

**RETAIL/RESALE  
WATER RATE STUDY  
Fiscal Years  
2022 and 2023**

**Billings, MT**  
March 31, 2021

## Executive Summary

The City of Billings, Montana calculates its water rates for retail and resale customers using a cost of service rate model developed specifically for its water system. In October 2020, the City retained AE2S Nexus to update its water rate model and develop recommendations for FY22 and FY23 water rates. This report summarizes the results of the most recent update to the water rate model, including rate recommendations for FY22 and FY23. Detailed tables are found in the Appendices. It should be noted that volumes and costs per volume are reported relative to gallons or thousand gallons (kgal), as opposed to cubic feet or one hundred cubic feet (CCF). This is reflective of a recent shift in how the City intends to represent volumetric use and corresponding charges to customers in the future.

Based on the results of this study, the recommended monthly meter charges for FY22 and FY23 are shown in Table ES.1. To balance the overall need for a revenue increase between the fixed and volumetric rates, meter rate increases are recommended for both FY22 and FY23. Tables ES.2 and ES.3 summarize the recommendations for Fire Protection charges for Owners (inside City users) and Non-Owners (outside City users), respectively.

Meter Size	Inside City Recommended Rate FY22	Outside City Recommended Rate FY22	% Increase from FY21	Inside City Recommended Rate FY23	Outside City Recommended Rate FY23	% Increase from FY22
3/4"	\$8.30	\$8.95	1.8%	\$8.45	\$9.15	1.8%
1"	\$9.35	\$10.20	2.2%	\$9.55	\$10.40	2.1%
1-1/2"	\$11.30	\$12.30	2.0%	\$11.55	\$12.55	2.2%
2"	\$16.20	\$17.70	1.8%	\$16.50	\$18.05	1.9%
3"	\$50.50	\$54.90	2.0%	\$51.50	\$56.00	2.0%
4"	\$65.80	\$71.50	2.0%	\$67.10	\$72.95	2.0%
6"	\$98.70	\$107.25	2.0%	\$100.65	\$109.40	2.0%
8"	\$134.85	\$146.55	2.0%	\$137.55	\$149.50	2.0%

**Table ES.1: Recommended FY22 and FY23 Meter Charges for Owners and Non-Owners**

Meter Size	Inside City Current Rate FY21 (\$/Year)	Inside City Recommended Rate FY22 (\$/Year)	% Increase from FY21	Inside City Recommended Rate FY23 (\$/Year)	% Increase from FY22
1-1/4"	\$27.65	\$29.30	6.0%	\$30.75	5.0%
1-1/2"	\$36.90	\$39.10		\$41.05	
2"	\$59.05	\$62.60		\$65.75	
3"	\$147.50	\$156.35		\$164.15	
4"	\$258.10	\$273.60		\$287.30	
6"	\$589.85	\$625.25		\$656.50	
8"	\$1,032.25	\$1,094.20		\$1,148.90	
10"	\$1,622.05	\$1,719.35		\$1,805.30	
12"	\$2,335.80	\$2,475.95		\$2,599.75	
14"	\$3,179.25	\$3,370.00		\$3,538.50	

**Table ES.2: Recommended Annual Fire Protection Charges for Owners – FY22/FY23**

Meter Size	Outside City Current Rate FY21 (\$/Year)	Outside City Recommended Rate FY22 (\$/Year)	% Increase from FY21	Outside City Recommended Rate FY23 (\$/Year)	% Increase from FY22
1-1/4"	\$28.05	\$29.75	6.0%	\$31.25	5.0%
1-1/2"	\$37.35	\$39.60		\$41.60	
2"	\$59.80	\$63.40		\$66.55	
3"	\$149.55	\$158.50		\$166.45	
4"	\$261.65	\$277.35		\$291.20	
6"	\$598.05	\$633.95		\$665.65	
8"	\$1,046.60	\$1,109.40		\$1,164.85	
10"	\$1,644.65	\$1,743.35		\$1,830.50	
12"	\$2,368.25	\$2,510.35		\$2,635.85	
14"	\$3,223.50	\$3,416.90		\$3,587.75	

**Table ES.3: Recommended Annual Fire Protection Charges for Non-Owners – FY22/FY23**

In recent years, a combination of weather patterns and conservation initiatives undertaken by the City has resulted in a change in Single-Family Residential water use. As part of this study, an alternate Single-Family Residential volumetric tier structure was evaluated for consideration by the City. The results summarized herein are associated with two rate scenarios:

- Scenario 1: Existing Four-Tier Inclining Block Tier Structure; and
- Scenario 2: Four-Tier Inclining Block with Reduced Tier 1 Volume.

Tables ES.4 and ES.5 present the recommended FY22 and FY23 volumetric rates for Single-Family Residential users under Scenarios 1 and 2, respectively. Consistent with the approach taken in the previous analysis, rate increase percentages for Non-Owner Residential users are equal to the increases recommended for the Owner Single Family Residential user class in FY22 and FY23. Tables ES.6 and ES.7 present the calculated FY22 and FY23 volumetric rates for Non-Owner Single Family Residential accounts under both Scenarios 1 and 2, respectively.

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-14	0-10	\$3.56	\$3.72	4.3%	\$3.88	4.3%
Tier 2	15-43	11-32	\$4.26	\$4.45		\$4.64	
Tier 3	44-100	33-75	\$5.55	\$5.79		\$6.04	
Tier 4	>100	>75	\$8.33	\$8.69		\$9.06	

**Table ES.4: Scenario 1: Recommended FY22 and FY23 Volumetric Charges for Owners**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-7	0-5	\$3.56	\$3.66	3.0%	\$3.77	2.8%
Tier 2	8-43	6-32	\$4.26	\$4.40			
Tier 3	44-100	33-75	\$5.55	\$5.71			
Tier 4	>100	>75	\$8.33	\$8.58			

**Table ES.5: Scenario 2: Recommended FY22 and FY23 Volumetric Charges for Owners**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-14	0-10	\$3.69	\$3.85	4.3%	\$4.01	4.3%
Tier 2	15-43	11-32	\$4.43	\$4.61			
Tier 3	44-100	33-75	\$5.76	\$6.02			
Tier 4	>100	>75	\$8.64	\$9.01			

**Table ES.6: Scenario 1: Recommended FY22 and FY23 Volumetric Charges for Non-Owners**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-7	0-5	\$3.69	\$3.80	3.0%	\$3.90	2.8%
Tier 2	8-43	6-32	\$4.43	\$4.56			
Tier 3	44-100	33-75	\$5.76	\$5.94			
Tier 4	>100	>75	\$8.64	\$8.89			

**Table ES.7: Scenario 2: Recommended FY22 and FY23 Volumetric Charges for Non-Owners**

Table ES.8 summarizes the recommended multi-family residential and non-residential volumetric rates for FY22 and FY23. Adjustments to the multi-family residential user rates were set based on the single-family residential rates; as a result, Scenario 1 and Scenario 2 rates are shown for the Multi-Family Residential class.

Table ES.8 also summarizes the non-residential volumetric rates for FY22 and FY23 for Owners and Non-Owners. For the Resale user class, it is recommended that the City continue its approach of charging the calculated cost of service rate, adopting the calculated FY22 and FY23 rates shown in Table ES.8. Due to a significant increase in the supply/treatment components of the rate base in FY22, the calculated FY23 rate for the Resale user increases significantly.

