

Heceta Water People's Utility District Resolution 2021-02

A Resolution of the Heceta Water People's Utility District Board of Directors Adopting a New Rate and Fees Schedule

WHEREAS, Heceta Water People's Utility District (PUD) is an Oregon special district formed under ORS Chapter 198 and existing and exercising legal authority under ORS Chapter 261; and,

WHEREAS, the PUD is governed by an elected board of Directors; and the Board of Directors want to maintain fiscal responsibility in repairing and preplacing aging infrastructure; and

WHEREAS, the policies of the PUD adopted by the Board of Directors on July 1, 2014 specify that all fees and rate schedules will be adjusted from time to time, by resolution of the Board of Directors, and will be available for inspection at the PUD office; and,

WHEREAS, the PUD has prepared the methodology and schedule of water rates and System Development Charges (SDCs) (Water Rate Study, February, 2021, Donovan Enterprises, Inc.), and made part of this Resolution as Exhibit A; and,

WHEREAS, the Board of Directors of the PUD has determined the methodology and rates hereinafter specified and established are just, reasonable, and necessary.

THEREFORE, IT IS RESOLVED: the Board of Directors hereby adopts the attached Rates and Fees Schedule, effective 60 days after the adoption of this Resolution.

Section 1: Amendment and updating of water rates and SDCs. In accordance with PUD policies, this Resolution establishes the methodology and provides the basis for water rates and SDCs.

Section 2: Scope of amendment and update of water rates and SDCs. The water rates and SDCs established by this Resolution are separate from, and in addition to, any other applicable taxes, fees, assessments, or charges, including but not limited to water rates and SDCs, which are either required by the PUD or represent a condition of a land use or development approval.

Section 3: Methodology. The methodology for the water rates and SDCs is described in the attached Exhibit "A" and, by this reference, hereby made a part of this Resolution and adopted by the Board of Directors. The PUD amends and updates its water rates and SDCs as described in the attached Exhibit "A".

Section 4: Effective Date. This Resolution shall become effective 60 days after its adoption by the Board of Directors of the PUD.

Section 5: Review. This Resolution may be reviewed at the pleasure of the Board of Directors, and the rates may be amended as appropriate.

Section 6: This Resolution is hereby made part of PUD's fee resolution, Resolution No. 2015-03 (the "Fee Resolution"). The provisions of the Fee Resolution that are not amended or modified by this Resolution remain unchanged and in full force and effect. The provisions of this Resolution are severable. If any section, subsection, sentence, clause, and/or portion of this Resolution is for any reason held invalid, unenforceable, and/or unconstitutional, such invalid, unenforceable, and/or unconstitutional section, subsection, sentence, clause, and/or portion will (a) yield to a construction permitting enforcement to the maximum extent permitted by applicable law, and (b) not affect the validity, enforceability, and/or constitutionality of the remaining portion of this Resolution. All pronouns contained in this Resolution and any variations thereof will be deemed to refer to the masculine, feminine, or neutral, singular, or plural, as the identity of the parties may require. The singular includes the plural and the plural includes the singular. The word "or" is not exclusive. The words "include," "includes," and "including" are not limiting. This Resolution may be corrected by order of the Board of Directors to cure editorial and/or clerical errors.

ADOPTED by the Board of Directors this 18th day of May, 2021 and signed by the President and Vice President of the Board of Directors in authentication of its passage.



Wendy Rohner, President, Board of Directors



Debby Todd, Vice President, Board of Directors

RATES AND FEES OF HECETA WATER PEOPLE'S UTILITY DISTRICT

Adopted May 18, 2021

Effective August 1, 2021

5% Rate Increase (exception: New Meter)

The following rates and fees are set by the Board of Directors, and may be revised from time to time.

New Meter:

Application for Service	20.00
Meter (5/8 x 3/4)*	535.00
Valve and Gate Inspection	15.00
System Development Charge	<u>2,500.00</u>
	\$3,070.00

***Fee for larger meter available upon request**

Fees:

Service Turn-on Fee	21.00
Delinquent Fee	26.25
Late Charge Fee	5.25
After Hours Service Charge	31.50
Duplicate Billing Per Cycle	1.05
Backflow Test Charge	36.75
No Show Fee	31.50

Bulk Rates:

Per 1,000 Gallons	Tiered
Up to 4,000 Gallons	2.63
4,001 to 8,000 Gallons	3.15
8,001 to 20,000 Gallons	3.94
Over 20,000 Gallons	4.99
Per Day Service Charge	10.50

Water Service Rates:

Includes Monthly base rate plus a per gallon usage rate

Monthly Base Rates:

Inside District

101	Res/Comm – 5/8"	29.93
103	Res/Comm – 1"	52.24
107	Res/Comm – 2"	165.90
109	Res/Comm – 4"	543.11

Outside District

102	Res/Comm – 5/8"	44.89
106	Res/Comm – 1"	78.12
108	Res/Comm – 2"	249.11
110	Res/Comm – 4"	779.10

Usage Rates:

Per 1,000 Gallons	Tiered
Up to 4,000 Gallons	2.63
4,001 to 8,000 Gallons	3.15
8,001 to 20,000 Gallons	3.94
Over 20,000 Gallons	4.99

Rates do not include a 5% Franchise Fee for City of Florence Residence

Billing:

Billing shall be on a monthly basis and payment is due by the 25th of the month for the previous period. Non-payment will be cause for termination of water service. If a meter fails to register the amount of water used for any period, the charge for that period will be calculated based on the average quality of water used in the previous billing period. Any water user may request a meter check if the water usage records appear unreasonable. If the readings appear unreasonable to the General Manager, the General Manger will assist in determining he cause of the reading.

EXHIBIT "A"

Water Rate Study Final Report

February, 2021

Donovan Enterprises, Inc.

Presented by:



May

2021

Water Rate Study

Final Report

Prepared for:



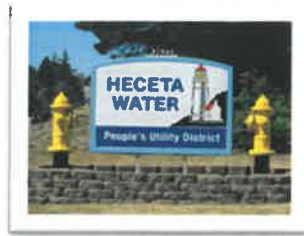
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Utilities Rate Study and SDC Update

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Executive Summary

Heceta Water People's Utility District (Heceta) is the sole provider of water services to customers within the service territory of the District. Revenues required to fund the delivery of these services are obtained from monthly user fees which are set by the District Board of Directors (the Board) via its PUD statutory authority. This study addresses the revenue required from rates needed to support future operations and maintenance costs for the utility along with a funding plan for capital needs identified in the District's 2020 water master plan. In addition to analyzing utility rates, this study recommends a process for adjusting System Development Charges (SDC) for inflation on an ongoing basis.

With the active involvement of District staff, and input from the Board, twenty-year planning models were developed for this project; however, the focus for the rate study is the five-year near-term forecast of fiscal 2022 through fiscal 2026. These financial models have been reviewed with the District as they were developed and will be provided to Heceta as a project deliverable enabling the District to make future updates.

The purpose of this study is to develop a cost of service-based methodology that will accurately determine the cost the District incurs to deliver water supply, storage, and distribution services. The models developed for this project have been populated with budget data for fiscal 2021, along with actuals for the three (3) prior fiscal years. During the formative stages of this rate study, the project team presented multiple utility rate scenarios to Heceta Staff for their consideration. These model runs simulated the current service levels (CSL) of the utility, and sensitivity cases for a number of funding issues facing the utility. The results of each model run were expressed in terms of the rate impacts on the average single family residential customer's monthly bill for water services, and in the case of SDCs, the impact on a newly constructed single-family residence. Over the near-term five- year forecast horizon, water system revenue requirements are projected to rise by an average of 6.07% per year. Over this same time frame, growth in water sales volumes is projected to grow by 1% per year (per the 2020 Water Master Plan). The net effect on water rates is general 5% per year increases. Finally, based on our analysis, we are recommending the Board adjust its schedule of water SDCs by 3.80% to account for construction cost inflation. We are basing this recommendation on the annual percentage change in the Engineering News Record's Construction Cost Index (CCI), 20-city average as of April, 2021. A detailed discussion the logic behind this recommendation is contained in the body of this report.

The project team prioritized its funding needs and, by consensus, arrived at the preferred alternative water rate and SDC schedules shown below in tables 1 and 2:

Table 1 - Five Year Forecast of Water Rates

	Current Rates	Cost of Service Based Rates					
	2021	2021	2022	2023	2024	2025	2026
Inside District:							
Base charge (monthly)							
Meter Size:							
5/8" x 3/4"	\$ 28.50	\$ 28.57	\$ 30.40	\$ 32.39	\$ 34.44	\$ 36.62	\$ 38.92
3/4" x 3/4"	28.50	28.57	30.40	32.39	34.44	36.62	38.92
1 inch	49.75	47.62	50.67	53.98	57.40	61.03	64.87
1 & 1/2 inch	N/A	95.23	101.33	107.97	114.80	122.07	129.73
2 inch	158.00	152.37	162.13	172.75	183.68	195.31	207.57
3 inch	N/A	333.32	354.67	377.88	401.80	427.23	454.07
4 inch	517.25	571.40	608.00	647.80	688.80	732.40	778.40
Use Charge (\$/kgal) monthly billing							
Residential and Multifamily							
Zero to 4,000 gallons	2.50	2.82	2.87	2.92	2.97	3.02	3.07
4,001 to 8,000 gallons	3.00	3.39	3.44	3.50	3.56	3.62	3.69
8,001 to 20,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
Over 20,000 gallons	4.75	5.36	5.45	5.54	5.64	5.74	5.84
Commercial/Industrial							
Zero to 4,000 gallons	2.50	2.82	2.87	2.92	2.97	3.02	3.07
4,001 to 8,000 gallons	3.00	3.39	3.44	3.50	3.56	3.62	3.69
8,001 to 20,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
Over 20,000 gallons	4.75	5.36	5.45	5.54	5.64	5.74	5.84
Outside District:							
Base charge (monthly)							
Meter Size:							
5/8" x 3/4"	42.75	42.86	45.60	48.59	51.66	54.93	58.38
3/4" x 3/4"	42.75	42.86	45.60	48.59	51.66	54.93	58.38
1 inch	74.40	71.43	76.00	80.98	86.10	91.55	97.30
1 & 1/2 inch	N/A	142.85	152.00	161.95	172.20	183.10	194.60
2 inch	237.25	228.56	243.20	259.12	275.52	292.96	311.36
3 inch	N/A	499.98	532.00	566.83	602.70	640.85	681.10
4 inch	742.00	857.10	912.00	971.70	1,033.20	1,098.60	1,167.60
Use Charge (\$/kgal) monthly billing							
Residential and Multifamily							
Zero to 4,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
4,001 to 8,000 gallons	4.50	5.08	5.16	5.25	5.34	5.43	5.53
8,001 to 20,000 gallons	5.63	6.35	6.46	6.57	6.68	6.79	6.91
Over 20,000 gallons	7.13	8.04	8.18	8.32	8.46	8.60	8.75
Commercial/Industrial							
Zero to 4,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
4,001 to 8,000 gallons	4.50	5.08	5.16	5.25	5.34	5.43	5.53
8,001 to 20,000 gallons	5.63	6.35	6.46	6.57	6.68	6.79	6.91
Over 20,000 gallons	7.13	8.04	8.18	8.32	8.46	8.60	8.75

