\$234,463	\$104,751	\$117,281	\$222,032	\$133,165	\$146,915	\$280,080
Wastewater Collection		\$14,449	\$14,449		\$10,358	\$10,358		\$28,975	\$28,975		\$55,477	\$55,477
Sewage Treatment		\$28,435	\$28,435		\$30,924	\$30,924		\$40,913	\$40,913		\$34,268	\$34,268
Total Expenses	\$205,219	\$169,439	\$374,658	\$185,961	\$164,880	\$350,841	\$200,045	\$187,169	\$387,214	\$244,949	\$236,660	\$481,609
Net Revenue	\$109,355	\$51,779	\$161,134	\$118,085	\$56,898	\$174,983	\$125,787	\$48,417	\$174,204	\$63,571	(\$12,326)	\$51,245

Source: GMCSO audited financials.

audits

Table A-4
Gold Mountain CSD Rate & Fee Study

Historical Fund Balances

Draft

Enterprise Function	Fiscal Year Ending				
	2017	2018	2019	2020	2021
WATER					<i>Estimates</i>
Capital	\$144,581	\$165,575	\$220,200	\$238,810	\$113,321
Operating				\$168,298	\$168,298
Unassigned	\$223,564	\$212,665	\$218,163	\$47,103	\$84,104
Total	\$368,145	\$378,240	\$438,363	\$454,211	\$365,723
SEWER					
Capital	\$48,047	\$65,980	\$70,122	\$74,265	\$58,377
Operating				\$147,422	\$147,422
Unassigned	\$306,968	\$289,943	\$299,274	\$53,117	\$94,841
Total	\$355,015	\$355,923	\$369,396	\$274,804	\$300,640
TOTAL					
Capital	\$192,628	\$231,555	\$290,322	\$313,075	\$171,698
Operating	\$0	\$0	\$0	\$315,720	\$315,720
Unassigned	\$530,532	\$502,608	\$517,437	\$100,220	\$178,945
Total	\$723,160	\$734,163	\$807,759	\$729,015	\$666,363

Source: GMCSO financial records.

bal

**Table A-5
Gold Mountain CSD Rate & Fee Study**

Draft

Estimated CIP

Water & Sewer CIP Items		Total Estimated Cost	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Water							
High Elevation Tank	D	\$700,000			\$75,000	\$625,000	
Well 29 Rehabilitation	C	\$235,000			\$20,000	\$215,000	
Water SCADA	C	\$75,000		\$75,000			
Booster Station #8	C	\$120,000			\$120,000		
Well 36 Connections	C	\$70,000					\$70,000
Various Upgrades	C	\$25,000				\$25,000	
New Office Building (50%)	C F	\$150,000	\$150,000				
Total Water		\$1,375,000	\$150,000	\$75,000	\$215,000	\$865,000	\$70,000
Sewer							
Water Reclamation Plant	D G	\$650,000	\$300,000	\$350,000			
Leach Field Expansion	C	\$220,000			\$70,000	\$150,000	
Pumping Trailer	C	\$50,000	\$50,000				
Sewer SCADA	C	\$100,000					\$100,000
New Office Building (50%)	C F	\$150,000	\$150,000				
Total Sewer		\$1,170,000	\$500,000	\$350,000	\$70,000	\$150,000	\$100,000
Total CIP		\$2,545,000	\$650,000	\$425,000	\$285,000	\$1,015,000	\$170,000
Estimated Funding Sources							
Plumas County Grant	G	\$84,000	\$84,000	\$0	\$0	\$0	\$0
Fire Fund [1]	F	\$260,000	\$260,000	\$0	\$0	\$0	\$0
Cash	C	\$851,000	\$6,000	\$75,000	\$210,000	\$390,000	\$170,000
Debt	D	\$1,350,000	\$300,000	\$350,000	\$75,000	\$625,000	\$0
Total		\$2,545,000	\$650,000	\$425,000	\$285,000	\$1,015,000	\$170,000

Source: GMCSO.

cip

[1] Fire fund reserves put toward the new office building.

APPENDIX B

WATER FEES

SUPPORT TABLES

Table B-1
Gold Mountain CSD Rate & Fee Study
Functional Allocation of Water Expenses

Draft

Operating Expenses	FY 2022 BUDGET	Allocation Basis	Allocation			
			Customer	Capacity	Commodity	Unclassified
Personnel - Administrative (35%)	\$64,453	Customers	100%	0%	0%	0%
Personnel - Field (65%)	\$119,698	Plant in Service	8%	75%	17%	0%
Water Licenses	\$1,500	Customers	100%	0%	0%	0%
Insurance	\$7,562	Plant in Service	8%	75%	17%	0%
Rents & Leases	\$5,875	Avg. of Classified	0%	0%	0%	100%
Utilities	\$1,000	Customers	100%	0%	0%	0%
Communications	\$2,250	Avg. of Classified	0%	0%	0%	100%
Miscellaneous	\$1,500	Avg. of Classified	0%	0%	0%	100%
Elections	\$0	Customers	100%	0%	0%	0%
Publications	\$125	Avg. of Classified	0%	0%	0%	100%
Memberships	\$1,500	Avg. of Classified	0%	0%	0%	100%
Bank Charges	\$0	Avg. of Classified	0%	0%	0%	100%
Office Furniture & Equipment	\$250	Avg. of Classified	0%	0%	0%	100%
Office Expense & Supplies	\$2,000	Avg. of Classified	0%	0%	0%	100%
Professional Services	\$8,300	Plant in Service	8%	75%	17%	0%
Travel & Accommodation	\$1,000	Avg. of Classified	0%	0%	0%	100%
Water Production	\$5,500	Plant in Service	8%	75%	17%	0%
Production Electric	\$11,500	Utilities	0%	40%	60%	0%
Water Distribution	\$12,000	Plant in Service	8%	75%	17%	0%
Distribution Electric	\$14,000	Utilities	0%	40%	60%	0%
General Maintenance	\$11,500	Plant in Service	8%	75%	17%	0%
Studies	\$7,250	Avg. of Classified	0%	0%	0%	100%
Total Operating Expenses	\$278,762		\$80,301	\$134,106	\$42,606	\$21,750
			31%	52%	17%	
Reallocation of Unclassified	\$21,750		\$6,796	\$11,349	\$3,606	
Total with Reallocation	\$278,762		\$87,096	\$145,454	\$46,212	
Depreciation	\$73,300	Plant in Service	8%	75%	17%	
			\$5,946	\$55,191	\$12,163	
TOTAL	\$352,062		\$93,042	\$200,646	\$58,374	
Percentage Allocation			26%	57%	17%	

Source: GMCSO financial documents and HEC 2021 rate study.

func alloc

Table B-2
Gold Mountain CSD Rate & Fee Study

Capital Assets - Water System

Draft

Plant in Service	Customer	Capacity	Commodity (Use)	Original Cost	Customer	Capacity	Commodity (Use)
Wells		60%	40%	\$758,285	\$0	\$454,971	\$303,314
Distribution Pipes	10%	90%		\$1,039,500	\$103,950	\$935,550	\$0
Meters	100%			\$53,663	\$53,663	\$0	\$0
Booster Stations and PRVs		60%	40%	\$71,391	\$0	\$42,835	\$28,556
Vehicles	25%	75%		\$18,470	\$4,618	\$13,853	\$0
Buildings & Equipment		100%		\$27,943	\$0	\$27,943	\$0
Tanks		100%		\$30,769	\$0	\$30,769	\$0
Total				\$2,000,021	\$162,231	\$1,505,920	\$331,870
Percentage of Plant In Service				100%	8%	75%	17%

Source: GMCSO financial documents and HEC 2021 rate study.

cap alloc

Table B-3
Gold Mountain CSD Rate & Fee Study

Draft

Calculated Equivalent Meter Units

Customer		Number of Lots / Customers	Number of Living Units	Number of Meters	Meter Size	Operating Capacity (gpm)	Meter Ratio	Equivalent Meter Units
Residential						[1]		
Dwelling Unit (R)	[2]	86	86	86	1-inch	50	1.00	86.00
Multiple Living Units (CR)	[3]	3	7	3	1-inch	50	1.00	3.00
Fractional Ownership (CR)	[3]	4	8	4	1-inch	50	1.00	4.00
Total Residential		93	101	93				93.00
Non-Residential								
<i>Nakoma Lodge</i>		1						
Lodge Building				1	3-inch	300	6.00	6.00
Irrigation				1	1-inch	50	1.00	1.00
<i>Golf Course</i>		1						
Clubhouse				1	6-inch	1000	20.00	20.00
Maintenance Yard				1	2-inch	160	3.20	3.20
Restrooms 1				1	1-inch	50	1.00	1.00
Restrooms 2				1	1-inch	50	1.00	1.00
<i>Altitude Recreation Center</i>		1						
Fitness Building				1	2-inch	160	3.20	3.20
Fire Service				1	4-inch	500	10.00	10.00
Subtotal Non-Residential		3		8				45.40
TOTAL		96	101	101				138.40
Unconnected Lots								
Billable		325	325					
Unbillable [4]		16						
Total Unconnected Lots		341	325					

Source: GMCSO customer database and Plumas County Assessor's office.

m equiv

[1] Safe operating capacity by meter size:

1"	50 gpm
1.5"	100 gpm
2"	160 gpm
3"	300 gpm
4"	500 gpm
6"	1000 gpm
8"	1600 gpm

[2] May have a guest house.

Of the 86 units, 26 are lived in year-round.

[3] May be attached or detached.

[4] Pursuant to legal agreement, there are 16 lots that cannot be billed by the CSD until they connect.

**Table B-4
Gold Mountain CSD Rate & Fee Study**

Draft

Growth Assumptions

Customer Type	FY 2022	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Accounts	Base	New Connected Accounts				
Dwelling Unit (R)	86	1	1	1	1	1
Multiple Living Units (CR)	3	1	1	1	2	2
Fractional Ownership (CR)	4	0	0	0	0	0
Non-Residential (Nakoma Market)	3	0	1	0	0	0
Total		2	3	2	3	3
Estimated Cumulative Accounts	96	98	101	103	106	109
Residential	Base	New Units				
New Single Family Units	86	1	1	1	1	1
New Multi-Units	7	2	2	2	4	4
New Fractional Buildings	8	0	0	0	0	0
Estimated New Residential Units		3	3	3	5	5
Estimated Cumulative Units	101	104	107	110	115	120
Non-Residential		New Meters				
Nakoma Market	3	0	2	0	0	0
Est. Cumulative Non-Res. Accounts	3	3	5	5	5	5
Estimated New Water Meters	Base	New Meters				
New SF Meters	86	1	1	1	1	1
New Attached Unit Meters	3	1	1	1	2	2
New Fractional Building Meters	4	0	0	0	0	0
New Non-Residential Meters	8	0	2	0	0	0
Estimated New Meters Total		2	4	2	3	3
Estimated Cumulative Meters	101	103	107	109	112	115
Estimated New Meters by Size						
1-inch or less		2	2	2	3	3
1.5"						
2"			1			
3"						
4"			1			
6"						
8"						
Estimated Equivalent Meter Units						
1-inch or less		2	2	2	3	3
1.5"		0	0	0	0	0
2"		0	3.2	0	0	0
3"		0	0	0	0	0
4"		0	10	0	0	0
6"		0	0	0	0	0
8"		0	0	0	0	0
Total Estimated New Meter Equivalents		2	15.2	2	3	3
Est. Cumulative Meter Equivalents	138.4	140.4	155.6	157.6	160.6	163.6
Est. Cumulative Non-Res. Meter Equiv.	45.4	45.4	58.6	58.6	58.6	58.6

Source: GMCSD customer records and HEC 2021 rate study.

growth

Table B-5
Gold Mountain CSD Rate & Fee Study

Estimated Decrease in Billable Unconnected Lots

Draft

Customer Type	Year 1	Year 2	Year 3	Year 4	Year 5	
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Dwelling Unit (R)		-1	-1	-1	-1	-1
Multiple Living Units (CR)		-1	-1	-1	-2	-2
Fractional Ownership (CR)		0	0	0	0	0
Non-Residential (Nakoma Market)		0	-1	0	0	0
Est. Unconnected Lots [1]	325	323	320	318	315	312

Source: GMCSO customer records and HEC 2021 rate study.

by stand

[1] Unconnected and billable lots. Pursuant to legal agreement, there are 16 lots that cannot be billed by the CSD until they connect.

Table B-6
Gold Mountain CSD Rate & Fee Study
Single Family Residential Water Use

Draft

Fiscal Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Annually
<i>Average Water Use in Gallons per Dwelling Unit per Month</i>													
2013	8,993	11,522	8,452	4,921	2,854	4,014	2,409	2,177	2,100	4,134	8,666	8,009	5,989
2014	9,711	8,914	6,494	4,238	2,759	5,297	2,746	2,081	2,407	3,474	8,075	8,075	5,553
2015	8,075	9,413	8,079	5,747	4,482	2,428	2,404	2,015	2,337	3,793	3,076	3,918	4,542
2016	4,977	5,618	5,088	3,498	3,918	1,512	2,509	1,395	1,523	2,040	3,714	6,966	3,680
2017	6,966	7,625	6,516	3,059	2,681	3,619	3,206	3,310	1,611	2,219	5,141	6,313	4,506
2018	7,998	8,538	7,335	3,290	2,119	2,127	1,549	1,811	1,378	2,793	4,653	7,349	4,431
2019	6,678	8,458	7,031	6,274	3,293	4,830	2,748	2,104	2,365	2,974	7,596	5,875	5,250
2020	10,017	7,502	6,311	4,972	2,220	2,235	2,404	2,001	4,850	4,850	10,662	9,434	5,988
2021	8,254	10,505	11,713	4,770	2,410	3,234	3,046	3,219	2,565	2,948	10,825	7,540	6,149
Avg 2019-2021	8,316	8,822	8,352	5,339	2,641	3,433	2,733	2,441	3,260	3,591	9,694	7,616	5,796
Average by Quarter			25,490			11,413			8,434			20,901	
Nov-Feb Off-Peak Months													2,812
Jul-Sep Peak Months													8,497
On-Peak to Off-Peak Ratio													3.02

Source: GMCSO water use records.

sf unit

Table B-7
Gold Mountain CSD Rate & Fee Study

Historical Annual Use by Customer Type (FY 2012 through FY 2021)

Draft

Customer Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	Avg. 3 Yrs	Share
Residential	<i>All figures in Gallons; table excludes non-billable water use</i>									2019-2021	
Dwelling Unit (R) [1]	5,048,438	4,786,954	4,029,096	3,304,459	3,929,134	3,948,202	4,704,293	4,742,351	5,854,269	5,100,304	70%
Multiple Living Units (CR)	129,810	116,790	51,570	56,890	25,040	35,920	58,993	117,106	139,346	105,148	1%
Fractional Ownership (CR)	236,686	299,254	192,753	135,313	135,582	156,529	133,147	73,957	133,909	113,671	2%
Total Residential	5,414,934	5,202,998	4,273,419	3,496,662	4,089,756	4,140,651	4,896,433	4,933,415	6,127,524	5,319,124	73%
Non-Residential	792,921	764,359	752,650	817,079	941,990	1,743,675	1,795,279	1,456,175	2,779,382	2,010,279	27%
Total Water Use	6,207,855	5,967,357	5,026,069	4,313,741	5,031,746	5,884,326	6,691,712	6,389,590	8,906,906	7,329,402	100%

Source: GMCSO historical water consumption records.

hist demand

[1] May have a guest house.

Table B-8
Gold Mountain CSD Rate & Fee Study

New Growth Additional Water Use

Draft

Customer Type	Average Annual Use	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Residential	<i>galls per account</i>	<i>new growth estimated water use in gallons</i>				
Dwelling Unit (R) [1]	69,550	69,550	69,550	69,550	69,550	69,550
Multiple Living Units (CR)	35,049	35,049	35,049	35,049	70,099	70,099
Fractional Ownership (CR)	28,418	0	0	0	0	0
Total Residential		104,600	104,600	104,600	139,649	139,649
Nakoma Market [2]	<i>galls per account</i>	0	300,000	0	0	0

Source: GMCSD historical water consumption records and HEC 2021 rate study.

new use

[1] May have a guest house.

[2] Estimated water use of 25,000 gallons per month.

Table B-9
Gold Mountain CSD Rate & Fee Study

Draft

Water Expenses by Month and Season for Fiscal Year 2020

Cost Category	Jul on-peak	Aug on-peak	Sep on-peak	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	TOTAL	PEAK avg./ mo	OFF-PEAK avg./ mo	RATIO Peak to Off-Peak	
* Starred items only included in seasonality calculation as they are affected by seasonality of operations																	
Administrative Personnel Salaries/Wages	*	\$4,813	\$3,366	\$3,101	\$3,220	\$3,639	\$4,585	\$3,199	\$2,523	\$1,350	\$3,502	\$3,323	\$2,701	\$39,320	\$3,760	\$3,116	1.207
Administrative Personnel Benefits		\$1,280	\$1,837	\$894	\$849	\$1,336	\$1,434	\$1,560	\$918	\$708	\$1,051	\$1,312	\$2,734	\$15,913	\$1,337	\$1,322	1.011
Field Personnel Salaries/Wages	*	\$7,565	\$7,729	\$6,211	\$6,617	\$6,192	\$9,848	\$6,496	\$5,349	\$4,184	\$6,064	\$6,123	\$4,357	\$76,733	\$7,168	\$6,136	1.168
Field Personnel Benefits		\$2,012	\$4,217	\$1,791	\$1,744	\$2,273	\$3,080	\$3,167	\$1,946	\$2,196	\$1,821	\$2,418	\$4,411	\$31,076	\$2,673	\$2,562	1.044
Water Licenses/Fees		\$516	\$60	\$0	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$636	\$192	\$7	28.800	
Insurance		\$7,562	\$24	\$0	\$0	\$24	\$250	\$0	\$0	\$0	\$0	\$0	\$7,859	\$2,528	\$30	83.052	
Rents & Leases		(\$279)	\$1,144	\$433	\$358	\$650	\$505	\$505	\$505	\$505	\$505	\$1,671	\$7,006	\$433	\$634	0.682	
Utilities		(\$49)	\$110	\$0	(\$15)	\$72	\$63	\$142	\$141	\$91	\$20	\$161	\$172	\$906	\$20	\$94	0.217
Communications		\$115	\$195	\$168	\$80	\$85	\$383	\$273	\$123	\$198	\$102	\$369	\$161	\$2,250	\$159	\$197	0.807
Miscellaneous		\$0	\$0	\$4	\$51	\$120	\$1,250	(\$525)	\$306	\$0	\$0	\$25	\$0	\$1,230	\$1	\$136	0.010
Memberships		\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$64	\$0	\$54	\$50	\$243	\$0	\$27	0.000	
Bank charges		\$6	\$21	\$0	\$0	\$0	\$13	\$0	\$6	\$6	\$6	\$6	\$64	\$9	\$4	2.219	
Office Expense & Supplies		\$11	\$661	\$23	\$14	\$92	\$258	\$0	\$731	\$73	\$0	\$926	\$128	\$2,915	\$232	\$247	0.939
Professional Services		\$559	\$289	\$468	\$364	\$3,452	(\$381)	\$1,040	\$611	\$139	\$190	\$1,152	\$1,273	\$9,155	\$439	\$871	0.503
Travel		\$0	\$0	\$0	\$0	\$0	\$147	\$0	\$0	\$0	\$0	\$33	\$0	\$180	\$0	\$20	0.000
HOA/CSD Fees		(\$267)	\$810	\$533	\$266	\$0	\$0	\$1,064	\$0	\$0	\$354	\$0	\$0	\$2,759	\$358	\$187	1.916
WATER PRODUCTION																	
72031.1 - Wells	*	\$0	\$0	\$75	\$0	\$45	\$0	\$94	\$0	\$0	\$0	\$0	\$214	\$25	\$15	1.619	
72031.2 - Electric	*	\$0	\$2,104	\$0	\$866	\$1,412	\$0	\$2,051	\$1,816	\$1,741	\$0	\$3,063	\$2,245	\$15,298	\$701	\$1,466	0.478
72031.3 - Testing		\$55	\$645	\$490	\$412	\$623	\$0	\$354	\$54	\$0	\$0	\$785	\$108	\$3,525	\$396	\$260	1.527
WATER DISTRIBUTION																	
72032.1 - Distribution - Pipes	*	\$0	\$1,889	\$0	\$0	\$0	\$3,667	\$509	\$0	\$0	\$0	\$0	\$6,065	\$630	\$464	1.357	
72032.2 - Booster Stations		\$0	\$9	\$0	\$0	\$19	\$0	\$0	\$938	\$0	\$0	\$8	\$974	\$3	\$107	0.029	
72032.3 - Electric	*	\$0	\$2,597	\$0	\$1,322	\$1,013	\$0	\$2,619	\$0	\$778	\$0	\$1,875	\$1,863	\$12,067	\$866	\$1,052	0.823
72032.4 - Meter Maintenance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$893	\$0	\$0	\$0	\$893	\$0	\$99	0.000	
GENERAL MAINTENANCE																	
7202 - Maintenance-Structure & Grounds	*	\$794	\$386	\$0	\$0	\$2,781	\$188	\$49	\$96	\$64	\$150	\$24	\$59	\$4,588	\$393	\$379	1.039
7210-1 - Equipment & Tools		\$89	\$122	\$52	\$0	\$34	\$0	\$19	\$191	\$390	\$19	\$525	\$234	\$1,673	\$88	\$157	0.559
7210-2 - Auto Fuel & Maintenance		\$100	\$0	\$132	\$204	\$191	\$145	\$0	\$590	\$99	\$0	\$296	\$211	\$1,966	\$77	\$193	0.401
7210-5 - Maintenance Supplies		\$0	\$0	\$0	\$0	\$15	\$0	\$0	\$0	\$0	\$0	\$0	\$15	\$0	\$2	0.000	
Engineering Studies		\$0	\$2,635	\$0	\$5,452	\$749	\$685	\$575	\$225	\$0	\$463	\$1,096	\$1,265	\$13,144	\$878	\$1,168	0.752
TOTAL		\$24,882	\$30,849	\$14,371	\$21,801	\$24,874	\$26,119	\$23,189	\$18,034	\$12,584	\$14,246	\$24,069	\$23,647	\$258,665	\$23,367	\$20,951	1.115
Percent of Year Total		10%	12%	6%	8%	10%	10%	9%	7%	5%	6%	9%	100%				
Normalized Expenses		\$8,698	\$8,698	\$8,698	\$8,698	\$8,698	\$8,698	\$8,698	\$8,698	\$8,698	\$8,698	\$8,698	\$104,381	\$8,698	\$8,698	rounded	1.000
Seasonal Expenses	*	\$13,172	\$18,071	\$9,387	\$12,025	\$15,082	\$18,288	\$15,017	\$9,783	\$8,117	\$9,716	\$14,407	\$11,224	\$154,284	\$13,543	\$12,628	1.070
Expenses in Calculation		\$21,870	\$26,769	\$18,085	\$20,723	\$23,780	\$26,986	\$23,715	\$18,481	\$16,815	\$18,414	\$23,105	\$19,922	\$258,665	\$22,241	\$21,327	1.045

Source: GMCSO financial records.

seasonal

Table B-10
Gold Mountain CSD Rate & Fee Study

Residential Lot Water Bill Impact by Water Use Level

Draft

Water Use thousands of gallons	Current Water Rates									New Water Rates (2022)					Bill Change		
	Base Charge	Use								Use Charges	TOTAL Bill	Customer Charge	Service Charge	Use Charge		TOTAL Bill	
		Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Tier 7	Tier 8								
		\$0.55	\$0.60	\$0.65	\$0.70	\$0.75	\$0.80	\$0.90	\$1.00							\$7.33	
5	\$887.36	\$2.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.75	\$890.11	\$198.04	\$393.60	\$36.67	\$628.31		(\$262)
10	\$887.36	\$5.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5.50	\$892.86	\$198.04	\$393.60	\$73.33	\$664.97		(\$228)
15	\$887.36	\$5.50	\$3.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8.50	\$895.86	\$198.04	\$393.60	\$110.00	\$701.64		(\$194)
20	\$887.36	\$5.50	\$6.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$11.50	\$898.86	\$198.04	\$393.60	\$146.66	\$738.30		(\$161)
25	\$887.36	\$5.50	\$6.00	\$3.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.75	\$902.11	\$198.04	\$393.60	\$183.33	\$774.97		(\$127)
30	\$887.36	\$5.50	\$6.00	\$6.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.00	\$905.36	\$198.04	\$393.60	\$219.99	\$811.64		(\$94)
35	\$887.36	\$5.50	\$6.00	\$6.50	\$3.50	\$0.00	\$0.00	\$0.00	\$0.00	\$21.50	\$908.86	\$198.04	\$393.60	\$256.66	\$848.30		(\$61)
40	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$0.00	\$0.00	\$0.00	\$0.00	\$25.00	\$912.36	\$198.04	\$393.60	\$293.33	\$884.97		(\$27)
45	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$3.75	\$0.00	\$0.00	\$0.00	\$28.75	\$916.11	\$198.04	\$393.60	\$329.99	\$921.63		\$6
50	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$0.00	\$0.00	\$0.00	\$32.50	\$919.86	\$198.04	\$393.60	\$366.66	\$958.30		\$38
55	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$4.00	\$0.00	\$0.00	\$36.50	\$923.86	\$198.04	\$393.60	\$403.32	\$994.97		\$71
60	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$8.00	\$0.00	\$0.00	\$40.50	\$927.86	\$198.04	\$393.60	\$439.99	\$1,031.63		\$104
70	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$16.00	\$0.00	\$0.00	\$48.50	\$935.86	\$198.04	\$393.60	\$513.32	\$1,104.96		\$169
80	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$24.00	\$0.00	\$0.00	\$56.50	\$943.86	\$198.04	\$393.60	\$586.65	\$1,178.29		\$234
90	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$24.00	\$9.00	\$0.00	\$65.50	\$952.86	\$198.04	\$393.60	\$659.98	\$1,251.63		\$299
100	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$24.00	\$18.00	\$0.00	\$74.50	\$961.86	\$198.04	\$393.60	\$733.32	\$1,324.96		\$363
110	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$24.00	\$18.00	\$10.00	\$84.50	\$971.86	\$198.04	\$393.60	\$806.65	\$1,398.29		\$426
120	\$887.36	\$5.50	\$6.00	\$6.50	\$7.00	\$7.50	\$24.00	\$18.00	\$20.00	\$94.50	\$981.86	\$198.04	\$393.60	\$879.98	\$1,471.62		\$490

Source: GMCSO existing rate schedule.

curr sf

APPENDIX C

SEWER FEES

SUPPORT TABLES

Table C-1
Gold Mountain CSD Rate & Fee Study

Draft

Functional Allocation of Sewer Expenses

Operating Expenses	FY 2022 BUDGET	Allocation Basis	Customer	Capacity	Flow	Unclassified
Personnel - Administrative (35%)	\$64,453	Customers	100%	0%	0%	0%
Personnel - Field (65%)	\$119,698	Plant in Service	5%	73%	22%	0%
Sewer Licenses	\$1,500	Customers	100%	0%	0%	0%
Insurance	\$7,562	Plant in Service	5%	73%	22%	0%
Rents & Leases	\$5,875	Avg. of Classified	0%	0%	0%	100%
Utilities	\$1,000	Customers	100%	0%	0%	0%
Communications	\$2,250	Avg. of Classified	0%	0%	0%	100%
Miscellaneous	\$1,500	Avg. of Classified	0%	0%	0%	100%
Elections	\$0	Customers	100%	0%	0%	0%
Publications	\$125	Avg. of Classified	0%	0%	0%	100%
Memberships	\$1,500	Avg. of Classified	0%	0%	0%	100%
Bank Charges	\$0	Avg. of Classified	0%	0%	0%	100%
Office Furniture & Equipment	\$250	Avg. of Classified	0%	0%	0%	100%
Office Expense & Supplies	\$2,000	Avg. of Classified	0%	0%	0%	100%
Professional Services	\$8,300	Plant in Service	5%	73%	22%	0%
Travel & Accommodation	\$1,000	Avg. of Classified	0%	0%	0%	100%
Leachfield Electric	\$1,000	Utilities	0%	0%	100%	0%
Transmission	\$1,500	Plant in Service	5%	73%	22%	0%
Disposal/Treatment	\$250	Plant in Service	5%	73%	22%	0%
Testing - sewer	\$3,500	Avg. of Classified	0%	0%	0%	100%
Septic tank maintenance	\$2,000	Utilities	0%	0%	100%	0%
Septic Pumping	\$15,000	Utilities	0%	0%	100%	0%
Sewer System - Other	\$1,000	Plant in Service	5%	73%	22%	0%
General Maintenance	\$11,500	Plant in Service	5%	73%	22%	0%
Studies	\$11,250	Avg. of Classified	0%	0%	0%	100%
Total Operating Expenses	\$264,012		\$74,446	\$109,479	\$50,837	\$29,250
			32%	47%	22%	
Reallocation of Unclassified			\$9,276	\$13,640	\$6,334	
Total with Reallocation	\$264,012		\$83,721	\$123,120	\$57,171	
Depreciation	\$22,600	Plant in Service	5%	73%	22%	
			\$1,130	\$16,516	\$4,954	
TOTAL	\$286,612		\$84,852	\$139,635	\$62,125	
Percentage Allocation	100%		30%	49%	22%	

Source: GMCSD financial records and HEC 2021 rate study.

ww func

Table C-2
Gold Mountain CSD Rate & Fee Study
Capital Assets - Sewer System

Draft

Plant in Service	Customer	Capacity	Flow	Original			
				Cost	Customer	Capacity	Flow
Disposal (Leachfield)		100%		\$273,868	\$0	\$273,868	\$0
Collection	10%	50%	40%	\$415,042	\$41,504	\$207,521	\$166,017
Dosing Station		80%	20%	\$180,534	\$0	\$144,427	\$36,107
Backup Leachfield		100%		\$34,206	\$0	\$34,206	\$0
Vehicles	25%	75%		\$18,470	\$4,618	\$13,853	\$0
Total				\$922,120	\$46,122	\$673,875	\$202,124
Percentage of Plant In Service				100%	5%	73%	22%

Source: GMCSO financial documents and HEC 2021 rate study.

ww cap alloc

Table C-3
Gold Mountain CSD Rate & Fee Study
Full Time Residential Water Meter Reads

Draft

Fiscal Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Nov-Feb Average
FULL-TIME SINGLE FAMILY RESIDENCES AVERAGE MONTHLY WATER USE													
2013	8,992	13,019	8,578	5,877	3,136	3,520	3,909	3,161	2,519	6,133	10,011	8,586	3,432
2014	12,701	9,149	7,176	5,170	3,774	3,570	3,542	3,298	3,251	5,234	8,956	8,079	3,546
2015	8,492	7,798	6,621	5,294	3,079	2,758	2,645	2,675	5,178	3,289	3,873	5,322	2,789
2016	5,476	5,289	4,387	3,417	2,331	2,274	2,831	1,993	2,307	2,294	3,876	6,024	2,357
2017	6,592	7,455	5,806	2,645	3,555	2,639	1,852	2,608	1,799	2,224	5,232	4,894	2,663
2018	7,458	6,425	5,482	3,568	2,398	2,577	2,187	2,592	1,895	3,134	4,774	8,680	2,438
2019	7,161	7,291	7,136	4,846	2,603	4,980	4,061	2,841	3,307	3,736	5,566	6,095	3,621
2020	10,739	6,704	5,784	5,700	2,965	3,097	3,759	2,854	9,524	9,524	14,042	9,859	3,169
2021	8,370	9,556	9,350	5,965	2,760	3,643	3,559	4,534	2,922	3,456	12,360	9,105	3,624
Avg 2019-2021	8,757	7,850	7,423	5,504	2,776	3,906	3,793	3,410	5,251	5,572	10,656	8,353	3,472
Winter Water Use Gallons per Day													116

Source: GMCSO meter read data.

fullt

Table C-4
Gold Mountain CSD Rate & Fee Study

Calculation of Non-Residential EDUs based on Winter Water Use

Draft

Customer Type	Number of Accounts	Galls per Day per EDU	Annual Flow per Account	Ratio to Residential	Est. # of EDUs
		Nov-Feb	[1]		by Flow
Dwelling Unit (R)	1	115	41,975	1.0	1.0
Non-Residential					
Inn at Nakoma	1	115	617,876	14.7	14.5
Clubhouse	1	115	318,333	7.6	7.5
Maintenance Yard	1	115	668,133	15.9	16.0
Restrooms 1	1	115	16,666	0.4	0.5
Restrooms 2	1	115	7,209	0.2	0.0
Altitude Recreation Center	1	115	379,094	9.0	9.0
Subtotal Non-Residential	6		2,007,312		47.5

Source: HEC 2021 rate study.

edu water

[1] Based on average annual use fiscal years 2019-2021.

**Table C-5
Gold Mountain CSD Rate & Fee Study**

Projected Number of New Sewer EDUs

Draft

Customer Type	Year 1 FY 2023	Year 2 FY 2024	Year 3 FY 2025	Year 4 FY 2026	Year 5 FY 2027
Residential	Equivalent Dwelling Units				
Dwelling Unit (R)	1	1	1	1	1
Multiple Living Units (CR)	2	2	2	4	4
Fractional Ownership (CR)	0	0	0	0	0
Est. New Residential EDUs	3	3	3	5	5
Non-Residential Lots					
Inn at Nakoma	0	0	0	0	0
Altitude Recreation Center	0	0	0	0	0
Golf Course	0	0	0	0	0
Nakoma Market	0	9	0	0	0
Est. New Non-Residential EDUs	0	9	0	0	0
Est. New Estimated EDUs	3	12	3	5	5

Source: GMCSO Master Plan Update, July 2017, Shaw Engineering, and HEC 2021 rate study.

sewer cust