	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Owners					
Multi-Family Residential - Scenario 1	\$3.60	\$3.76	4.4%	\$3.92	4.3%
Multi-Family Residential - Scenario 2	\$3.60	\$3.70	2.8%	\$3.81	3.0%
Non-Residential	\$3.07	\$3.20	4.2%	\$3.29	2.8%
Seasonal	\$5.07	\$5.37	5.9%	\$5.48	2.0%
Non-Owners					
Non-Residential	\$3.25	\$3.38	4.0%	\$3.49	3.3%
Resale	\$2.79	\$2.81	0.7%	\$3.68	31.0%

**Table ES.8: Recommended Multi-Family and Non-Residential Volumetric Rates for Owners and Non-Owners – FY22 and FY23**

Table ES.9 summarizes the projected revenue adequacy of the Water Utility for FY22 and FY23 based on the recommended rates. The residential volumetric rates associated with Scenarios 1 and 2 were developed to calculate essentially the same amount of revenue, and do not significantly affect the values shown in Table ES.9. The recommended rates for FY22 result in a very slight projected revenue deficiency. As shown in Table ES.10, even with significant investment of reserve funds in capital projects in FY22, it is anticipated that remaining utility reserves would be adequate to absorb the projected revenue deficiency. At the recommended rates, projected revenues in FY23 are forecast to be adequate to meet revenue requirements given the current modeled assumptions. In summary, under the projected water sales and given the current cash reserve balances, the recommended rates for FY22 and FY23 will present a stable near-term approach to rate-setting, while allowing the City to step into the necessary increases to fully meet cost of service over two or more years.

	FY2022	FY2023
<b>Rate Revenue Requirements</b>		
O&M-Related	\$ 13,077,025	\$ 13,466,611
Less Other Operating Revenue	\$ (1,068,900)	\$ (1,068,900)
Capital-Related	\$ 23,639,415	\$ 25,385,780
Less Cash Reserves	\$ (9,335,061)	\$ (9,729,839)
<b>Net Rate Revenue Requirements</b>	<b>\$ 26,312,478</b>	<b>\$ 28,053,652</b>
<b>Projected Rate Revenues</b>		
Owners		
Residential	\$ 12,592,485	\$ 13,129,521
Multi-Family	\$ 2,359,881	\$ 2,475,865
Non-Residential	\$ 3,865,521	\$ 3,976,538
Seasonal	\$ 1,756,760	\$ 1,800,626
Fire Protection	\$ 455,595	\$ 478,375
Non-Owners		
Residential	\$ 114,843	\$ 119,159
Non-Residential	\$ 2,474,634	\$ 2,552,770
Resale	\$ 2,638,944	\$ 3,517,113
Fire Protection	\$ 16,690	\$ 17,525
<b>Total Projected Rate Revenue</b>	<b>\$ 26,275,355</b>	<b>\$ 28,067,492</b>
<b>Projected Revenue Adequacy</b>	<b>\$ (37,123)</b>	<b>\$ 13,840</b>

**Table ES.9: Summary of Net Cash-Based Rate Revenue Requirements – FY22 and FY23**

	2021	2022	2023
Total Water Fund Balance	\$ 28,420,496	\$ 19,048,311	\$ 9,332,312
O&M Reserve	\$ 3,435,000	\$ 3,530,797	\$ 3,635,985
Debt Service Reserve	\$ 1,385,000	\$ 1,385,000	\$ 1,385,000
Capital/Rate Stabilization Reserve	\$ 23,600,496	\$ 14,132,515	\$ 4,311,327

**Table ES.10: Projected Cash Reserve Balances – FY22 and FY23**

Table ES.11 summarizes three significant near-term capital projects for which the City has recently applied for grant funding. At the time of this study, grant funding has not been obtained. In the event grant funding should be awarded, the City should reconsider the volumetric water rates for FY23, as the grant-funded portion of these projects will not be allowable in the rate base for the purposes of rate-setting. Alternative rates that account for \$50M in grant funding have been evaluated and are presented in Section 5.5 of this report for future consideration.

Project	Year	Cost (\$)	Potential Grant (\$)
Water - West End Intake, Pump Station, and Pipeline	FY22	\$21,000,000	\$11,998,385
Water - West End Treatment Plant	FY22	\$57,000,000	\$14,552,029
Water - West End Reservoir/City Lakes	FY23	\$34,000,000	\$23,449,586

**Table ES.11: Capital Projects with Potential Grant Funding**

Lastly, to assess the potential revenue stability risk to the City of Billings, a probabilistic revenue forecasting model was developed. The framework for the model was based on a publicly-available tool developed by the Alliance for Water Efficiency. The probabilistic revenue forecast completed was based on the stochastic evaluation of FY20 billing and weather data as compared to 20 years of historical weather data. The results of the revenue forecast resulted in the conclusions presented in Table ES.12. The percentages in Table ES.12 indicate the modeled probability of achieving total target FY22 rate revenues, excluding fire protection, from Table ES.9, of \$25.8 million (M).

	\$25.52 Million	\$25.32 Million	\$24.71 Million	\$23.69 Million
<b>Probability to Meet/Exceed</b>	17%	23%	79%	100%

**Table ES.12: Estimated Probability of Achieving Revenue at Varying Targets (FY22)**

Although the revenue forecasting model indicated that water sales adequate to meet target revenue of \$25.8M are not forecast to be achieved at a high confidence interval, it should be noted that the City’s operation and maintenance (O&M) expenditures are typically less than budgeted. For the most recent three-year period, the average for actual expenditures as compared to budget was 91.3 percent. As a result, it is reasonable to assume for the purposes of the forecast modeling that total target revenue requirements for FY22 could be reduced by \$1.13M (8.7 percent) with no anticipated net impact on cash position of the utility. In this case, total rate revenue requirements would be reduced to \$24.67M. The model projects a high probability of reaching a revenue target of that magnitude.

In summary, reducing water sales projections based solely on the outputs of the water sales forecasting from the model would require the City to implement increases in excess of those currently proposed, which does not seem prudent given the factors noted above. As long as the City continues its practice of evaluating rates at least once every two years and maintaining a healthy cash position, it appears that the maximum revenue shortfall as predicted by the forecasting model could be readily offset using existing cash reserves.

## 1.0 Introduction

The City of Billings retained AE2S Nexus to update its water rate model and recommend Retail and Resale water rates for the 2022 Fiscal Year (FY22), which begins July 1, 2021 and ends June 30, 2022, as well as for FY23. The City has utilized a detailed and comprehensive rate-setting model for several years. The rate model utilized by the City of Billings was last updated by AE2S Nexus in early 2019 for the purpose of developing rates for FY20 and FY21. The FY22/FY23 rate review involved a comprehensive review of assumptions and methodology upon which the analysis is based. It should be noted that the data and results reported herein are given in terms of gallons or thousand gallons (kgal), as opposed to cubic feet or one hundred cubic feet (CCF), as was the practice in previous studies. The results of that review are described herein.

The County Water District of Billings Heights is a major outside/non-owner user of the City's water system and is referred to as the Resale user class throughout this analysis. Based on the current agreement between the City of Billings and this Resale customer, the established and agreed upon rate of return is based on the weighted average cost of capital (WACC). The Memorandum of Understanding between the City and the District included the following methodology for establishing the WACC, the calculation of which is detailed in Section 3.2.2.

*“The WACC will be calculated for each rate study, including the current study, using the City’s then current effective interest rate on outstanding debt and a return on equity equal to the average 30-year treasury rate plus 300 basis points for the most recent twelve month period ending June 30<sup>th</sup>.”<sup>1</sup>*

At the City's request, AE2S Nexus has updated the customer billing data, operation and maintenance (O&M), capital revenue requirements, and asset inventory. To complete a comprehensive update, assumptions upon which the model calculations are based were also reviewed and verified or updated to reflect current system conditions. In general, the cost of service analysis (COSA) methodology utilized remains consistent with previous analyses, which involved three steps: 1) Functionalization, 2) Classification, and 3) Allocation. The cost of service analysis completed using the City's existing rate model and upon which rate calculations have been historically based, involved the following steps:

1. *Functionalization*: in the methodology applied by the City of Billings, this step involves the grouping of costs based on the type of customer to which the cost applies:
  - a. Joint allocation – costs allocated to all user classes

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<sup>1</sup> Memorandum of Understanding Between the City of Billings and County Water District of Billings Heights, May 8, 2013.