Table 2 – Schedule of Current and Proposed Water SDCs

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Schedule of SDCs by Meter Size	
			Current	Proposed
0.625"x 0.75" - Displacement Multi-jet	30	1.00	\$ 2,500	\$ 2,595
1.00 inch - Displacement Multi-jet	50	1.67	\$ 4,167	\$ 4,325
1.50 inch - Displacement Class I Turbine	100	3.33	\$ 8,333	\$ 8,650
2.00 inch - Displacement or Class I & II Turbine	160	5.33	\$ 13,333	\$ 13,840
3.00 inch - Displacement	300	10.00	\$ 25,000	\$ 25,950
4.00 inch - Displacement or Compound	500	16.67	\$ 41,667	\$ 43,250
6.00 inch - Displacement or Compound	1000	33.33	\$ 83,333	\$ 86,500
8.00 inch - Compound	1600	53.33	\$ 133,333	\$ 138,400

* - AWWA Manual of Practice M3; Safety Practices for Water Utilities; Table 2-2 Total Quantities Registered per Month by Meters Operating at Varying Percentages of Maximum Capacity

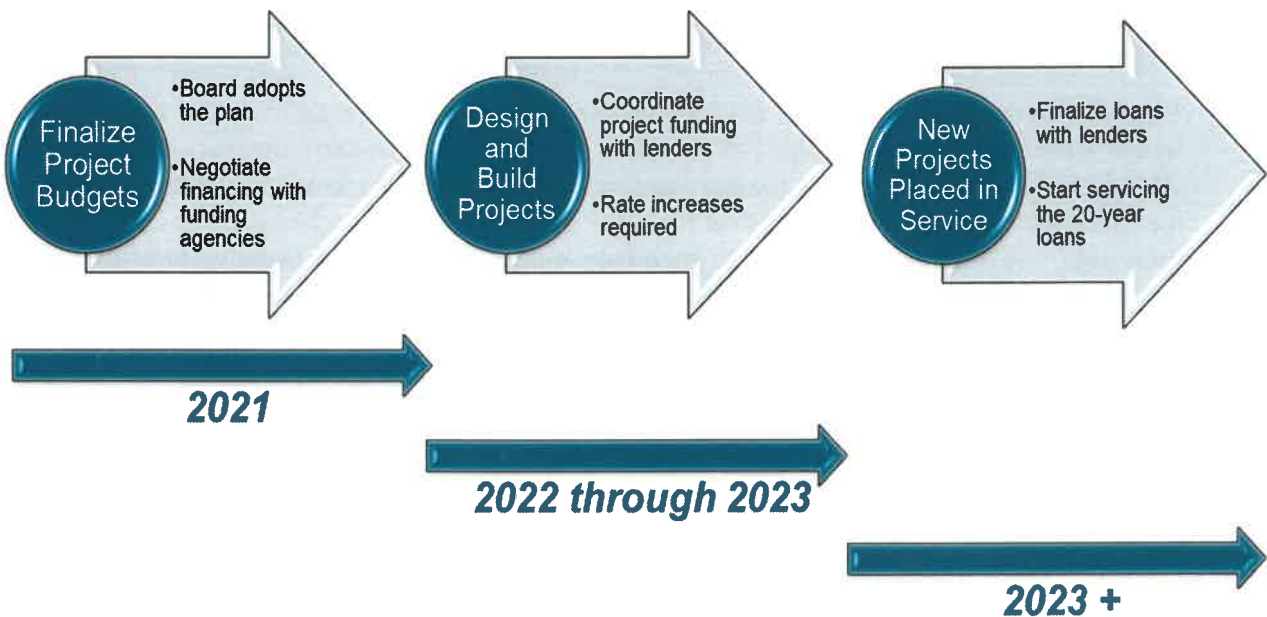
The schedules of water rates and SDCs shown above were developed through consultation with District staff and the Board. A number of specific policy recommendations were developed through this collaboration and are briefly discussed in this executive summary. Itemized below is a listing of these policy recommendations.

- The 2020 water master plan was adopted by the Board and is deemed complete by the Oregon Health Authority. The master plan has identified ~\$27 million in needed capital improvements over the next twenty (20) years. For the purposes of this rate study, the Board has chosen to focus on the Phase I highest priority projects for funding. These projects are scheduled for construction in fiscal 2022 and fiscal 2023. In order to keep rates manageable over the five-year forecast horizon, and get the projects built, our analysis indicates all of the Phase I projects will have to be funded from the proceeds of new loans originated by the District. The resulting debt service on these new loans will have to be paid from future water rates. A key element of our funding strategy is “levelized” annual water rate increases. In order to make our financing plan work, we are recommending small annual rate increases, every year, over the five-year forecast. A start date for this strategy is on or near July 1, 2021.
- The District’s current water rate structure encourages customers to conserve water by increasing the unit price as larger amounts of water are consumed. This rate structure is called “inverted block” or “conservation” pricing. Conservation-oriented water rates are aimed at stimulating water use efficiency and water conservation through economic incentives, specifically through water price signals. The American Water Works Association (AWWA) suggests three principal criteria to design and evaluate a conservation water rate structure. The three criteria are: (1) the structural form of the rate; (2) the proportion of utility costs that is recovered through fixed versus commodity charges; and (3) effective communication of the price signal through consumer billing. We have reviewed all three of these criteria in this study and have concluded the District has an effective conservation rate structure. We see no need to deviate from the currently adopted monthly commodity consumption blocks of:

Consumption Block	Current rate \$/1,000 gallons
Zero to 4,000 gallons	\$2.50
4,001 to 8,000 gallons	\$3.00
8,001 to 20,000 gallons	\$3.75
Over 20,000 gallons	\$4.75

- The District should commission a SDC methodology update study. Through this water rate study effort, we have recommended the Board adjust its current schedule of water SDCs for inflation. This is permissible under Oregon statute. It has been over ten years since the last SDC cost of service and methodology study has been undertaken. With the benefit of the new 2020 water master plan, it is an opportune time to do this work.
- The water financial plan that has been developed through this rate study is predicated on a three-year schedule. We recommend the Board direct Staff to develop policies and procedures to implement this three-year plan through the annual District budget process. Figure 1 shown below lays out our recommend three year implementation plan.

Figure 1 - Recommended Water Financial Plan Implementation Schedule



Board of Directors Involvement and Participation in this Study

This rate study was started in November of 2020, and the first draft of the analysis was completed at the end of December, 2020. The first draft of the analysis was presented to the District Board of Directors as an agenda item at their February 4, 2021 business meeting. The Board spent over an hour reviewing the study planning assumptions and the resulting outputs. There was active participation by all Board members, with the conversation centered on the following general topics:

- The draft study recommended 4% per year general rate increases in order to fund system operations and maintenance and the proposed five-year capital improvement plan. The Board was particularly concerned about the affordability of any rate increases relative to measurable benchmarks like median household income.
- Concern was raised about cost inflation and if the analysis took operations and maintenance cost increases into account over the five-year financial forecast.
- A chart of neighboring communities' water rates was shown at the meeting, and some Board members were concerned if the rates shown in neighboring communities were relevant to the District's current water rates.
- The most discussed topic of the presentation was the study's draft recommendation to leave the Water General Fund with a projected ending fund balance in fiscal 2025-2026 of \$288,158. By contrast, the Water General Fund started fiscal 2020-2021 with a balance of \$706,893. The Board was advised this level of reserve drawdown was necessary to facilitate 4% per year general rate increases.

The Board took no action on the draft rate study recommendations and directed Staff to research the topics discussed above and report back with findings. Staff completed this task and on March 24, 2021 distributed a Board briefing memo with analysis and findings. Over the next six weeks, the Board held discussions on this topic and coalesced on the conclusion that the projected 2025-2026 Water General Fund balance of \$288,158 was not enough of a reserve to protect the District against unplanned or emergency expenses. A copy of the March 24, 2021 Board briefing memo is attached to this report in Appendix A.

The topic of the rate study and proposed rate increase was an agenda item at the Board's May 18, 2021 business meeting. With the benefit of the analysis and findings contained in the March 24th, 2021 Board briefing memo, the Board unanimously agreed that a larger Water General Fund reserve balance was required. In order to achieve this, the Board agreed to implement 5% per year general rate increases over the five-year forecast horizon fiscal 2021-2022 through fiscal 2025-2026. The modeling of this preferred level of rate increases indicated an ending balance in the Water General Fund of \$482,380 in fiscal 2025-2026. During this meeting, the Board unanimously adopted the 5% per year general rate increases via resolution.

Analysis Section

Water Rates

Analysis of Water System Revenue Requirements

This analytical task determines the amount of revenue needed from water rates. This is driven by utility cash flow or income requirements, constraints of bond/loan covenants, and specific fiscal policies related to the water utility. Based on three years of actual financial records (i.e., fiscal 2018 through 2020), and for the current budget year 2021, a base case analysis was developed. This case is predicated on a number of planning assumptions. These planning assumptions are discussed in detail below.

For the current budget year (fiscal 2021), it is forecasted that the water utility will generate sufficient revenues from rates, charges, and fees to meet its obligations and produce an unappropriated ending balance in the water general fund of \$503,158. The beginning balance for the water general fund in this same fiscal year was \$706,893. In order to establish and maintain cash balances in the general fund while continuing to support the funding of future capital requirements, a general increase in system revenue requirements of 6.07% is required beginning in fiscal 2022 and continuing every year thereafter through fiscal 2026.

For the forecast of revenue requirements, the following assumptions were made based on discussions with District staff and the Board:

Inflation in costs and growth in the customer base – In order to accurately reflect likely future conditions, the revenue requirements model was programmed to allow for inflation and cost escalation factors by budget line item. Per guidance from District staff, the following factors were applied for estimating future cost escalation:

- All direct labor line items – 2.5% per year
- Pension plan contributions (PUD cost) – 2.0% per year
- Health insurance premiums (PUD cost) – 5.0% per year
- Professional services – 2.5% per year
- All other operating expense line items – 2.5% per year
- The growth forecast expressed in the annual increase in 5/8" meters is estimated to be 1.0% per year over the five (5) year forecast horizon. This is consistent with the population growth forecast used in the 2020 water master plan

Capital Improvement Plan Funding – The District budgets for and pays for system capital improvements in two (2) funds; the general fund and the water construction fund. In the current fiscal year, total water system capital improvement costs are budgeted to be \$545,500. A detailed listing of these budgeted capital expenditures is shown below in Table 3. The current budget assumes these capital improvement costs will be funded from cash on hand.

Table 3 - Fiscal 2020-2021 Budgeted Capital Expenditures

Fund/Project Name	Fiscal 2020-21 Budget
General Fund:	
Conservation program	\$ 500
Meter update program	40,000
Computer replacement	10,000
Security fencing	-
Master plan	-
Miscellaneous equipment	-
Filter rehabilitation	10,000
Subtotal general fund	\$ 60,500
Construction Fund:	
Sutton pump station	\$ 50,000
Mercer lake road water line improvement	180,000
Water treatment plant - exterior painting	240,000
System leak detection	15,000
Subtotal construction fund	\$ 485,000
HWPUD total budgeted capital improvements	<u>\$ 545,500</u>

Between fiscal 2022 and 2023, the District's water system capital improvement plan calls for the investment of \$6,854,494. This represents a full funding of the Phase I priority projects identified in the 2020 water master plan. The water system financial plan calls for all of these costs to be funded from the proceeds of future loans (one loan in each future fiscal year). The resulting debt service on these bonds is to be paid from water rates. The key planning assumptions for the issuance of these future water system revenue bonds are:

- Life of each issuance – 20 years
- Interest rate – 1.00%
- Issuance costs – 1.0% of gross borrowings
- Coverage requirement – 1.00 times annual debt service
- Reserve requirement – one year's annual debt service

Table 4 contains a listing of the Phase I priority projects and the forecasted year of completion for each project and the inflated project costs.

Table 4 - Five Year Forecast for Capital Improvements

Cost Escalation Rate		3%									
Cost in FY 2021	Year	CIP ID Number	Project	Growth		Fiscal Years Future Cost of Projects					
				Accommodation		2022	2023	2024	2025	2026	
Phase 1											
453,000	2022	1	WTP improvements		0%			466,590			
1,262,968	2022	2	District office and shop replacement		0%			1,300,857			
96,000	2022	3	SCADA improvements		0%			98,880			
4,416,700	2023	4	Driftwood Shores water line improvements		40%				4,685,677		
256,000	2023	5	Enchanted Valley pump station		0%				271,590		
30,000	2022	6	Water quality study		100%			30,900			
		7									
		8									
		9									
		10									
Phase 2											
12,921,000		1	AC pipe replacement		0%						
224,000	2028	2	Hwy 101 water line improvements		0%						
1,335,000	2028	3	Reservoir improvements		0%						
		4									
		5									
		6									
		7									
		8									
		9									
		10									
Phase 3											
270,000	2032	1	View Road improvement		0%						
120,000	2032	2	Hydrant replacement		0%						
		3									
		4									
		5									
		6									
		7									
		8									
		9									
		10									
Phase 4											
545,000	2037	1	Shark tail Drive water line improvement		0%						
5,017,000	2037	2	Enchanted Valley pump station phase II		0%						
		3									
		4									
		5									
		6									
		7									
		8									
		9									
		10									
Net Construction Cost								\$ 1,897,227	\$ 4,957,267	\$ -	\$ -
\$26,946,668											

Under the current water system financial plan, by the end of fiscal 2023, the District will add an additional \$370,633 of annual debt service to the water system revenue requirements. The debt sizing cashflows and resulting debt service calculations are shown below in Table 5.

Table 5 - Forecast of Future Water System Borrowings and Resulting Debt Service

Capital Improvements Financing	2022	2023	2024	2025	2026
Capital Costs to be Funded	1,897,227	4,957,267	-	-	-
less: Contributions from SDCs	231,386	372,345	-	-	-
less: Contributions From Construction Fund bal					
less: Contributions From Utility Rates					
less: Developer Contributions					
Amount to be Financed	1,665,841	4,584,923	-	-	-
Long-term Borrowing:					
Revenue Bonds:					
Amount Borrowed	1,782,440	4,905,840	-	-	-
less: Financing Cost	17,824	49,058	-	-	-
less: Reserve Funding	98,774	271,859	-	-	-
less: Refunding of BANs	-	-	-	-	-
Net Funds from Revenue Bonds	1,665,841	4,584,923	-	-	-
Debt Service	98,774	370,633	370,633	370,633	370,633

It should be noted, the water system financial plan also assumes the District will continue to budget \$60,500 per year (adjusted for inflation) on water projects paid for out of the general fund. It is assumed these project costs will be funded with cash that is generated from water rates and is accounted for in the revenue requirements calculations. These costs are for service installations, small works construction, minor equipment and tools, and the funding for an ongoing meter replacement program. For the forecast, we have used this figure as the starting point and adjusted it for inflation (3.0% per year) over the forecast period. We have not budgeted for any costs in the other minor capital line items.

Operating Costs in Excess of Inflation – In most rate studies, there are certain operating cost categories that tend to grow in excess of the general price index. We have identified one such category in this analysis: a) health care premiums. This cost category has been accounted for in the revenue requirements model. We have not identified any other areas of concern for this forecast, but the District should monitor the cost structure of the water utility on an ongoing basis. Three key areas of future concern are:

Professional services costs – Any water distribution system maintenance contracts with a “cost plus” structure should be monitored. If future cost plus contracts negotiations result in cost increases in excess of 2.5% per year, the District will have to revisit the water rate forecast and determine potential impacts on water rates.

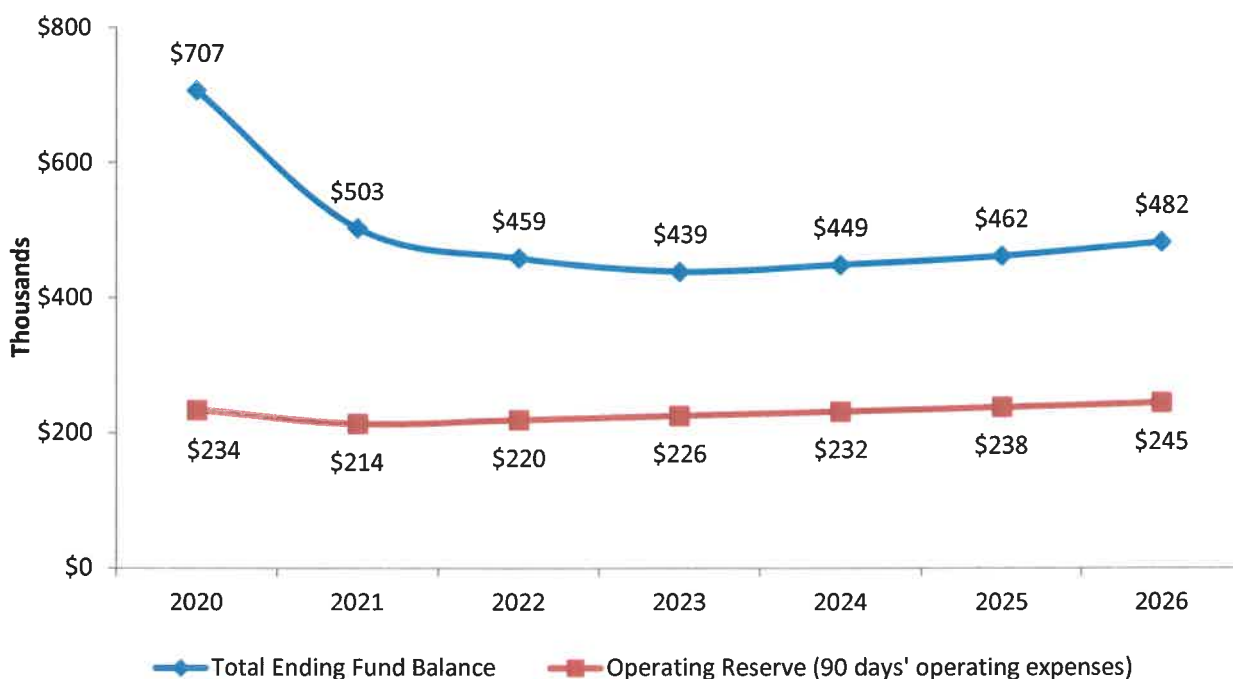
Administrative charges – We have not estimated or accounted for any unusual increases in general fund administrative charges. The PUD provides administrative services such as accounting, legal, and billing to the water system. Based on proposed changes in the commodity charge rate structure

as a result of our recommendations to the Board, the PUD may incur additional costs for billing software updates. While modest, we do not know exactly how much these costs will be, but estimates have been included within the operations and maintenance expense forecast. The District should monitor this situation.

Staffing Costs – We have not planned or budgeted for any additional labor. If the water utility does add staff, these costs will impact the current revenue requirements forecast.

Modeling for Contingencies, Reserves, and Ending Fund Balances - The financial engine of the water utility is the general fund. Because the utility cash finances all of its operations, the ending fund balance in the general fund is in effect the contingency fund for the utility. Over the past three years, the ending fund balance in the general fund has been declining, primarily due to several years of higher-than-normal operating expenses. For planning purposes, we are expecting the general fund will end all forecast years with a target ending fund balance in excess of ninety days of operating expenses. This target balance gives the water utility enough contingency to fund unforeseen operating cost spikes. The five-year forecast of targeted general fund balances and operating reserve requirements is shown below in Figure 2.

Figure 2 - Forecast of General Fund Balances and Operating Reserve Requirements



Revenue Requirements Forecast & Results

All of the above cost elements are contained in the revenue requirements model which is the platform for the “base case” forecast. The base case assumes the utility will fund the Phase I priority projects in the 2020 water master plan (discussed above). Also, the utility would fund the operating costs as adjusted for inflation. This base case resulted in the following forecast of water system revenue requirements (Table 6).

Table 6 – Base Case Forecast of Water System Revenue Requirements

	Budget 2021	Forecast				
		2022	2023	2024	2025	2026
Projection of Cash Flow:						
Revenues:						
Total licenses and permits	6,660	6,860	7,066	7,278	7,496	7,721
Total Service Charges	1,111,000	1,111,000	1,178,310	1,250,436	1,325,765	1,406,157
Total interest earned	3,000	4,025	3,673	3,513	3,593	3,697
Total other financing sources	3,350	3,384	3,417	3,452	3,486	3,521
Total transfers from other funds	-	-	250,000	100,000	50,000	-
Total miscellaneous income	3,500	3,605	3,713	3,825	3,939	4,057
Subtotal gross operating revenues	1,127,510	1,128,874	1,446,179	1,368,503	1,394,280	1,425,153
Operations & Maintenance Expense:						
Total personal services	559,304	575,312	591,824	608,858	626,433	644,569
Total materials and services	307,584	315,273	323,155	331,234	339,515	348,003
Total debt service	188,509	287,283	559,142	427,630	427,630	427,630
Total capital outlay	60,500	62,315	64,184	66,110	68,093	70,136
Transfers(excluding transfers to the construction and bond funds)	-	-	-	-	-	-
Total operations and maintenance expense	1,115,897	1,240,183	1,538,305	1,433,832	1,461,672	1,490,338
(Use)/replacement of fund balance	11,613	(44,000)	(20,000)	10,000	13,000	20,222
Net Cash	0	(67,310)	(72,126)	(75,329)	(80,392)	(85,406)
Net Deficiency/(Surplus)	(0)	67,310	72,126	75,329	80,392	85,406
Test of Coverage Requirement:						
Gross Revenues:						
Operating revenues	1,127,510	1,128,874	1,446,179	1,368,503	1,394,280	1,425,153
System Development Charges	30,000	30,300	30,603	30,909	31,218	31,530
Total Gross Revenues	1,157,510	1,159,174	1,476,782	1,399,412	1,425,498	1,456,684
Operating Expenses:						
Total personal services	559,304	575,312	591,824	608,858	626,433	644,569
Total materials and services	307,584	315,273	323,155	331,234	339,515	348,003
Transfers(excluding transfers to the construction and bond funds)	-	-	-	-	-	-
Transfers to/from the rate stabilization account	-	-	-	-	-	-
Total Operating Expenses	866,888	890,585	914,979	940,092	965,948	992,572
Net Revenues	290,622	268,589	561,803	459,320	459,550	464,112
Debt Service:						
Debt Service on Existing Refunding Bonds	188,509	188,509	188,509	56,997	56,997	56,997
Debt Service on New Serial Revenue Bond Debt	-	98,774	370,633	370,633	370,633	370,633
Total debt service	188,509	287,283	559,142	427,630	427,630	427,630
Coverage Recognized	1.54	0.93	1.00	1.07	1.07	1.09
Coverage Required	1.25	1.00	1.00	1.00	1.00	1.00
Net Deficiency/(Surplus)	(54,986)	18,695	(2,661)	(31,690)	(31,920)	(36,482)
Projection of Revenue Sufficiency and Forecasted Rates:						
Maximum Deficiency	-	67,310	72,126	75,329	80,392	85,406
Percent Increase Required Over Current Rate Revenues	0.00%	6.06%	6.12%	6.02%	6.06%	6.07%
Five Year Average Increase in Revenue Requirements		6.07%	6.07%	6.07%	6.07%	6.07%
Revenues Recovered From Existing Rates and Charges:	1,111,000	1,111,000	1,178,310	1,250,436	1,325,765	1,406,157
add: Revenues Recovered From Rate Increase	-	67,310	72,126	75,329	80,392	85,406
Total Revenues Recovered From Rates & Charges after Increase	1,111,000	1,178,310	1,250,436	1,325,765	1,406,157	1,491,563

Table 6 shows forecasted annual changes in water system revenue requirements average approximately 6.07% per year from fiscal 2022 through fiscal 2026.

Allocation of Revenue Requirements to Customer Classes (Cost of Service)

The ratemaking methodology that was used to allocate water system revenue requirements is called the “base-extra capacity method” and is consistent with industry standards in water rate making. Under this methodology, costs of service are separated into three primary cost components: (1) base costs, (2) extra capacity costs, and, (3) customer costs.

Base costs are those that tend to vary with the total quantity of water used plus those operations and maintenance (O&M) expenses and capital costs associated with service to customers under average load conditions, without the elements of cost incurred to meet water use variations and resulting peaks in demand. Base costs include O&M expenses of supply, treatment, pumping, and distribution facilities. Base costs also include capital costs related to water plant investment associated with serving customers to the extent required for a constant, or average, annual rate of demand/usage.

Extra capacity costs are those associated with meeting rate of use requirements in excess of average and include O&M expenses and capital costs for system capacity beyond that required for average rate of use. These costs have been subdivided into costs necessary to meet maximum-day extra demand, and maximum-hour demand in excess of maximum day demand.

Customer costs comprise those costs associated with serving customers, irrespective of the amount or rate of water use. They include meter reading, billing, and customer accounting and collection expense, as well as maintenance and capital costs related to meters and services.

The resulting cost of service-based forecast of recommended water rates is shown below in Table 7. The complete contents of the water rate model are contained in Appendix B to this report.

Table 7 - Recommended Schedule of Cost of Service-Based Water Rates

	Current Rates	Cost of Service Based Rates					
	2021	2021	2022	2023	2024	2025	2026
Inside District:							
Base charge (monthly)							
Meter Size:							
5/8" x 3/4"	\$ 28.50	\$ 28.57	\$ 30.40	\$ 32.39	\$ 34.44	\$ 36.62	\$ 38.92
3/4" x 3/4"	28.50	28.57	30.40	32.39	34.44	36.62	38.92
1 inch	49.75	47.62	50.67	53.98	57.40	61.03	64.87
1 & 1/2 inch	N/A	95.23	101.33	107.97	114.80	122.07	129.73
2 inch	158.00	152.37	162.13	172.75	183.68	195.31	207.57
3 inch	N/A	333.32	354.67	377.88	401.80	427.23	454.07
4 inch	517.25	571.40	608.00	647.80	688.80	732.40	778.40
Use Charge (\$/kgal) monthly billing							
Residential and Multifamily							
Zero to 4,000 gallons	2.50	2.82	2.87	2.92	2.97	3.02	3.07
4,001 to 8,000 gallons	3.00	3.39	3.44	3.50	3.56	3.62	3.69
8,001 to 20,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
Over 20,000 gallons	4.75	5.36	5.45	5.54	5.64	5.74	5.84
Commercial/Industrial							
Zero to 4,000 gallons	2.50	2.82	2.87	2.92	2.97	3.02	3.07
4,001 to 8,000 gallons	3.00	3.39	3.44	3.50	3.56	3.62	3.69
8,001 to 20,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
Over 20,000 gallons	4.75	5.36	5.45	5.54	5.64	5.74	5.84
Outside District:							
Base charge (monthly)							
Meter Size:							
5/8" x 3/4"	42.75	42.86	45.60	48.59	51.66	54.93	58.38
3/4" x 3/4"	42.75	42.86	45.60	48.59	51.66	54.93	58.38
1 inch	74.40	71.43	76.00	80.98	86.10	91.55	97.30
1 & 1/2 inch	N/A	142.85	152.00	161.95	172.20	183.10	194.60
2 inch	237.25	228.56	243.20	259.12	275.52	292.96	311.36
3 inch	N/A	499.98	532.00	566.83	602.70	640.85	681.10
4 inch	742.00	857.10	912.00	971.70	1,033.20	1,098.60	1,167.60
Use Charge (\$/kgal) monthly billing							
Residential and Multifamily							
Zero to 4,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
4,001 to 8,000 gallons	4.50	5.08	5.16	5.25	5.34	5.43	5.53
8,001 to 20,000 gallons	5.63	6.35	6.46	6.57	6.68	6.79	6.91
Over 20,000 gallons	7.13	8.04	8.18	8.32	8.46	8.60	8.75
Commercial/Industrial							
Zero to 4,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61
4,001 to 8,000 gallons	4.50	5.08	5.16	5.25	5.34	5.43	5.53
8,001 to 20,000 gallons	5.63	6.35	6.46	6.57	6.68	6.79	6.91
Over 20,000 gallons	7.13	8.04	8.18	8.32	8.46	8.60	8.75

Existing Water Rates

The City's current water rate structure has not been reviewed for at least ten years. A number of rate increases have been implemented by the Board from time to time, but the basic water rate

methodology has remained intact. Billings for customers include two components: a fixed rate (demand charge) and a volume rate (commodity charge). The two components are added together to compute an invoice for each customer. The District bills most of its customers on a monthly basis, but some are billed bimonthly.

The fixed rates are based on costs associated with maintaining/reading meters and the costs associated with billing and are charged per connection to the water system. Volume rates are based on the customer class for each 1,000 gallons of water. The last rate adjustments were made by the Board (dated March 19, 2019) with an implementation date of March 1, 2019. The current schedule of water rates and charges is shown below in Table 7.

Table 8 - Heceta Water PUD Current Water Rates

RATES AND FEES
OF
HECETA WATER PEOPLE'S UTILITY DISTRICT
Adopted March 19, 2019
Effective March 1, 2019

The following fees and rates are set by the Board of Directors, and may be revised from time to time.

<p>Fees:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Application for Service</td> <td style="width: 30%; text-align: right;">\$20.00</td> </tr> <tr> <td>Meter (5/8 by 3/4)*</td> <td style="text-align: right;">535.00</td> </tr> <tr> <td>Valve and Gate Inspection</td> <td style="text-align: right;">15.00</td> </tr> <tr> <td>System Development Charge</td> <td style="text-align: right;"><u>2,500.00</u></td> </tr> <tr> <td></td> <td style="text-align: right;">\$3,070.00</td> </tr> </table>	Application for Service	\$20.00	Meter (5/8 by 3/4)*	535.00	Valve and Gate Inspection	15.00	System Development Charge	<u>2,500.00</u>		\$3,070.00	<p>Water Service Rates:</p> <p>Water service is provided on the basis of a monthly base rate plus a per gallon usage rate.</p>
Application for Service	\$20.00										
Meter (5/8 by 3/4)*	535.00										
Valve and Gate Inspection	15.00										
System Development Charge	<u>2,500.00</u>										
	\$3,070.00										

<p>*Fee for larger meter available upon request</p>	<p style="text-align: center;"><u>Inside District</u></p> <p style="text-align: center;">THESE RATES DO NOT INCLUDE A 5% FRANCHISE FEE FOR CITY OF FLORENCE RESIDENCE</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Service Turn-on Fee</td> <td style="width: 20%; text-align: right;">\$20.00</td> <td style="width: 10%; text-align: center;">101</td> <td style="width: 30%;">Res/Comm – 5/8"</td> <td style="width: 10%; text-align: right;">28.50</td> </tr> <tr> <td>Delinquent Fee</td> <td style="text-align: right;">25.00</td> <td style="text-align: center;">103</td> <td>Res/Comm – 1"</td> <td style="text-align: right;">49.75</td> </tr> <tr> <td>Late Charge Fee</td> <td style="text-align: right;">5.00</td> <td style="text-align: center;">107</td> <td>Res/Comm – 2"</td> <td style="text-align: right;">158.00</td> </tr> <tr> <td>After Hours Service Charge</td> <td style="text-align: right;">30.00</td> <td style="text-align: center;">109</td> <td>Res/Comm – 4"</td> <td style="text-align: right;">517.25</td> </tr> <tr> <td>Duplicate Billing per cycle</td> <td style="text-align: right;">1.00</td> <td></td> <td></td> <td></td> </tr> </table>	Service Turn-on Fee	\$20.00	101	Res/Comm – 5/8"	28.50	Delinquent Fee	25.00	103	Res/Comm – 1"	49.75	Late Charge Fee	5.00	107	Res/Comm – 2"	158.00	After Hours Service Charge	30.00	109	Res/Comm – 4"	517.25	Duplicate Billing per cycle	1.00			
Service Turn-on Fee	\$20.00	101	Res/Comm – 5/8"	28.50																						
Delinquent Fee	25.00	103	Res/Comm – 1"	49.75																						
Late Charge Fee	5.00	107	Res/Comm – 2"	158.00																						
After Hours Service Charge	30.00	109	Res/Comm – 4"	517.25																						
Duplicate Billing per cycle	1.00																									

<p>Backflow Testing Charge</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Backflow Testing Charge</td> <td style="width: 30%; text-align: right;">35.00</td> </tr> </table> <p>Bulk Rates:</p> <p>Per Gallon Rate: Tiered rate per 1,000 gallons</p> <p>Service Charge \$10.00 per day</p>	Backflow Testing Charge	35.00	<p style="text-align: center;"><u>Outside District</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">102</td> <td style="width: 30%;">Res/Comm – 5/8"</td> <td style="width: 40%; text-align: right;">42.75</td> </tr> <tr> <td>106</td> <td>Res/Comm – 1"</td> <td style="text-align: right;">74.40</td> </tr> <tr> <td>108</td> <td>Res/Comm – 2"</td> <td style="text-align: right;">237.25</td> </tr> <tr> <td>110</td> <td>Res/Comm – 4"</td> <td style="text-align: right;">742.00</td> </tr> </table>	102	Res/Comm – 5/8"	42.75	106	Res/Comm – 1"	74.40	108	Res/Comm – 2"	237.25	110	Res/Comm – 4"	742.00
Backflow Testing Charge	35.00														
102	Res/Comm – 5/8"	42.75													
106	Res/Comm – 1"	74.40													
108	Res/Comm – 2"	237.25													
110	Res/Comm – 4"	742.00													

The base rate is charged regardless of the meter being off or on.

	<p><u>Charge Per 1,000 gallons Per 2 Month Cycle</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Up to 8,000 Gallons</td> <td style="width: 10%; text-align: right;">\$2.50</td> <td style="width: 50%;">per 1,000 Gallons</td> </tr> <tr> <td>8,000 to 16,000 Gallons</td> <td style="text-align: right;">\$3.00</td> <td>per 1,000 Gallons</td> </tr> <tr> <td>16,000 to 40,000 Gallons</td> <td style="text-align: right;">\$3.75</td> <td>per 1,000 Gallons</td> </tr> <tr> <td>Over 40,000 Gallons</td> <td style="text-align: right;">\$4.75</td> <td>per 1,000 Gallons</td> </tr> </table>	Up to 8,000 Gallons	\$2.50	per 1,000 Gallons	8,000 to 16,000 Gallons	\$3.00	per 1,000 Gallons	16,000 to 40,000 Gallons	\$3.75	per 1,000 Gallons	Over 40,000 Gallons	\$4.75	per 1,000 Gallons
Up to 8,000 Gallons	\$2.50	per 1,000 Gallons											
8,000 to 16,000 Gallons	\$3.00	per 1,000 Gallons											
16,000 to 40,000 Gallons	\$3.75	per 1,000 Gallons											
Over 40,000 Gallons	\$4.75	per 1,000 Gallons											

Billing:

Billing shall be on a monthly or bi-monthly basis and payment is due by the 25th of the month for the previous period.

Non-payment will be cause for termination of water service.

If a meter fails to register the amount of water used for any period, the charge for that period will be calculated based on the average quantity of water used in the previous billing period. Any water user may request a meter check if the water usage records appear unreasonable. If the readings appear unreasonable to the General Manager, the General Manager will assist in determining the cause for the reading

Rate Design Alternatives

The District's current water rate methodology is sound, conforms to industry practice, and promotes conservation. We see no reason to move off of this methodology.

Water System Development Charges

Updating the Current Schedule of SDCs for Inflation

As part of the scope of work for this project, we were asked to investigate the feasibility of adjusting the current schedule of SDCs for inflation. We have reviewed this matter, and find the District has statutory authority to annually adjust its schedule of SDCs for inflation with certain conditions. The specific statutory authorization and conditions of use are as follows:

Per Oregon Revised Statutes No.:

223.304 Determination of amount of system development charges; methodology; credit allowed against charge; limitation of action contesting methodology for imposing charge; notification request.

... (8) A change in the amount of a reimbursement fee or an improvement fee is not a modification of the system development charge methodology if the change in amount is based on:

(a) A change in the cost of materials, labor or real property applied to projects or project capacity as set forth on the list adopted pursuant to ORS 223.309; or

(b) The periodic application of one or more specific cost indexes or other periodic data sources. A specific cost index or periodic data source must be:

(A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property, or a combination of the three;

(B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and

(C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution, or order. [1989 c.449 §4; 1991 c.902 §28; 1993 c.804 §20; 2001 c.662 §3; 2003 c.765 §§4a,5a; 2003 c.802 §21]

We recommend the District use the Engineering News Record's Construction Cost Index for this purpose. The ENR CCI (20 city average) has a long history of use for cost estimating in public works and the general construction industries. As of April, 2021, the annualized growth in the CCI was 3.80%. The data used to arrive at this calculation is contained in Appendix C to this report.

Table 9 shows the current and proposed schedule of water SDCs by meter size for the District:

Table 9 - Current and Proposed Schedule of Water SDCs

Meter Size	AWWA Rated Flow (GPM) *	Flow Factor Equivalence	Schedule of SDCs by Meter Size	
			Current	Proposed
0.625"x 0.75" - Displacement Multi-jet	30	1.00	\$ 2,500	\$ 2,595
1.00 inch - Displacement Multi-jet	50	1.67	\$ 4,167	\$ 4,325
1.50 inch - Displacement Class I Turbine	100	3.33	\$ 8,333	\$ 8,650
2.00 inch - Displacement or Class I & II Turbine	160	5.33	\$ 13,333	\$ 13,840
3.00 inch - Displacement	300	10.00	\$ 25,000	\$ 25,950
4.00 inch - Displacement or Compound	500	16.67	\$ 41,667	\$ 43,250
6.00 inch - Displacement or Compound	1000	33.33	\$ 83,333	\$ 86,500
8.00 inch - Compound	1600	53.33	\$ 133,333	\$ 138,400

* - AWWA Manual of Practice M3; Safety Practices for Water Utilities; Table 2-2 Total Quantities Registered per Month by Meters Operating at Varying Percentages of Maximum Capacity

Issues Concerning the District's Current SDC

Although we have not undertaken a formal SDC methodology review, we have identified some issues the Board should consider. Firstly, the District's SDC methodology has not been reviewed/updated for some time (Staff indicated it has been at least ten years). Industry practice is to perform a SDC methodology review every five years, or upon completion of a new water master plan.

The current SDCs do not have identified component fees. These component fees are reimbursement, improvement, and administration. It appears the District's current schedule of SDCs only contains an improvement fee. We suggest the District include reimbursement and administration fee components.

Rate Study Conclusions and Recommendations

The District is well funded and managed. Over the five-year near-term forecast, our modeling indicates water system revenue requirements will increase. General annual rate increases of 5% per year will be required to fund these increases in system revenue requirements. This level of general water rate increases will be sufficient to fund projected operations and maintenance cost increases and provide sufficient cash flows to pay increased debt service on anticipated future borrowings for water system capital improvements.

With the benefit of input from PUD staff and the members of the Board we recommend the following relative to modifications to the District's water rate structure:

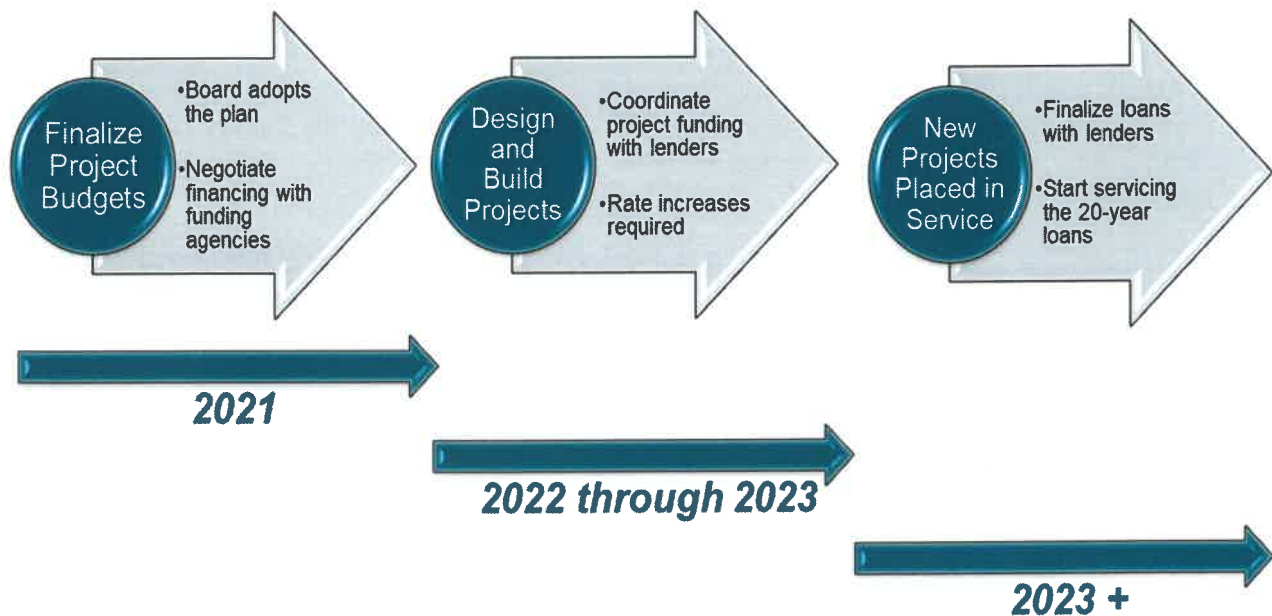
- The 2020 water master plan was adopted by the Board and is deemed complete by the Oregon Health Authority. The master plan has identified ~\$27 million in needed capital improvements over the next twenty (20) years. For the purposes of this rate study, the Board has chosen to focus on the Phase I highest priority projects for funding. These projects are scheduled for construction in fiscal 2022 and fiscal 2023. In order to keep rates manageable over the five-year forecast horizon, our analysis indicates all of the Phase I projects will have to be funded from the proceeds of new loans originated by the District. The resulting debt service on these new loans will have to be paid from future water rates. A key element of our funding strategy is "levelized" annual water rate increases. In order to make our financing plan work, we are recommending small annual rate increases, every year, over the five-year forecast. A start date for this strategy is on or near July 1, 2021.
- The District's current water rate structure encourages customers to conserve water by increasing the unit price as larger amounts of water are consumed. This rate structure is called "inverted

block” or “conservation” pricing. Conservation-oriented water rates are aimed at stimulating water use efficiency and water conservation through economic incentives, specifically through water price signals. The American Water Works Association (AWWA) suggests three principal criteria to design and evaluate a conservation water rate structure. The three criteria are: (1) the structural form of the rate; (2) the proportion of utility costs that is recovered through fixed versus commodity charges; and (3) effective communication of the price signal through consumer billing. We have reviewed all three of these criteria in this study and have concluded the District has an effective conservation rate structure. We see no need to deviate from the currently adopted monthly commodity consumption blocks of:

Consumption Block	Current rate \$/1,000 gallons
Zero to 4,000 gallons	\$2.50
4,001 to 8,000 gallons	\$3.00
8,001 to 20,000 gallons	\$3.75
Over 20,000 gallons	\$4.75

- The District should commission a SDC methodology update study. Through this water rate study effort, we have recommended the Board adjust its current schedule of water SDCs for inflation. This is permissible under Oregon statute. It has been over ten years since the last SDC cost of service and methodology study has been undertaken. With the benefit of the new 2020 water master plan, it is an opportune time to do this work.
- The water financial plan that has been developed through this rate study is predicated on a three-year schedule. We recommend the Board direct Staff to develop policies and procedures to implement this three-year plan through the annual District budget process. Figure 3 shown below lays out our recommend three-year implementation plan.

Figure 3 - Recommended Water Financial Plan Implementation Schedule



The District's SDC methodology has not been reviewed/updated for some time (at least 10 years based on discussions with District Staff). The project team reviewed the methodology and presented their findings to District staff and the Board. We recommend the following to the Board relative to its SDC methodology:

- Change the current SDC methodology to include reimbursement fees
- Update the current improvement fees to take the most current adopted capital improvement plan per the 2020 water master plan
- Upon Board approval, direct PUD staff to comply with the statutory notice provisions contained in ORS 223.304
- Between SDC methodology updates, adjust SDCs for inflation based on an annual change in the Engineering News Record's Construction Cost Index (20 City average).

Neighboring Communities' Utility Rates and SDCs

Shown below in Figures 4 and 5 are charts that compare the current and proposed utility rates and SDCs for a single-family customer in Heceta to the same charges in similar communities in western Oregon.

Figure 4 - Comparison of Neighboring Communities' Utility Rates

Monthly Water Bills (assuming 4,000 gallons of consumption), December, 2020

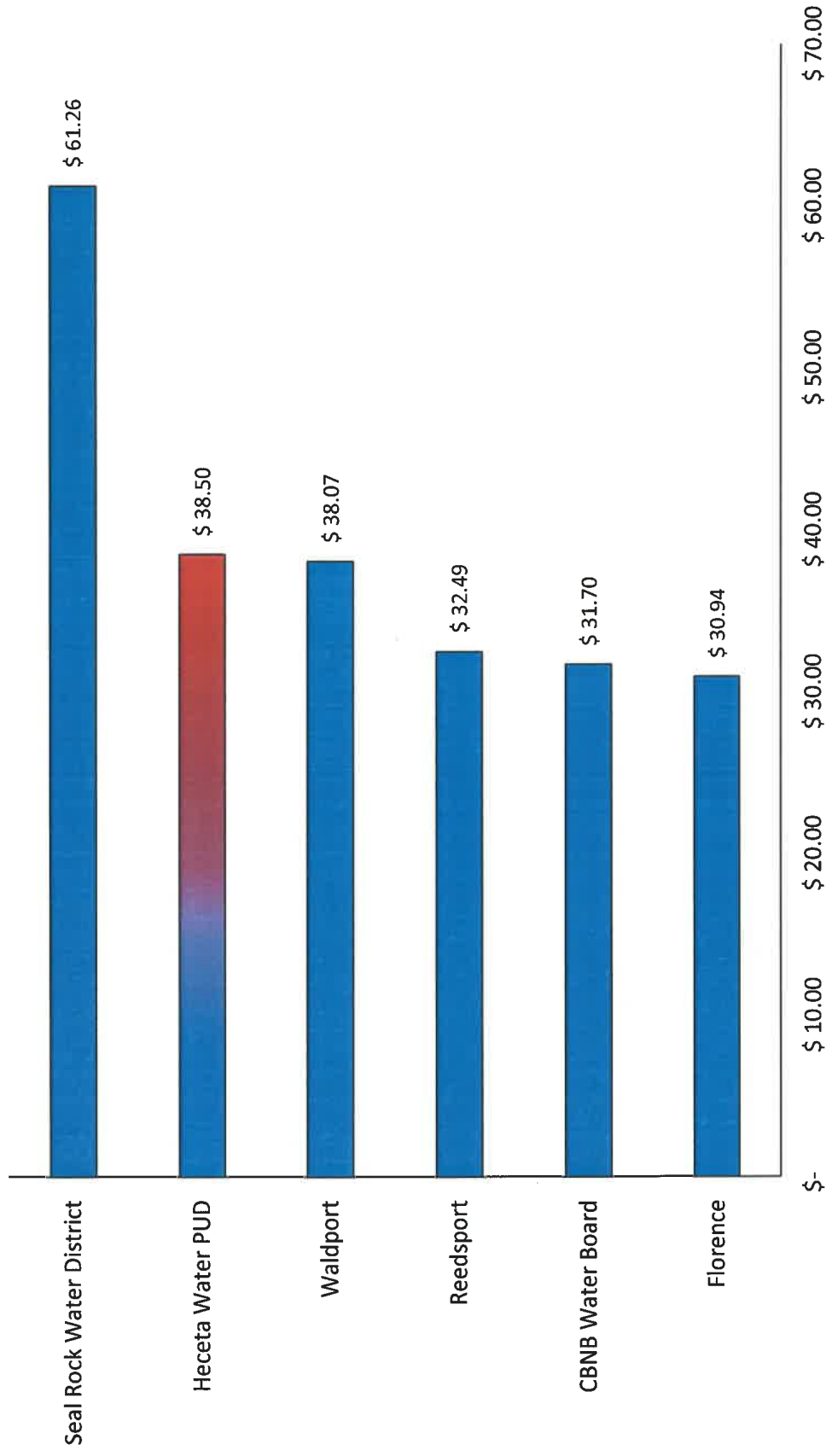
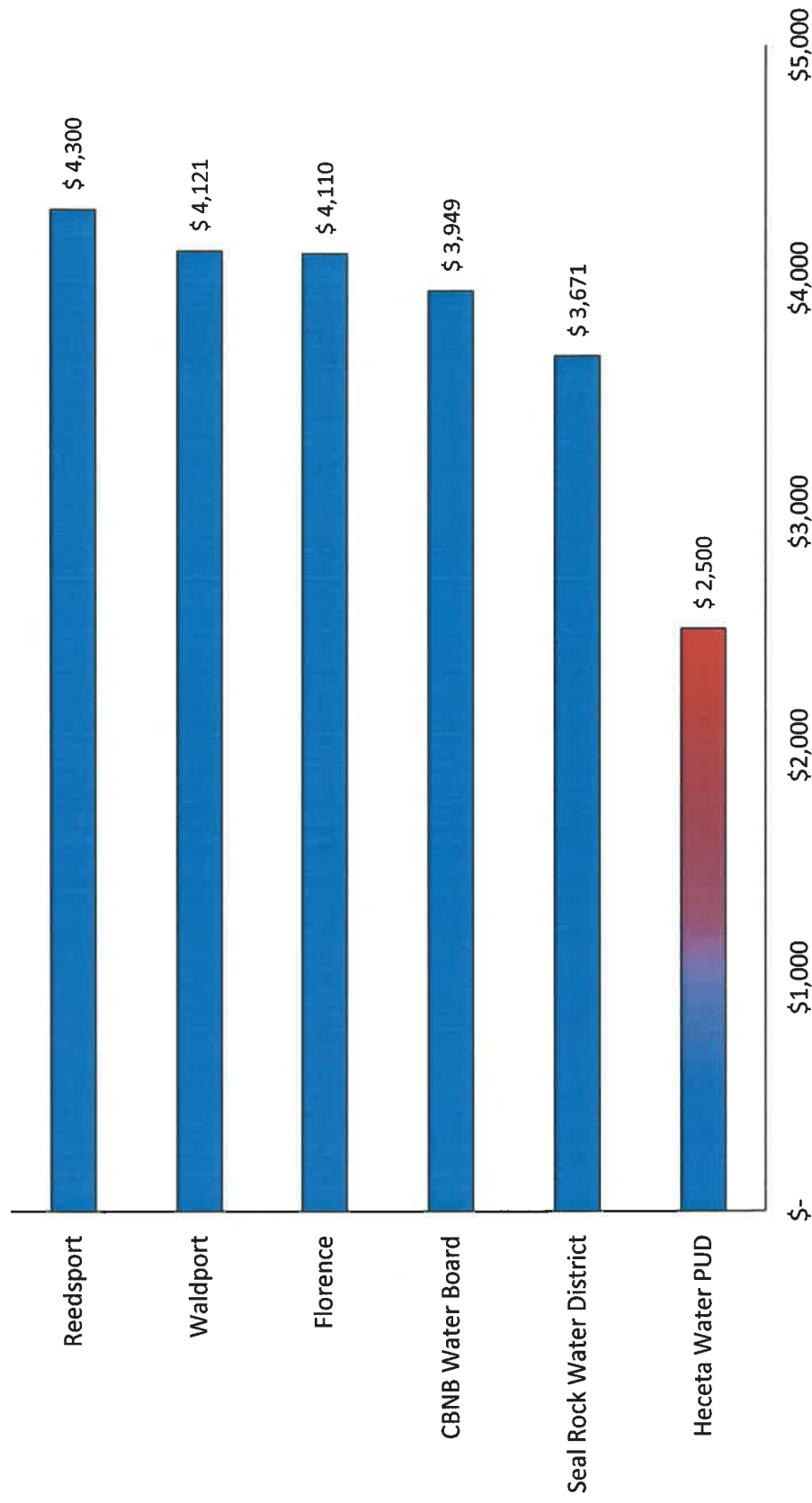


Figure 5 - Comparison of Neighboring Communities' SDCs

Water System Development Charges (Single Family Residential), December, 2020



Note: Reedsport currently has a policy of waiving all SDCs through December 31, 2020

Appendix A – March 24, 2021 Board Briefing Memo

Memorandum

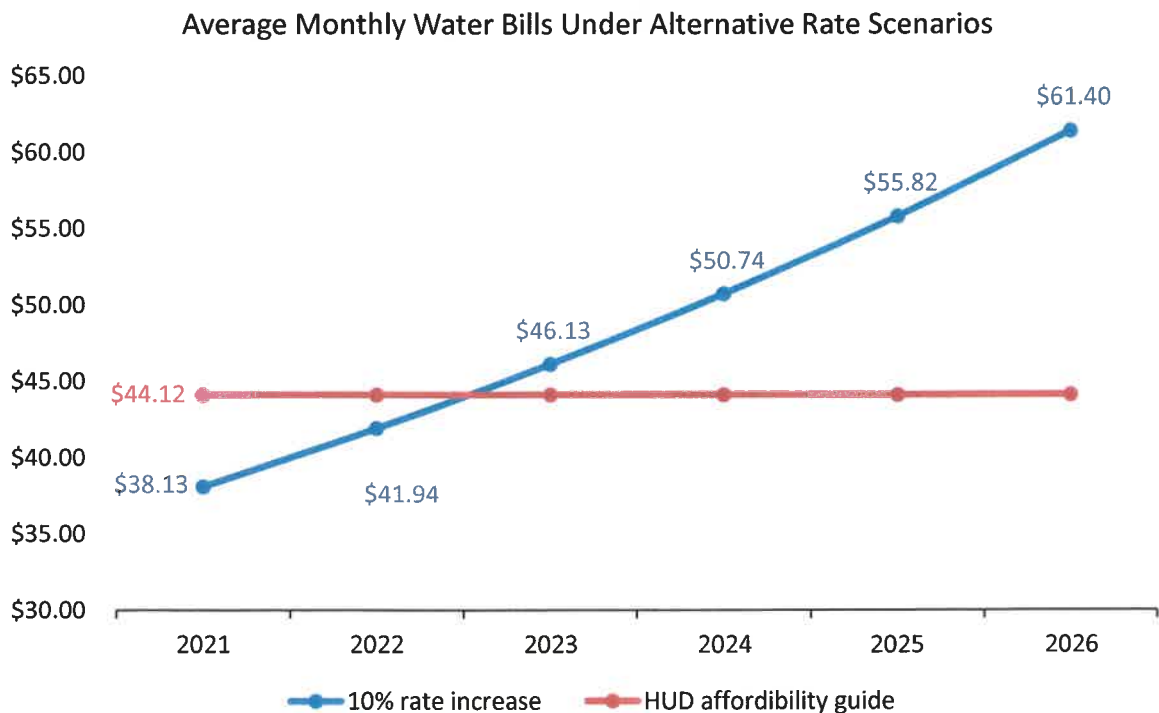
To: Carl Neville
From: Steve Donovan
Cc: Aaron Speakman
Date: March 24, 2021
Re: Answers to rate questions posed by Board members



Thanks for e-mailing me the questions you noted from your Board members. Itemized below is each question restated and my attempt to provide answers.

Q #1 - What would a 10% rate increase look like compared to the affordability index of the annual median household income in relationship to usage charges.

The issue of affordability is usually defined by federal and state agencies as a reference point when they are evaluating a Community Development Block Grant (CDBG) application. Today, the affordability guideline for water rates is defined as 1.25% of an applicant community's median household income. For this analysis, I went to the Census Bureau and found the estimated 2019 MHI for Florence at \$42,356 (the HWPUD service area is not identified in the census data). This implies a monthly water rate affordability rate of \$44.12. Shown below is a chart that compares current estimated monthly water bills for a single-family customer in HWPUD growing at 10% per year against the current affordability bill.

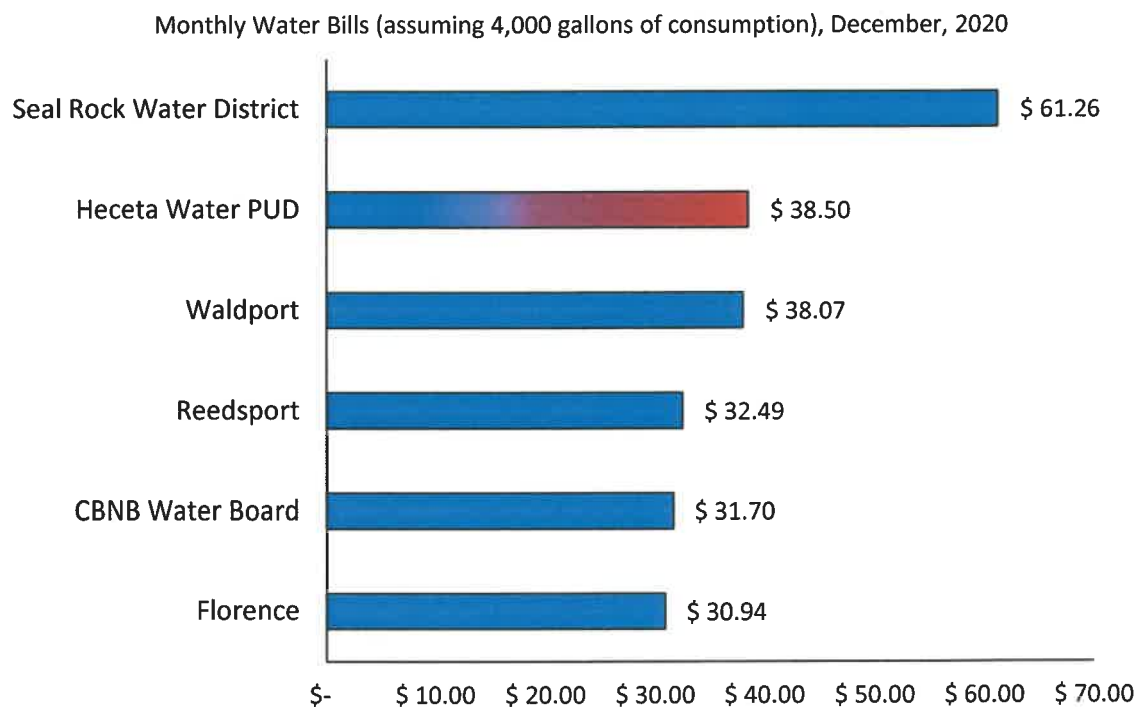


Q #2 - Is raising rates in line with normal cost of living? (Portion 2.5% based on rate study) of increase is to cover inflation since last rate increase).

No, the rate increases we are prescribing are on balance about 4% per year over the five-year forecast. About 2% of each year's increases are to account for general inflation for labor and materials. The balance, (2% per year) is for the anticipated new debt service on master plan projects that has to be recovered from rate payers.

Q #3 - Donovan's rate study indicates the District has second highest rates compared to neighboring districts. Have Donovan compare only water districts. Have Donovan include commentary of how our District differs from others in rate study if unable to find water districts only.

The rate comparisons shown in the draft final report includes water purveyors in the general vicinity of HWPUD. That was the purpose of the chart. The chart also shows the rates for three (3) local "Water Districts" (Seal Rock, HWPUD, and Coos Bay/North Bend Water Board). These comps are for illustration only and the Board should not assume the rates charged by any of the other water purveyors has any bearing on HWPUD's cost of service.



Q #4 – the Board inquired about seeing a sliding scale for reserves to rate increase to find the right variations. How reserve is taken down with percentage of rate increase.

We have run several sensitivity cases to answer this question. Shown below are the results of those simulations. Keep in mind, the District started this fiscal year with a cash balance in the General fund of \$706,893. In our base case (i.e., 4% per year rate increase, the General fund ended year 5 of the forecast with \$288,158.

Case Name	Prescribed Annual Rate Increases	Actual General Fund Balance on July 1, 2020	Forecasted General Fund Balance on June 30, 2026
Base Case	4%	\$706,893	\$288,158
Sensitivity Case #1	5%	\$706,893	\$482,380
Sensitivity Case #2	6%	\$706,893	\$657,158
Sensitivity Case #3	7%	\$706,893	\$871,158

Q #5 - How much reserve does the district need to qualify for low interest loans and/or grants?

If the District borrows for the entire master plan CIP as we have modeled, the most restrictive loan covenant on reserves under the Drinking Water State Revolving Fund (DWSRF) loan program would be ½ of maximum annual debt service. In our base case forecast, that amount would be \$185,317.

Appendix B – Water Rate Model Output Tables



Water Rates Step 1 - Functional Allocation of Revenue Requirements

• Functions are:

- Source of Supply
- T & D System
- Customer Accounts
- G & A
 - Debt Svc
 - Contracts
 - Gen. Fund transfers

Heceta Water PUD Water System Rate Study Update 2020 Forecast of Net Revenue Requirements by System Function						
	2021	2022	2023	2024	2025	2026
Net Revenue Requirement by Function:						
Source of Supply	7,373	7,557	7,746	7,940	8,138	8,342
land, buildings and impoundment reservoir	1,223	1,254	1,285	1,317	1,350	1,384
water treatment equipment	181,957	186,936	192,080	197,334	202,763	208,353
fees, permits	-	-	-	-	-	-
laboratory testing	8,893	9,115	9,343	9,577	9,816	10,061
vehicles, tools, & misc.	-	-	-	-	-	-
source of supply total	199,446	204,862	210,434	216,168	222,068	228,140
Transmission and Distribution System						
distribution reservoirs	83,034	85,300	87,632	90,033	92,504	95,049
transmission & distribution mains	63,591	65,338	67,136	68,989	70,898	72,865
services	-	-	-	-	-	-
hydrants	2,657	2,724	2,792	2,862	2,933	3,006
fees, permits	-	-	-	-	-	-
tools, shop, and garage equipment	766	785	805	825	846	867
transmission & distribution mains total	150,049	154,147	158,365	162,709	167,182	171,788
Customer Account Expense						
meter reading and services	40,000	41,200	42,436	43,709	45,020	46,371
customer collection & services	9,450	9,689	9,934	10,185	10,442	10,706
postage, supplies	-	-	-	-	-	-
customer accounts expense total	49,450	50,889	52,370	53,894	55,462	57,077
General and Administrative Expense						
General & Administrative	619,719	674,231	732,730	794,045	860,022	930,600
office supplies	25,002	25,628	26,288	26,925	27,598	28,288
telephone	7,923	8,121	8,324	8,532	8,745	8,964
contract services	13,027	13,353	13,687	14,029	14,380	14,739
employee costs	7,917	8,115	8,318	8,526	8,739	8,958
insurance - general	38,015	38,966	39,940	40,938	41,962	43,011
long term supply development	-	-	-	-	-	-
general and administrative expense total	711,604	768,413	829,267	892,995	961,445	1,034,559
Total Net Revenue Requirement by Function	1,110,549	1,178,310	1,250,436	1,325,765	1,406,157	1,491,563
Checksum	1,110,549	1,178,310	1,250,436	1,325,765	1,406,157	1,491,563
Checksum error	-	-	-	-	-	-



Water Rates Step 2 – Assignment of Functional Costs to BEC

Variable Fixed

- Meters & Services are recovered from the monthly base charge
- Base and extra capacity charges are recovered from the volume (commodity) charge

Line Item Description	Base	Extra Capacity		Customer Costs		BEC Total
		Max Day	Max hour	Meters & Services	Billing	
Forecast Year: 2021						
Source of Supply	139,761	59,684	-	-	-	199,446
Transmission and Distribution System	101,954	32,064	16,032	-	-	150,049
Customer Account Expense	-	-	-	40,000	9,450	49,450
General and Administrative Expense	-	-	-	711,604	-	711,604
Total	\$ 241,715	\$ 91,748	\$ 16,032	\$ 751,604	\$ 9,450	\$ 1,110,549
Forecast Year: 2022						
Source of Supply	143,544	61,318	-	-	-	204,862
Transmission and Distribution System	104,735	32,941	16,470	-	-	154,147
Customer Account Expense	-	-	-	41,200	9,689	50,889
General and Administrative Expense	-	-	-	768,413	-	768,413
Total	\$ 248,280	\$ 94,259	\$ 16,470	\$ 809,613	\$ 9,689	\$ 1,178,310
Forecast Year: 2023						
Source of Supply	147,436	62,988	-	-	-	210,434
Transmission and Distribution System	107,599	33,844	16,922	-	-	158,365
Customer Account Expense	-	-	-	42,436	9,934	52,370
General and Administrative Expense	-	-	-	829,267	-	829,267
Total	\$ 255,035	\$ 96,843	\$ 16,922	\$ 871,703	\$ 9,934	\$ 1,250,436
Forecast Year: 2024						
Source of Supply	151,439	64,728	-	-	-	216,168
Transmission and Distribution System	110,547	34,774	17,367	-	-	162,709
Customer Account Expense	-	-	-	43,709	10,185	53,894
General and Administrative Expense	-	-	-	892,985	-	892,985
Total	\$ 261,987	\$ 99,503	\$ 17,367	\$ 936,704	\$ 10,185	\$ 1,325,765
Forecast Year: 2025						
Source of Supply	155,559	66,509	-	-	-	222,068
Transmission and Distribution System	113,583	35,732	17,866	-	-	167,182
Customer Account Expense	-	-	-	45,020	10,442	55,462
General and Administrative Expense	-	-	-	961,445	-	961,445
Total	\$ 269,142	\$ 102,242	\$ 17,866	\$ 1,006,466	\$ 10,442	\$ 1,406,157
Forecast Year: 2026						
Source of Supply	159,797	68,343	-	-	-	228,140
Transmission and Distribution System	116,709	36,719	18,359	-	-	171,788
Customer Account Expense	-	-	-	46,371	10,706	57,077
General and Administrative Expense	-	-	-	1,034,559	-	1,034,559
Total	\$ 276,506	\$ 105,062	\$ 18,359	\$ 1,080,930	\$ 10,706	\$ 1,491,563



Water Rates Step 3 – Calculate Monthly Base Charge

- Monthly base fee on sliding scale based on capacity to serve
- Capacity to serve based on AWWA water meter flow factors

Heceta Water PUD Water System Rate Study Update 2020 Calculation of Forecasted Customer Charges (\$/Account/Month)						
	Budget 2021	2022	2023	2024	2025	2026
Net revenue requirement - customer costs						
Meters & Services	751,804	809,613	871,703	936,704	1,006,466	1,080,930
Billing	9,450	9,689	9,934	10,185	10,442	10,706
Total	761,054	819,301	881,637	946,889	1,016,908	1,091,636
Number of equivalent customers/bills:						
Per month	2,220	2,246	2,269	2,291	2,314	2,337
Annual	26,640	26,954	27,223	27,495	27,770	28,047
Unit charge per equivalent customer:						
Meters & Services	28,2133	30,0364	32,0203	34,0679	36,2433	38,5401
Billing	0.3547	0.3595	0.3649	0.3704	0.3760	0.3817
Total	\$ 28,5681	\$ 30,3958	\$ 32,3852	\$ 34,4383	\$ 36,6193	\$ 38,9218

Heceta Water PUD Water System Rate Study Update 2020 Calculation of Forecasted Customer Charges by Meter Size (\$/Meter/Month)						
	Budget 2021	2022	2023	2024	2025	2026
Meter Size:						
5/8" x 3/4"	\$ 28.57	\$ 30.40	\$ 32.39	\$ 34.44	\$ 36.62	\$ 38.92
3/4" x 3/4"	\$ 28.57	\$ 30.40	\$ 32.39	\$ 34.44	\$ 36.62	\$ 38.92
1 inch	\$ 47.62	\$ 50.67	\$ 53.98	\$ 57.40	\$ 61.03	\$ 64.87
1 & 1/2 inch	\$ 95.23	\$ 101.33	\$ 107.97	\$ 114.80	\$ 122.07	\$ 129.73
2 inch	\$ 152.37	\$ 162.13	\$ 172.75	\$ 183.68	\$ 195.31	\$ 207.57
3 inch	\$ 333.32	\$ 354.67	\$ 377.88	\$ 401.80	\$ 427.23	\$ 454.07
4 inch	\$ 571.40	\$ 608.00	\$ 647.80	\$ 688.80	\$ 732.40	\$ 778.40
6 inch	\$ 1,190.42	\$ 1,266.67	\$ 1,349.58	\$ 1,435.00	\$ 1,525.83	\$ 1,621.67
8 inch	\$ 1,714.20	\$ 1,824.00	\$ 1,943.40	\$ 2,066.40	\$ 2,197.20	\$ 2,335.20



Water Rates Step 4 – Calculate Use (Commodity) Charge

- Uniform residential and commercial commodity rates
 - 98% of active meters serve residential customers
 - 2% of remaining meters serve low impact commercial customers

Line Item Description	Budget		Forecast			
	2021	2022	2023	2024	2025	2026
Estimated annual water sales in kgal:						
Residential	100,472	101,477	102,491	103,516	104,551	105,597
Commercial	23,424	23,895	23,895	24,134	24,375	24,619
Wholesale	-	-	-	-	-	-
Total	123,896	125,135	126,386	127,650	128,927	130,216
Base charge:						
Forecasted base cost revenue requirement	\$ 241,715	\$ 248,280	\$ 255,035	\$ 261,987	\$ 269,142	\$ 276,506
Base charge:						
Residential	1.9510	1.9841	2.0179	2.0524	2.0876	2.1234
Commercial	1.9510	1.9841	2.0179	2.0524	2.0876	2.1234
Wholesale	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity charge:						
Maximum day charge:						
Forecasted maximum day revenue requirement	\$ 91,748	\$ 94,258	\$ 96,843	\$ 99,503	\$ 102,242	\$ 105,062
Maximum day extra capacity charge:						
Residential	0.7405	0.7533	0.7662	0.7795	0.7930	0.8068
Commercial	0.7405	0.7533	0.7662	0.7795	0.7930	0.8068
Wholesale	N/A	N/A	N/A	N/A	N/A	N/A
Maximum hour charge:						
Forecasted maximum hour revenue requirement	\$ 16,032	\$ 16,470	\$ 16,922	\$ 17,387	\$ 17,866	\$ 18,359
Maximum hour extra capacity charge:						
Residential	0.1294	0.1316	0.1339	0.1362	0.1386	0.1410
Commercial	0.1294	0.1316	0.1339	0.1362	0.1386	0.1410
Wholesale	N/A	N/A	N/A	N/A	N/A	N/A
Commodity charge summary:						
Residential		1.9841	2.0179	2.0524	2.0876	2.1234
Base		0.7533	0.7662	0.7795	0.7930	0.8068
Maximum day		0.1316	0.1339	0.1362	0.1386	0.1410
Maximum hour		2.8690	2.9180	2.9681	3.0192	3.0713
Total	1.9510	1.9841	2.0179	2.0524	2.0876	2.1234
Commercial		0.7405	0.7662	0.7795	0.7930	0.8068
Base		0.1294	0.1339	0.1362	0.1386	0.1410
Maximum day		2.8209	2.9180	2.9681	3.0192	3.0713
Maximum hour		1.9510	2.0179	2.0524	2.0876	2.1234
Wholesale		0.7405	0.7662	0.7795	0.7930	0.8068
Base		0.1294	0.1339	0.1362	0.1386	0.1410
Maximum day		2.8209	2.9180	2.9681	3.0192	3.0713
Maximum hour		N/A	N/A	N/A	N/A	N/A
Total		N/A	N/A	N/A	N/A	N/A



Water Rates Step 5 – Proposed Conservation Pricing

- Assumes variable monthly base charges
- 3 outer consumption blocks with conservation price incentives

	Current Rates					Cost of Service Based Rates				
	2021	2021	2022	2023	2024	2025	2026			
Inside District:										
Base charge (monthly)										
Meter Size:										
5/8" x 3/4"	28.50	\$ 28.57	\$ 30.40	\$ 32.39	\$ 34.44	\$ 36.62	\$ 38.92			
3/4" x 3/4"	28.50	28.57	30.40	32.39	34.44	36.62	38.92			
1 inch	49.75	47.62	50.67	53.98	57.40	61.03	64.87			
1 & 1/2 inch	N/A	95.23	101.33	107.97	114.80	122.07	129.73			
2 inch	158.00	152.37	162.13	172.75	183.68	195.31	207.57			
3 inch	N/A	333.32	354.67	377.88	401.80	427.23	454.07			
4 inch	517.25	571.40	608.00	647.80	688.80	732.40	778.40			
Use Charge (\$/kgal) monthly billing										
Residential and Multifamily										
Zero to 4,000 gallons	2.50	2.82	2.87	2.92	2.97	3.02	3.07			
4,001 to 8,000 gallons	3.00	3.39	3.44	3.50	3.56	3.62	3.69			
8,001 to 20,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61			
Over 20,000 gallons	4.75	5.36	5.45	5.54	5.64	5.74	5.84			
Commercial/Industrial										
Zero to 4,000 gallons	2.50	2.82	2.87	2.92	2.97	3.02	3.07			
4,001 to 8,000 gallons	3.00	3.39	3.44	3.50	3.56	3.62	3.69			
8,001 to 20,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61			
Over 20,000 gallons	4.75	5.36	5.45	5.54	5.64	5.74	5.84			
Outside District:										
Base charge (monthly)										
Meter Size:										
5/8" x 3/4"	42.75	42.86	45.60	48.59	51.66	54.93	58.38			
3/4" x 3/4"	42.75	42.86	45.60	48.59	51.66	54.93	58.38			
1 inch	74.40	71.43	76.00	80.98	86.10	91.55	97.30			
1 & 1/2 inch	N/A	142.85	152.00	161.95	172.20	183.10	194.60			
2 inch	237.25	228.56	243.20	259.12	275.52	292.96	311.36			
3 inch	N/A	499.98	532.00	566.83	602.70	640.85	681.10			
4 inch	742.00	857.10	912.00	971.70	1,033.20	1,098.60	1,167.60			
Use Charge (\$/kgal) monthly billing										
Residential and Multifamily										
Zero to 4,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61			
4,001 to 8,000 gallons	4.50	5.08	5.16	5.25	5.34	5.43	5.53			
8,001 to 20,000 gallons	5.63	6.35	6.46	6.57	6.68	6.79	6.91			
Over 20,000 gallons	7.13	8.04	8.18	8.32	8.46	8.60	8.75			
Commercial/Industrial										
Zero to 4,000 gallons	3.75	4.23	4.30	4.38	4.45	4.53	4.61			
4,001 to 8,000 gallons	4.50	5.08	5.16	5.25	5.34	5.43	5.53			
8,001 to 20,000 gallons	5.63	6.35	6.46	6.57	6.68	6.79	6.91			
Over 20,000 gallons	7.13	8.04	8.18	8.32	8.46	8.60	8.75			

Appendix C – Engineering News Record Construction Cost Index; April, 2021

CONSTRUCTION ECONOMICS

ENR's 20-city average cost indexes, wages and material prices. Historical data and details for ENR's 20 cities can be found at ENR.com/economics

Construction Cost Index

+3.8%

ANNUAL INFLATION RATE

APR. 2021

1913=100	INDEX VALUE	MONTH	YEAR
CONSTRUCTION COST	11249.21	+0.1%	+3.8%
COMMON LABOR	24253.88	+0.4%	+1.4%
WAGE \$/HR	46.19	+0.4%	+1.4%

The Construction Cost Index annual escalation is up 3.8% while the monthly gain is just over 0.1%.

Building Cost Index

+6.1%

ANNUAL INFLATION RATE

APR. 2021

1913=100	INDEX VALUE	MONTH	YEAR
BUILDING COST	8812.61	+1.0%	+6.1%
SKILLED LABOR	10876.81	0.0%	+1.7%
WAGE \$/HR	39.71	0.0%	+1.7%

The Building Cost Index rose 6.1% over a year, but fell slightly for the month. Component materials increased 1.0%.

Materials Cost Index

+2.6%

ANNUAL INFLATION RATE

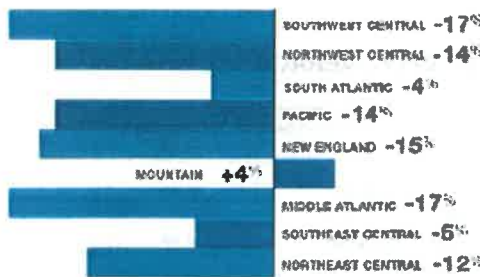
APR. 2021

1913=100	INDEX VALUE	MONTH	YEAR
MATERIALS COST	10782.82	+1.0%	+2.6%
CEMENT \$/TON	151.10	+1.0%	+3.9%
STEEL \$/CWT	58.90	+1.4%	+5.0%
LUMBER \$/MBF	823.70	+1.1%	+20.4%

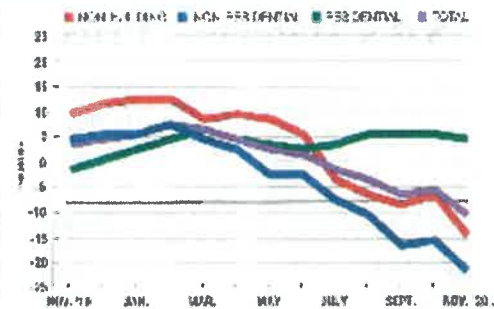
The MCI rose 2.6% over a year, but fell for the month. Annual escalation rate increased 14%.

Construction Starts Regional growth trends vs. national trends

SOUTHWEST CENTRAL STARTS DOWN 17%



RESIDENTIAL STARTS NEAR FLAT



The total dollar value of new construction starts in Maryland in November was 9.2% below November 2019's level, according to Dodge Data & Analytics. The residential sector increased 2.6%, while non-residential declined 17.4% from the same time last year. Non-building construction fell 15.7% in the same period.

	2020 EST.	2019 ACT.	2018 ACT.	MO. CHG. 10/20	YOY CHG. 10/20
TOTAL CONSTRUCTION	11,092,357	11,164,903	12,111,454	-1.5	-9.2
NON-RESIDENTIAL	4,282,253	4,480,000	5,200,712	-3.3	-17.4
GOVT. BLDG. MAINTENANCE	1,709,143	1,805,852	3,330,849	-2.0	-48.9
STORES, SHOPPING CENTERS	238,265	280,776	318,519	-8.3	-22.9
OFFICE BLDG. & DWGS	408,893	480,421	1,229,591	-4.4	-65.5
HOUS. WITH S.	141,482	152,488	142,376	-2.2	-8.8
MANUFACTURING BLDGS	57,812	35,824	261,171	+5.5	-65.5
INDUSTRIAL BLDGS	2,593,216	2,644,903	1,875,863	-4.2	+36.0
EDUCATIONAL BLDGS	1,345,535	1,426,193	1,034,691	-3.7	+27.6
HEALTH CARE FACILITIES	781,818	750,830	293,413	-1.5	+201.4
RESIDENTIAL	4,830,358	4,823,782	4,805,231	+0.1	+2.6
NON-BUILDING	1,769,896	1,780,622	2,080,511	-1.2	-15.7
HIGHWAYS, BRIDGES	863,284	861,447	898,563	+2.1	+4.8
ENVIRONMENTAL PUBLIC WORKS	519,939	502,537	761,781	+3.5	-31.7
POWER, UTILITIES	162,230	163,305	16,719	-0.7	+870.3

BASED ON THE 2019 10/20 EST. FOR THE 2020 10/20 ACT. FOR THE 2018 10/20 ACT. FOR THE 2017 10/20 ACT. FOR THE 2016 10/20 ACT. FOR THE 2015 10/20 ACT. FOR THE 2014 10/20 ACT. FOR THE 2013 10/20 ACT. FOR THE 2012 10/20 ACT. FOR THE 2011 10/20 ACT. FOR THE 2010 10/20 ACT. FOR THE 2009 10/20 ACT. FOR THE 2008 10/20 ACT. FOR THE 2007 10/20 ACT. FOR THE 2006 10/20 ACT. FOR THE 2005 10/20 ACT. FOR THE 2004 10/20 ACT. FOR THE 2003 10/20 ACT. FOR THE 2002 10/20 ACT. FOR THE 2001 10/20 ACT. FOR THE 2000 10/20 ACT. FOR THE 1999 10/20 ACT. FOR THE 1998 10/20 ACT. FOR THE 1997 10/20 ACT. FOR THE 1996 10/20 ACT. FOR THE 1995 10/20 ACT. FOR THE 1994 10/20 ACT. FOR THE 1993 10/20 ACT. FOR THE 1992 10/20 ACT. FOR THE 1991 10/20 ACT. FOR THE 1990 10/20 ACT. FOR THE 1989 10/20 ACT. FOR THE 1988 10/20 ACT. FOR THE 1987 10/20 ACT. FOR THE 1986 10/20 ACT. FOR THE 1985 10/20 ACT. FOR THE 1984 10/20 ACT. FOR THE 1983 10/20 ACT. FOR THE 1982 10/20 ACT. FOR THE 1981 10/20 ACT. FOR THE 1980 10/20 ACT. 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