



# GOLD MOUNTAIN CSD

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*Proposal for:*

**Water and Sewer Rate Study**

April 15, 2021



870 Market Street, Suite 1223  
San Francisco, CA 94102  
Toll free: 800.434.8349

[nbsgov.com](http://nbsgov.com)

April 15, 2021

Mr. Rich McLaughlin  
General Manager  
Gold Mountain CSD  
*Via email: richman106@gmail.com*

**RE: Proposal for a Water and Sewer Rate Study**

Dear Mr. McLaughlin,

Thank you for the opportunity to present this proposal to the CSD to prepare a rate study for your water and sewer rates, including redesigning the rate structure in order to meet Proposition 218 requirements. Given the origination of the District's rates and the current standby fees, we recognize that updating these rates involves some unique challenges.

Our proposal is structured to fully evaluate the cost of service and rate structures and develop final recommendations by working cooperatively with you and other stakeholders in this process. We will assist the District in clearly communicating the study results to the District's customers. Our study report will also provide the administrative record necessary to comply with Proposition 218. Some of the key benefits of our proposal include:

- 1. Dedicated Project Team:** Our project management team consists of two senior consultants, each with more than 40 years of experience successfully conducting similar studies. We can ensure that your study is managed successfully from start to finish. Other proven staff will provide all the technical support that is critical to the success of this study.
- 2. Comprehensive Project Approach:** Given the unpredictability of today's rate-setting environment, recent drought, changes in consumption patterns, and the legal challenges of demonstrating the cost-basis of rates, we will need to restructure the District's water and sewer rates.
- 3. Technically Sound Rate Study Tasks:** Based on our experience with similar agencies throughout the State and the 40 years of experience of our project manager, our proposal is focused on offering sound and implementable solutions.

Please do not hesitate to contact me at 530.297.5856 or [gclumpner@nbsgov.com](mailto:gclumpner@nbsgov.com) if you have any questions. We look forward to helping the District successfully adopt improved water and sewer rates.

Best Regards,

A handwritten signature in blue ink, appearing to read "Greg Clumpner", with a stylized flourish at the end.

Greg Clumpner  
Director – Utility Rate Practice Group

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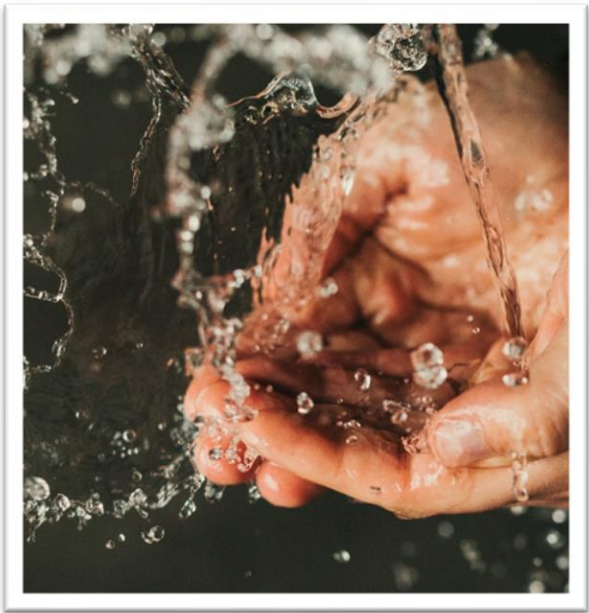
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# 1 | PROJECT APPROACH AND SCOPE OF WORK

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## Approach

This scope of work is intended to comprehensively update the District's water and sewer rates and help the District staff develop rate alternatives that will be well-received by both the District Board and customers. The three primary study components will include (1) preparing a financial plan, (2) conducting a cost-of-service analysis, and (3) performing a rate design analysis.

NBS will also examine the amount of rate revenue collected from fixed vs. volumetric water rates from a revenue stability and customer equity perspective and will work with the District in determining what rate alternatives should be considered and what is an acceptable level of annual rate increases.

## Scope of Work

### Task 1 – Data Collection and Kick-off Meeting

NBS will provide the District with a data request and hold a kick-off meeting to review and discuss the data for the study, along with the scope of work and study timeline. We want to ensure there is a clear understanding of how the study objectives will be met.

The data required to conduct the study will include:

- Financial data typically reported in financial statements.
- Operating and maintenance budgets identifying costs for water supply, treatment, transmission/distribution, pump stations, and overhead and administrative costs.
- Customer billing information, such as the number of water meters by size and customer class, monthly water consumption, and the number of customers by type.
- Wastewater treatment plant records of total annual flow, and pounds of BOD and TSS.
- Current cash balances in each reserve fund.
- Projected capital improvement costs.
- Total annual residential and commercial rate revenue for the past two years.

### Task 2 – Financial Plans

NBS will prepare separate financial plans for water and sewer that summarize revenues, expenditures, reserves, and net revenue requirements (the revenue that must be collected from customer charges).

Task deliverables will include:

- A 10-year financial projection model that will serve as a financial “roadmap.”
- Three rate alternatives (i.e., annual rate increases) that meet projected net revenue requirements.
- Funding for capital improvements.
- Summary of current and projected net revenue requirements.
- Updated reserve fund policies, target fund balances, and projected year-end reserve fund levels.
- Calculated debt service coverage ratios (if needed).

The financial plans will include the following subtasks and lay the groundwork for the cost-of-service and rate design analyses addressed in Tasks 3 and 4:

1. **Projected Revenues and Expenditures** – This analysis will use a cash-basis approach and the District’s chart of accounts. The projected customer growth rates and inflation factors will be updated.
2. **Evaluate Reserve Fund Sufficiency** – NBS will examine the sufficiency of existing reserve funds, target reserves, reserve fund policies, and debt service coverage ratios. If there are deficits identified in current reserve levels, we will consider a phased-in approach to improving long-term funding of reserves in a manner that minimize the impacts on ratepayers.
3. **Review Capital Improvement Program Funding** – NBS will evaluate the timing, costs, and available reserves needed to fund all projects and the level of rate increases this involves and collaborate with District staff to develop a well-conceived funding approach. The recommended solution will provide an appropriate balance between funding from rates, system development fees and, if necessary, the use of outside financing. NBS will develop up to three scenarios to fund the capital improvement program for modeling and comparison purposes.

The financial plans will be presented in a format like those shown in Figures 1 and 2 and will be tailored to the District’s chart of accounts. Reserve fund policies will also be evaluated and presented in a format like those shown in Figures 3 and 4.

**Figure 1. Example of a Financial Plan Summary**

Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget	Projected				
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
<b>Sources of Funds</b>						
Rate Revenue Under Prevailing Rates	\$ 15,203,655	\$ 15,315,705	\$ 15,429,586	\$ 15,546,465	\$ 15,685,153	\$ 15,828,338
Non-Rate Revenues	599,330	635,770	600,769	575,976	571,953	571,970
Interest Earnings	49,648	44,365	46,139	55,338	43,480	55,118
<b>Total Sources of Funds</b>	<b>\$ 15,852,634</b>	<b>\$ 15,995,840</b>	<b>\$ 16,076,494</b>	<b>\$ 16,177,778</b>	<b>\$ 16,300,587</b>	<b>\$ 16,455,426</b>
<b>Uses of Funds</b>						
Operating Expenses	\$ 12,791,032	\$ 13,197,960	\$ 13,312,000	\$ 13,813,880	\$ 14,928,296	\$ 15,546,000
Debt Service	498,608	489,138	488,652	490,108	492,153	463,855
Rate-Funded Capital Expenses	-	3,515,232	7,310,656	5,620,544	5,217,171	4,346,899
<b>Total Use of Funds</b>	<b>\$ 13,289,640</b>	<b>\$ 17,202,330</b>	<b>\$ 21,111,308</b>	<b>\$ 19,924,532</b>	<b>\$ 20,637,620</b>	<b>\$ 20,356,754</b>
Additional Revenue from Rate Increases	-	765,785	1,581,533	2,450,511	3,561,824	4,565,472
<b>Surplus / (Deficiency) after Rate Increase</b>	<b>\$ 2,562,994</b>	<b>\$ (440,704)</b>	<b>\$ (3,453,281)</b>	<b>\$ (1,296,243)</b>	<b>\$ (775,210)</b>	<b>\$ 664,144</b>
<b>Projected Annual Rate Increase</b>	<b>0.00%</b>	<b>5.00%</b>	<b>5.00%</b>	<b>5.00%</b>	<b>6.00%</b>	<b>5.00%</b>
<b>Debt Coverage After Rate Increase</b>	<b>4.25</b>	<b>1.30</b>	<b>1.30</b>	<b>1.30</b>	<b>1.30</b>	<b>1.30</b>
<b>Net Revenue Requirement</b>	<b>\$ 12,690,310</b>	<b>\$ 16,566,560</b>	<b>\$ 20,510,539</b>	<b>\$ 19,348,556</b>	<b>\$ 20,065,667</b>	<b>\$ 19,784,784</b>

Figure 2. Example of a Financial Plan Summary

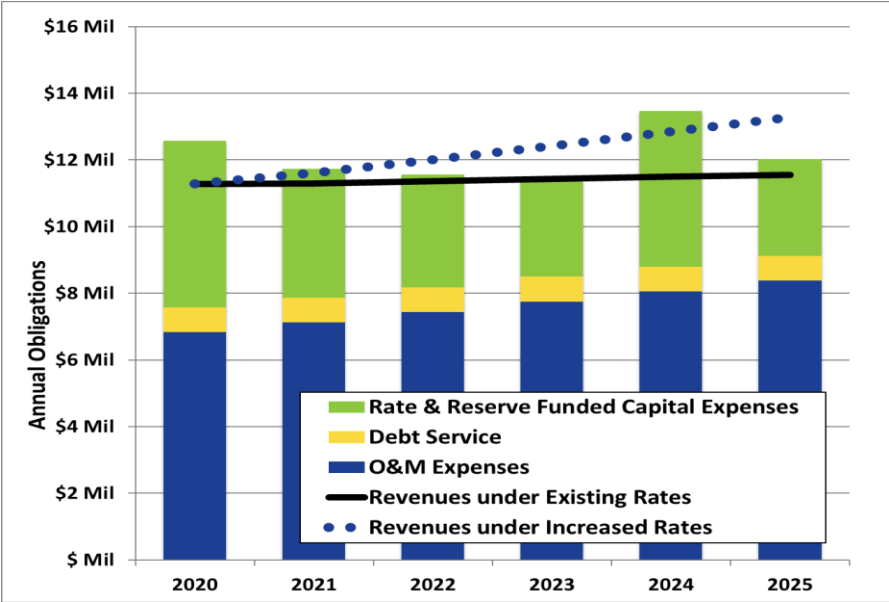
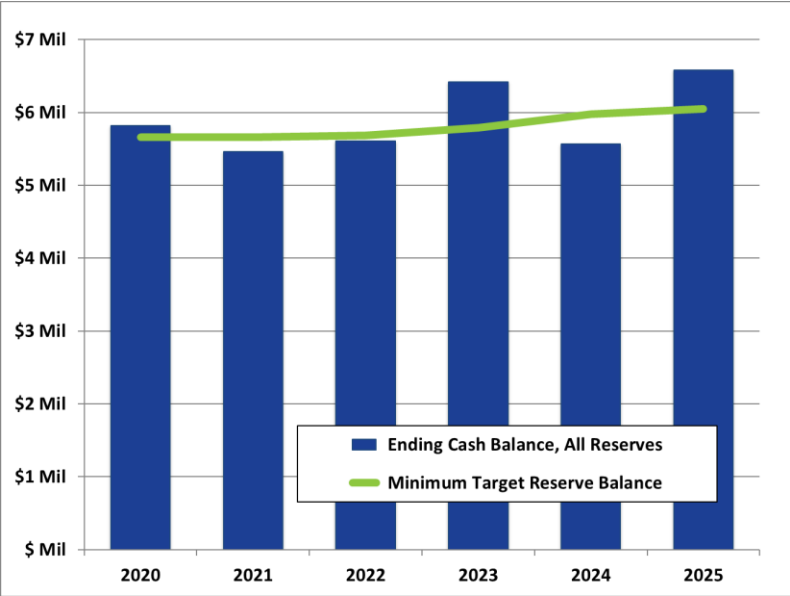


Figure 3. Example of a Financial Reserve Fund Summary

Reserve Fund Balances and Recommended Reserve Targets	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
<b>Operating Reserve</b>	\$ 1,708,000	\$ 1,586,173	\$ 1,781,660	\$ 1,938,000	\$ 1,605,258	\$ 2,095,000
<i>Recommended Minimum Target</i>	<i>1,708,000</i>	<i>1,781,000</i>	<i>1,858,000</i>	<i>1,938,000</i>	<i>2,015,000</i>	<i>2,095,000</i>
<b>Capital Rehab &amp; Replacement Reserve</b>	\$ 1,726,922	\$ 1,426,100	\$ 1,372,500	\$ 1,952,055	\$ 1,336,200	\$ 1,777,507
<i>Recommended Minimum Target</i>	<i>1,565,400</i>	<i>1,426,100</i>	<i>1,372,500</i>	<i>1,320,100</i>	<i>1,336,200</i>	<i>1,249,300</i>
<b>Debt Reserve</b>	\$ 536,949	\$ 536,949	\$ 536,949	\$ 536,949	\$ 536,949	\$ 536,949
<i>Recommended Minimum Target</i>	<i>536,949</i>	<i>536,949</i>	<i>536,949</i>	<i>536,949</i>	<i>536,949</i>	<i>536,949</i>
<b>Total Ending Balance</b>	<b>\$ 3,971,871</b>	<b>\$ 3,549,223</b>	<b>\$ 3,691,110</b>	<b>\$ 4,427,004</b>	<b>\$ 3,478,408</b>	<b>\$ 4,409,456</b>
<b>Total Recommended Minimum Target</b>	<b>\$ 3,810,349</b>	<b>\$ 3,744,049</b>	<b>\$ 3,767,449</b>	<b>\$ 3,795,049</b>	<b>\$ 3,888,149</b>	<b>\$ 3,881,249</b>
<b>Surplus / (Deficit)</b>	<b>\$ 161,522</b>	<b>\$ (194,827)</b>	<b>\$ (76,340)</b>	<b>\$ 631,955</b>	<b>\$ (409,742)</b>	<b>\$ 528,207</b>

Figure 4. Example of a Financial Reserve Fund Summary



### Task 3 – Evaluate Water Demand

It is important to understand how consumption patterns have changed in recent years and how to reasonably project future water demand. Therefore, we will work with District staff to evaluate these data and develop reasonable projections of water consumption by customer class.

### Task 4 – Cost-of-Service Analysis

Using the net revenue requirements developed in Task 2, we will equitably allocate costs to each customer class based on cost-of-service principles that comply with Prop 218. NBS will also review and incorporate the historical usage characteristics by customer class from Task 3. Based on the District's budgets, NBS will evaluate cost allocations of various cost components to each customer class.

#### Water Cost of Service Analysis

The main components of the water cost-of-service analysis are:

1. **Functionalization/Classification of Expenses** – Functionalizing the expenses means arranging costs into basic categories, such as source of supply, treatment, transmission, and distribution, as well as administrative and overhead costs. Once the costs have been functionalized, they are then classified into their various cost components (i.e., capacity, commodity, or customer-related costs).
2. **Allocation of Costs to Customer Classes** – These costs are then allocated to individual customer classes based on allocation factors specific to each cost classification producing fixed and variable revenue requirements for each customer class. These allocations will be used for the actual rate calculations.

Figure 5 provides an example of how water revenue requirements are classified and then allocated to customer classes to establish the amount of revenue requirements for each customer class. Figures 6 and 7 provide examples of how commodity- and capacity-related costs are allocated to customer classes. Figure 8 is an example of how allocated costs are summarized for each customer class.

**Figure 5. Classification of Water Revenue Requirements**

Classification of Expenses							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	2013/14	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
<b>Operating Expenses</b>							
Administration Expenses	\$ 1,623,270	\$ 604,908	\$ 756,135	\$ 262,227	37%	47%	16%
Purchased Water Expenses	\$ 704,330	\$ 704,330	\$ -	\$ -	100%	0%	0%
Water Treatment Expenses	\$ 5,919,390	\$ 3,774,945	\$ 2,144,445	\$ -	64%	36%	0%
Water Distribution Expenses	\$ 4,950,970	\$ 1,579,595	\$ 1,579,595	\$ 1,791,780	32%	32%	36%
<b>Total Operating Expenses</b>	<b>\$ 13,197,960</b>	<b>\$ 6,663,778</b>	<b>\$ 4,480,175</b>	<b>\$ 2,054,007</b>	<b>50%</b>	<b>34%</b>	<b>16%</b>
Total Debt Service Payments	\$ 489,138	\$ 244,569	\$ 244,569	\$ -	50%	50%	0%
Rate Funded Capital Expenses	\$ 3,515,232	\$ 1,757,616	\$ 1,757,616	\$ -	50%	50%	0%
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>\$ 17,202,330</b>	<b>\$ 8,665,963</b>	<b>\$ 6,482,360</b>	<b>\$ 2,054,007</b>	<b>50%</b>	<b>38%</b>	<b>12%</b>
Less: Non-Rate Revenues	\$ (476,925)	\$ (240,259)	\$ (179,720)	\$ (56,946)	50%	50%	0%
<b>NET REVENUE REQUIREMENTS</b>	<b>\$ 16,248,479</b>	<b>\$ 8,185,445</b>	<b>\$ 6,122,920</b>	<b>\$ 1,940,115</b>			
<b>Allocation of Revenue Requirements</b>	<b>100%</b>	<b>50%</b>	<b>38%</b>	<b>12%</b>			
<b>Adjustment for Current Rate Level:</b>	<b>Total</b>	<b>(COM)</b>	<b>(CAP)</b>	<b>(CA)</b>			
2013/14 Target Rate Rev. After Rate Increases	\$ 16,081,490						
Current Level of Rate Revenue	\$ 15,315,705						
2013/14 Projected Rate Increase	5.00%						
<b>Adjusted Net Revenue Req'ts</b>	<b>\$ 16,081,490</b>	<b>\$ 8,101,321</b>	<b>\$ 6,059,994</b>	<b>\$ 1,920,176</b>			
<i>Percent of Revenue</i>		<i>50%</i>	<i>38%</i>	<i>12%</i>			

**Figure 6. Example of Commodity Allocation Factor**

Development of the Commodity Allocation Factor				
Customer Class	FY 2011/12 Volume (ccf) <sup>1,2</sup>	% Conservation	Estimated Volume Adjusted for Conservation <sup>3</sup>	Percent of Adjusted Volume
Residential	6,210,146	5%	5,899,639	64%
Multi-Family	487,451	5%	463,078	5%
Commercial	2,968,556	5%	2,820,128	31%
<b>Total</b>	<b>9,666,153</b>	<b>--</b>	<b>9,182,845</b>	<b>100%</b>

**Figure 7. Example of Capacity Allocation Factor (Water)**

Development of the Capacity Allocation Factor				
Customer Class	Average Mo. Use (Ccf)	Total Peak Month Use	Peak Month Factor	Capacity Allocation %
Residential	517,512	962,235	1.86	67%
Multi-Family	40,621	61,603	1.52	4%
Commercial	247,380	412,591	1.67	29%
<b>Total</b>	<b>805,513</b>	<b>1,436,429</b>	<b>1.78</b>	<b>100%</b>

**Figure 8. Example of Allocation of Water Revenue Requirements to Customer Classes**

Classification Components	Net Revenue Requirements 2013/14		Customer Classes		
			Single-Family	Multi-Family	Commercial
Commodity-Related Costs	\$ 9,730,242	61%	\$ 6,251,321	\$ 490,683	\$ 2,988,238
Capacity-Related Costs	\$ 4,823,021	30%	\$ 3,230,845	\$ 206,841	\$ 1,385,335
Customer-Related Costs	\$ 1,528,227	10%	\$ 1,284,960	\$ 57,405	\$ 185,862
<b>Net Revenue Requirement</b>	<b>\$ 16,081,490</b>	<b>100%</b>	<b>\$10,767,126</b>	<b>\$ 754,929</b>	<b>\$ 4,559,436</b>

### Sewer Cost of Service Analysis

NBS will rely on the District's sewer budget to classify all expenses into their various cost components, such as flow (volume), strength (BOD and TSS), and customer related costs. We will allocate costs to each customer class based on allocation factors: water consumption, wastewater treatment plant flow and loading data, and industry standard customer classification data. The cost allocation factors developed include:

- Volume Allocation Factor – Develop estimates of the total annual volume of wastewater treated for each customer class.
- Strength Allocation Factors – Develop estimates of the annual pounds of BOD and TSS treated for each customer class.
- Customer Allocation Factors – Calculate the number of customers by customer class in the District's service area.

NBS will then apportion the costs to individual customer classes based on the allocation factors specific to each cost classification, producing fixed and variable revenue requirements for each customer class. These allocations will then be used in calculating rates.



## Task 5 – Rate Design Analysis

NBS will work with District staff to review the current rate structure to develop alternatives that better meet Prop 218 and the District’s broader objectives. Where possible, we will identify pass-through costs (e.g., water supply costs, electricity, and other appropriate costs).

**General Criteria for Improving the Rate Design** – Rate design should consider both revenue sufficiency and financial resiliency. NBS’ general approach is to avoid significant ***under-collection*** of rate revenue, which is the worst-case scenario from a financial perspective. Other criteria include:

- How fixed and volumetric rates affect revenue stability.
- How water conservation is reflected in the water and sewer rate analyses.
- Changes over the last several years due to drought, conservation efforts, and COVID 19 that may affect rates on a going-forward basis.
- The amount of revenue collected from fixed and variable charges (which can significantly impact customer bills).
- Impacts on monthly bills for customer with low-, average-, and high-consumption.

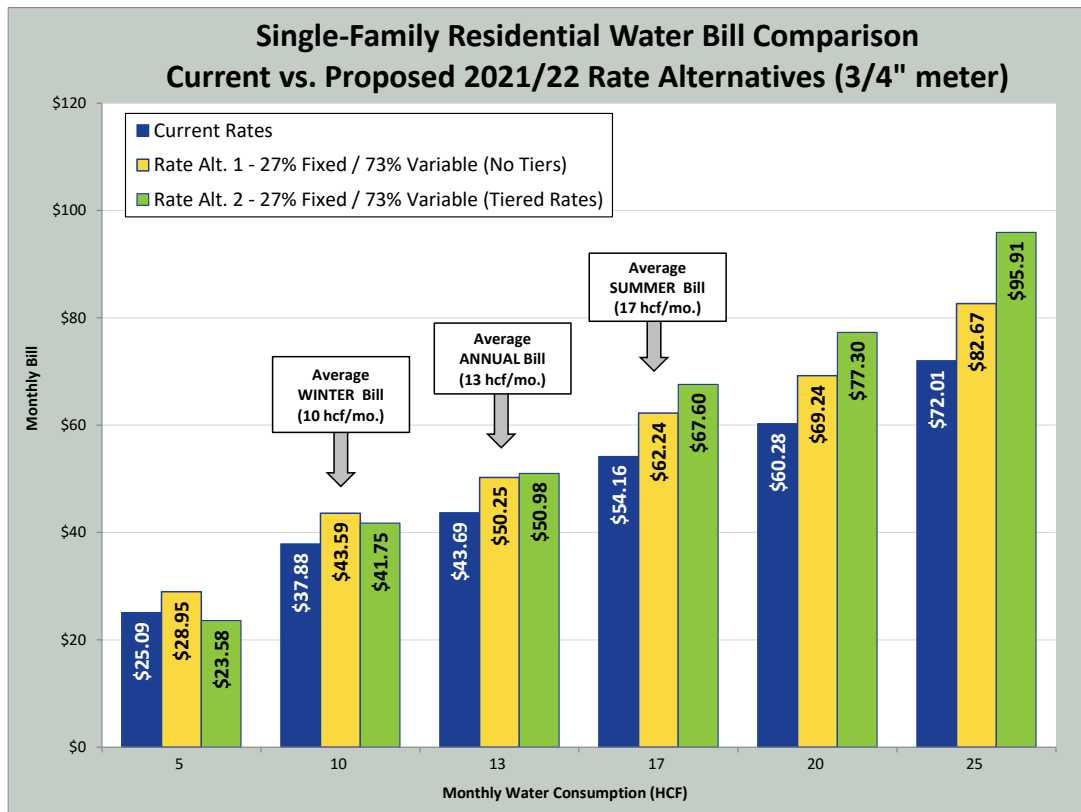
Customer bill comparisons will look at both the current and alternative rate structures. It is important to note that all rate structure alternatives will be “revenue neutral”: they all collect the same amount of revenue within each customer class. However, difference in bills within customer classes will be of great interest to those customers.

**Approach to Calculating Fixed and Volumetric Charges** – In a true cost-of-service methodology, fixed charges collect 100% of fixed costs. However, to encourage water conservation, the pricing signals used by many water utilities have resulted in revenue instability during mandated drought-conservation periods.

Likewise, volumetric rates should be used to cover variable costs and allocated based on consumption. Again, an emphasis on conservation often results in recovering some portion of the fixed costs through volumetric rates, which exposes water utilities to revenue instability (e.g., when consumption drops, volumetric rates fail to recover all the fixed costs). These impacts can be offset by using rate stabilization reserves and/or drought rates. We have also successfully created and implemented “revenue-stabilization rates” whereby automatic increases occur whenever projected monthly volumetric rate revenue falls by 10% or more. We will discuss this option and whether using this approach instead of drought rates would be an improvement.

**Comparison of Customer Bills** – In order to compare rate alternatives, we will prepare rate tables and bill comparisons for each customer classes for water and sewer to illustrate how the rate adjustments will affect customer bills, as shown in Figure 9. These are the tables and charts that will be used in the report and in public workshops. NBS will also prepare a comparison of the District’s current and proposed water and sewer rates with comparable neighboring agencies.

**Figure 9. Example of Customer Bill Comparison – Single Family Water Rates**



## Task 6 – Prepare Written Study Report

NBS will prepare draft and final study reports<sup>1</sup> and work with District staff to review the draft report prior to public release. Our emphasis will be to present a clear and concise report with an executive summary of no more than two pages. Key assumptions, methodologies, and factors affecting the development of proposed rates will be highlighted with charts and graphs. More technical aspects of the study, particularly the tables documenting the calculations and sources of data, will be separately provided in a technical appendix.

## Task 7 – Meetings and Presentations

NBS will talk with District staff on a regular basis regarding data collection, analysis, initial results, and staff questions. Holding meetings remotely (e.g., Zoom, Teams, etc.) will dramatically reduce study costs, and should be sufficient to answer questions and adopt new rates. While we assume that meetings will be remote, we have included an optional task for in-person meetings in the cost proposal below.

## Task 8 – Implementing Rates and Prop 218 Assistance

NBS will work with District staff to answer any questions that come up and guide you through the adoption process. The key technical tasks will be to provide the proposed rate tables included in the Prop 218 notices. We assume the District will print, mail, and conduct all counting of protest ballots. The District should also have legal counsel review the notices for legal compliance with the provisions under Prop 218, wording related to pass-throughs, etc.

<sup>1</sup> We will plan to combine water and sewer into the same report.

## 2 | COST PROPOSAL

### Budget

Our detailed project budget is shown below. Our professional fees are based on our understanding of the District's needs and the effort we believe is necessary to complete the scope of services described in our proposal. Work will be performed on a time and materials basis, at the hourly labor rates show in the table below for a not-to-exceed amount of **\$38,400**.

Gold Mountain CSD Water and Sewer Rate Study					
Study Tasks	Consultant Labor (Hours)				Grand Totals
	PM (Clumpner)	Principal Consultant (Highstreet)	Consultants (Bou, Taylor)	Total Consultant Labor (Hrs.)	Consultant Costs (\$)
<b>Hourly Rates</b>	<b>\$250</b>	<b>\$250</b>	<b>\$170</b>		
<b>Water Rate Study</b>					
Task 1 – Data Collection and Kickoff Meeting	2.0	-	6.0	8.0	\$1,520
Task 2 – Financial Plan	4.0	-	10.0	14.0	\$2,700
Task 3 – Evaluate Water Demand	2.0	-	8.0	10.0	\$1,860
Task 4 – Cost of Service Analysis	8.0	1.0	16.0	25.0	\$4,970
Task 5 – Rate Design Analysis	8.0	1.0	14.0	23.0	\$4,630
Task 6 – Prepare Written Study Report	6.0	-	2.0	8.0	\$1,840
Task 7 – Meetings and Presentations <sup>1</sup>	6.0	-	4.0	10.0	\$2,180
Task 8 – Implementing Rates and Prop 218 Assistance	4.0	-	2.0	6.0	\$1,340
<b>Subtotal: Water Rate Study</b>	<b>40.0</b>	<b>2.0</b>	<b>62.0</b>	<b>104.0</b>	<b>\$21,040</b>
<b>Sewer Rate Study</b>					
Task 1 – Data Collection and Kickoff Meeting	2.0	-	6.0	8.0	\$1,520
Task 2 – Financial Plan	2.0	-	10.0	12.0	\$2,200
Task 3 – Evaluate Water Demand	-	-	6.0	6.0	\$1,020
Task 4 – Cost of Service Analysis	6.0	1.0	14.0	21.0	\$4,130
Task 5 – Rate Design Analysis	6.0	1.0	14.0	21.0	\$4,130
Task 6 – Prepare Written Study Report	6.0	-	2.0	8.0	\$1,840
Task 7 – Meetings and Presentations <sup>1</sup>	4.0	-	4.0	8.0	\$1,680
Task 8 – Implementing Rates and Prop 218 Assistance	2.0	-	2.0	4.0	\$840
<b>Subtotal: Sewer Rate Study</b>	<b>28.0</b>	<b>2.0</b>	<b>58.0</b>	<b>88.0</b>	<b>\$17,360</b>
<b>TOTAL: Utility Rate Studies</b>	<b>68.0</b>	<b>4.0</b>	<b>120.0</b>	<b>192.0</b>	<b>\$38,400</b>
<i>Incremental Expenses for In-Person Meetings<sup>2</sup></i>					\$0
<i>Labor Costs (per Meeting)</i>	6.0	-	-	6.0	\$1,500
<i>Travel Costs (per Meeting)</i>	-	-	-	-	\$250

1. We assume that 2 public meetings/presentations will be conducted remotely via conference call or video.

2. NBS' labor costs to attend in-person meetings.

**Additional services, if requested**, can be provided based on these hourly labor rates, such as:

- Additional public meetings
- Additional rate alternatives

All tasks would be mutually agreed upon by NBS and the District prior to proceeding.

### 3 | PROJECT SCHEDULE

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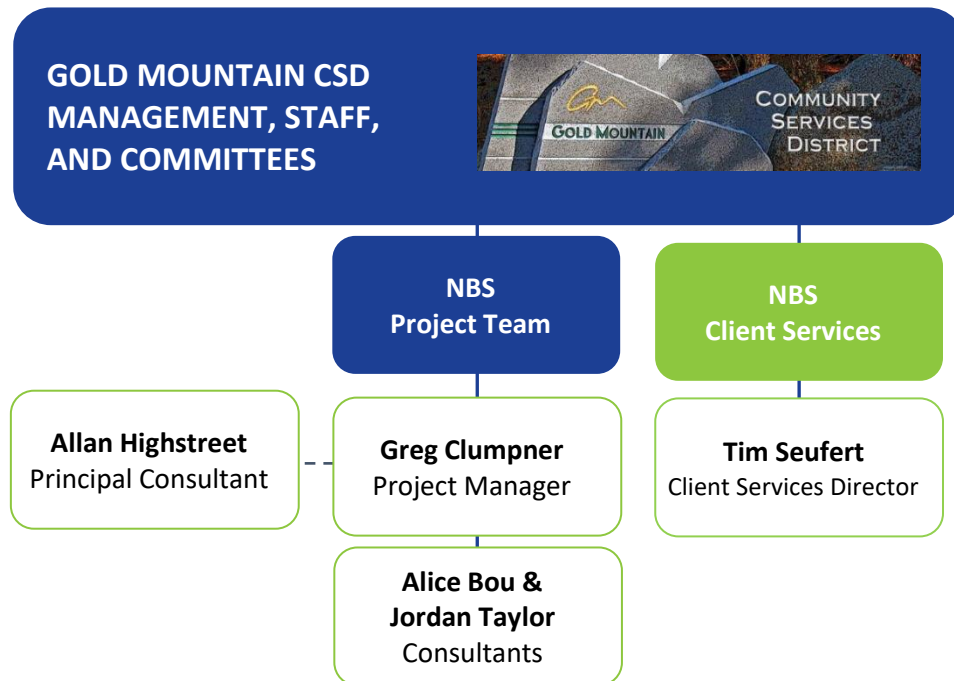
The project schedule for completing this rate study will be determined based on how soon data is available and the District's scheduling of meetings. Typically, it takes about three months to collect data and have draft results ready. Since there is not sufficient time to have the new rates adopted by July 1, 2021, we can discuss an appropriate schedule in more detail at the kick-off meeting.

## 4 | PROJECT TEAM

### Key Personnel

The following is an overview of NBS' consulting team.

### NBS Project Team Organization



### GREG CLUMPNER, PROJECT MANAGER

**Role and Responsibilities:** As project manager, Greg Clumpner will provide the day-to-day management of the technical and administrative aspects of the project and will work closely with the District's project manager and staff to discuss and review the overall approach, technical rate alternatives, and creative solutions to consider that will best fit the District's unique characteristics and issues. Greg will be the primary point of contact for District staff, and will be responsible for delivering work products, attending meetings and public presentations for this engagement.

**Work Experience:** As Director in NBS' Utility Rate Study Practice, Greg Clumpner's 40-year professional career has focused on cost-of-service rate studies for municipal water, sewer, recycled water, and solid waste agencies. He has completed 400+ similar studies during his career. He regularly makes technical presentations at client workshops and industry conferences. Greg's practice also includes management-consulting assignments related to utility operations, system valuations, and feasibility studies. He also created and managed Foresight Consulting where, for six years, his practice focused on water and sewer rate analyses. Additionally, Greg works with Prop 218 legal counsel on an on-going basis and knows the legal constraints and when to solicit legal input to ensure alternatives will meet Prop 218 requirements.



## ALLAN HIGHSTREET, PRINCIPAL CONSULTANT

**Role and Responsibilities:** Allan Highstreet will provide additional experience in water rate making and provide overall senior technical review on this project.

**Work Experience:** Allan Highstreet has 41 years of experience in the water industry working as an economist for Jacobs Engineering (previously CH2M Hill). Most recently he was senior vice president at Jacobs managing water resource planning and development projects. Allan's four decades of experience includes preparing water and sewer rate and capacity fee studies, and he provides invaluable experience to the NBS project team for this engagement. His academic background includes a BS in Agricultural Business and a MS in Agricultural Economics.

## ALICE BOU AND JORDAN TAYLOR, CONSULTANTS

**Role and Responsibilities:** Alice Bou and Jordan Taylor will support the project team in performing large scale data analysis and validation, data input, and will also help develop the rate model for this study. As needed, they will facilitate data collection and coordinate with District staff to move tasks forward on the agreed-upon timeline for completion.

**Work Experience:** Alice Bou has a Bachelor of Arts degree and offers more than two decades of experience working in accounting and financial management performing data analysis, variance analysis, budgeting, and forecasting, financial modeling, and managerial reporting.

Jordan Taylor has a Bachelor of Science degree in Chemistry and a master's degree in Business Administration with an emphasis in Finance. She offers more than 10 years of accounting experience along with extensive knowledge of financial analysis and budget planning.

## TIM SEUFERT, CLIENT SERVICES DIRECTOR

**Project role and responsibilities:** Tim Seufert will ensure NBS' study team delivers the high-quality work products and service standards but will not be charging time to this project.

**Summary of work experience:** Tim Seufert is a Director located in NBS' San Francisco office. He has a dozen years of local government experience with special financing tools in California, a decade of corporate financial experience, and has been involved in municipal projects for school and fire districts, counties, and other special districts from their feasibility stage to their completion. He is also a presenter at training seminars and an author on local government finance issues.

*Full resumes for our proposed project team follow.*

## EDUCATION

- Master of Science, Agricultural/Managerial Economics, U.C. Davis
- Bachelor of Science, Environmental Planning, U.C. Davis

## AFFILIATIONS

- Former Vice-Chair, City of Davis Utility Rate Advisory Committee
- Former Chairman, City of Davis Planning Commission

## SPEAKING / MEDIA

- “Tiered Water Rates – Understanding Their Equity and Impact on Customer Bills” – Journal of AWWA, September 2019, Volume 111, Number 9
- “Avoiding Billing Debacles Around New Water or Sewer Rates” – Journal of AWWA, March 2019, Vol. 111, No. 3
- “Changing Perspectives on Outside Surcharges: Understanding New Criteria” – Journal of AWWA, January 2019, Vol. 111, No. 1
- “Social Justice and Water Rates: Impacts of Rate Design on Low-Income Customers” – Journal of AWWA, July 2018, Vol. 110, No 7
- “Setting the Stage for Water Rates: Policy Direction Should Be A Priority”, CSMFO Magazine, November 2016
- “Rates, Fees and Charges in the Post-Proposition 13, 218 and 26 ERA in California” – NBS Publication, Contributing Author, 2014
- “Fiscal Health vs. Pricing for Conservation” – ACWA Fall Conf., Indian Wells, CA, December 2015

## HIGHLIGHTS

Greg Clumpner has 35 years of experience in financial, economic, and cost-of-service rate analyses for municipal water, sewer and solid waste agencies, including broader management consulting:

- **Utility Cost-of-Service Rate Studies:** 400+ cost-of-service analyses and rate design studies; conservation-oriented water rates, capital improvement funding strategies for water, sewer and solid waste utilities
- **Management Consulting and Strategic Planning:** Feasibility analyses of municipal vs. private system operations, system valuations and acquisitions, and bond feasibility studies.

## RELEVANT PROJECT EXPERIENCE

- **City of Redding – Water, Sewer, and Solid Waste Rate and Impact Fee Studies:** Cost-of-service study of water, sewer, and solid waste rate and system capacity charges. Addressed everything from policies objectives to structure alternatives. Worked with a City Council-appointed Citizens Advisory Group that reviewed rate alternatives and provided recommendations to the Council.
- **Mountain House CSD, Tracy, CA – Water and Sewer Cost-of-Service Rate Study:** Study redesigning rates from 1990s-era rate structures that subsidized utilities from the general fund. New rates were phased in over five years and restructured rates, evaluated customer bill impacts, provided public workshops and Prop 218 notices.
- **El Dorado Irrigation District, Placerville, CA – Water, Sewer, and Recycled Water Cost-of-Service and Rate Design Study:** Worked with the district board and a dedicated committee to review/recommend policy changes; alternative rate designs; and recommended water, sewer, and recycled water rates.
- **Los Angeles Department of Water & Power (LADWP) – Specialized Studies:** As a part of the 2018-19 interim rate review for LADWP under contract with Navigant Consultants (now Guidehouse), prepared evaluations of: (1) Analysis of how demand forecasting methodologies are used for financial planning and rate-setting purposes; (2) Review of temperature zones and water rate impacts to determine whether climate-change adjustments to temperature zone boundaries would change customer water budgets, and; (3) stormwater benefit cost analysis reviewed the feasibility of specific projects.
- **City of Lincoln – Sewer and Solid Waste Rate Studies:** Prepared full cost-of-service rate studies that evaluated rate design alternatives, capital project funding strategies, and changing customer characteristics. The sewer rates also developed new rates for County vs. City customers and provided the basis for issuing new revenue bonds to fund capital improvements.

### RELEVANT PROJECT EXPERIENCE | CONTINUED

- **Mill Valley – Sewer Rate Study:** Evaluated long-term financial plans reflecting the City’s capital improvement costs and developed fixed and variable rate design alternatives to improve revenue stability and their impacts on commercial customers. Sewer rates also considered recent drought and water conservation efforts. Water consumption was used to update commercial rates and how projected water conservation might impact future consumption.
- **City of Sacramento – Water, Sewer and Stormwater Impact Fees:** Updated citywide impact fees for each utility, including the City’s downtown area combined storm-sewer system as well as the separated systems.
- **Pajaro Sunny Mesa CSD, Monterey – Water Rate Study:** The CSD has nine separate water systems, each with separate rates. This study developed a uniform and combined rate structure for the CSD that met CSD policy objectives and Prop 218 requirements for fairness and equity.
- **City of Santa Paula – Water and Sewer Rate Study:** This study included meeting future funding requirements, evaluating issues surrounding the City’s purchase of its wastewater treatment plant, drought impacts, and generally improving rate design to be fairer and more equitable. Residential sewer rates were restructured to create volumetric charges based on average winter water use on a customer-by-customer basis.
- **City of Sausalito – Sewer Rate Study:** This study restructured sewer rates from a fixed charge to a combination of fixed and volumetric rates based on average winter water use. At that time, the Marin County Grand Jury was investigating sewer rates countywide and commended the City for the actions it took to restructure these rates and recommended other agencies follow suit.
- **San Francisco PUC – Solid Waste Electric Utility Rate Studies:** As the prime contractor, NBS teamed with Navigant and R3 Consulting to complete rate studies for the PUC that updated solid waste and electric utility rates.
- **San Lorenzo Valley Water District – Water and Sewer Cost of Service and Rate Design Studies:** Two separate studies addressed the cost of service and then rate design issues, including a long-term funding plan for capital projects. Rate design included restructuring tiered rates combined with a set of rate stabilization (drought) rates that would automatically be implemented if rate revenue in any month fell 10 percent or more below projected revenues
- **City of Yuba City – Water and Sewer Rate Study:** Comprehensive update addressing long-term revenue goals, water conservation, and adequate funding for capital improvements. Prepared financial plan alternatives, projected net revenues, developed reserve policies, cost-of-service analyses, and alternative rate designs including water conservation rates.

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*“Greg’s knowledge and expertise helped the process immensely. He met with the committees and presented his findings in clear, understandable graphs and tables. He worked with staff to fine tune the information for presentation to the Board and community.”*

*Brian Lee, General Manager,  
San Lorenzo Valley  
Water District*

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## EDUCATION

- Master of Science,  
Agricultural Economics,  
UC Davis
- Bachelor of Science,  
Agricultural Business  
Management,  
California State University,  
San Luis Obispo

## AFFILIATIONS

- Project Management  
Professional (2002,  
No. 52367)
- American Water Works  
Association (AWWA),  
Member

## PROJECTS | CONT.

- **City of Tracy, Tracy, CA – Sewer Rate Studies:** Has prepared sewer rate updates for the City of Tracy since 1979. Originally done to satisfy SRF requirements, more recent updates focused on cost of service studies.
- **City of Sacramento, CA – Sanitary Sewer and Storm Drainage Rate Study:** Project economist on this rate study. The primary focus of the project was to compute rates sufficient to upgrade the combined sewer portion of the system to a 10-year level of protection and prevent combined sewer overflows into the Sacramento and American Rivers.
- **Cities of Stockton, Millbrae, Turlock, Arcata, Wheatland, and Merced, CA:** Developed sewer revenue programs for the cities of Stockton, Millbrae, Turlock, Arcata, Wheatland, and Merced and for the American Canyon County Water District and the Tahoe-Truckee Sanitation Agency.
- **Sacramento Industrial Users Group** (Campbell's Soup and Crystal Creamery): Represented industry in review/revising SRCSD sewer rates.

## HIGHLIGHTS

After retiring from Jacobs Engineering as a senior vice-president last fall, Allan Highstreet has since joined NBS as a technical consultant with the highest level of expertise in water-related financial analyses.

Allan is a senior economist with 41 years of experience in financial planning for water, wastewater, and stormwater utilities, including rate studies, project funding, and cost allocations. He has performed economic assessments, cost analyses, finance plans, and rate studies, including preparing loan applications and related documents for many municipal clients.

## RELEVANT PROJECT EXPERIENCE

- **Merced Irrigation District, Merced, CA – Water Cost of Service Study:** Prepared a cost of service study that estimated user charges and fees for the water deliveries within the District. Also prepared the Proposition 218 material for the vote to enact the rates.
- **Byron Bethany Irrigation District, Byron, CA – Water Cost of Service Study:** Prepared a cost of service study that estimated user charges for the water deliveries within the District. Also prepared the Proposition 218 material for the vote to enact the rates.
- **Westlands Water District, CA – Evaluating Land Based Assessments:** Led an evaluation of possible land based assessments in the District, then prepared an Engineers Report to implement a benefit assessment for the District.
- **Oakdale Irrigation District, Oakdale, CA – Water Rate Study:** Prepared a cost of service study that estimated user charges for the water deliveries within the District. This study moved the District from a flat rate to tiered volumetric rates to comply with the Water Conservation Act of 2009 (SBx 7-7). Also prepared the Proposition 218 material for the vote to enact rates.

**Flood Control User Charges and Financing Plans:** Developed financing plans and user charges for storm drainage and flood control projects, including the City of Sacramento Storm Drainage and Sewer Rate Study, the City of Palo Alto Storm Drainage Enterprise Fund, establishing the City of Tracy's storm drainage charges, a financing plan for the Auburn Ravine Mitigation Plan for Placer County Flood Control District, and a financing plan for the Colma Creek/Guadalupe Canyon master plan for Daly City.

**Other clients Mr. Highstreet has provided similar services include:**

- **City of Anaheim – Storm Drainage Impact Fees and Financial Planning**
- **City of Millbrae – Sewer Rate Study**
- **Tahoe Truckee Sanitation Agency – Financial Analyses**
- **Del Monte and Sun Maid Corporations – Sewer Rate Evaluations for the Selma-Kingsburg-Fowler Sanitation District**
- **City of Stockton – Sewer Rate Study**
- **City of Hollister – Wastewater User Charges and Demand Fees**
- **City of Merced – Water and Sewer Rate Studies**
- **City of Turlock – Sewer Rate Studies**
- **Oroville-Wyandotte Irrigation District – Water Rate Study**

## EDUCATION

- Bachelor of Arts, University of California San Diego, La Jolla

## HIGHLIGHTS

- Two decades of financial, accounting and risk management experience
- Extensive experience in financial reporting, risk management analysis, budget management and development of accounting policies and procedures
- In-depth experience as a finance manager, consultant and controller in private industry
- Supports project teams completing public utility rate and fee studies in performing large-scale data analysis, financial modeling and rate analysis



*“It has been a pleasure working with you on our rate study. I greatly appreciate your prompt responses and quality work to quickly make requested model changes.”*

*Cammie Morin  
Finance Director  
Suisun-Solano Water Authority*



## BIOGRAPHY

Alice Bou is a Consultant in our Utility Rate and Fee group. She is an accomplished finance professional with proven success in the oversight of management accounting and business analysis. Alice has two decades of experience working in accounting and financial management, performing data analysis, variance analysis, budgeting and forecasting, financial modeling, and managerial reporting. She has also developed detailed procedures and systems documentation with a focus on productivity, data integrity and functionality to promote transparency of all finance and accounting functions across all departments of the entire organization. Alice’s diverse experience is essential to the work performed by NBS.

As a member of the NBS team, Alice assists in the preparation of financial plans, cost of service, rate, and fee design analysis for our public utility clients. She reviews financial statements, budgets, capital improvement plans, operational data, and customer billing information for use in public utility rate and fee studies. Alice adds value to our team with her exceptional strategic financial planning and analytical skills.

## RELEVANT PROJECT EXPERIENCE

- **City of Sausalito – Sewer Rate Study:**  
Developed a comprehensive financial plan to address the City’s increasing operating and maintenance costs as well as the need to finance \$8.6 million in planned capital improvements over the 5-year rate period. Due to the deteriorating condition of the City’s sewer system, the overall goal was to identify equitable sewer charges that addressed sewer upgrades and services and develop rates that balanced the use of outstanding bond proceeds, cash reserves, and additional revenue generated from rate increases.
- **City of Davis – Sewer Rate and System Capacity Fee Study:**  
Established sewer capacity fees for the City that reflect the cost of sewer system infrastructure that is available to serve new development. Many factors were considered in the study, including the allocation of the \$268 million in existing system assets, the cost of planned capital improvements, and adjustments for outstanding debt and cash reserves. The assigned EDU’s per residential type of use were calculated based on the City’s most recent sewer rate study and average winter water use.



## RELEVANT PROJECT EXPERIENCE | CONTINUED

- City of Redding – Water, Sewer, and Solid Waste Rate Study:** Performed an update of the City’s rate studies for its water, sewer, and solid waste utilities, which included updating long-term financial plans to incorporate funding capital improvements estimated at \$97.2 million and reviewing alternative rate structures. Although all three utilities were financially sound, rate increases were necessary to ensure the continued financial health of the City’s utilities by generating sufficient revenue needed to meet projected capital funding requirements, providing revenue stability, and providing equity in rates among customer classes. In addition, the cost-of-service analysis for the solid waste utility examined specific allocation factors for each customer class and determined how costs are divided into various types of service (e.g., collection, disposal, and transfer station).
- City of Santa Paula – Water and Sewer Rate Study:** Completed water and sewer rate studies that included development of sustainable financial plans that focused on balancing the capital improvement needs of the utilities against the financial impact on customers. Worked with the City to develop several capital funding alternatives that balanced the use of cash reserves and rate increases to fund all obligations. The financial plans were then incorporated into the cost-of-service and rate design analyses to develop several rate alternatives for the City’s consideration.
- Suisun-Solano Water Authority – Water Rate Study:** Conducted a comprehensive water rate study for the Authority which consisted of a long-term financial plan that includes the projection of revenues and expenditures on a cash-flow basis to help determine the amount of rate revenue required to maintain reserves at the recommended levels. Worked with Authority staff to develop a plan to fund over \$20 million in necessary capital improvement projects, with a combination of new debt issuances, existing cash reserves, and rate adjustments.
- Mill Valley – Sewer Rate Study:** In the process of preparing a long-term financial plan reflecting the City’s growing concerns about shortfalls due to increased capital improvement costs and its current sewer rate structure, specifically the equitable assignment of costs to commercial customers (i.e., restaurants). Sewer rates will be evaluated to improve revenue stability in the light of current economic conditions as well as recent drought and continuing water conservation efforts. Water consumption data will be used to update commercial rates to assess how consumption has changed in the last few years and how projected water conservation might impact future consumption.
- LADWP – Water Temperature Zone Analysis:** LADWP currently has a four-tiered water-budget based volumetric rate structure that assigns water budgets to each customer based on lot size and temperature zone. As part of LADWP’s Interim Rate Review, evaluated the findings of previous temperature zone assignments to determine potential customer bill impacts of modifying the existing temperature zones. Prepared an analysis of temperature zone impacts on water customers, including a thorough review of the temperature data as well as recent trends related to the number of customers, water use, and water bills by zone, tier, and lot size over the last five years. The primary focus of this study was to see if recent changes in temperature data as defined by LADWP’s current temperature zones warranted changing the customers assigned to each temperature zone, or the criteria used to define each zone.
- Ironhouse Sanitary District – Wastewater Rate and Capacity Fee Study:** Assisted in the analysis of the District’s customer data to confirm the proportionality of current sewer rates to the cost of providing service. This process involved an in-depth examination of the water consumption data for customers from multiple water agencies to complete a cost-of-

## EDUCATION

- Master of Business Administration, Finance, University of Redlands
- Bachelor of Science, Chemistry, University of Utah, Salt Lake City

## HIGHLIGHTS

- Extensive experience in large-scale data analysis
- Advanced Excel user with the essential skills for complex data analysis and alternative scenario analysis
- More than ten years of accounting experience for large and small businesses
- Experienced consultant with water, sewer and solid waste rate structures
- Experienced consultant with budget management, financial planning and reserve fund analysis



*“Jordan has been great to work with on our Five-Year Water and Wastewater Rate Study. She is professional and very responsive to our requests from making last minute updates to the rate model to brainstorming alternative solutions with us.”*

Sunny Wang  
 Water Resources Manager  
 City of Santa Monica



## BIOGRAPHY

Jordan Taylor is a Consultant at NBS in our Utility Rate group. She brings more than ten years of experience in finance, accounting, budget planning and system auditing. Jordan graduated with high honors in her Master’s program and spent most of her studies focusing on large-scale financial analysis and data management.

Jordan provides analysis and support on water and sewer utility rate studies for cities and special districts in California. She performs various financial analyses, data management, and utility customer data analysis for utility rate and capacity fee studies. Jordan’s diverse knowledge of managerial accounting is essential to the work performed by NBS.

## RELEVANT PROJECT EXPERIENCE

- **Costa Mesa Sanitary District – Solid Waste Rate Study:** This comprehensive rate study included development of a long-term financial plan that evaluated funding options to reduce the annual operating deficit over a five-year period. An evaluation of the District’s solid waste rates, and updated rates were calculated for the three cart sizes that are used by customers in the District and a five-year rate schedule was adopted.
- **Hidden Valley Lakes Community Services District – Water/Sewer Rates & Capacity Fee Study:** Completed an updated water and sewer cost of service study, based on a previous 2015 study conducted by NBS. A key part of this study was addressing significant capital improvement projects and drought-related changes in water consumption patterns. Major tasks included reviewing financial/rate setting policies, preparing financial plans, updating the cost of service analysis, and evaluating alternative rate designs.
- **Idyllwild Water District – Water and Sewer Rate Study:** Prepared water and sewer rate studies, which included developing long-term financial plans that allowed the District to begin funding capital improvement programs for both utilities, and maintain adequate reserves to meet established reserve fund policies. Updated the water rate structure to provide more revenue stability for the District, and implement a cost-based tiered volumetric rate.
- **Ironhouse Sanitary District – Sewer Rate/Capacity Fee Study:** Developed a long-term financial plan that provides sufficient funding to meet annual operating and capital improvement costs, ensuring the District maintains adequate reserve funds while balancing capital outlays. Developed cost of service based rates that are proportional to the cost of service. A key component was obtaining water consumption data for customers and conducting an analysis to determine updated EDU assignments for non-residential customers based on water usage and strength characteristics of wastewater discharged.

### RELEVANT PROJECT EXPERIENCE | CONTINUED

- **City of Yuba City – Water and Sewer Rate Study Updates:** Perform annual updates of the City’s most recent comprehensive Water and Sewer Financial Plan and Rate Study. Key objectives of the annual updates are to evaluate annual financial status and determine if the City needs to implement the previously approved rate increases, or if a lower increase is possible.
- **City of Lincoln – Sewer and Solid Waste Rate Study:** Prepared long-term financial plans for the City’s Sewer and Solid Waste utilities, which included evaluating debt financing alternatives for sewer collection system and wastewater treatment plant improvements. Since this was the City’s first full cost-of-service analysis for solid waste, Jordan and the project team developed all relevant data necessary to complete the study, including allocating collection, disposal, organics collection, and general and administrative costs.
- **City of McFarland – Water and Sewer Rate Study:** Developed long-term financial plans for the City’s water and sewer utilities that would adequately fund operating, maintenance, and high-priority capital improvement needs, which included expanding the wastewater treatment plant and constructing a new water well. Worked with the project team to update the rate structures to reflect the cost of providing service to each customer class and current industry standards.
- **City of Morgan Hill – Wastewater Rate Study:** Prepared a financial plan for the 2018 wastewater rate study update, which included budget analysis, cash flow projections, and a detailed evaluation of capital funding options. The study evaluated debt financing alternatives to fund \$87 million in capital improvements for pipeline replacement and a treatment plant expansion.
- **City of Sacramento – Development Impact Fee Study:** Conducted an extensive update of water, sewer, and storm drainage system capacity charges. This study addressed City policies and overall objectives in developing connection fee alternatives for the City to consider. Key tasks included preparing financial/rate setting policies, financial plans, projecting capital revenue requirements, cost-of-service analyses, and alternative fee methodologies.
- **City of Seal Beach – Water and Sewer Rate Study:** Prepared financial plans for the City’s water and sewer utilities to ensure sufficient funding was available for operating, maintenance, capital improvement needs and to maintain appropriate reserve funds. Developed cash flow analyses and capital improvement program funding options that balanced the use of rate increases with potential debt financing to minimize the impact to ratepayers.
- **City of Santa Monica – Water and Wastewater Rate and Capital Facility Fee Study:** Developed long-term financial plans for the City’s water and wastewater utilities that balanced meeting operating, maintenance, and capital needs along with maintaining adequate reserve funds. Worked with the project team to develop capital funding options for the City’s \$200 million Sustainable Water Infrastructure project by balancing outside debt financing, interfund loans, use of existing reserve fund balances, and rate increases. Developed updated rate structures which included collecting a greater percentage of revenue from fixed water meter charges, incorporating a modest fixed charge in the wastewater rate structure and developing tiered volumetric water rates based on the City’s sources of water supply. Conducted a thorough analysis of water usage patterns and updated the wastewater discharge factors to reflect low water usage periods.