- b. All-But-Resale allocation – costs allocated to all but the Resale user class including both Inside City (Owner) and Outside (non-Owner) City users
    - c. Owner allocation – costs allocated only to the owner user classes
    - d. Resale allocation – costs assigned to the Resale class
  2. *Classification*: categorization of functionalized costs based on how the cost is related to the user characteristics (related to customer account numbers, average flow, peak flow, etc.):
    - a. Fixed cost allocation
      - i. Customer-based
      - ii. Meter-based
    - b. Variable cost allocation
      - i. Base Capacity allocation
      - ii. Peak Day Capacity allocation
      - iii. Peak Hour Capacity allocation
    - c. Direct Fire allocation
  3. *Allocation*: The distribution of functionalized and classified costs to customer classes based on number of meters, equivalent meters, peak day and peak hour demands, and billed flow totals.

This report summarizes the following topics:

- Water system usage parameters assumed for FY22 and FY23 (Section 2.0);
- Projected FY22/FY23 revenue requirements and associated assumptions (Section 3.0);
- Allocation of FY22/FY23 operating and capital-related revenue requirements (Section 4.0);
- Calculated FY22/FY23 costs of service by user class and recommended FY22/FY23 water rates for Retail and Resale customer classes (Section 5.0); and
- Probabilistic revenue forecasting and rate setting risk considerations (Section 6.0).

## 2.0 Customers and Usage

The City of Billings provides water service to approximately 31,000 users within City limits, 300 users outside of the City, and 1 Resale customer, the County Water District of Billings Heights. Based on a review of billed flow and account data from FY19 and FY20, a Test Year representing recent water usage patterns by user class was developed. Customer classes include the following:

- Owners:
  - Single Family Residential (single family, two- and three-unit complexes)
  - Multi-Family Residential (multi-family complexes with greater than three units)
  - Commercial
  - Industrial
  - Seasonal
  - Private Fire Protection
- Non-Owners:
  - Residential (single family, two- and three- multi-family unit complexes)
  - Commercial (includes multi-family complexes with greater than three units)
  - Resale (County Water District of Billings Heights)
  - Private Fire Protection

Estimated FY22 customer accounts by meter size and equivalent meters for the owner and non-owner user classes are shown in Table 2.1 and Table 2.2, respectively. Similar values for FY23 are found in Table 2.3 and Table 2.4, respectively. The equivalent meter counts are shown on a 3/4-inch meter basis.

Meter Size	Residential	Multi-Family Residential	Commercial	Industrial	Seasonal	Total
3/4"	27,020	353	1,230	0	144	28,747
1"	343	246	340	0	132	1,061
1-1/2"	20	128	257	4	91	500
2"	1	53	148	0	26	228
3"	0	32	95	1	10	138
4"	0	17	20	0	4	41
6"	0	21	31	1	0	53
8"	0	4	5	0	0	9
10"	0	0	0	0	0	0
Total Accounts	27,384	854	2,126	6	407	30,777
Total Equivalent Meters	27,492	2,058	4,402	36	680	34,668

**Table 2.1: Owner Customer Accounts and Equivalent Meters – Projected FY22**

Meter Size	Residential	Commercial	Resale	Total
3/4"	250	19	0	269
1"	3	11	0	14
1-1/2"	0	1	0	1
2"	0	1	0	1
3"	0	3	0	3
4"	0	0	0	0
6"	0	0	0	0
8"	0	1	0	1
10"	0	1	1	2
Total Accounts	253	37	1	291
Total Equivalent Meters	254	135	41	430

**Table 2.2: Non-Owner Customer Accounts and Equivalent Meters – Projected FY22**

Meter Size	Residential	Residential	Commercial	Industrial	Seasonal	Total
3/4"	27,155	355	1,236	0	145	28,891
1"	345	247	342	0	133	1,067
1-1/2"	20	129	258	0	91	498
2"	1	53	149	0	26	229
3"	0	32	95	1	10	138
4"	0	17	20	0	4	41
6"	0	21	31	1	0	53
8"	0	4	5	0	0	9
10"	0	0	0	0	0	0
Total Accounts	27,521	858	2,136	2	409	30,926
Total Equivalent Meters	27,629	2,063	4,414	36	683	34,825

**Table 2.3: Owner Customer Accounts and Equivalent Meters – Projected FY23**

Meter Size	Residential	Commercial	Resale	Total
3/4"	250	19	0	269
1"	3	11	0	14
1-1/2"	0	1	0	1
2"	0	1	0	1
3"	0	3	0	3
4"	0	0	0	0
6"	0	0	0	0
8"	0	1	0	1
10"	0	1	1	2
Total Accounts	253	37	1	291
Total Equivalent Meters	254	135	41	430

**Table 2.4: Non-Owner Customer Accounts and Equivalent Meters – Projected FY23**

Figure 2.1 shows the recent historical trend in meter growth for all non-irrigation meter classes. As shown, meter number growth has been relatively flat. The dip in commercial accounts in FY14 correlates with identification of a Multi-Family Residential user class, which was previously accounted for in the Commercial class. Figure 2.2 shows the change in Single Family residential inside meters, which have grown at an average of one percent per year since FY13.

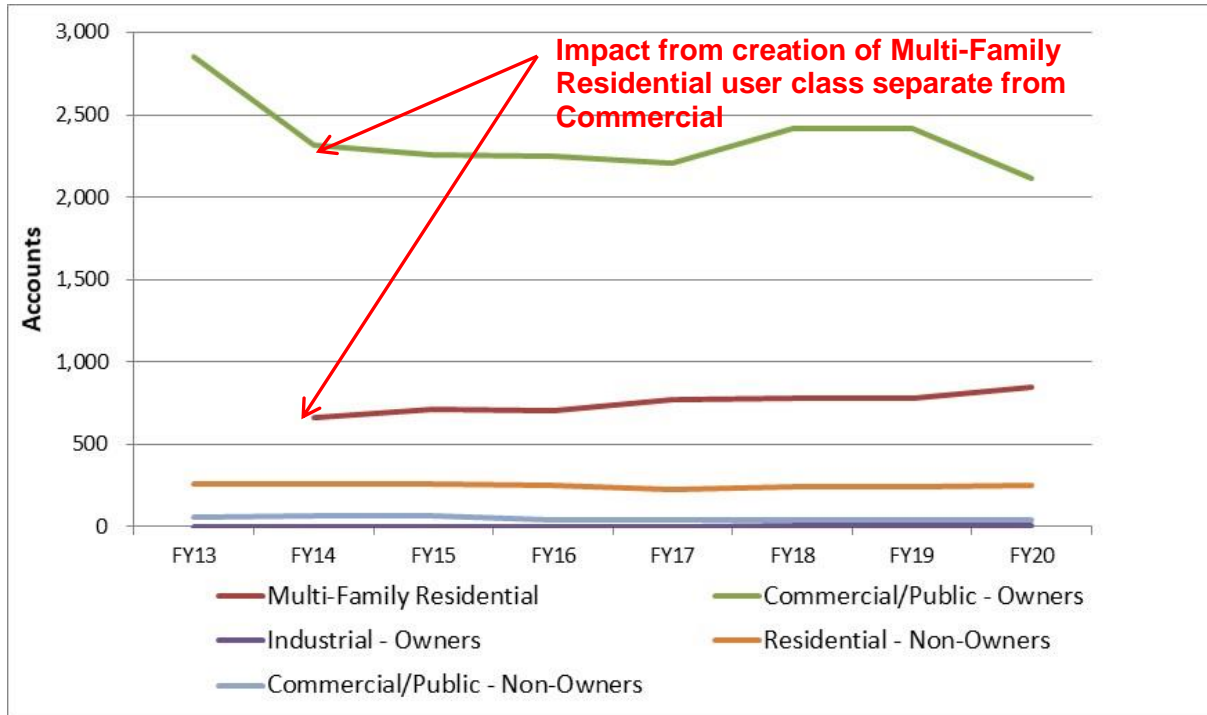


Figure 2.1: Recent Historical Meter Counts (Excluding Irrigation)

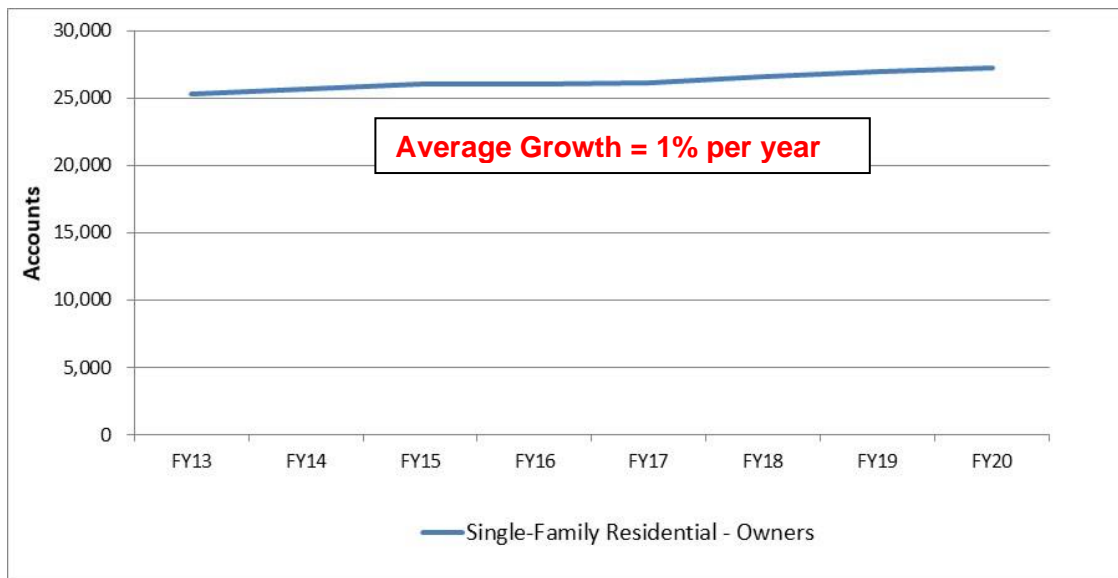


Figure 2.2: Recent Historical Single-Family Residential (Owner) Meter Counts

Despite growth in meters, water use for the Single-Family Residential class has declined, likely as a combined result of conservation-oriented rate changes, increased use of water-saving household appliances, as well as variable weather patterns. Water use for other inside user classes has been sporadic, but the City expects to see continued growth. To avoid overestimating water sales for FY22 and FY23, account growth was projected to be 0.5 percent per year for the Single-Family Residential, Multi-Family Residential, Commercial and Irrigation Accounts. Industrial accounts numbers were projected to remain constant. Based on recent historical water use per account, all water use other than Industrial was also grown at 0.5 percent per year. Water demand projections from the County Water District of Billings Heights shows an expected increase in water use of approximately 1.8 percent annually. Meter and water demand projections for other outside users were not assumed to grow from projected FY22 levels.

Table 2.5 summarizes the projected FY22 and FY23 billable flow for each user class, measured in units of one thousand gallons (kgal), noting the basis for the FY22 and FY23 flow assumptions. Table 2.6 presents the peaking factors utilized in the FY22/FY23 analysis.

Customer Class	FY22 Usage (kgal)	FY23 Usage (kgal)	Basis
<b>Owners</b>			
Residential	2,447,792	2,460,031	Based on FY20; 0.5% annual increase
Multi-Family Residential	588,757	591,701	Based on FY20; 0.5% annual increase
Commercial	1,088,985	1,094,430	Based on FY20; 0.5% annual increase
Industrial	13,074	13,074	Based on FY20; no annual increase
Seasonal	316,504	318,086	Based on FY20; 0.5% annual increase
<b>Subtotal</b>	<b>4,455,112</b>	<b>4,477,322</b>	
<b>Non-Owners</b>			
Residential	20,712	20,712	Based on FY20; no annual increase
Commercial	728,615	728,615	Based on FY20; no annual increase
Resale	938,998	955,900	Based on FY20 and Height's projections
<b>Subtotal</b>	<b>1,688,325</b>	<b>1,705,227</b>	
<b>Total</b>	<b>6,143,437</b>	<b>6,182,549</b>	

**Table 2.5: Projected FY22 and FY23 Billable Water Sales**

Customer Class	Max (Peak) Day (MGD)/Average Day (MGD)	Max (Peak) Hour (MGD)/Average Day (MGD)
<b>Owners</b>		
Residential	2.60	4.00
Multi-Family	1.40	4.00
Commercial	1.50	3.00
Industrial	1.50	2.00
Seasonal	3.50	6.00
<b>Non-Owners</b>		
Residential	2.60	4.00
Commercial	1.50	3.00
Resale	2.60	3.83
<b>System Data</b>	2.20	3.40

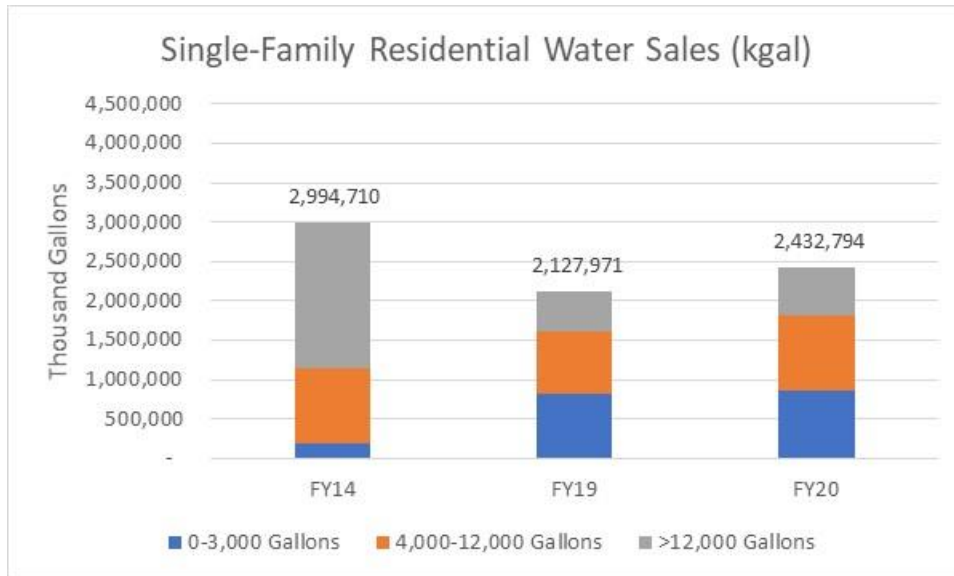
**Table 2.6: Peaking Factors – FY22 and FY23 Analyses**

### Single-Family Residential Water Use

Figure 2.3 illustrates how Single-Family Residential water use has shifted since implementation of the existing tier structure. In FY14, the first tier was sized to capture the first 3,000 gallons of water use, with the second tier capturing water use up to 12,000 gallons, with the remainder falling within the third tier. Based on an analysis of residential water use completed in FY14, in FY15 the Single-Family Residential tier structure was changed in to the four-tier structure currently in place:

- Tier 1: 0 – 14 CCF (0 – 10,500 gallons)
- Tier 2: 15 – 43 CCF (11,000 – 32,000 gallons)
- Tier 3: 44 – 100 CCF (33,000 – 74,800 gallons)
- Tier 4: greater than 100 CCF (74,800 gallons)

The FY19 and FY20 bars in Figure 2.3 show how overall Single-Family Residential water use has decreased since FY14, as well as how in recent years the volume of water billed between one and three thousand gallons has increased while the amount of water billed in excess of 12,000 gallons has decreased.



**Figure 2.3: Single-Family Residential Water Sales**

As part of this study, an alternate Single-Family Residential volumetric tier structure was evaluated for consideration by the City. The two scenarios evaluated are:

- Scenario 1: Existing Four-Tier Inclining Block Tier Structure; and
- Scenario 2: Four-Tier Inclining Block with Reduced Tier 1 Volume.

When the tiers were modified in FY15, the City’s Tier 1 rate block was designed to capture average annual water use. Table 2.7 summarizes the water use statistics used to design the existing block structure, based on water usage for the period of FY09-FY13, as well as current water use statistics from FY20. A review of this data found that average annual water use has been reduced from approximately 10,500 gallons per month to 7,500 gallons per month. Additionally, it was noted that median indoor (winter) water use has not changed significantly. This information suggests that some Single-Family Residential users have indeed changed their summer usage habits to some degree, and that reconsideration of the existing tier structure is appropriate.

FY09-FY13	Winter (Jan-Mar)	Summer(Jul-Sept)	Annual
Average Monthly Bill	6.1 CCF/4,500 gallons	26.1 CCF/19,500 gallons	<b>14.0 CCF/10,500 gallons</b>
Median Monthly Bill	5.4 CCF/4,000 gallons	20.0 CCF/15,000 gallons	11.5 CCF/8,600 gallons
FY20	Winter (Jan-Mar)	Summer(Jul-Sept)	Annual
Average Monthly Bill	5.25 CCF/4,000 gallons	16.4 CCF/12,300 gallons	10.1 CCF/7,500 gallons
Median Monthly Bill	5.2 CCF/3,900 gallons	15.7 CCF/11,700 gallons	<b>7.1 CCF/5,300 gallons</b>

**Table 2.7: Historical and Recent Single-Family Residential Water Usage Statistics**

Based on water usage data reviews with City staff, it was determined that the Scenario 2 Tier 1 cap would be set at 5,000 gallons. At this level, it is anticipated that at least 50 percent of the annual bills will fall within Tier 1 and given that average indoor water use is less than 5,000 gallons, most users will have the ability to stay within Tier 1. By reducing the volume captured within Tier 1 and simultaneously increasing the water billed in Tier 2, the City would have the ability to keep the Tier 1 rate as low as possible. This is favorable in terms of affordability. Table 2.8 summarizes the tier sizes for Scenarios 1 and 2. Rate projections associated with Scenarios 1 and 2 are presented in Section 5.3.

Single Family Residential	Tier Volume (CCF)	Tier Volume (Gallons)
<b>Scenario 1:</b>		
Tier 1	0-14	0-10,000
Tier 2	15-43	11,000-32,000
Tier 3	44-100	33,000-75,000
Tier 4	>100	>75,000
<b>Scenario 2:</b>		
Tier 1	0-7	0-5,000
Tier 2	8-43	6,000-32,000
Tier 3	44-100	33,000-75,000
Tier 4	>100	>75,000

**Table 2.8: Single-Family Residential Volumetric Tier Scenarios**

### 3.0 Revenue Requirements

Revenue requirements consist of expenses incurred for O&M of the Water Utility, as well as capital-related expenses such as debt service principal, capital outlays, and contributions to reserves.

#### 3.1 Operation and Maintenance Costs

For the purpose of developing water rates for FY22 and FY23, the O&M component of revenue requirements was based on the preliminary FY22 Water Operating budget divisions titled Administration, Fiscal Services/Billing, Service Center, Water Treatment Plant, Distribution/Collection Maintenance, and Meter Shop. As agreed upon with the District, Joint O&M was determined based on the three-year average of the difference between budgeted and actual O&M expenses. For the FY22 and FY23 analyses, this value was 91.3 percent, updated from 92.8 percent in the FY20/FY21 study.

In determining net O&M revenue requirements, consideration is also given to non-rate operating revenue, which is applied to offset the operating costs. Tables 3.1 and 3.2 summarize total projected O&M revenue requirements, total projected O&M non-rate revenue, and net O&M revenue requirements based on ownership for FY22 and FY23, respectively.

Changes to the cost of service assumptions upon which Tables 3.1 and 3.2 are discussed in Section 4. Similar to the previous analysis, the portion of distribution cost associated with Zones 1, 2, and 4 was assumed to provide a benefit to non-owner users based on how water is managed within the system and provisions in place for alternate flow patterns in the case of emergency. In addition, it was noted that the City of Billings manages the District's storage tanks, which have a total volume of 8 MG. The analysis includes a direct allocation of O&M expense to the District for the purpose of storage management. The directly assigned value for FY22 was derived as shown below based on the following assumptions:

- Heights storage volume = 8 MG
- City of Billings distribution storage volume = 29.91MG
- Assumed percentage of Water Treatment Plant budget division labor and expense associated with maintenance of pump station and storage reservoirs = 6 percent

$$8MG \div (29.91MG + 8 MG) \times 6\% = 1.27\%$$

$$1.27\% \times \text{Water Treatment Plant division fixed cost of } \$3,912,172 = \$49,534$$

As Owners of the system, the Owner user classes are allocated all of the O&M non-rate revenue except for the Transfer to O&M for pipe bursting. As a result of this credit to Owner-only

revenue requirements, the net O&M revenue requirements for Non-Owners appears as a negative value in Tables 3.1 and 3.2.

The net revenue requirements functionalized by ownership shown in Tables 3.1 and 3.2 are further allocated to the user classes based on the fixed or variable nature of the cost (classification), and the system usage parameters associated with each user class (allocation). Table 3.3 summarizes the allocated O&M revenue requirements by owner of FY22 and FY23, noting in particular the total net O&M revenue requirements allocated to the Resale user class.

Budget Line Item	Total	Joint	All-But-Resale	Owners	Resale
<b>Water Production</b>					
Chemicals	\$545,000	\$497,351	\$47,649	\$0	\$0
All Other	\$3,638,320	\$3,320,224	\$318,096	\$0	\$0
<b>High Service Pumping</b>					
Utilities (80% to Base)	\$1,276,266	\$1,164,683	\$111,583	\$0	\$0
All Other	\$39,122	\$35,701	\$3,420	\$0	\$0
<b>System Pumping and Storage</b>					
Utilities (80% to Base)	\$476,734	\$68,961	\$230,674	\$142,967	\$34,132
All Other	\$234,730	\$28,855	\$96,520	\$59,821	\$49,534
<b>Distribution System</b>					
Fire Hydrants	\$847,375	\$0	\$847,375	\$0	\$0
All Other	\$1,740,152	\$633,005	\$815,793	\$291,353	\$0
<b>Customer Billing and Meter</b>					
Admin.	\$2,579,716	\$2,354,173	\$225,543	\$0	\$0
<b>O&amp;M - Total</b>	<b>\$13,077,025</b>	<b>\$9,653,969</b>	<b>\$2,845,249</b>	<b>\$494,141</b>	<b>\$83,666</b>
<b>Less</b>					
<b>O&amp;M - Related</b>					
Water Permits	\$56,000	\$0	\$0	\$56,000	\$0
Misc. Revenue	\$24,900	\$0	\$0	\$24,900	\$0
Collection of Bad Debt	\$3,000	\$0	\$0	\$3,000	\$0
Sale of Material/Labor	\$280,000	\$0	\$0	\$280,000	\$0
Public Water Supply	\$62,000	\$0	\$0	\$62,000	\$0
Water Service Line Repair	\$526,000	\$0	\$0	\$526,000	\$0
Water Service Line Admin.	\$25,000	\$0	\$0	\$25,000	\$0
Hydrant Meter Rental Fee	\$23,000	\$0	\$0	\$23,000	\$0
Charge for Services	\$69,000	\$0	\$0	\$69,000	\$0
Transfer to O&M for Pipebursting Projects	\$0	\$0	\$0	\$0	\$0
Transfers In	\$0	\$0	\$0	\$0	\$0
<b>Total O&amp;M-Related</b>	<b>\$1,068,900</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,068,900</b>	<b>\$0</b>
<b>Total O&amp;M Revenue Requirement</b>					
	<b>\$12,008,125</b>	<b>\$9,653,969</b>	<b>\$2,845,249</b>	<b>(\$574,759)</b>	<b>\$83,666</b>

**Table 3.1: Summary of Projected FY22 O&M Revenue Requirements**

Budget Line Item	Total	Joint	All-But-Resale	Owners	Resale
Water Production					
Chemicals	\$558,625	\$509,785	\$48,840	\$0	\$0
All Other	\$3,747,470	\$3,419,831	\$327,638	\$0	\$0
High Service Pumping	\$0	\$0	\$0	\$0	\$0
Utilities (80% to Base)	\$1,314,554	\$1,199,624	\$114,930	\$0	\$0
All Other	\$40,295	\$36,772	\$3,523	\$0	\$0
System Pumping and Storage	\$0	\$0	\$0	\$0	\$0
Utilities (80% to Base)	\$491,036	\$71,030	\$237,594	\$147,256	\$35,156
All Other	\$241,772	\$29,721	\$99,416	\$61,616	\$51,020
Distribution System	\$0	\$0	\$0	\$0	\$0
Fire Hydrants	\$872,797	\$0	\$872,797	\$0	\$0
All Other	\$1,792,356	\$651,995	\$840,267	\$300,094	\$0
Customer Billing and Meter	\$1,750,598	\$1,597,545	\$153,053	\$0	\$0
Admin.	\$2,657,107	\$2,424,799	\$232,309	\$0	\$0
O&M - Total	\$13,466,611	\$9,941,101	\$2,930,368	\$508,965	\$86,176
Less	Non-Rate				
O&M - Related	Revenue	Joint	All-But-Resale	Owners	Resale
Water Permits	\$56,000	\$0	\$0	\$56,000	\$0
Misc. Revenue	\$24,900	\$0	\$0	\$24,900	\$0
Collection of Bad Debt	\$3,000	\$0	\$0	\$3,000	\$0
Sale of Material/Labor	\$280,000	\$0	\$0	\$280,000	\$0
Public Water Supply	\$62,000	\$0	\$0	\$62,000	\$0
Water Service Line Repair	\$526,000	\$0	\$0	\$526,000	\$0
Water Service Line Admin.	\$25,000	\$0	\$0	\$25,000	\$0
Hydrant Meter Rental Fee	\$23,000	\$0	\$0	\$0	\$0
Charge for Services	\$69,000	\$0	\$0	\$0	\$0
Transfer to O&M for Pipebursting Projects	\$0	\$0	\$0	\$23,000	\$0
Transfers In	\$0	\$0	\$0	\$69,000	\$0
Total O&M-Related	\$1,068,900	\$0	\$0	\$1,068,900	\$0
	<b>Total</b>	<b>Joint</b>	<b>All-But-Resale</b>	<b>Owners</b>	<b>Resale</b>
<b>Total O&amp;M Revenue Requirement</b>	<b>\$12,397,711</b>	<b>\$9,941,101</b>	<b>\$2,930,368</b>	<b>(\$559,935)</b>	<b>\$86,176</b>

Table 3.2: Summary of Projected FY23 O&M Revenue Requirements

Ownership		FY22 O&M	FY23 O&M
Joint			
Owners		\$ 7,791,829	\$ 8,014,045
Resale		\$ 1,186,619	\$ 1,235,900
Other Non-Owners		\$ 675,521	\$ 691,157
Total Joint		\$ 9,653,969	\$ 9,941,101
All But Resale			
Owners		\$ 2,656,855	\$ 2,737,141
Other Non-Owners		\$ 188,393	\$ 193,227
Total All But Resale		\$ 2,845,249	\$ 2,930,368
Owners-Only		\$ (574,759)	\$ (559,935)
Resale-Only		\$ 83,666	\$ 86,176
<b>Total</b>		<b>\$ 12,008,125</b>	<b>\$ 12,397,711</b>
Total Resale		\$ 1,270,285	\$ 1,322,076

**Table 3.3: Summary of Net O&M Revenue Requirements by Ownership**

## 3.2 Capital Costs

Total capital-related revenue requirements were evaluated in terms of the cash-basis for the purpose of establishing the utility-basis capital requirements to be met with rate revenue. Capital costs are determined on a cash basis for owners of the system and a hybrid-utility basis for non-owners of the system. The hybrid-utility basis is determined by first taking the cash-based utility revenue requirements and then adjusting for the remaining non-owner share on a utility basis. These steps are described below.

### 3.2.1 Development of Cash-Basis Capital-Related Revenue Requirements

The City provided information related to existing and anticipated debt service requirements, the five-year Capital Improvement Plan (CIP), non-CIP capital outlays, and anticipated capital-related non-rate revenue for FY22. In FY22, the CIP includes \$90.938 million (M) in capital improvements. The City anticipates utilizing \$1.3M in revenue from system development fee (SDF) revenues and taking \$72M in new debt, leaving a total CIP cash-funded capital requirement of approximately \$17,639,000 to be met using cash reserves and user fees. Of this, approximately \$8.3M is anticipated to be funded through FY22 rate revenues, with the balance of approximately \$9.4M funded with cash reserves. The total FY22 rate and reserve-funded CIP amount is higher than average historical rate-funded capital values which have ranged from \$8M to \$10M. Changes to the timing of projects have allowed the City to build and subsequently strategically spend down cash reserves to fund capital in the period of FY17 through FY23. After accounting for reserve-funded capital, projected capital-related rate revenue requirements

totaled \$14,519,353, and net capital-related revenue requirements came to \$14,304,353 after netting out capital-related non-rate revenue of \$215,000.

For FY23, the current CIP projects expenditures of \$40.05M, with \$1.3M funded with cash from SDF revenues and \$6.020M funded with rate revenues. Projected FY23 capital-related revenue requirements totaled \$16,190,941, with net capital-related revenue requirements of \$15,655,941 when considering a projected capital-related non-rate revenue estimate of \$535,000. Table 3.4 summarizes the anticipated FY22 and FY23 cash-basis capital-related revenue requirements and capital-related non-rate revenues.

Line Item	Total FY22	Total FY23
Debt Service	\$ 5,770,000	\$ 9,715,592
Cash Funded CIP	\$ 17,638,618	\$ 15,750,000
Water Service Line Repair	\$ 350,000	\$ 350,000
Transfers To (from) O&M Reserve	\$ 95,797	\$ 105,188
Increase/ (Decrease) Operating Fund Balance	\$ (9,335,061)	\$ (9,729,839)
<b>Total Capital Revenue Requirements - Cash Basis</b>	<b>\$ 14,519,353</b>	<b>\$ 16,190,941</b>
Less: Non-Rate Capital Revenue		
late payment interest	\$ 35,000	\$ 35,000
interest earnings	\$ 180,000	\$ 500,000
<b>Total Non-Rate Capital -Related Revenue</b>	<b>\$ 215,000</b>	<b>\$ 535,000</b>
<b>Net Capital Revenue Requirements - Cash Basis</b>	<b>\$ 14,304,353</b>	<b>\$ 15,655,941</b>

**Table 3.4: Summary of Net Capital-Related Revenue Requirements – Cash Basis**

### 3.2.2 Development of Utility-Basis Capital-Related Revenue Requirements

To fairly assign the cost of only those assets in service and utilized by non-owner user classes, the Utility-basis with cash residual methodology is utilized by the City of Billings in determining the appropriate rates to charge non-owner user classes. This methodology calculates the capital-related component of revenue requirements based on depreciation of system assets in service and a return on capital investment made by the owners of the system.

Once capital-related revenue requirements have been established, the City’s methodology then applies the utility-based approach for calculating the appropriate share of capital-related revenue requirements for users located outside of the City. The utility approach is considered a fair means to allocate the capital-related revenue requirements to non-owners of the system based on the value of the infrastructure used by the non-owner users. The utility approach is based upon the allocation of revenue requirements represented by depreciation and a rate of return on the utility’s investment. Users located within the City are then allocated the difference between the total capital-related revenue requirements established under the cash-basis methodology and the

outside city allocation of the utility-based capital-related revenue requirements. This approach is consistent with past efforts and Resale contract agreements.

There are two components to the Utility-basis capital-related revenue requirements: the return on rate base as calculated by applying a rate of return percentage to the asset base or net plant in service, and the depreciation on the net plant in service. To identify the return on rate base, the total assets in service must first be identified. Once the asset base is identified, the net plant in service is calculated as the original cost less depreciation to date. The annual depreciation for the assets currently in service must also be determined. Table 3.5 summarizes the net fixed assets and depreciation for development of the FY22 utility-basis capital-related revenue requirements. The net fixed asset totals in Table 3.5 indicate that based on asset values at year-end FY20, new assets placed in service in FY21, assets that depreciated out in FY21, and assets that remained in service for FY21, the value of net plant in service for FY22 calculated as \$173.779M. Using the FY22 net asset base and the FY21 and FY22 CIP items anticipated to be placed in service by the close of FY21, the anticipated net asset base and annual depreciation for FY23 was developed and is summarized in Table 3.6.

For the FY22 and FY23 asset bases, use of the system was evaluated in terms of ownership, as was done for the evaluation of O&M revenue requirements. Tables 3.7 and 3.8 summarize the ownership allocations of net fixed asset value and depreciation for FY22 and FY23, respectively. Detailed fixed asset tables are found in Appendix A.

Fixed Asset Type	FY20 Asset Value	Annual Depreciation	FY22 Fixed Assets	FY21 Asset Additions	FY22 Net Fixed Assets
Source of Supply	\$7,217,215	\$230,382	\$6,756,451	\$103,100	\$6,859,551
Water Treatment/HS Pumping	\$35,023,147	\$1,947,040	\$31,129,066	\$15,769,922	\$46,898,988
Distribution Pumping	\$7,525,807	\$345,756	\$6,834,296	\$2,188,355	\$9,022,651
Reservoirs and Tanks	\$19,105,557	\$588,346	\$17,928,865	\$2,610,530	\$20,539,395
Transmission and Distribution	\$76,087,783	\$2,647,341	\$70,793,100	\$15,622,868	\$86,415,968
Meters and Hydrants	\$1,913,467	\$105,450	\$1,702,567	\$0	\$1,702,567
General Plant	\$1,745,081	\$336,747	\$1,074,105	\$1,265,783	\$2,339,888
Net	\$148,618,055	\$6,201,062	\$136,218,451	\$37,560,557	\$173,779,008

**Table 3.5: Summary of FY22 Fixed Assets and Depreciation**

Fixed Asset Type	Net Fixed Assets	Allocat Depr
Source of Supply	\$27,207,400	\$232,100
Water Treatment/HS Pumping	\$112,892,815	\$2,086,860
Distribution Pumping	\$9,589,283	\$382,228
Reservoirs and Tanks	\$22,120,620	\$625,527
Transmission and Distribution	\$101,923,682	\$2,959,799
Meters and Hydrants	\$1,597,100	\$105,450
General Plant	\$3,008,543	\$504,448
<b>Net</b>	<b>\$278,339,444</b>	<b>\$6,896,412</b>

**Table 3.6: Summary of FY23 Fixed Assets and Depreciation**

Ownership	Net Fixed Asset	Depreciation
Joint		
Owners	\$120,271,300	\$4,843,110
Resale	14,597,301	668,528
Other Non-Owners	<u>12,702,828</u>	<u>507,860</u>
Subtotal Joint	\$147,571,429	\$6,019,498
Owners-Only	\$24,970,626	\$820,876
Resale-Only	<u>\$1,236,953</u>	<u>\$56,038</u>
<b>Total</b>	<b>\$173,779,008</b>	<b>\$6,896,412</b>
Owner Subtotal	\$145,241,925	\$5,663,986
Non-Owner Subtotal (including Resale)	\$28,537,082	\$1,232,426
Resale Subtotal	\$15,834,255	\$724,566

**Table 3.7: FY22 Utility-Basis Capital-Related Revenue Requirements Based on Ownership**

Ownership	Net Fixed Asset	Depreciation
Joint		
Owners	\$194,047,272	\$6,159,599
Resale	29,456,313	924,867
Other Non-Owners	<u>21,489,402</u>	<u>665,127</u>
Subtotal Joint	\$244,992,987	\$7,749,594
Owners-Only	\$31,820,436	\$986,198
Resale-Only	<u>\$1,526,020</u>	<u>\$61,988</u>
<b>Total</b>	<b>\$278,339,444</b>	<b>\$8,797,779</b>
Owner Subtotal	\$225,867,709	\$7,145,797
Non-Owner Subtotal (including Resale)	\$52,471,735	\$1,651,982
Resale Subtotal	\$30,982,333	\$986,855

**Table 3.8: FY23 Utility-Basis Capital-Related Revenue Requirements Based on Ownership**

Per the Memorandum of Understanding between the City and its Resale customer, the rate of return is based on the WACC, calculated using the City’s current effective interest rate on outstanding debt and a return on equity equal to the average 30-year treasury rate plus 300 basis points for the most recent twelve-month period ending June 30<sup>th</sup>. Based on this formula, with an average 30-year treasury rate of 1.41 percent, the calculated rate of return on equity was 4.41 percent. For FY22 the effective interest rate on water debt for the City is estimated at 2.60 percent, resulting in a FY22 WACC of 4.20 percent. Table 3.9 summarizes the WACC calculation. The average 30-year treasury rate used for FY22 was also used for FY23. Based on a projected effective interest rate on water debt of 2.90 percent, the FY23 weighted cost of capital was projected to be 3.92 percent. This is a significant decrease from recent years and is a direct reflection of the recent interest rate environment.

Debt/Equity	FY2022	FY2023
Total Outstanding Debt	\$25,887,726	\$95,118,503
Interest on Outstanding Debt	\$673,459	\$2,760,258
Effective Interest Rate on Outstanding Debt	2.60%	2.90%
Total Fund Equity	\$193,911,655	\$197,390,579
Rate of Return on Equity	4.41%	4.41%
Total Equity and Debt	\$219,799,381	\$292,509,082
Weighted Cost of Capital	4.20%	3.92%

**Table 3.9: Weighted Average Cost of Capital (WACC) Calculation**

Table 3.10 shows the calculated return on rate base using Non-Owner rates of return of 4.20 percent and 3.92 percent in FY22 and FY23, respectively. Although the rate of return for Non-Owners decreases from FY22 to FY23, the substantial increase in the rate base as new infrastructure comes online results in an overall increase of 52 percent in net utility basis capital-related costs allocable to Non-Owners. Total capital revenue requirements under the utility method are equal to the capital-related revenue requirements under the cash basis and are based on actual capital revenue requirements for each year.

Line Item	FY2022	FY2023
Utility Basis Capital Costs for Non-Owners		
Return on Rate Base		
Rate Base		
Net Plant in Service	\$28,537,082	\$52,471,735
Allowance for Working Capital	\$266,775	\$275,807
Total Rate Base	\$28,803,857	\$52,747,542
Rate of Return	4.20%	3.92%
Total Rate of Return on Rate Base	\$1,208,896	\$2,067,492
Depreciation Less Amortization Expense	\$1,232,426	\$1,651,982
Net Utility Basis Capital Costs	\$2,441,322	\$3,719,474
Utility Basis Capital Costs for Owners		
Return on Rate Base		
Rate Base		
Net Plant in Service	\$145,241,925	\$225,867,709
Allowance for Working Capital	\$1,234,241	\$1,273,906
Total Rate Base	\$146,476,166	\$227,141,615
Rate of Return	4.23%	2.11%
Return on Rate Base	\$6,199,046	\$4,790,670
Depreciation Less Amortization Expense	\$5,663,986	\$7,145,797
Net Utility Basis Capital Costs	\$11,863,031	\$11,936,467
<b>Total Utility Basis Capital Revenue Requirement</b>	<b>\$14,304,353</b>	<b>\$15,655,941</b>

**Table 3.10: Utility-Basis Capital Revenue Requirements – FY22 and FY23**

The system owners are allocated the balance of the capital revenue requirements not allocated to the non-owners. This translates to a rate of return for Owners equal to 4.23 percent in FY22 and 2.11 percent in FY23. Because the return percentage is calculated based on the total rate base, the percentage decreases from FY22 to FY23 due to the \$81M increase in Owner rate base.

### 3.3 Total Revenue Requirements

Tables 3.11 and 3.12 summarize the total revenue requirements for FY22 and FY23, respectively, under both the Cash-Basis and Utility-Basis methodologies. Table 3.13 summarizes the total revenue requirements by ownership for both FY22 and FY23.

	Operating Costs	Capital Costs	Total
<b>Cash-Basis Revenue Requirements</b>			
O&M Expense	\$13,077,025	\$0	\$13,077,025
Debt Service Requirements		5,770,000	5,770,000
Cash Financing of Construction		17,638,618	17,638,618
Water Line Service Repair		350,000	350,000
Operating Reserve		95,797	95,797
<b>Total</b>	<b>\$13,077,025</b>	<b>\$23,854,415</b>	<b>\$36,931,440</b>
Revenue Requirements Met From Other Sources			
Other Operating Revenue	\$1,068,900	\$0	\$1,068,900
Interest Income		215,000	215,000
Change in Funds Available		9,335,061	9,335,061
<b>Total</b>	<b>\$1,068,900</b>	<b>\$9,550,061</b>	<b>\$10,618,961</b>
<b>Net Costs to be Met From Charges</b>	<b>\$12,008,125</b>	<b>\$14,304,353</b>	<b>\$26,312,478</b>
<b>Restatement of Net Costs - Utility-Basis Revenue Requirements</b>			
O&M Expenses	\$12,008,125	\$0	\$12,008,125
Capital Costs			
Depreciation		6,896,412	6,896,412
Return on Rate Base		7,407,941	7,407,941
<b>Total</b>	<b>\$12,008,125</b>	<b>\$14,304,353</b>	<b>\$26,312,478</b>

Table 3.11: Summary of Total Projected FY22 Net Revenue Requirements

	Operating Costs	Capital Costs	Total
<b>Cash-Basis Revenue Requirements</b>			
O&M Expense	\$13,466,611	\$0	\$13,466,611
Debt Service Requirements		9,715,592	9,715,592
Cash Financing of Construction		15,750,000	15,750,000
Water Line Service Repair		350,000	350,000
Operating Reserve		105,188	105,188
<b>Total</b>	<b>\$13,466,611</b>	<b>\$25,920,780</b>	<b>\$39,387,391</b>
Revenue Requirements Met From Other Sources			
Other Operating Revenue	\$1,068,900	\$0	\$1,068,900
Interest Income		535,000	535,000
Change in Funds Available		9,729,839	9,729,839
<b>Total</b>	<b>\$1,068,900</b>	<b>\$10,264,839</b>	<b>\$11,333,739</b>
<b>Net Costs to be Met From Charges (Rates)</b>	<b>\$12,397,711</b>	<b>\$15,655,941</b>	<b>\$28,053,652</b>
<b>Restatement of Net Costs - Utility-Basis Revenue Requirements</b>			
O&M Expenses	\$12,397,711	\$0	\$12,397,711
Capital Costs			
Depreciation		8,797,779	8,797,779
Return on Rate Base		6,858,162	6,858,162
<b>Total</b>	<b>\$12,397,711</b>	<b>\$15,655,941</b>	<b>\$28,053,652</b>

Table 3.12: Summary of Total Projected FY23 Net Revenue Requirements

Ownership	O&M	Capital	Total
<b>FY2022</b>			
Owner	\$9,873,926	\$11,863,031	\$21,736,957
Non-Owners	\$2,134,199	\$2,441,322	\$4,575,521
<b>Total</b>	<b>\$12,008,125</b>	<b>\$14,304,353</b>	<b>\$26,312,478</b>
<b>FY2023</b>			
Owner	\$10,191,251.0	\$11,936,467	\$22,127,718
Non-Owners	\$2,206,459.8	\$3,719,474	\$5,925,934
<b>Total</b>	<b>\$12,397,711</b>	<b>\$15,655,941</b>	<b>\$28,053,652</b>

Table 3.13: Summary of Total Projected FY22 and FY23 Net Revenue Requirements by Ownership

## 4.0 Cost of Service Analysis

The following sub-sections summarize the cost of service assumptions and results. Detailed tables summarizing the costs by ownership, cost type, and cost allocation to the user classes are found in Appendix B.

### 4.1 Methodology

Following the establishment of total O&M and capital revenue requirements by customer group (joint, all-but-resale, owner, or resale), the revenue requirements were then taken through a series of steps to result in allocation to each user class. In the first step, revenue requirements were functionalized according to customer group. As noted in Section 1.0, Joint costs were allocated to all user classes, All-But-Resale were allocated to all owner user classes and non-owner user classes with the exception of the Resale class, Owner costs were allocated only to Owner user classes, and Resale costs were allocated only to the Resale user class. In the second step, costs were classified as to how the cost is related to usage characteristics – Customer, Meter, Base, Max Day, or Peak Day applicability. Finally, in the third step, costs were allocated to the user classes based on the system usage characteristics of each class. For the allocation of customer costs, the percentage of meters or accounts determined the allocation percentage. For meter costs, the percentage of total equivalent meters in terms of 3/4-inch meter equivalents was used. For base capacity, average day billed water use determines the allocation percentage, and for peak/max day and peak/max hour allocations were calculated using the average day billed water use and the peaking factors from Table 2.6. The following subsections describe the Functionalization, Classification, and Allocation steps for the O&M and Capital-Related revenue requirements.

### 4.2 O&M Cost Allocations

Table 3.3 presented the O&M revenue requirements by ownership. To arrive at the final O&M cost allocation to each user class, the costs by ownership were also classified to the appropriate fixed or variable component based on the manner in which the cost is related to user characteristics such as meter numbers and flow. Table 4.1 presents the functionalization percentages for each line item O&M revenue requirement by ownership. The same values were applied for both FY22 and FY23. Table 4.2 shows the classification of each line item. Per the agreement with the County Water District of Billings Heights, the amount of cost eligible for joint allocation to all users is adjusted based on the rolling three-year average percentage of actual expenditures over budgeted expenditures. For FY22 this value was 91.3 percent. The following bullets briefly summarize the assumptions behind the O&M functionalization percentages in Table 4.1.

- Water Production and High Service Pumping costs: Allocated to all users. Adjusted by 91.3 percent to account for agreement with Resale customer.
- System Pumping and Storage: Allocated based on value of asset base utilization of system components. Assumed Resale customer uses 75 percent of the Walter Pump Station, with the rest allocated to the Owner user class. The Joint allocation percentage is based on the assumption that the Resale customer benefits from the Willet and Leavens Reservoirs due to their role in serving Zone 1, and the Fox Reservoir due to its interconnect that allows for emergency service to the Resale customer. All-But-Resale allocation is based on the determination that Non-Owner users (other than Resale) benefit from infrastructure in Pressure Zones 1, 2, and 4.
- System Pumping and Storage: A portion of fixed Water Treatment Plant division costs were allocated directly to the Resale customer to account for reservoir management as described in Section 3.1.
- Allocation of Fire Hydrants based on information indicating the presence of public hydrants served outside of City limits.
- Allocation of all other Distribution (maintenance of pipelines) based on agreement that Resale customer can be charged for transmission greater than 12” and that Non-Owner customers (other than Resale) utilize the transmission system. In addition, it was assumed that Non-Owner customers (other than Resale) utilize 60 percent of the distribution system to receive water at their connection points based on the estimated miles of pipe in Pressure Zones 1, 2, and 4.
- Customer Billing and Meter: Allocated to all users. Adjusted by 91.3 percent to account for agreement with Resale customer.
- Administrative: Allocated to all users. Adjusted by 91.3 percent to account for agreement with Resale customer.

As shown in Table 4.2, the costs were classified as Base, Max Day, Max Hour, Customer, Meter, or Direct Fire. The revenue requirements comprising the Customer and Meter classified costs result in the calculation of the fixed meter charges, and those allocated to the Base, Max Day, and Max Hour components comprise the charges that derive the volumetric rates. The revenue requirements identified as Direct Fire costs are associated with the fixed fire protection charges.

The following bullets briefly summarize the assumptions behind the O&M classification percentages in Table 4.2.

- Water Production – