



Hidden Valley Lake Community Services District

Board Workshop

DATE: May 29, 2019
TIME: 5:30 P.M.
PLACE: Hidden Valley Lake CSD
Administration Office, Boardroom
19400 Hartmann Road
Hidden Valley Lake, CA

- 1) CALL TO ORDER
- 2) PLEDGE OF ALLEGIANCE
- 3) ROLL CALL
- 4) APPROVAL OF AGENDA
- 5) DISCUSS: Review and discuss NBS Rate Study
- 6) DISCUSS: Review and discuss 2019-20 Budget
- 7) PUBLIC COMMENT
- 8) BOARD COMMENT
- 9) ADJOURNMENT

Public records are available upon request. Board Packets are posted on our website at www.hvlcsd.org/meetings.

In compliance to the Americans with Disabilities Act, if you need special accommodations to participate in or attend the meeting please contact the District Office at 987-9201 at least 48 hours prior to the scheduled meeting.

Public shall be given the opportunity to comment on each agenda item before the Governing Board acts on that item, G.C. 54953.3. All other comments will be taken under Public Comment.



HIDDEN VALLEY LAKE
COMMUNITY SERVICES DISTRICT

WATER, SEWER & RECYCLED WATER RATE STUDY REPORT

Administrative Draft Report

April 2019

OFFICE LOCATIONS:

Temecula – Headquarters
32605 Temecula Parkway, Suite 100
Temecula, CA 92592

San Francisco - Regional Office
San Francisco, CA 94102

Davis - Regional Office
Davis, CA 95616

Phone: 800.676.7516

www.nbsgov.com

TABLE OF CONTENTS

SECTION 1. PURPOSE AND OVERVIEW OF THE STUDY	1
PURPOSE	ERROR! BOOKMARK NOT DEFINED.
OVERVIEW OF THE STUDY	1
RATE STUDY METHODOLOGY	2
SECTION 2. WATER RATE STUDY	4
A. KEY WATER RATE STUDY ISSUES.....	4
B. WATER UTILITY REVENUE REQUIREMENTS	4
C. CURRENT VS. PROPOSED WATER RATES	9
D. DROUGHT RATES.....	11
SECTION 3. SEWER AND RECYCLED WATER RATE STUDY	12
A. KEY SEWER/RECYCLED WATER RATE STUDY ISSUES	12
B. SEWER UTILITY REVENUE REQUIREMENTS.....	13
C. SEWER CUSTOMER CHARACTERISTICS	16
D. CURRENT VS. PROPOSED SEWER RATES	18
E. CURRENT VS. PROPOSED RECYCLED WATER RATES.....	218
SECTION 4. RECOMMENDATIONS AND NEXT STEPS.....	22
CONSULTANT RECOMMENDATIONS	22
NEXT STEPS	23
PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS	23
APPENDIX A: WATER RATE ANALYSIS.....
APPENDIX B: SEWER AND RECYCLED WATER RATE ANALYSIS

SECTION 1. BACKGROUND, PURPOSE AND OVERVIEW OF THE STUDY

BACKGROUND

In 2014, the Hidden Valley Lake Community Services District (“District”) retained NBS to complete a water and sewer rate study which resulted in a March 2015 rate study report, and new rates were implemented soon afterwards. However, within a month, the San Juan Capistrano court decision was issued; this decision had significant implications for how tiered rates are designed. Essentially, the decision required water agencies to “*demonstrate that the tiers correspond to the actual cost of providing service at a given level of usage.*” In addition, severe drought and mandated conservation throughout California prompted the District to replace its four-tiered rates with a new uniform (single tier) rate and new drought surcharges.

“Significant declines in water use have impacted the District’s revenues and reserves.”

Since then, the District has been evaluating changes in consumption patterns, water supply limitations, future CIP funding requirements, and the desire to continue to improve the fairness and equity of rates. In light of these considerations, an updated rate study was needed. This revised rate study presents significant changes related to funding assumptions for planned water and sewer capital projects along with significant increases in recorded commercial water consumption due to meter reading issues.

PURPOSE

This re-evaluation of the District’s water, sewer and recycled water rates is intended to ensure these rates meet basic Proposition 218 (Prop 218) requirements, industry standards, reflect the District’s current priorities, and promote transparent communications between the District and its ratepayers.

OVERVIEW OF THE STUDY

In developing the proposed new water and sewer rates, NBS and District Staff worked cooperatively to develop new financial plan and rate alternatives, with the intent that the District Board will provide direction on these alternatives. The proposed rates summarized in this report represent a conservative or worst-case scenario based on current uncertainty of grant and/or State Revolving Fund (SRF) loan funding. Using revenue bonds instead of grant or SRF funding results in significant rate increases over the next five years of almost 100% for water and 50% for sewer. If grant and/or SRF funding become available during this time, the recommended rate increases could be reduced. Also, because there is insufficient time to implement new rates this July, this study has assumed that currently adopted water and sewer rates for FY 2019/20 will be implemented as planned on July 1, 2019. However, the “proposed” new water rates will be implemented mid-fiscal year (January 1, 2020) and every January 1 thereafter. Proposed new sewer rate increases will continue to be implemented July 1 each year.

Key Issues Addressed – In addition to ensuring that water and sewer rates collect sufficient revenue to meet the annual operating costs and capital improvement plans, other key issues addressed included:

- The need to use new revenue bonds instead of grant and low-interest State revolving fund loans to fund approximately \$19 million of water capital improvement projects and approximately \$1.65 million of sewer capital improvement projects
- Lower water sales over the last few years due to the drought and conservation concerns
- Consumption records also indicate that commercial water use significantly increased while residential use has significantly decreased
- Water supply limitations and the potential need to build a new well

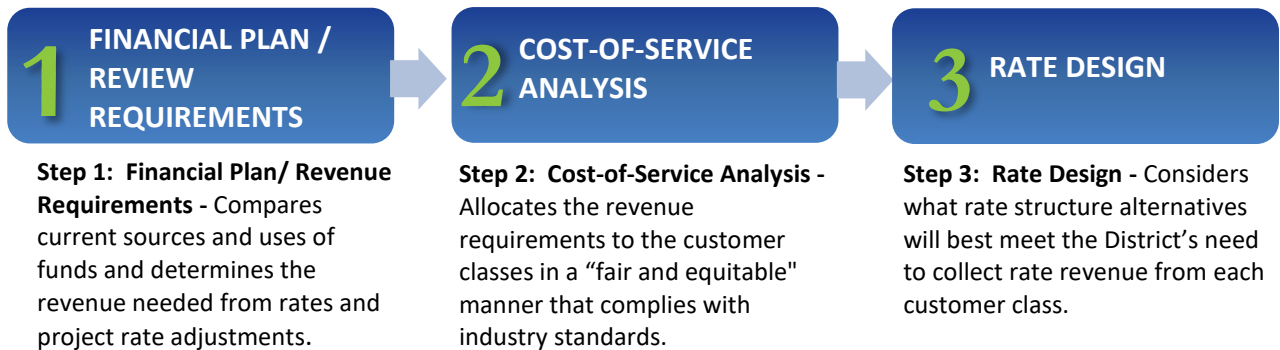
- Changes in annual operating costs, including adjustments resulting from the District’s salary survey
- The need to build adequate CIP and replacement reserves

Recommendations – As a part of the water and sewer financial plans, NBS evaluated projected revenues and expenditures to determine net revenue requirements. In light of the water utility’s decreased water sales and planned capital improvements, it will be critical to issue new revenue bonds to fund capital projects and rebuild reserves. Likewise, the sewer utility will also need to issue additional debt in order to cover projected deficits, fund capital projects and rebuilt reserves. NBS recommends the District Board review the rate increases described below and determine the District’s priorities for capital improvements vs. the tradeoff of the higher rates needed to fund these improvements.

RATE STUDY METHODOLOGY

Components of the Rate Study Methodology – A comprehensive utility rate study typically has three major components: (1) the utility’s overall revenue requirements and financial plan, (2) the cost-of-service for each customer class, and (3) rate structure design, as shown in **Figure 1**. These components reflect industry standards, primarily from the American Water Works Association (AWWA)¹, and address the general requirements for equity and fairness. In terms of the chronology of the study, these three steps represent the order they were performed in this study.

Figure 1: Primary Components of a Rate Study



The following sections in this report present an overview of the methodologies, assumptions, and data used along with the financial plans and rates developed.

Rate Design Criteria – Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been documented in several rate-setting manuals. For example, the foundation for evaluating rate structures is generally credited to James C. Bonbright in the *Principles of Public Utility Rates*², which outlines pricing policies, theories, and economic concepts along with various rate designs. The other common industry standard is AWWA Manual M1. The following is a simplified list of the attributes of a sound rate structure:

- Rates should be easy to understand from the customer’s perspective.
- Rates should be easy to administer from the utility’s perspective.
- Rates should promote the efficient allocation of the resource.
- Rates should be equitable and non-discriminating (e.g., cost based).

¹ *Principles of Water Rates, Fees, and Charges*, Manual of Water Supply Practices, M1, AWWA, seventh edition, 2017.

² James C. Bonbright; Albert L. Danielsen and David R. Kamerschen, *Principles of Public Utility Rates*, (Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988), p. 383-384.

- There should be continuity in the rate making philosophy over time.
- Other utility policies should be considered (e.g., encouraging conservation & economic development).
- Rates should consider the customer's ability to pay.
- Rates should provide month-to-month and year-to-year revenue stability.

The following section covers basic rate design criteria that NBS and District staff considered as a part of their review of the rate structure alternatives.

Rate Structure Issues – The relationship between fixed costs and variable costs is one of the most fundamental rate structures considerations. Fixed costs typically do not vary with the amount of water consumed. Debt service and District personnel are examples of fixed costs. In contrast, variable costs such as the cost of chemicals and electricity, tend to change with the quantity of water sold. The vast majority of rate structures contain a fixed or minimum charge in combination with a volumetric charge.

The District's rate design objectives are not necessarily the same as those in other communities. For example, some communities, particularly those with very expensive purchased water costs, place a very high priority on conservation-oriented rates. Other communities who have many low-income customers may want to implement low-income subsidies.

The District's 2015 rate study considered various combinations of fixed vs. variable charges and determined that collecting 60 percent of rate revenue from fixed charges and 40 percent from variable charges was preferred. Additionally, the previous four-tiered volumetric rates were replaced with a single-tier (uniform) volumetric rate. This water rate design still appears to be a good fit in light of the District's projected water sales and the need to emphasize revenue sufficiency going forward.

Key Financial Assumptions

Following are the key assumptions used in the water, sewer and recycled water rate analyses:

- **Funding of Capital Projects** – After extensive review of the planned capital improvement projects (CIP) and funding requirements by the District and its engineering consultant, the District has decided that the water utility lacks any guarantees that SRF loans and Prop 1 Grants will be available to fund CIP costs over the next several years, and therefore needs to assume the use of additional debt (revenue bonds). The sewer utility will also need new revenue bonds, although a much smaller amount.
- **Reserve Targets** – The water and sewer utility reserves are currently below target levels. Going forward, the target reserves for operations and maintenance (O&M) and capital rehabilitation and replacement (R&R) follow general utility industry standards. This includes approximately 90-days of O&M expenses for both the water and sewer O&M Reserves, and approximately 3% of net assets as the target reserve level for the R&R Reserves.
- **Inflation and Growth Projections:**
 - ✓ Customer growth is assumed to be 0.25% annually. While some additional growth may occur³, NBS did not rely on any additional growth during the next five years.
 - ✓ General cost inflation is about 3% annually.
 - ✓ Operating expenses, which include among other things labor costs, health benefits, and retirement benefits, are inflated at a rate of approximately 3% to 4% annually.
 - ✓ No inflation is added to other costs.

The next two sections discuss the water, sewer and recycled water rate studies.

³ The District has roughly 700 undeveloped lots, but these are not expected to develop within the timeframe of this study.

SECTION 2. WATER RATE STUDY

A. KEY WATER RATE STUDY ISSUES

The revised water rate analysis was undertaken with a few specific objectives, including:

- Restructuring the District’s approach to funding capital improvements, which total about \$19 million over the next five years.
- Analyzing and adjusting for recorded consumption changes over past several years.
- Generating additional revenue to meet projected funding requirements and rebuild reserve funds.
- In light of recent conservation, continuing to collect approximately 60% of water rate revenue from fixed charges and 40% from volumetric rates continues to be a reasonable approach to rate design.
- Update fixed charges and volumetric rates to reflect changes in consumption patterns.

NBS developed several water rate alternatives over the course of this study based on industry standards and cost-of-service principles. The fixed and volumetric charges were calculated based on the net revenue requirements, number of customer accounts, water consumption, and other District-provided information. The following are the basic components included in this analysis:

- **Developing Unit Costs:** The water revenue requirements were “functionalized” into three categories: (1) fixed capacity costs; (2) variable costs (or volume-based), and; (3) customer service costs, such as meter reading, billing, mailing, and responding to customer questions. Unit costs for each of these categories were then allocated to functional areas, including water consumption, peaking factors, number of accounts by meter size, and customer class.
- **Determining Revenue Requirements by Customer Class:** The total revenue collected from customer classes (i.e., groups of customers with similar consumption patterns) was determined using the unit costs and the total units belonging to each class. For example, volume-related costs are allocated based on the water consumption for each class, while customer costs are allocated based on number of meters. Once the revenue requirement for each customer class is determined, collecting these revenue requirements from each customer class is addressed in the rate design task.
- **Rate Design and Fixed vs. Variable Costs:** The revenue required from each customer class are collected from fixed charges and volumetric rates. The cost of service analysis indicated that an allocation of 60% of the costs to fixed and 40% to variable rates is a reasonable basis for rate design. State agencies, such as the California Water Efficiency Partnership, would like water utilities to collect at least 70% of rate revenue from volumetric rates. However, many utilities prefer to collect less than 70% from volumetric rates because of the revenue instability that can and has resulted when water use drops unexpectedly.

“The best way to promote financial stability is to collect fixed costs through fixed charges.”

B. WATER UTILITY REVENUE REQUIREMENTS

Rate increases for municipal utilities are governed by the need to meet operating and capital costs, and maintain adequate reserves and meet required debt coverage. These are important in order to handle minor emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. The current financial state of the District’s water utility is as follows:

Capital Improvement Costs: The \$19 million in planned capital projects for FY 2019/20 through FY 2024/25 shown in **Figure 2** are a major driver of the water utility's projected annual costs. These costs are in current year dollars; future inflation of 3% is assumed for actual funding of these revenue requirements.

Figure 2. Summary of Water Capital Project Costs

Project Description	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Tanks (Tank 9 - HVLCS Priority #1)	\$ 220,000	\$ 979,800	\$ 979,800	\$ 979,800	\$ 979,800	\$ 979,800
Generators (HVLCS Priority #4)	\$ -	\$ 434,400	\$ 434,400	\$ 434,400	\$ 434,400	\$ 434,400
AMI (HVLCS Priority #3)	\$ 100,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
Admin Vehicle	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MMN Water Main	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -
DS Line Replacement	\$ -	\$ 541,800	\$ 541,800	\$ 541,800	\$ 541,800	\$ 541,800
Backhoe	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ -
Dump Truck ¹	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ -
Hydrants	\$ -	\$ 748,400	\$ 748,400	\$ 748,400	\$ 748,400	\$ 748,400
IT Upgrades ¹	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
SCADA Replacement ¹	\$ -	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Vacc Truck	\$ 134,000	\$ -	\$ -	\$ -	\$ -	\$ -
Well	\$ -	\$ 728,400	\$ 728,400	\$ 728,400	\$ 728,400	\$ 728,400
Total: Planned CIP Costs	\$ 609,000	\$ 3,902,800	\$ 3,767,800	\$ 3,767,800	\$ 3,767,800	\$ 3,767,800

1. Full CIP costs split between water and sewer funds. This is the amount allocated to water fund.

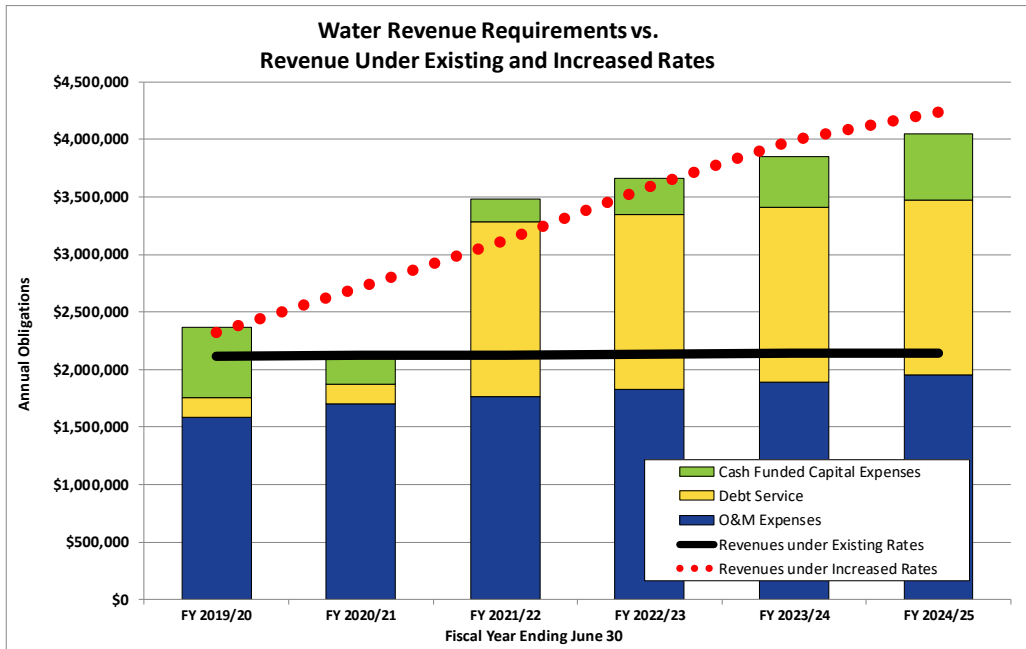
Meeting Net Revenue Requirements: For Fiscal Years 2019/20 through 2024/25, the projected net revenue requirement that must be recovered from rates increases by more than 74%, from \$2.28 million to \$3.98 million, as shown in **Figures 3 and 4**. Without additional rate increases, the water utility would run annual deficits that grow to about \$1.9 million by the end of FY 2024/25. (Note: since FY 2018/19 numbers are not yet available and estimates would need to be revised within a few months, only FY 2019/20 through FY 2024/25 are shown. Also, the five years of proposed January 1 rate increases encompass FY 2019/20 through FY 2023/24, and assume the currently adopted July 1, 2019 increase is implemented. The FY 2024/25 numbers are shown for information only.)

Figure 3. Summary of Water Revenue Requirements

Summary of Sources and Uses of Funds and Net Revenue Requirements ¹	Adopted		Projected			
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Sources of Water Funds						
Rate Revenue Under Existing Rates	\$ 2,050,434	\$ 2,055,560	\$ 2,060,699	\$ 2,065,851	\$ 2,071,015	\$ 2,076,193
Other Operating Revenue	68,600	66,704	66,808	66,913	67,018	67,123
Interest Earnings	-	-	-	-	-	-
Total Sources of Potable Funds	\$ 2,119,034	\$ 2,122,264	\$ 2,127,507	\$ 2,132,764	\$ 2,138,033	\$ 2,143,316
Uses of Water Funds						
Salaries & Benefits	\$ 796,528	\$ 870,325	\$ 904,591	\$ 943,049	\$ 983,658	\$ 1,026,573
Water Rights	70,000	72,100	74,191	76,342	78,480	80,521
Repair & Replacement	185,000	190,550	196,076	201,762	207,411	212,804
Electricity	120,000	122,400	124,848	127,345	129,892	132,490
All Other Expenses	413,450	448,491	462,281	476,523	490,799	504,646
Potable System Debt Service ¹	171,065	170,746	1,521,287	1,520,946	1,520,592	1,520,226
Rate-Funded Capital Expenses	597,462	219,884	-	140,938	440,692	567,913
Total Use of Potable Water Funds	\$ 2,353,505	\$ 2,094,496	\$ 3,283,274	\$ 3,486,906	\$ 3,851,525	\$ 4,045,173
Surplus/(Deficiency) before Rate Increase	\$ (234,471)	\$ 27,768	\$ (1,155,766)	\$ (1,354,142)	\$ (1,713,492)	\$ (1,901,857)
Additional Revenue from Rate Increases	205,043	596,112	996,348	1,458,542	1,859,879	2,097,941
Surplus/(Deficiency) after Rate Increase	\$ (29,427)	\$ 623,881	\$ (159,419)	\$ 104,400	\$ 146,388	\$ 196,084
Projected Annual Potable Rate Revenue Increase	20.00%	15.00%	15.00%	15.00%	8.00%	4.00%
Net Revenue Requirement - Potable System	\$ 2,284,905	\$ 2,027,792	\$ 3,216,465	\$ 3,419,993	\$ 3,784,507	\$ 3,978,050
Overall Debt Coverage Ratio	8.92	10.82	1.45	1.74	1.98	2.11

1. Assumes \$19 million (net proceeds) in new revenue bonds is issued in FY'20/21 and debt service begins in FY'21/22.

Figure 4. Water Revenue Requirements through FY 2022/23



The District was previously planning on using SRF funding as well as Prop 1 Grant funding to pay for capital improvement projects. Since those funds are not guaranteed to be available, a new \$19 million revenue bond is assumed to cover these costs. The bonds would be issued in FY 19/20 and debt service would start in FY 20/21. To meet the considerable increase in debt service payments and other annual costs, five years of annual rate increases of 20%, 15%, 15%, 15% and 8% are needed starting January 1, 2020.

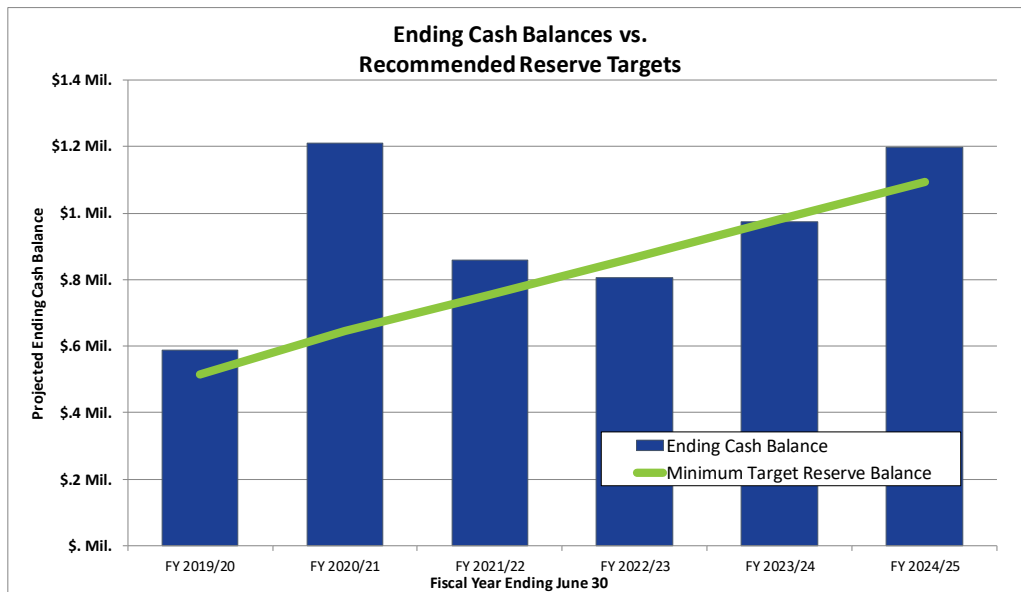
Figure 5 summarizes the projected reserve fund balances and reserve targets for the next five years. Figure 6 indicates that, assuming the proposed rate increases are adopted, the District’s reserves will increase over the next five years, and will keep up with the reserve fund target, which is growing to account for the additional capital improvements the District will be building.

Figure 5. Summary of Water Reserve Funds

Beginning Reserve Fund Balances and Recommended Reserve Targets	Adopted	Projected				
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Operating Reserve						
Ending Balance	\$ 396,000	\$ 426,000	\$ 269,514	\$ 393,449	\$ 473,000	\$ 489,000
<i>Recommended Minimum Target</i>	<i>396,000</i>	<i>426,000</i>	<i>440,000</i>	<i>456,000</i>	<i>473,000</i>	<i>489,000</i>
Water Capital Fund						
Ending Balance	\$ 191,417	\$ 785,298	\$ 588,039	\$ 411,800	\$ 502,019	\$ 709,328
<i>Recommended Minimum Target</i>	<i>118,600</i>	<i>219,000</i>	<i>315,300</i>	<i>411,800</i>	<i>508,700</i>	<i>605,800</i>
Debt Reserve ¹						
Ending Balance	\$ 171,065	\$ 1,523,219	\$ 1,535,518	\$ 1,535,177	\$ 1,534,823	\$ 1,534,457
<i>Recommended Minimum Target</i>	<i>171,065</i>	<i>1,535,848</i>	<i>1,535,518</i>	<i>1,535,177</i>	<i>1,534,823</i>	<i>1,534,457</i>
Total Ending Balance	\$ 758,482	\$ 2,734,516	\$ 2,393,071	\$ 2,340,427	\$ 2,509,842	\$ 2,732,785
<i>Total Recommended Minimum Target</i>	<i>685,665</i>	<i>2,180,848</i>	<i>2,290,818</i>	<i>2,402,977</i>	<i>2,516,523</i>	<i>2,629,257</i>

1. Assume reserves for a new \$19 million revenue bond will be funded by the revenue bond in FY 20/21.

Figure 6. Water Reserve Funds through FY 2022/23



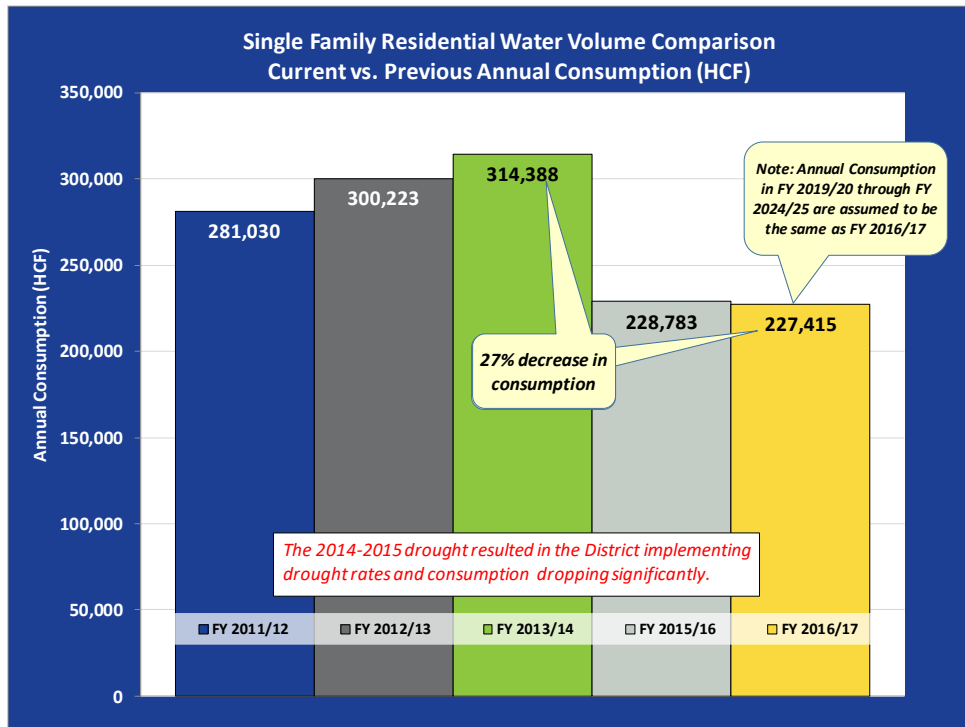
Building and Maintaining Reserve Funds: The Water Utility should maintain sufficient reserves. NBS recommends the District adopt and maintain the following reserve fund target balances:

- ✓ **Operating Reserve** should normally be equal to 25% of the Utility’s budgeted annual operating expenses, which is equal to a three-month (or 90-day) cash cushion for normal operations. An Operating Reserve is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures. Fluctuations might be caused by weather patterns, the natural inflow and outflow of cash during billing cycles, natural variability in demand-based revenue streams (e.g., volumetric charges), local natural disasters and – particularly in periods of economic distress – changes or trends in age of receivables.
- ✓ **Capital Rehabilitation and Replacement (R&R) Reserve** are typically about 3% of net depreciable capital assets, which equates to a 33-year replacement cycle for capital assets.
- ✓ **Debt Reserve** is the reserve requirement for the CEIDB loan of approximately \$170,000. We assume the new \$19 million revenue bond would require one-year of debt service as a reserve.
- ✓ **OPEB⁴ Reserve** – The District’s is establishing this reserve fund to begin addressing its current liability for post-retirement benefits, with the intent of increasing annual contributions in the future.

Summary of Changing Consumption Patterns: NBS confirmed that customer billing data indicate that the District has experienced lower than expected water rate revenues. This was primarily related to the drop in residential water use shown in **Figure 7**, which indicates that residential consumption decreased by 27%. This reflects the drought and drought-related conservation mandates that impacted water supplies throughout most of California. An additional factor that affected consumption was the drought surcharges that the District implemented from 2015 until April 2017.

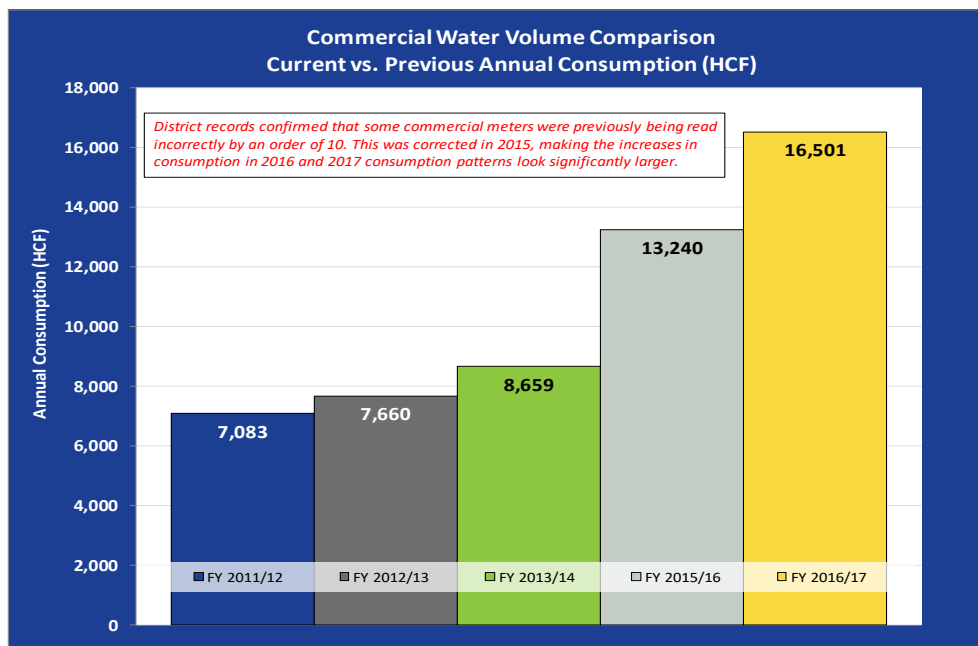
⁴ OPEB refers to “Other Post-Employment Benefits”.

Figure 7: Annual Water Consumption for Single Family Residential Customers from 2011-2017



District staff also became aware of an issue of incorrect meter readings for some commercial customers. The lower than actual readings gives the impression that there were significant increases in commercial water use after 2013-14, as shown in **Figure 8**. However, District staff believe that the previous consumption was just under-recorded. Going forward, District staff are comfortable assuming that future residential and commercial consumption will be similar to that recorded for FY 2016/17.

Figure 8: Annual Water Consumption for Commercial Customers from 2011-2017



C. CURRENT VS. PROPOSED WATER RATES

Currently, the District charges all customer classes with a standard 5/8” meter a monthly fixed charge of \$36.65, plus a uniform commodity rate of \$2.48/hcf for all water consumed. The proposed new rates follow this same rate design. **Figure 9** compares the current (FY 2018/19) and proposed rates for FY 2019/20 through 2022/23. Regarding the “Increase in Rate Revenue” shown in Figure 9, these are increases in total rate revenue that are not applied across-the-board to fixed and volumetric charges in the first year (i.e., the test year) due to cost-of-service calculations. However, after the test year, they are applied as a straight percentage to both fixed and volumetric charges.

Figure 9. Current and Proposed Water Rates for FY 2018/19 through 2022/23

Water Rate Schedule	Current Rates ('18/19)	Adopted '19/20 Rates	Proposed Rates				
			FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
<i>Increase in Rate Revenue:</i>			20.00%	15.00%	15.00%	15.00%	8.00%
Fixed Service Charge							
<i>Monthly Fixed Service Charge:</i>							
5/8 inch	\$36.65	\$39.58	\$44.25	\$50.89	\$58.52	\$67.30	\$72.68
3/4 inch	\$53.72	\$58.02	\$44.25	\$50.89	\$58.52	\$67.30	\$72.68
1 inch	\$87.88	\$94.91	\$107.20	\$123.28	\$141.78	\$163.04	\$176.09
1.5 inch	\$173.25	\$187.11	\$212.13	\$243.95	\$280.54	\$322.62	\$348.43
2 inch	\$275.71	\$297.75	\$338.04	\$388.74	\$447.06	\$514.11	\$555.24
Water Commodity Charges							
<i>Volumetric Rates</i>							
Single & Multi-Family	\$2.48	\$2.68	\$3.26	\$3.75	\$4.32	\$4.96	\$5.36
Commercial	\$2.48	\$2.68	\$3.99	\$4.59	\$5.27	\$6.07	\$6.55
Municipal	\$2.48	\$2.68	\$5.08	\$5.84	\$6.72	\$7.73	\$8.35

Figure 10 compares monthly bills for residential customers under current and proposed rates at varying levels of water consumption, **Figure 11** shows projected water bills under average consumption, and **Figure 12** provides a comparison of water bills for other regional communities.

Figure 10. Comparison of Monthly Water Bills for Single-Family Residential Customers

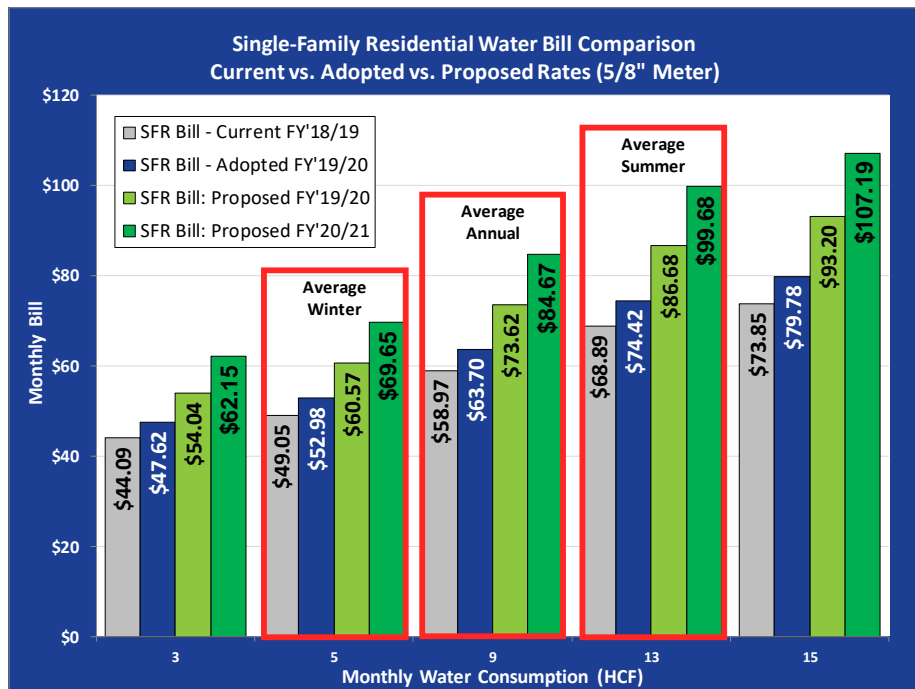


Figure 11. Projected Monthly Single-Family Water Bills – Average Water Use

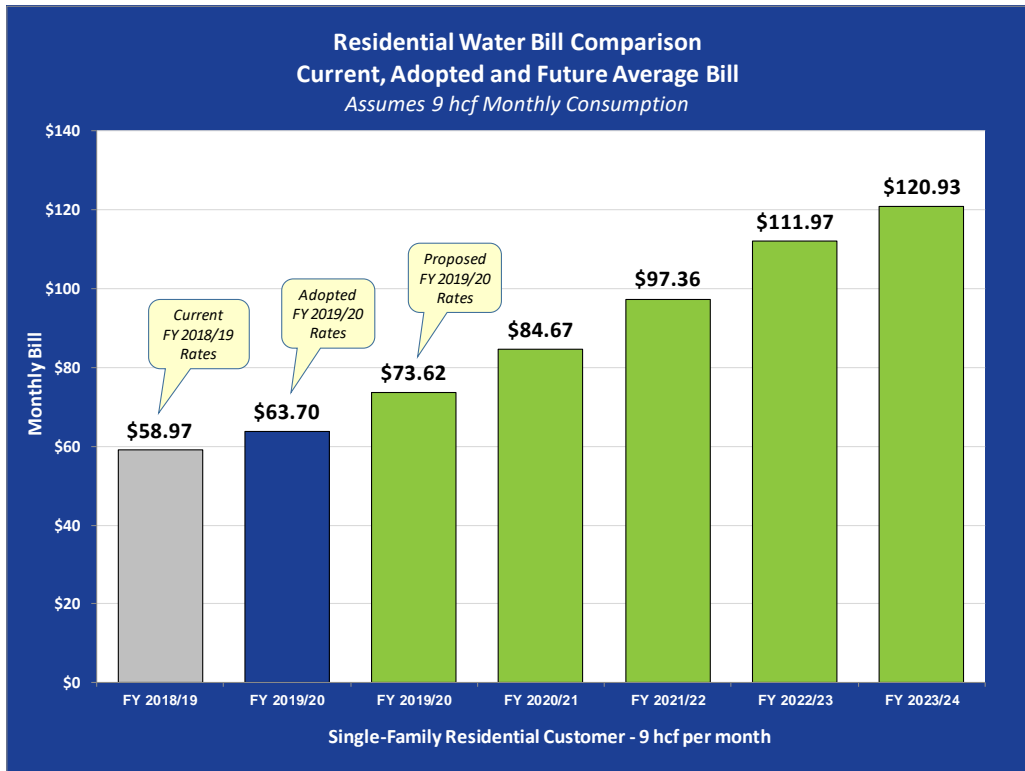
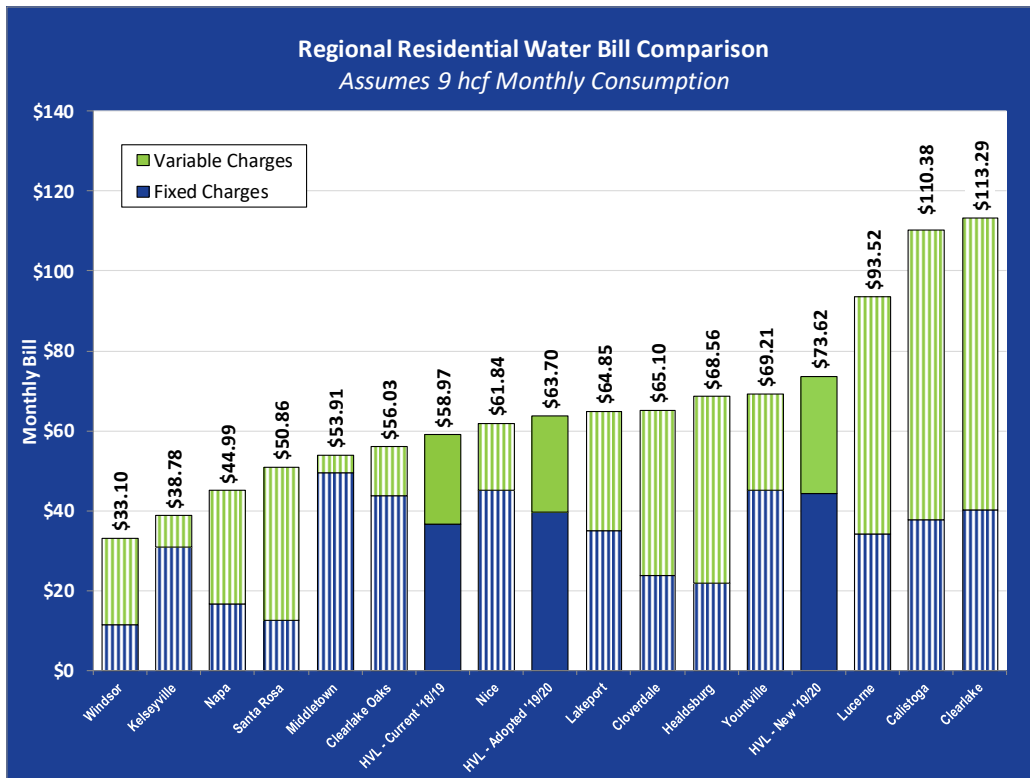


Figure 12. Regional Comparison of Monthly Water Bills for Single-Family Residential



D. DROUGHT RATES

The District has emergency drought plans with four drought emergency stages requiring progressively greater reductions in water use by 10% through 40%. Assuming consumption is reduced by these amounts, the District will lose revenue from volumetric rates, although there will be some cost savings as production costs are slightly lower. NBS estimated these cost savings along with revenue losses to calculate drought rates.

The objectives of these drought rates are to meet the revenue requirement under drought conditions, after accounting for both cost savings and revenue losses. **Figure 13** summarizes these drought rates, which reflect the differences in volumetric rates for single-family and multi-family residential (SFR and MFR), commercial and municipal customers.

Figure 13. Proposed Drought Rates

Water Rate Schedule	Current Rates ('18/19)	Adopted '19/20 Rates	Proposed Rates				
			FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Fixed Service Charge							
Monthly Fixed Service	<i>(Same as Non-Drought fixed Service Charges)</i>						
Commodity Charges for All Water Consumed							
SFR and MFR:							
Drought Stage 1	\$3.10	\$3.35	\$3.56	\$4.09	\$4.70	\$5.41	\$5.84
Drought Stage 2	\$3.47	\$3.75	\$4.05	\$4.66	\$5.36	\$6.16	\$6.65
Drought Stage 3	\$3.72	\$4.02	\$4.68	\$5.39	\$6.19	\$7.12	\$7.69
Drought Stage 4	\$4.14	\$4.47	\$5.53	\$6.36	\$7.31	\$8.41	\$9.08
Commercial							
Drought Stage 1	\$2.48	\$3.35	\$4.35	\$5.00	\$5.75	\$6.61	\$7.14
Drought Stage 2	\$2.48	\$3.75	\$4.95	\$5.69	\$6.55	\$7.53	\$8.13
Drought Stage 3	\$2.48	\$4.02	\$5.72	\$6.58	\$7.57	\$8.70	\$9.40
Drought Stage 4	\$2.48	\$4.47	\$6.75	\$7.77	\$8.93	\$10.27	\$11.10
Municipal							
Drought Stage 1	\$2.48	\$3.35	\$5.54	\$6.37	\$7.32	\$8.42	\$9.10
Drought Stage 2	\$2.48	\$3.75	\$6.31	\$7.25	\$8.34	\$9.59	\$10.36
Drought Stage 3	\$2.48	\$4.02	\$7.29	\$8.38	\$9.64	\$11.09	\$11.98
Drought Stage 4	\$2.48	\$4.47	\$8.61	\$9.90	\$11.38	\$13.09	\$14.13

SECTION 3. SEWER AND RECYCLED WATER RATE STUDY

A. KEY SEWER AND RECYCLED WATER RATE STUDY ISSUES

Some of the specific objectives addressed in the sewer rate analysis included:

- Generating additional revenue needed to meet projected funding requirements.
- Updating the volumetric-based charge for residential customers that maintains the average winter water use basis. This is more equitable than a 100-percent flat rate because it reflects the differences in effluent generation and therefore better aligns with the cost of service.
- Updating the volumetric rate for commercial customers that relies on average winter water use for improving equity, as explained below there have been significant changes in consumption data and the cost-basis for commercial customers that NBS believes is better represented by winter water use.
- Updating recycled water rates for the one customer within the District, which is the Golf Course.

As with the water rates, the proposed sewer rates were developed based on industry standards and cost-of-service principles, and reflect input from District staff and the District Board. However, it is ultimately the District Board that decides whether to adopt and implement these recommended rates.

The proposed rate structure for residential customers continues to include a fixed monthly charge per housing equivalent unit (HEU) plus a volumetric rate based on their average winter water consumption. This volumetric charge is used to set the volumetric charge each month for the subsequent 12 months and, in this respect, acts like a fixed charge except it varies based on each customer's winter consumption. The rate structure for commercial customers is similar, with a fixed monthly charge per HEU plus a volumetric rate based on *average monthly* water consumption (not average winter use).

The updated rates were set based on the net revenue requirements, number of customer accounts and housing equivalent units, water consumption, and the estimated volume and strength of the effluent. The following are the basic components of this analysis:

- **Customer classes:** Customer classes are typically determined by grouping customers with similar flow and strength characteristics in order to reflect the cost differences in serving each type of customer. The District's existing customer classes have been retained in the proposed rates developed:
 - **Residential** – Consists of single- and multi-family residential customers⁵; multi-family accounts are assessed fixed charges based on the number of housing equivalent units (HEUs), with a single-family account representing one HEU⁶.
 - **Commercial** – Includes all commercial and industrial users, who are assigned HEUs based on their effluent characteristics (e.g., there are 15 accounts and 35 HEUs in commercial).
 - **Recycled Water** – The District has only one recycled water meter, which is at the golf course. The recycled water rate represents the additional treatment costs of recycled water, which should not be paid by sewer customers.

⁵ The District's one municipal customer (the fire department) was included in residential because its consumption and strength characteristics are better represented in residential than in commercial.

⁶ An HEU is the typical (average) winter water use of SFR. It's applied to all SFR, and doesn't vary with number of bedrooms. For example, 3-5 people in a home aren't assumed to generate more or less effluent (on average) if they are in a 2- vs. 5- bedroom home. Commercial HEUs are estimates of how they compare to SFR effluent.

- **Cost Allocation Factors:** For the purpose of allocating costs to customer classes, the sewer revenue requirements were “functionalized” into five categories:
 1. Flow (volume) related costs
 2. Strength costs related to biochemical oxygen demand (BOD)
 3. Strength costs related to total suspended solids (TSS)
 4. Customer service related costs, and
 5. Recycled water related costs.

These cost allocation factors represent varying levels of the cost of service. For example, effluent with higher levels of BOD and TSS is costlier to treat and, therefore, should be allocated a greater proportion of treatment costs. Details documenting these cost allocations are shown in Appendix B.

- **Determining Revenue Requirements by Customer Class:** Based on these cost allocation factors, revenue requirements were allocated to each customer class. For example, customer costs are allocated based on number of accounts and billable units, flow-related costs are allocated based on the estimated effluent generated by each class, and strength-related costs are allocated based on estimated strength of wastewater discharged by each customer class. Once the revenue requirement for each customer class is determined, collecting these revenue requirements from each customer class is reflected in the rate design.
- **Rate Design:** The revenue requirements collected from residential customers were based on the number of housing equivalent units and, for residential customers, the average winter water consumption. Average winter water use is the best means of estimating potential flow to the wastewater treatment plant because outdoor irrigation is typically at its lowest during the winter months. Revenue requirements recovered from commercial and industrial customers through fixed charges are based on the number of HEUs; their monthly water consumption is applied to monthly water use. This is because the amount of wastewater discharged by commercial users is generally assumed to be better correlated to their monthly vs. average winter water use.

B. SEWER UTILITY REVENUE REQUIREMENTS

Rate increases are governed by the need to meet the operating and capital costs, debt service payments and reserves included in the revenue requirements. The District’s sewer utility is summarized as follows:

Capital Improvement Costs: As with the water utility, sewer capital projects are a major driver of the projected annual costs. The planned capital improvement costs for FY 2019/20 through FY 2024/25 shown in **Figure 14** total more than \$2.3 million, and are shown in current year dollars. Future inflation of 3% is assumed for actual funding requirements.

Figure 14. Summary of Sewer Capital Project Costs

Project Description	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
CS Line Replacement - I&I (HVLCS Priority #2)	\$ 160,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
RAINS 2019 (HVLCS Priority #5) ¹	\$ -	\$ 550,001	\$ 550,001	\$ -	\$ -	\$ -
Backhoe	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ -
Chlorine Tank Auto Shut Off	\$ 32,000	\$ -	\$ -	\$ -	\$ -	\$ -
Aquatic Harvesting	\$ 35,000	\$ 34,000	\$ 34,000	\$ 34,000	\$ 34,000	\$ 34,000
Admin vehicle	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction Truck ²	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vacc Truck	\$ 201,000	\$ -	\$ -	\$ -	\$ -	\$ -
Dump Truck ²	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ -
IT Upgrades ²	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Manhole Rehab	\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Preliminary Design - Chlorine Disinfection Facility	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA Replacement ²	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Tideflex - Stormwater ³	\$ -	\$ 131,600	\$ 131,600	\$ 131,600	\$ 131,600	\$ 131,600
Total: CIP Program Costs* (Current-Year Dollars)	\$508,000	\$904,001	\$769,001	\$219,000	\$219,000	\$219,000

* Total does **not** include Tideflex project costs.

1. Per District staff (call of 4/11/19), \$300k was spent in '19/20 and the remaining \$1.1 million must be spent over the following 2 years.

2. Full CIP costs split between water and sewer funds. This is the amount allocated to sewer fund.

3. This project will not be funded unless Grant/SRF Funds are available and, therefore, is not included in the total costs.

Meeting Net Revenue Requirements: The District’s sewer utility is currently running a small structural deficit that is likely to increase to over \$870,000 per year with no rate increases. The proposed rate increases would stabilize this deficit over the next five years. Projected net revenue requirements (i.e., total annual expenses less non-rate revenue) increase by approximately 45% in Fiscal Years 2020/21 through 2024/25 from about \$1.5 million to \$2.2 million.

Building and Maintaining Reserve Funds: The District should maintain sufficient reserves for the Utility. NBS recommends that the District adopt and maintain the following reserve fund targets:

- ✓ **Operating Reserve** equal to 25% of the Utility’s budgeted annual operating expenses. This reserve target is equal to a three-month (or 90-day) cash cushion for normal operations. An Operating Reserve is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures.
- ✓ **Capital Facilities Reserve** equal to a minimum of 3% of net depreciable capital assets (or approximately \$100,000 based on a total system asset value of approximately \$3.4 million). This reserve provides for capital repair and replacement needs.
- ✓ **Debt Reserve** equal to the reserve requirements for the existing and planned debt, which is approximately \$160,000 annually after the new revenue bonds are issued.

Figures 15 and 16 summarize the sources and uses of funds, including net revenue requirements, and the recommended annual percent increases in total rate revenue for the next five years. This figure shows the small deficit in FY 2019/20 and, without rate increases, grows to over \$870,000 by FY 2024/25. With rate increases, the deficit turns into small net surpluses over the next five years.

Figure 15. Summary of Sewer Revenue Requirements

Summary of Sources and Uses of Funds and Net Revenue Requirements	Adopted	Projected				
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Sources of Sewer Funds						
Rate Revenue Under Current Rates - Sewer	\$ 1,201,016	\$ 1,204,019	\$ 1,207,029	\$ 1,210,046	\$ 1,213,071	\$ 1,216,104
Rate Revenue Under Current Rates - RW	110,000	110,000	110,000	110,000	110,000	110,000
Non-Rate Revenues	27,200	42,506	42,612	42,719	42,826	42,933
Interest Earnings	1,500	-	-	-	-	-
Total Sources of Funds	\$ 1,339,716	\$ 1,356,525	\$ 1,359,641	\$ 1,362,765	\$ 1,365,897	\$ 1,369,037
Uses of Sewer Funds						
Operating Expenses	\$ 1,502,741	\$ 1,486,100	\$ 1,533,579	\$ 1,582,639	\$ 1,632,819	\$ 1,683,602
Existing Debt Service	32,258	32,255	32,238	32,205	32,158	32,095
New Debt Service	-	-	121,065	124,931	128,913	128,913
Rate Funded Capital Expenses	-	38,298	190,308	146,486	256,441	396,933
Total Use of Funds	\$ 1,534,998	\$ 1,556,653	\$ 1,877,190	\$ 1,886,262	\$ 2,050,331	\$ 2,241,542
Surplus (Deficiency) before Rate Increase	\$ (195,282)	\$ (200,129)	\$ (517,549)	\$ (523,497)	\$ (684,434)	\$ (872,505)
Additional Revenue from Rate Increases (Sewer) ¹	174,027	323,310	455,381	598,589	753,853	922,171
Additional Revenue from Rate Increases (Recycled) ²	-	11,000	20,680	31,134	42,425	54,619
Surplus (Deficiency) after Rate Increase	\$ (21,255)	\$ 134,182	\$ (41,488)	\$ 106,226	\$ 111,845	\$ 104,285
Projected Annual Rate Revenue Adjustment - Sewer¹	7.00%	10.00%	8.00%	8.00%	8.00%	8.00%
Projected Annual Rate Revenue Increase - RW²	0.00%	10.00%	8.00%	8.00%	8.00%	8.00%
Net Revenue Requirement³	\$ 1,506,298	\$ 1,514,147	\$ 1,834,578	\$ 1,843,543	\$ 2,007,505	\$ 2,198,609

1. The FY 2019/20 rate increase is assumed to be implemented on July 1, 2019, and future increases are also implemented July 1 each year.
2. The FY 2019/20 rate increase is assumed to not be implemented on July 1, 2019, but future potable increases are implemented on recycled water July 1 each year.
3. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from rates.

Figure 16. Sewer Revenue Requirements through FY 2024/25

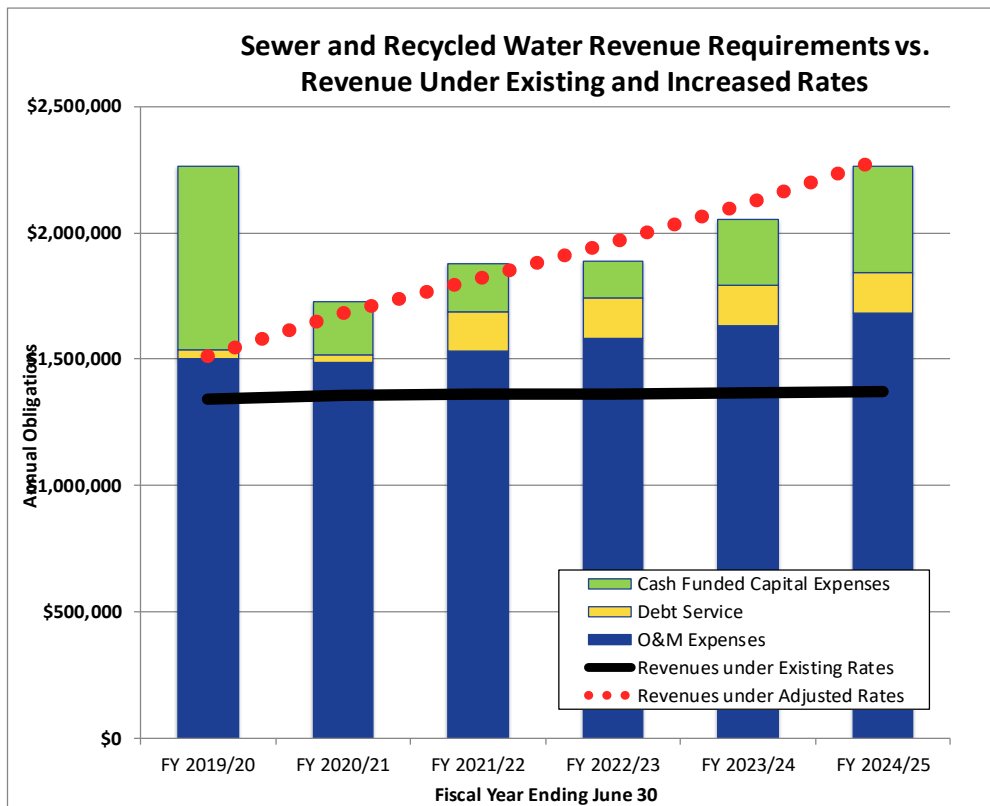


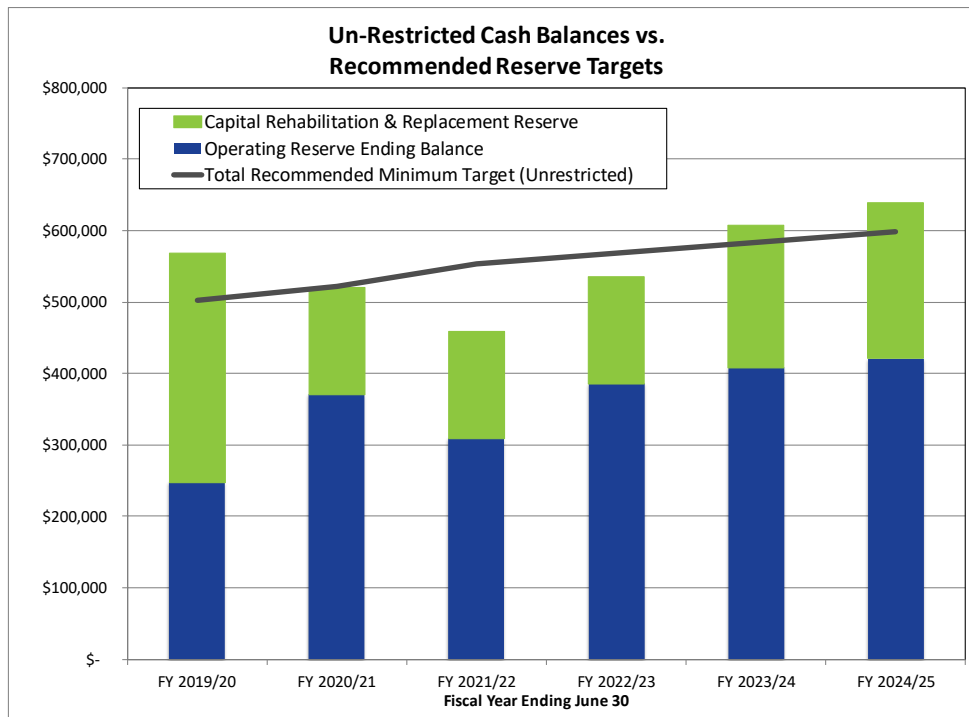
Figure 17 summarizes the projected reserve fund balances and reserve targets, for the next five years. Figure 18 indicates that, assuming the proposed rate increases are adopted, the District’s initial small

surplus of reserves will be drawn down over the next two years, but will then rebound to meet the target reserve fund the last two years.

Figure 17. Summary of Sewer Reserve Funds

Beginning Reserve Fund Balances and Recommended Reserve Targets	Adopted		Projected			
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Operating Reserve						
Ending Balance	\$ 247,337	\$ 370,760	\$ 308,915	\$ 385,924	\$ 408,000	\$ 421,000
<i>Recommended Minimum Target</i>	<i>376,000</i>	<i>372,000</i>	<i>383,000</i>	<i>396,000</i>	<i>408,000</i>	<i>421,000</i>
Capital Rehabilitation & Replacement Reserve						
Ending Balance	\$ 320,756	\$ 150,000	\$ 150,000	\$ 150,000	\$ 199,702	\$ 217,487
<i>Recommended Minimum Target</i>	<i>126,000</i>	<i>150,000</i>	<i>170,000</i>	<i>173,000</i>	<i>175,000</i>	<i>178,000</i>
Debt Reserve						
Ending Balance	\$ 32,310	\$ 32,310	\$ 153,375	\$ 157,241	\$ 161,223	\$ 161,223
<i>Recommended Minimum Target</i>	<i>32,310</i>	<i>32,310</i>	<i>153,375</i>	<i>157,241</i>	<i>161,223</i>	<i>161,223</i>
Total Ending Balance	\$ 600,402	\$ 553,070	\$ 612,291	\$ 693,165	\$ 768,925	\$ 799,710
<i>Total Recommended Minimum Target</i>	<i>\$ 534,310</i>	<i>\$ 554,310</i>	<i>\$ 706,375</i>	<i>\$ 726,241</i>	<i>\$ 744,223</i>	<i>\$ 760,223</i>
<i>Total Recommended Minimum Target (Unrestricted)</i>	<i>\$ 502,000</i>	<i>\$ 522,000</i>	<i>\$ 553,000</i>	<i>\$ 569,000</i>	<i>\$ 583,000</i>	<i>\$ 599,000</i>

Figure 18. Sewer Reserve Funds Through FY 2024/25



A summary of the sewer utility’s proposed 5-year financial plan is included in Appendix B – Sewer Rate Study Summary Tables. These tables include revenue requirements, reserve funds, revenue source and proposed rate increases for the 5-year period.

C. SEWER CUSTOMER CHARACTERISTICS

The five factors used in allocating costs as a part of the sewer cost-of-service analysis are effluent (flow), BOD, TSS, customer costs, and recycled water costs. Water consumption data from January 2017 through December 2017 was used to estimate the flows to the District’s wastewater treatment plant, and District

staff believe this data is representative of future conditions. Residential bills reflect average winter consumption because it is correlated to the amount of residential effluent going to the treatment plant.

For residential customers, the average winter water consumption used to calculate their bills is assumed to include four billing periods; December 2016 - March 2017 were considered the “winter” months because consumption is lowest in these months. Based on water consumption records summarized in **Figure 19** residential customers account for approximately 95.6% of effluent at the plant (i.e., single-family = 93% and multi-family = 2.6%). Commercial customers account for the remaining 4.4% of the flow. Effluent strength factors for individual customer classes⁷ are shown in **Figure 20** and described below.

Figure 19. Summary of Estimated Flow to Treatment Plant

Development of the FLOW Allocation Factor						
Customer Class	Number of HEUs ¹	Annual Volume (hcf)	Average Winter Monthly Consumption ² (hcf)	Annual Winter Average Based Volume (hcf)	Adjusted Annual Volume (hcf)	Percentage of Adjusted Volume
Single Family Residential ³	1,445	150,324	7,348	88,171	124,640	93.1%
Multi-Family Residential	54	3,615	201	2,417	3,416	2.6%
Commercial	35	10,224	347	4,158	5,878	4.4%
Total ⁴	1,534	164,163	7,895	94,745	133,934	100.0%
					133,934	Flow (hcf/yr.)
					1.41	Flow Adj. Factor

1. Consumption and Meters from source files: *NBS 2018 - #17_Manipulated Sewer Billing Data.xlsx* (data combined and summarized in pivot tables).
Note: The adjusted annual flow per HEU for commercial customers is approximately twice that of SFR. In this sense, these are not truly "HEU's".
2. Includes months of December 2016 through March 2017.
3. Includes the one Municipal account (fire department) which has the same consumption as residential.
4. Recycled Water excluded from flow allocation factor. One customer only in the District, volumetric rate only.

Figure 20. Summary of Annual Flow and Strength Characteristics by Customer Class

Development of the STRENGTH Allocation Factor									
Customer Class	Adjusted Annual Flow (hcf)	Biochemical Oxygen Demand (BOD)				Total Suspended Solids (TSS)			
		Average Strength Factor (mg/l) ²	Calculated BOD (lbs./yr.)	Adjusted BOD (lbs./yr.)	Percent of Total	Average Strength Factor (mg/l) ²	Calculated TSS (lbs./yr.)	Adjusted TSS (lbs./yr.)	Percent of Total
Single Family Residential	124,640	200	155,509	181,546	93.1%	180	139,958	150,410	93.1%
Multi Family Residential	3,416	200	4,262	4,976	2.6%	180	3,836	4,123	2.6%
Commercial ¹	5,878	200	7,334	8,562	4.4%	180	6,601	7,094	4.4%
Total	133,934		167,105	195,084	100%		150,395	161,627	100%
			Target, from WWTP Data			195,084 BOD (lbs./yr.)		161,627 TSS (lbs./yr.)	
						1.17 BOD Adj. Factor		1.07 TSS Adj. Factor	

1. Commercial was previously billed on monthly water use, now if billed on average winter; as a result it is more typical of indoor/residential strengths.
2. Typical strength factors for BOD and TSS are derived from the State Water Resources Control Board Revenue Program Guidelines, Appendix G.

- **Residential** customers, including single-family, multi-family and municipal, have BOD and TSS strength factors of 200 mg/l, which is within the normal range for residential users.
- **Commercial** customers can have individual strength factors that are higher or lower than residential, depending on the particular type of commercial uses. In the District’s case, NBS and the District believe that commercial effluent is, on average, consistent with residential strengths. Therefore, strength factors assigned to commercial class customers are the same as residential customers.

⁷ Strength factors for each customer class were derived from the State Water Resources Control Board Revenue Program Guidelines, Appendix G, page G-21 “Commercial User Strength Characteristics.”

Figure 21 compares the total number of accounts and billing units (depending on how customers are billed) by customer class. **Figure 22** then summarizes the total rate revenue requirements by customer class resulting from the cost-of-service cost allocation components previously shown in Figures 19 and 20 (Flow and Strength Characteristics), and Figure 21 (Customer Costs).

Figure 21. Number of Accounts and Billing Units by Customer Class

Development of the CUSTOMER Allocation Factor					
Customer Class	Number of Accounts ⁴	Percentage of Accounts	Number of HEUs ⁴	Percentage of Assigned HEUs	Average HEUs per Account
Single Family Residential	1,445	97.1%	1,445	94.2%	1.00
Multi-Family Residential	27	1.8%	54	3.5%	2.00
Commercial & Industrial	15	1.0%	35	2.3%	2.30
Recycled Irrigation ²	1	0.1%	0	0.0%	0.00
Total ²	1,488	100.0%	1,534	100.0%	1.03

1. Consumption and Meters from source files: *NBS 2018 - #17_Manipulated Sewer Billing Data.xlsx*

2. Recycled Water excluded from customer allocation factor. One customer only in the District, volumetric rate only.

Figure 22. Summary of Rate Revenue Requirements by Customer Class

Allocation of FY 2020/21 Revenue Requirements by Customer Class							
Customer Class	Cost Classification Components					Cost-of-Service Net Revenue Req't.	% of COS Net Revenue Req't.
	Volume	Treatment		Customer Related	Recycled Water		
		BOD	TSS				
Net Revenue Requirements ¹	\$ 654,698	\$ 330,445	\$ 330,445	\$ 172,017	\$ 149,724	\$ 1,637,329	--
	40.0%	20.2%	20.2%	10.5%	9.1%	100.0%	
Single-, Multi-Family & Municipal	\$ 625,964	\$315,942	\$315,942	\$170,167	\$ -	\$1,428,015	87.2%
Commercial	28,734	14,503	14,503	1,734	-	59,475	3.6%
Recycled Irrigation	-	-	-	116	149,724	149,839	9.2%
Total	\$ 654,698	\$ 330,445	\$ 330,445	\$ 172,017	\$ 149,724	\$1,637,329	100%

1. Revenue requirement for each customer class is determined by multiplying the revenue requirement from each cost classification by the allocation factors for each customer class.

D. CURRENT VS. PROPOSED SEWER RATES

Currently, all customers pay the same fixed monthly charge based on their number of household equivalent units (HEUs). Both residential and commercial customers also pay a volumetric monthly rate, but the uniform volumetric rate for residential customers is applied to average winter water use, while commercial customers pay a slightly higher volumetric rate that is applied to monthly water use.

Changes in Residential vs. Commercial Sewer Rates – The proposed rates retain the same customer classes, which combine single- and multi-family residential customers⁸, and combine commercial with industrial customers. However, as previously noted, water consumption for commercial customers is now significantly higher than previously thought due to meter misreads that have now been corrected. That new consumption data has increased the costs allocated to commercial customers and, as a result, NBS is recommending realigning commercial fixed and volumetric rates to account for these higher costs as follows: (1) since fixed charges for commercial costs are allocated on the basis of HEUs, they should be the same as residential customer, and (2) the volumetric rate for commercial was set to recover all remaining costs not collected through the fixed charges; this increased the commercial volumetric rate.

⁸ And the one municipal customer (the fire department).

In other words, higher fixed costs are partially collected from commercial as they are assigned, on average, more HEUs per account, as well as through higher volumetric charges.

Figure 23 shows current and proposed sewer rates for FY 2018/19 through FY 2022/23. Regarding the “% Increase in Annual Rate Revenue” shown in Figure 23, these are the percent increases in total rate revenue that are not applied in an across-the-board manner to fixed and volumetric charges in the first year (i.e., the test year) due to cost-of-service calculations. However, after the test year, they are applied as a straight percentage to both fixed and volumetric charges. **Figure 24** compares the average monthly sewer bills for residential customers under current and proposed rates. **Figure 25** compares commercial bills under current vs. proposed rates. **Figure 26** provides a comparison of monthly sewer bills for other communities in the region.

Figure 23. Current vs. Proposed Sewer Rates

Sewer Rate Schedule	Current Rates ('18/19)	Adopted Rates ('19/20)	Proposed Sewer Rates				
			FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
% Increase in Annual Rate Revenue:			10.00%	8.00%	8.00%	8.00%	8.00%
Fixed Service Charge per HEU							
Residential & Municipal	\$49.02	\$51.96	\$61.92	\$66.88	\$72.23	\$78.00	\$84.24
Commercial	\$49.02	\$51.96	\$61.92	\$66.88	\$72.23	\$78.00	\$84.24
Volumetric Charge (\$/hcf)							
Residential & Municipal (Applied to Average Winter Water Use)	\$2.60	\$2.76	\$3.47	\$3.75	\$4.05	\$4.37	\$4.72
Commercial (Applied to Average Winter Water Use) ²	\$2.83	\$3.00	\$3.31	\$3.57	\$3.86	\$4.17	\$4.50

1. Sewer customers are charged on the basis of their number of assigned Housing Equivalent Units (HEUs).

2. Proposed commercial volumetric charges, currently use average winter water use, but now use average monthly water use.

Figure 24. Residential Sewer Bill Comparison – Current vs. Proposed Rates

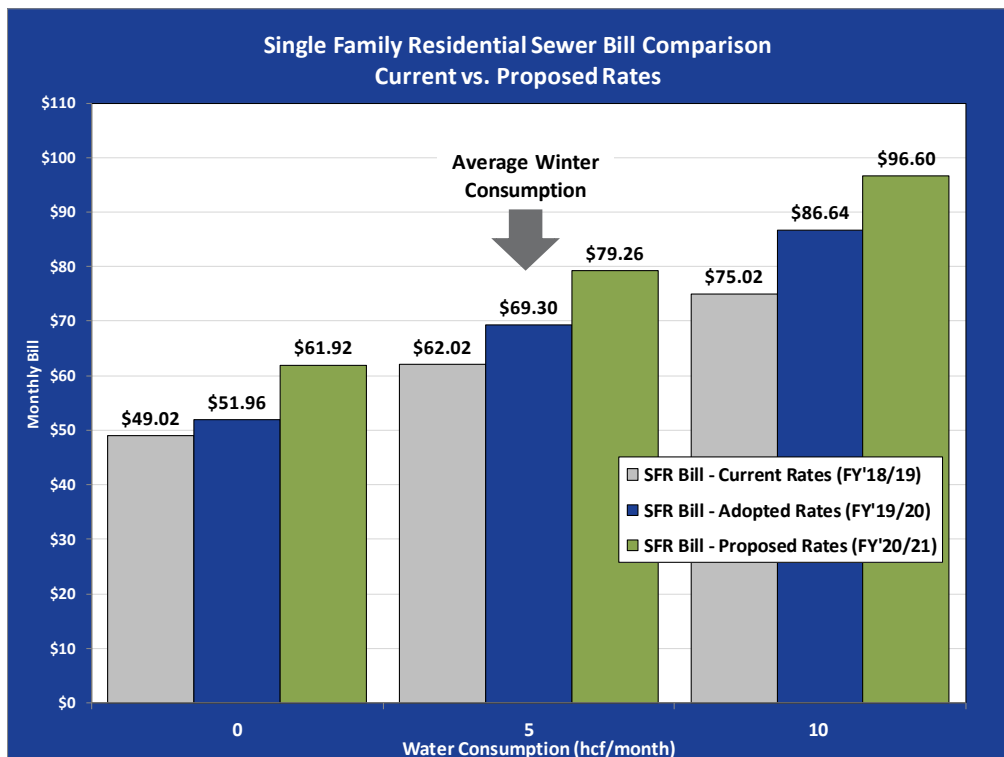


Figure 25. Commercial Sewer Bill Comparison – Current vs. Proposed Rates

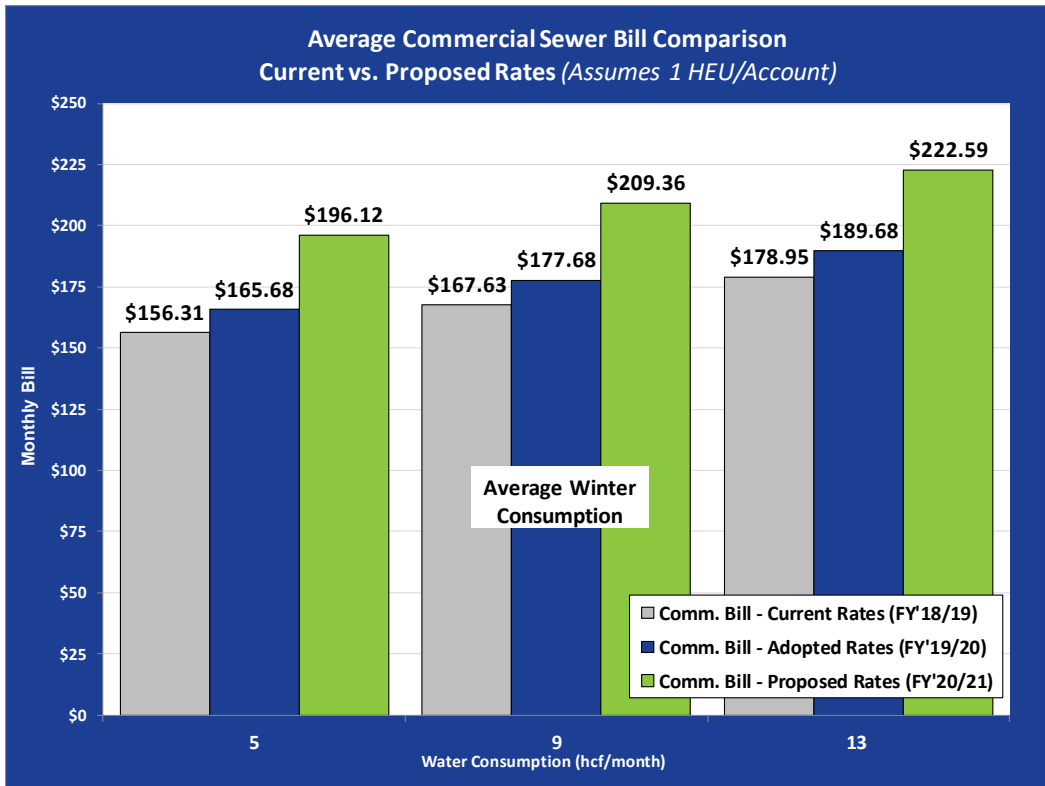
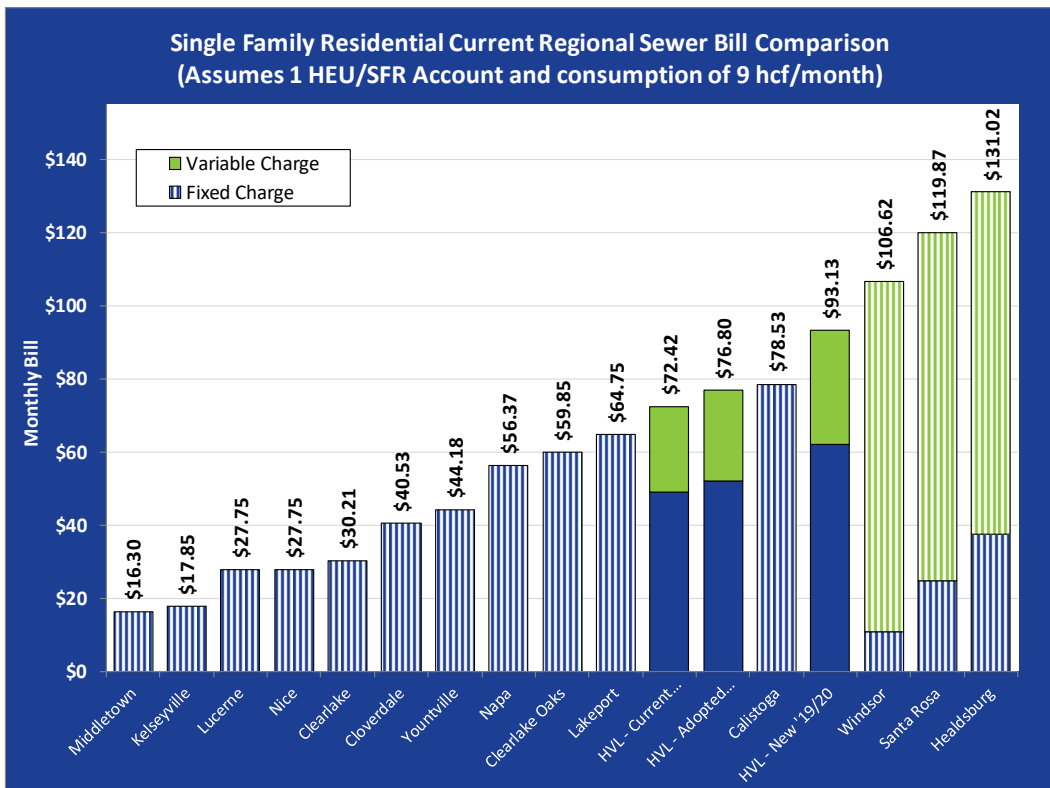


Figure 26. Regional Sewer Bill Comparison – Single Family Residential



E. CURRENT VS. PROPOSED RECYCLED WATER RATES.

The District has maintained one recycled water customer and has not evaluated the rate structure since its inception. The current rate is \$291.64 per acre foot. NBS considered the sewer utility’s annual expenses and how those expenses might be allocated to the recycled water customer. The District’s one recycled water customer, the golf course, is owned by the homeowner’s association, who are to a large extent the same properties receiving water and sewer service provided by the District.

Basis for Setting Recycled Water Rate – There is no established industry standard for setting recycled water rates, and many agencies arbitrarily set rates at some percent below potable volumetric rates. There is also no clear allocation of benefits accruing from a recycled water program: Are there benefits to using recycled water instead of discharging effluent from the treatment plant? Do the lower water quality standards for recycled water make it less valuable than potable water? Do the additional constituents in recycled water translate into higher costs for recycled water irrigation systems? The answers to these questions are generally “yes”.

Whether there is an issue of allocating recycled water costs to individuals within the homeowner’s association, such as golfers vs. non-golfers, is an issue that would be more appropriately addressed by the homeowner’s association rather than the District.⁹

Proposed Recycled Water Rate – In view of these factors, the current recycled water rate is, in NBS’ opinion, a reasonable and fair rate. However, we did calculate an updated rate using the annual recycled water consumption and a reasonable allocation of the sewer annual revenue requirements, which have increased for a number of reasons. A recommended volumetric rate is \$341.04 per acre foot. **Figure 27** Summarizes the calculation of the recycled water charge. Recycled water rates should be adjusted annual by the same adjustments as sewer rates, as shown in **Figure 28**.

Figure 27. Calculation of Recycled Water Rate

Customer Class	Total Annual RW Use ¹	Annual Rev. Req't			Monthly Fixed Charge	Volumetric Charge
		Total	Fixed	Volumetric		
Recycled Irrigation (hcf)	191,386					
Recycled Irrigation (Acre Ft)	439	\$149,839	\$0	\$149,839	\$0.00	\$0.78/hcf \$341.04/AF

1. Actual 2017 consumption

Figure 28. Proposed Recycled Water Rate

Recycled Water Rate Schedule	Current Rates ('18/19)	Adopted Rates ('19/20)	Proposed Recycled Water Rates				
			FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
% Increase in Annual Rate Revenue:			10.00%	8.00%	8.00%	8.00%	8.00%
Fixed Service Charge per HEU							
Recycled Irrigation (hcf)	\$291.64	\$291.64	\$341.04	\$368.32	\$397.79	\$429.61	\$463.98

⁹ For example, recycled water costs could be incorporated into green fees and/or other charges paid by golfers.

SECTION 4. RECOMMENDATIONS AND NEXT STEPS

CONSULTANT RECOMMENDATIONS

A number of factors have impacted the District's water and sewer rates in the last several years. The drought and its mandated conservation efforts, the corresponding lower water sales, and the correction of some commercial water reading problems have been notable. However, the greatest impact is from issuing new revenue bonds to cover the cost of planned capital improvements, which had previously been assumed to be funded from grants and low-interest loans. In light of these factors, NBS has reevaluated water, sewer and recycled water rates and made adjustments that, in our opinion, best represent the overall rate objectives of the District in a fair, equitable, and defensible manner. However, the District Board will need to make some tough decisions about the tradeoff between higher rates and funding capital projects.

“The District Board will need to make tough decisions about the tradeoff between higher rates and funding capital projects.”

The following are NBS' recommendations for the District's consideration:

- **Approve and Accept This Study Report:** NBS recommends the District Board formally approve and adopt this report, its recommendations, and accompanying appendices as documentation of the rate study analyses and the basis for recommended rates. Whether the significantly higher proposed rates required to fund the planned capital improvements are acceptable to the Board and community is a decision only the District Board can make.
- **Complete a Review by a Qualified Attorney:** This rate study outlines proposed new rates. Because NBS are not attorneys, we do not provide legal opinions and, therefore, must defer to the review by legal counsel with respect to compliance with Proposition 218 and related State laws, as well as legal assistance developing acceptable language for new resolutions to implement these rates.
- **Implement Recommended Levels of Rate Increases and Proposed Rates:** Based on the analysis presented in this report, the District Board should implement the proposed rates recommended in this report (see Figures 9, 13, 23, and 28) for the next five years. These rate adjustments are structured based on industry standards and are necessary to ensure the following objectives are met:
 - Water rates that promote water conservation and reflect the cost of providing water service to each customer class.
 - Drought rates that offer revenue stability during the District's four drought stages.
 - Sewer rates that more appropriately reflect the cost of providing sewer service to each customer class; in particular, commercial fixed charges based on better consumption data to improve equity between customers in the sewer utility.
 - Maintaining the financial health of the District's water and sewer utilities.
 - Recycled water rates that can reasonably be considered fair and equitable to both the golf course and the District.
- **Adopt Reserve Fund Targets:** NBS recommends the District Board adopt the proposed reserve fund targets described in Sections 2 and 3 of this report for the water and sewer utilities. The District should periodically evaluate reserve fund levels and make it a long-term goal to achieve and maintain these levels for the Operating, Capital, and Debt Reserves.

NEXT STEPS

Annually Review Rates and Revenue – Any time an Agency adopts new utility rates or rate structures, those new rates should be closely monitored over the next several years to ensure the revenue generated is sufficient to meet the annual revenue requirements. Changing economic factors, water consumption patterns, new regulatory mandates, and unplanned capital improvements all underscore the need for this annual review.

Update Capital Funding Plans – This analysis identifies the rates needed to meet projected O&M and capital costs, but the District will need to carefully consider the timing and amount of funding from new revenue bonds. This should be provided by an experienced financial advisor and underwriter.

Note: The attached Technical Appendices provide more detailed information on the analysis of the water and sewer revenue requirements, cost of service and rate design analyses that have been summarized in this report.

PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS

In preparing this report and the recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, number of customer accounts, billing records, and other conditions and events that may occur in the future. This information and assumptions, including the District's budgets and customer account information provided by District staff, are sources we believe to be reliable, although NBS has not independently verified this data.

We are also assuming that future water consumption levels, which District staff believe are representative of future conditions, are accurate, and that funding from grants and low-interest loans is largely unavailable or will not be secured in time to construct urgently needed capital projects. We also assume that the District will consider reducing future rate increases if such funding becomes available.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report and its recommendations, some assumptions will invariably not materialize as stated herein or may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

APPENDIX A – WATER RATE ANALYSIS

APPENDIX B – SEWER RATE ANALYSIS

Fiscal Year 2019-2020

Budget

(DRAFT)



Adopted June 18, 2019

Board of Directors:

Linda Herndon, President

Judy Mirbegian, Vice President

Jim Freeman

Jim Lieberman

Carolyn Graham

General Manager:

Kirk Cloyd

Table of Contents

Introduction	4
Revenue and Expense Trends and Forecast	3
Operating Budgets	11
Capital Projects	17
Debt Service	18
Projects	20
Summary Descriptions	21
Significant Changes	23
Capitol Additions (Unfunded)	25
Debt	26
Closing Thoughts	28

Introduction

The Hidden Valley Lake Community Services District (District) is an independent special district serving the Hidden Valley Lake Community in southern Lake County, California. The District, which consists of 12 full-time employees that provide municipal water to approximately 2,475 homes and 35 businesses, and sewer services to approximately 1,485 within its three-square mile service area.

Mission Statement

"The mission of the Hidden Valley Lake Community Services District is to provide, maintain and protect our community's water."

History

The Stonehouse Mutual Water Company was established in 1968 and supplied water to the Hidden Valley Lake subdivision. The Hidden Valley Lake Community Service District was established in 1984. A sewer system controversy led to a lawsuit between the two agencies in 1988; the suit was dismissed in the spring of 1989.

Stonehouse Mutual Water Company's problems led to discussions of a merge with Hidden Valley Lake Community Services District. It was evident that combining the two stand alone providers into one utility company would result in a tremendous cost savings for the agencies and rate payers. The merge also provided additional protection to the community via State oversight as well as access to grants and low cost loans. With the passage of AB 1504, the merger of the two utilities was accomplished on January 1, 1993 at 12:01 am.

Board of Directors

The Board of Directors of the Hidden Valley Lake CSD consists of five elected officials who are tasked with representing the general interest of those in the Hidden Valley Lake community. Directors must live within the boundaries of the water, sewer and recycled water district, ensuring that they fully understand the intricacies of the community and are enlisted in services provided. Each member serves a four year term. Elections are held in November of even numbered years, and Director terms are staggered to mitigate disruption.

The Board of Directors sets goals and creates policies that guide District operations. The Board appoints a General Manager to handle the day to day operations of the District and to carry out the policies established by the Board. It is the General Manager's responsibility to ensure that District procedures are in line with the District's mission and Board policies. Beyond the General Manager, the Board also appoints legal counsel and financial auditors.

The HVLCSD Board of Directors is committed to transparency. Board meetings are held in accordance to the Brown Act and are noticed as such. Regular board meetings are held on the third Tuesday of the month at 7:00 p.m. at the Districts business office, 19400 Hartmann Rd., Hidden Valley Lake. The board also assigns standing and ad hoc committees that meet throughout the year to assist in the development of policy. Committee meetings are also held at the District's business office; times and dates vary by committee and can be found on the district website, www.hvllcsd.org. Each meeting ends with a call for public comment, and community members are encouraged to attend and voice concerns.

It is projected that the 2018/19 budget year will close within the approved budgeted amounts. The 2019/20 budget provides a greater level of transparency and follows the 2017/18 audit with no reportable action for the first time in recent district history. District short falls have been brought to light and financial programs put in place to provide the District with a means to address them, but only with the implementation of a water and sewer rate increase as indicated in the NBS Rate Study dated April 2019. It is the desire of the District to continue down the path of financial health as we enter into the 2019/20 fiscal year. The new fiscal year has the means to provide the District with resources to improve infrastructure that is decaying due to deferred maintenance should the public approve a rate increase through the 218 process and the Board give staff the approval to proceed with the many grants and funding opportunities to save District constituents a portion of the financial outlay.

The 2019/20 Fiscal Budget is based on historical data from the previous three fiscal years. This provides the District with a more fact-based analysis of actual funds spent and less of a projection which can be skewed.

Revenue and Expense Trends and Forecast

Water Fund

With the last remaining rate increase of the 2014 Rate Study scheduled to be implemented July 1, 2019, the Water Fund is expected to experience minor improvement in the 2019/20 FY. However, the majority of the increase will be eaten away by the ever-increasing costs of doing business. The rate increases in recent years helped but did not completely restore the operating revenue stream nor were they designed to address regulatory requirements such as the Hexavalent Chrome or meter moratorium issues. Recent increases were not designed to address the need for an operational reserve, capital improvements or an emergency operating fund for the District, however, the District managed to establish small reserve accounts for each in the 2018/19 fiscal year. A similar percentage is expected to be placed in reserves this year. Replacement of aging infrastructure such as the wooden water tanks, water mains, hydrant replacement and emergency generators to provide domestic water and fire flow during PG&E outages were not included in previous rate increases either. The 2017/18 fiscal year was the first time HVLCSD established an Operational Reserve Fund for water putting 7% of the monthly revenues into this account. This account is required to be funded should the District need to request a loan such as the State Revolving Fund (SRF) loan or to match with a state/federal grant such as Prop. 1 or Hazardous Mitigation funding to replace the five (5) wooden water tanks that are over 51 years old. Of additional concern are the aging water meters that are not accounting for between 30% and 45% of the District's water loss. This is lost revenue the District should be recovering. In the 2019/20 fiscal budget year, funding has been designated for the Water Operational Reserve Fund (5.0%) and CIP Fund (8.0%). Unfortunately, these funds fall short of what is needed to replace aging infrastructure, address the meter moratorium, prepare for future regulations such as Chrome 6 and address the need for emergency generators during prolonged power outages. However, a funding source for these accounts has been identified and precedence set establishing a deposit into these funds annually. The District continues on the path to a healthy financial future. Future rate increases must include substantial increases to the current annual percentages designated for the Water CIP & Operational Reserve funds.

This past year, saw continued stabilization in water usage since the Governor lifted the drought mandate in 2017. Prior to the economic recession and drought, total District water use was

approximately 25 percent higher than today. Water usage, particularly outdoor use, plummeted as homes fell into foreclosure and landscaping was left to wither. The change to zero landscape, drought tolerant plants and low flow appliances has also stabilized. Although the number of residential water connections has rebounded and exceeded pre-recession numbers (approximately 2477 connections), the amount of water used by each connection is still below that of pre-recession/pre-drought usage while the cost of providing utility services continues to increase. This year we noted continued increases from PG&E, increased fuel costs based on the Governor's increased tax on gasoline and diesel fuel which also affects the cost of all commodities used to operate a utility district in such a rural area. This also impacts district staff as they drive to work as this District does not provide an annual cost of living increase for its employees. Not only has the cost to transport items such as chlorine greatly increased but the District noted an increase in chemicals in general as well as most other goods and services from our vendors. In summary, the Water Fund revenue stream has stabilized as the reduction in water use has stabilized but an increase to the cost of doing business greatly affects the District's ability to provide services at the same level while cutting costs to work within the existing budget. Again, this year, the increase in operating costs and need to replace aging infrastructure will not be offset by the coinciding rate increases we will see July 1, 2019.

Over the previous nine years, annual Water Fund operating expenses have increased by an average of 17 percent while revenue has increased only 15 percent. Additionally, there is considerable "expense wobble" between years. The wobble is partially attributable to weather, which impacts the amount of water that must be treated and delivered in any given year. Also, to be considered are the "one-time" expenses such as the Water Rights Petition Project, the meter moratorium and the Hexavalent Chromium (Cr6) issue – all of which were mandated by regulatory agencies and require substantial resources in the form of time and monies.

In summary, it is anticipated that Water Fund operating expenses will continue to steadily increase due to utility costs, infrastructure replacement needs and pending failures, the ever-increasing cost of regulatory oversight and increasing costs associated with keeping qualified individuals on staff. These expenses exceed the current and projected revenue streams thus replacement projects continue to be put on hold.

Sewer Fund

Despite the fiscal hardship the Sewer Fund continues to experience, last year, the District established Operational Reserve Fund (313) and CIP Fund (314). The 2019/20 Budget increases the reserve amount for both funds by 1% providing an over-all 3% of the monthly revenues going into each account (3.0% is an estimated \$47K per year.) This \$47K per year into each account will in no way allow the District to apply for grants and/or loans on their own, however, it continues the clear path to financial health should the Board of Directors and administrative staff choose to follow it now and, in the years, to come. The 2019/20 Budget also continues to express the Solar Debt Reserve (2.5% Sewer Rev) in line item 219-4115. As you may recall, the District received incentive pay from PG&E for the installation of the solar array at the RWRP. That incentive was in the form of money put into fund 219 and used to pay for the annual loan debt. Fund 219-4115 established in the 2018/19 Budget provides funds to pay the debt service throughout the life of the loan. The annual debt service is just under \$33K per year. The new Solar Debt Reserve of 2.0% is expected to provide approx. \$25K per year with the remaining \$8K coming from the remaining \$80K in Fund 219, initially from the PG&E incentive. Future budget years will need to see a minor increase to this reserve to avoid a balloon payment at the end of the loan.

The early payoff of a bond in 2009 and state loan in 2016 stabilized the Sewer Fund temporarily, however, this year the District again found it considerably more difficult to present a balance sewer budget. Sewer Fund revenues were blunted by the 2008 recession and with the reduction in water usage due to the drought, sewer revenue has dropped. Similar to Water Fund revenues, which are determined by the number of water connections and quantity of water delivered to each connection, sewer revenues are based on the number of connections and the individuals water usage from the previous December through March when outdoor usage is at its lowest. Accordingly, a homeowner can reduce water and sewer use and their associated costs through proper utility management. The self-managing of utilities by District constituents is in part based on the Governor's powerful message to make "...water conservation a way of life," thus reducing the revenue previously seen in the sewer fund.

From 2008 to 2016, annual Sewer Fund operating expenses increased by an average of 38 percent while revenue increased 53 percent. Unlike the Water Fund, the Sewer Fund kept up with operating expenses until last fiscal year. As stated in the 2017/18 Budget Narrative, “...with the recent changes in how sewer bills are calculated, going from a flat rate to usage-based billing, the Sewer Fund will succumb to the same fate as the Water Fund over time should rates not be increased.” That time is currently before us. During the last three years, the operational costs have exceeded the annual revenue requiring reductions that are needed for capital repair projects. This is reflected in the \$8K reduction in the Repair & Replace (5150) (which falls on the heels of a \$10K reduction in 2018/19 Budget) and the minimal investment into Funds 313 and 314 which are required to replace aging infrastructure such as the sewer lines that allow rain water to enter the collection system during and following a rain event, and year-round due to ground water, accounting for 50% of the water HVLCSO treats at its RWRP. Additionally, like the Water Fund, the Sewer Fund expenses tend to “wobble” between years. This year-to-year variation is becoming increasingly apparent with the increase in historic rain events and aging of the sewer system. Infiltration and inflow (I&I) of rain and ground water hydraulically overload the collection system causing Sanitary Sewer Overflows (SSO’s), increase pumping and treatment costs, lead to disposal complications, greater regulatory oversight and costly mandated repairs and modifications. Due to these issues, the Sewer Fund now suffers from the same fate as the Water Fund and similarly, without a rate increase, maintenance, repair and capital items associated with operating expenses and replacement of aging facilities cannot be funded.

Lastly, Recycled Water is a valuable resource in the fight against droughts while providing a means for our local golf course to irrigate while not depleting our ground water through the pumping and consumption of raw water. Noting that the last Recycled Water rate increase was in 2012. Recycled water rates were recently evaluated in the NBS rate study of 2019 and are recommended for a small increase in the most recent rate study.

Final Thoughts:

Again, this year, the District acknowledges that a rate increase is inevitable for a healthy and financially responsible utility provider, however, methodical replacement of infrastructure can be

achieved with intelligent increases, sound financial planning, strategic partnering of grants with low interest loans and a financially stable and responsible District. To this end, the District has presented a balanced budget for the 2019/20 fiscal year with recommendation to implement any future water rate increase approved by the votes through the Prop. 218 process and the governing body of this district on or as close to January 1st as possible of each consecutive year and sewer rate increase on or as close to July 1st as possible of each consecutive year.

The intent of this implementation strategy is to implement any water rate increase during the winter months when water usage is at its lowest due to cooler and rainy weather. This strategy allows the District's constituents to self-manage water usage as temperatures gradually increase in the summer months rather than having a spike in their bill July first when water usage is much higher. Additionally, the District bases its sewer rates on constituent's water usage December through March. With this, a sewer rate increase would need to be put in place July of each year based on the previous review period. This strategy empowers the District's constituents to self-manage their water and sewer utility costs without a sudden increase during high usage months.

Capital expenses far exceed the current and projected revenue streams thus repair/replacement projects such as the: Wooden water tank replacement; repairs to reduce I&I in the sewer system; water meters replacement (AMI); SCADA system repairs; and emergency generators for the water continue to be put on hold.

In short, the District continues to be on "Life Support." The new path the District has taken over the last two years, along with intelligent rate increases, is expected to revive the District over time and usher in a financially responsible and health utility district.

HIDDEN VALLEY LAKE COMMUNITY SERVICES DISTRICT

2019-2020 BUDGET

Draft

SEWER ENTERPRISE FUND

REVENUE	
120-1051 A/R Retiree Health	11,420
120-4020 PERMIT & INSPECTION FEES	500
120-4036 DEVELOPER SEWER FEES	15,200
120-4040 LIEN RECORDING FEES	-
120-4045 AVAILABILITY FEES	5,000
120-4050 SALES OF RECLAIMED WATER	118,000
120-4060 CC TRANSACTION FEE	18,000
120-4111 COMMERCIAL SEWER USE	36,959
120-4112 GOVERNMENT SEWER USE	855
120-4116 SEWER USE CHARGES	1,167,934
120-4210 LATE FEE 10%	20,000
120 4300 MISC INCOME	1,500
120-4310 OTHER INCOME	200
120-4320 FEMA/CalOES Grants	135,000
120-4550 INTEREST INCOME	1,500
120-4580 TRANSFER IN	54,821
	-
TOTAL REVENUE	1,586,889

EXPENSES	
120-5-10-5010 ADMIN SALARY & WAGES	301,602
120-5-30-5010 FIELD SALARY & WAGES	215,150
120-5-40-5010 DIRECTORS SALARY & WAGES	3,000
120-5-10-5020 ADMIN EMPLOYEE BENEFITS	93,853
120-5-30-5020 FIELD EMPLOYEE BENEFITS	68,002
120-5-40-5020 DIRECTOR BENEFITS	90
120-5-10-5021 ADMIN RETIREMENT BENEFITS	57,996
120-5-30-5021 FIELD RETIREMENT BENEFITS	46,724
120-5-30-5022 FIELD CLOTHING ALLOWANCE	1,800
120-5-00-5024 WORKERS' COMP INSURANCE	11,770
120-5-00-5025 RETIREE HEALTH BENEFITS	22,840
120-5-00-5026 COBRA	-
120-5-40-5030 DIRECTOR HEALTH BENEFITS	41,339
120-5-00-5040 ELECTION EXPENSE	-
120-5-00-5060 GASOLINE, OIL & FUEL	12,000
120-5-00-5061 VEHICLE MAINT	15,000
120-5-00-5062 TAXES & LICENSE	800
120-5-10-5063 ADMIN CERTIFICATIONS	500
120-5-30-5063 FIELD CERTIFICATIONS	1,500
120-5-00-5074 INSURANCE	26,000
120-5-00-5075 BANK FEES	21,000
120-5-00-5080 MEMBERSHIP & SUBSCRIPTIONS	7,500
120-5-10-5090 ADMIN OFFICE SUPPLIES	4,000
120-5-30-5090 FIELD OFFICE SUPPLIES	1,000
120-5-00-5092 POSTAGE & SHIPPING	7,000
120-5-00-5110 CONTRACTUAL SERVICES	-
120-5-00-5121 LEGAL SERVICES	5,000
120-5-00-5122 ENGINEERING SERVICES	27,000
120-5-00-5123 OTHER PROFESSIONAL SERVICE	10,000
INTERN/FELLOWSHIP	-
120-5-00-5126 AUDIT SERVICES	4,000
120-5-00-5130 PRINTING & PUBLICATION	5,000
120-5-00-5135 NEWSLETTER	500
120-5-00-5145 EQUIPMENT RENTAL	5,000
120-5-00-5148 OPERATING SUPPLIES	40,000
120-5-00-5150 REPAIR & REPLACE	137,972
120-5-00-5155 MAINT BLDG & GROUNDS	5,500

120-5-00-5156 CUSTODIAL SERVICES	16,500
120-5-00-5157 SECURITY	5,000
120-5-00-5160 SLUDGE DISPOSAL	45,000
120-5-10-5170 ADMIN TRAVEL MILEAGE	1,200
120-5-30-5170 FIELD TRAVEL MILEAGE	500
120-5-40-5170 DIRECTORS TRAVEL MILEAGE	200
120-5-10-5175 ADMIN EDUCATION/SEMINARS	4,000
120-5-30-5175 FIELD EDUCATION/SEMINARS	4,000
120-5-40-5175 DIRECTORS EDUCATION/SEMINARS	1,500
120-5-40-5176 DIRECTOR TRAINING	3,600
120-5-10-5179 ADM MISC EXPENSE	350
120-5-00-5191 TELEPHONE	9,500
120-5-00-5192 ELECTRICITY	60,000
120-5-00-5193 OTHER UTILITIES	2,600
120-5-00-5194 IT SERVICES	45,000
120-5-00-5195 ENV/MONITORING	32,000
120-5-00-5196 RISK MANAGEMENT	-
120-5-00-5198 ANNUAL OPERATING FEES	2,000
120-5-00-5310 EQUIPMENT - FIELD	1,500
120-5-00-5311 EQUIPMENT - OFFICE	1,300
120-5-00-5312 TOOLS - FIELD	1,500
120-5-00-5315 SAFETY EQUIPMENT	3,500
120-5-00-5545 RECORDING FEES	250
120-5-00-5580 TRANSFER OUT	-
120-5-00-5590 NON-OPERATING OTHER	-
120-5-00-5591 EXPENSES APPLICABLE TO PY	-
120-5-00-5600 CONTINGENCY	5,000
120-5-60-6006 PLKVF83	-
120-5-60-6007 STORMS 2019	-
120-OPEB OBLIGATION	12,500
140-5192 ELECTRICITY - FLOOD CONTROL	1,000
319-4115 SOLAR DEBT RESERVE (2% SEWER REV)	31,739
313-WASTEWATER OP RESERVE (3%)	47,607
314-WASTEWATER CIP (3%)	47,607
TOTAL EXPENDITURES	1,586.889

HIDDEN VALLEY LAKE COMMUNITY SERVICES DISTRICT

2019-2020 BUDGET

Draft

WATER ENTERPRISE FUND

REVENUE	
130-1051 A/R RETIREE HEALTH	11,420
130-4035 RECONNECT FEES	12,000
130-4038 COMM WATER CONNECTIONS	-
130-4039 WATER METER INSTALLATION	1,000
130-4040 RECORDING FEE INCOME	500
130-4045 AVAILABILITY FEES	25,000
130-4060 CC TRANSACTION FEE	18,000
130-4110 COMMERCIAL WATER USE	104,000
130-4112 GOVERNMENT WATER USE	6,000
130-4115 WATER USE CHARGES	1,940,435
130-4210 LATE FEE 10%	25,000
130 4215 RETURNED CHECK FEE	1,000
130-4300 MISC INCOME	2,000
130-4310 OTHER INCOME	100
130-4550 INTEREST INCOME	2,000
130-4580 TRANSFER IN	-
	-
TOTAL REVENUE	2,148,455

EXPENSES	
130-5-10-5010 ADMIN SALARY & WAGES	301,602
130-5-30-5010 FIELD SALARY & WAGES	215,150
130-5-40-5010 DIRECTORS SALARY & WAGES	3,000
130-5-10-5020 ADMIN EMPLOYEE BENEFITS	93,853
130-5-30-5020 FIELD EMPLOYEE BENEFITS	68,002
130-5-40-5020 DIRECTOR BENEFITS	90
130-5-10-5021 ADMIN RETIREMENT BENEFITS	55,555
130-5-30-5021 FIELD RETIREMENT BENEFITS	46,724
130-5-30-5022 FIELD CLOTHING ALLOWANCE	1,800
130-5-00-5024 WORKERS' COMP INSURANCE	11,770
130-5-00-5025 RETIREE HEALTH BENEFITS	22,840
130-5-40-5030 DIRECTOR HEALTH BENEFITS	36,163
130-5-00-5040 ELECTION EXPENSE	-
130-5-00-5060 GASOLINE, OIL & FUEL	11,000
130-5-00-5061 VEHICLE MAINT	24,292
130-5-00-5062 TAXES & LICENSE	1,200
130-5-10-5063 ADMIN CERTIFICATIONS	-
130-5-30-5063 FIELD CERTIFICATIONS	600
130-5-00-5074 INSURANCE	27,000
130-5-00-5075 BANK FEES	21,000
130-5-00-5080 MEMBERSHIP & SUBSCRIPTIONS	24,000
130-5-10-5090 ADMIN OFFICE SUPPLIES	4,000
130-5-30-5090 FIELD OFFICE SUPPLIES	1,000
130-5-00-5092 POSTAGE & SHIPPING	6,000
130-5-00-5110 CONTRACTUAL SERVICES	-
130-5-00-5121 LEGAL SERVICES	10,000
130-5-00-5122 ENGINEERING SERVICES	60,000
130-5-00-5123 OTHER PROFESSIONAL SRV	20,000
130-5-00-5124 WATER RIGHTS	70,000
130-5-00-5126 AUDIT SERVICES	4,000
130-5-00-5130 PRINTING & PUBLICATION	7,500
130-5-00-5135 NEWSLETTER	500
130-5-00-5140 RENT & LEASES	-
130-5-00-5145 EQUIPMENT RENTAL	35,000
130-5-00-5148 OPERATING SUPPLIES	5,000
130-5-00-5150 REPAIR & REPLACE	185,000
130-5-00-5155 MAINT BLDG & GROUNDS	12,000
130-5-00-5156 CUSTODIAL SERVICES	4,200

130-5-00-5157 SECURITY	5,000
130-5-10-5170 ADMIN TRAVEL MILEAGE	2,000
130-5-30-5170 FIELD TRAVEL MILEAGE	2,000
130-5-40-5170 DIRECTORS TRAVEL MILEAGE	200
130-5-10-5175 ADMIN ED/SEMINARS	4,000
130-5-30-5175 FIELD EDUCATION/SEMINARS	4,000
130-5-40-5175 DIRECTORS ED/SEMINARS	1,500
130-5-40-5176 DIRECTOR TRAINING	8,400
130-5-10-5179 ADM MISC EXPENSE	350
130-5-00-5191 TELEPHONE	9,500
130-5-00-5192 ELECTRICITY	132,000
130-5-00-5193 OTHER UTILITIES	2,200
130-5-00-5194 IT SERVICES	40,000
130-5-00-5195 ENV/MONITORING	20,000
130-5-00-5196 RISK MANAGEMENT	-
130-5-00-5198 ANNUAL OPERATING FEES	30,000
130-5-00-5310 EQUIPMENT - FIELD	1,000
130-5-00-5311 EQUIPMENT - OFFICE	1,000
130-5-00-5312 TOOLS - FIELD	1,000
130-5-00-5315 SAFETY EQUIPMENT	2,500
130-5-00-5505 WATER CONSERVATION	9,000
130-5-00-5545 RECORDING FEES	100
130-5-00-5580 TRANSFER OUT	-
130-5-00-5600 CONTINGENCY	20,000
130-OPEB OBLIGATION	12,500
218-5522 INTEREST LONG TERM DEBT	59,567
218-5595 CIEDB LOAN ANNUAL FEE	5,135
218-5599 PRINCIPAL PMT	106,363
320-4115 Water Capital Fund (8%)	171,876
325-4115 Water Operating Reserve (5%)	107,423
TOTAL EXPENDITURES	2,148,455



HIDDEN VALLEY LAKE COMMUNITY SERVICES DISTRICT

CAPITAL EXPENDITURES

DRAFT 2019 - 2020

SEWER CIP EXPENSES	FUND	Budget
I & I Study (Intern/Fellowship)	313	60,000
IT Upgrades	313	5,000
Vac Truck (60%)	712	201,000
I & I Repair	314	100,000
Chlorine tank auto shutoff	314	32,000
SCADA	712	30,000
Chlorine Disinfection Facility	314	45,000
Aquatic Harvesting	314	35,000
Total		\$ 508,000

SEWER CIP REVENUE	FUND	Revenue
Sewer Op Reserve (3%)	313	47,129
FEMA/CalOES	313	
Sewer CIP (3%)	314	47,129
FEMA/CalOES	314	
Total		\$ 94,259

WATER CIP EXPENSES	FUND	Budget
Unit 9 Tank Replacement 1,850,000 (*1)	320/325/130	220,000
AMI	320/325/130	100,000
Vac Truck (40%)	320	134,000
Repair Water Main Line	320	200,000
IT Upgrades	320	5,000
Total		\$ 609,000

WATER CIP/OP RESERVE	FUND	Revenue
Water CIP (8%)	320	171,876
Water OP Reserve Fund (5%)	325	136,670
Total		\$ 308,547

HIDDEN VALLEY LAKE COMMUNITY SERVICES DISTRICT			
DRAFT 2019 - 2020 BUDGET			
	<u>DEBT SERVICE REVENUE</u>	<u>FUND</u>	<u>AMOUNT</u>
1)	1995-2 BOND - TAX ASSESMENT	215	\$ 298,541
2)	CIEDB LOAN - FUND 130	218	171,064
3)	USDA RUS LOAN (SOLAR) - FUND 120	219	32,258
	TOTAL REVENUE		\$ 501,862
	<u>DEBT SERVICE EXPENDITURE</u>		
1)	1995-2 BOND REDEMPTION (PRINCIPAL)	215	\$ 179,000
	1995-2 BOND REDEMPTION (INTEREST)	215	105,272
	BOND ADMINISTRATION (ANNUAL FEE)	215	6,585
	COUNTY COLLECTION FEES	215	3,414
	CSD ADMIN COSTS	215	4,270
			\$ 298,541
2)	CIEDB (PRINCIPAL)	218	106,363
	CIEDB (INTEREST)	218	59,566
	CIEDB (ANNUAL FEE)	218	5,135
			171,064
3)	USDA RUS LOAN (PRINCIPAL)	219	\$ 16,500
	USDA RUS LOAN (INTEREST)	219	15,758
			\$ 32,258
	TOTAL DEBT SERVICE		501,862

Projects

Replacement of the 8” water main in Mountain Meadow N. Between Hartmann & Donkey Hill \$200K.

Planning, design and land acquisition for the replacement of the Unit 9 water tank will continue during this budget year. The total project is estimated to cost \$1,850,00.

Upon Board approval, a 218 vote will be implemented requesting a water, sewer and recycled water rate increase.

I & I repair continues. The District has identified the need to invest \$100,000 in the 2019/20 fiscal year.

In accordance with the District’s Risk Management Plan, the District is required to install a chlorine tank auto shutoff. Staff has identified \$32,000 to make this improvement. Additionally, the District will conduct a chlorine disinfection facility feasibility study to determine future alternatives.

Aquatic Harvesting. The District has identified 35,000 to ensure this effort is undertaken in the 2019/20 budget year. Alternatives are being looked at to provide cost saving measure.

The District has identified \$335,000 for the purchase of a Combo (Vac) Truck which will reduce rental costs for collection system line and wet well maintenance as well as enhance the District’s ability to make water/sewer line repairs safer/more efficient and clean valve cans so staff can establish a valve exercising program.

The District has identified weaknesses in the aging SCADA system and is working to upgrade to a cloud-based SCADA system over the next few years. \$30,000 has been identified for the 2019/20 budget year.

The District has identified \$100,000 in the 2019/20 budget to start the multi-year meter replacement program. The District is evaluating several funding options and the practicality of going to a fully automated AMI system or starting with an AMR system and transitioning to an AMI system when funding is available.

Summary Descriptions

Revenue

Permits and Inspections: New connections

Charges for Services: Water and sewer services, water overage, reclaimed water sales.

Miscellaneous: Availability (providing access to water and wastewater), lease income, interest, miscellaneous.

Expenditures

Salaries and Benefits: Salaries, wages, payroll taxes, retirement, employee medical and dental, director medical.

Insurance: Liability insurance.

Office Expenses: Office supplies, printing and publication, newsletter, administrative miscellaneous, recording fees.

Contractual Services: Software, cleaning service, internet, postage meter, web hosting.

Dues and Subscriptions: Membership fees and subscriptions.

Postage: Postage.

Repairs and Maintenance: Vehicle maintenance, repair and replace, maintenance building and grounds.

Gas, Fuel, and Oil: Gasoline, fuel & oil.

Supplies: General supplies.

Professional Services: Water rights consultants, aquatic ecologist, auditor, website design.

Travel: Mileage reimbursements, lodging (not related to education or seminars).

Telephone: Landline and mobile telephone service.

Power: Electricity.

Other Operating: Debt service payments, operating revenue set aside for capital improvements.

Office and Safety Equipment: Telephones, computers, printers, AED, medical supplies and hazmat equipment.

Environmental Monitoring: Lab samples.

Water Conservation: District education program, low flow toilet rebates, high efficiency washing machine rebates.

Annual Operating Fees: Permits, water rights, Unites States Geological Services fees.

Significant Changes

Salaries and Benefits

Fiscal year 2019/20 shows an increase in salary for the General Manager based on the 2017 salary survey completed by CPS HR Consulting and approved by the Board to be implemented July 1, 2018 for all staff members except the General Manager. This was at the recommendation of the General Manager as the 2018/19 Budget could only support an increase for staff other than the General Manager. The 2019/20 Budget can now support all recommended increase from 2017 salary survey. Additionally, benefits such as insurance and CalPERS continue to rise. A small cause for increase is due to the District's medical insurance provider, Special Districts Risk Management Authority (SDRMA,) with a 1.29% increase in health benefits beginning January 1, 2020.

Insurance (Property/Liability)

The 2019/20 insurance premium reflects a minor increase based on industry standards but no major increase is noted in this area.

Contractual Services

No changes are expected in contractual services for the 2019/20 fiscal year; however, the District may go out for bin for custodial services at the Admin. facility as well as at the RWRP.

Repairs and Maintenance

The 2019/20 Sewer Operating budget includes a \$8,000 decrease in the Repair and Replace line item in order to maintain a balanced budget and provide for an increase to on-call pay.

Professional Services

As noted under projects, the District intends to continue to work with Wagner & Bonsignore to address the meter moratorium.

Other Operating Expenses

For both the sewer and the water funds, the majority of costs in the Other Operating Expenses line item are related to the payment of debt [the solar loan to USDA for sewer (\$33,000 per year), and the CIEDB loan for water (\$172,767 per year)].

Office and Safety Equipment

The 2019/2020 budget will mirror the 2018/19 budget for Office and Safety Equipment line item that will cover improved security at the Administrative facility and several field facilities.

Capital Additions

(Unfunded)

Sewer

Rebuild the entrance road outside the gate to the existing 4” asphalt at the Reclamation Plant.

This fund is expected to continue each year until the road to Grange Rd. is completely paved, once funds are identified.

Water

All capital additions for water that have been identified are noted in the projects or are funded in the 2019/20 operational budget.

Stormwater

(Funds are currently not available for Capital additions in this area.)

Debt

Sewer Expansion and Wastewater Treatment Plant

In 1994, the District expanded the sewer system and relocated wastewater treatment to the new Grange Road plant. Prior to the expansion, there were many vacant lots remaining in the Hidden Valley Lake subdivision that were not considered buildable. The composition of the soil would not allow proper drainage that would make septic systems a feasible option to potential builders. The expansion of the system allowed 1460 properties within the Hidden Valley Lake Association to be viable for construction.

The project was funded by four bonds and a low interest loan. Of the four bonds, three were paid off early in order to minimize interest payments. The remaining bond, the 1995-2 series bond was issued by the USDA on August 16, 1995 for \$5,500,000. The bond carried a 5.5% interest rate. This Bond was refinanced in March of 2016. At that time, the balance was 3,650,000 and currently has an interest rate of 3.25%. The remaining principal balance of the loan on June 30, 2018 was \$2,711,932.00 (Interest is not included.) The principal and interest related to the 1995-2 bond is collected annually on the property tax roll.

Water Infrastructure Project

In 2002 the District upgraded the existing water infrastructure to meet increasing demands and ensure continuity of services. The Water Infrastructure Project included the addition of two 500,000 gallon storage tanks and the replacement of two pump stations. Additionally, pressure reducing valves were replaced throughout the District to ensure adequate water pressure was provided to all customers. The District's supervisory control and data acquisition (SCADA) system was also upgraded to allow for remote control of the water and wastewater systems.

The Water Infrastructure project was funded by the California Infrastructure and Economic Development Bank (CIEDB) via a low interest loan. The District borrowed \$3,000,000 on June 24, 2002 at 3.48%. The loan is set to mature in 2032, and the remaining balance is \$1,913,810. Loan payments were intended to be funded by new connections to the water system, but with the economic downturn, meter moratorium, and subsequent decline in new construction, annual loan payments are now made from the operating budget.

Solar Project

In an effort to mitigate anticipated increases in the cost of energy, the District installed a photovoltaic (PV) project at the Wastewater Treatment Plant. The PV went online in December 2011. The array was designed to meet the full demands of the Treatment facility, and the savings to the District have exceeded original estimates. The District has also extended this cost savings to the domestic well field on Grange Rd. as it is on contiguous properties with the PV.

The project was funded by the United States Department of Agriculture (USDA) via an \$885,000 grant and a \$640,000 low interest loan. Additionally, the District received \$200,000 in PG&E rebates for the project (to be paid over a five-year period). The USDA loan was signed on October 1, 2011 in the amount of \$640,000 at 3% interest. The outstanding balance of the loan is \$476,341 and the loan will mature in 2041. Annual loan payments of \$32,245 were said to be made from the operating budget from surplus funds remaining after electricity is paid. Historical review of past budgets suggest that loan payments have been paid out of the initial \$200,000 PG&E rebate provided the District. Currently that fund has a balance of approx. \$80,000. A new line item (219-4115) was added to the 2018/19 budget where \$25,000 of the budget is used to pay for most of the annual loan payment. The remaining \$7,245 will continue to be paid for out of the PG&E rebate the district holds in Fund 219. As the District becomes more financially sound and this loan approaches maturity, additional funds may need to be budgeted into 219-4115.

Closing Thoughts:

The goal is to manage the District's assets in a fiscally responsible manner while planning for the repair and replacement of aging infrastructure and equipment. Old equipment should be depreciated annually, while Capital Reserve funds are used to repair and replace distressed infrastructure and equipment.

A minimum of six (6) months Operational Reserve funds should be in place to allow the District to continue to operate and rebuild in the event of a catastrophic event such as wildfire or earthquake.

The 2017/18 budget year was the first-year funds were put into the new Water CIP (320) fund and the 2018/19 Budget Year ushered in three additional accounts: Water Operational Reserve (325), Wastewater Operational Reserve (313) and Wastewater CIP (314). Each see a relatively small deposit over the fiscal year; however, it sets precedence which the District is strongly encouraged to follow and increase whenever possible.

These funds pave the way for the District to obtain grants and loans as the District will improve its financial posture when viewed by grant administrators and lenders.

The final escalation of the five-year rate increase, which is currently in place, is scheduled for July 1, 2019 for the fiscal budget year 2019/20. This rate increase considered operational costs such as increases in insurance and projected costs to do business. It did not consider the fuel tax (\$0.30 per gallon for diesel) which affects all deliverables (chlorine, fuel, chemicals, dry goods etc.) that the District requires to operate. Additionally, replacement costs for the five wooden water tanks (which turned 51 years old in 2019), transitioning water meters to AMR/AMI and the financial software upgrades that are required, replacement of failing water and sewer mains (I&I), replacement of aging vehicles and equipment and an aging SCADA system were not factored into previous rate studies. Due to these factors, the current rate study does not meet the operational and financial obligations of the District. The District contracted with NBS to complete a new rate study which takes many of these factors into consideration. This study has been completed and is currently under review by the Board of Directors.

HVLCSD intends to provide greater transparency of its financial obligations and position using the new Website (www.hvllcsd.org) and Facebook page. Communicating the District's financial short comings and successes related to infrastructure and equipment, repair/replacement so the public may better choose the direction of their water, wastewater and recycled water utility now and in the future through the Prop. 218 process.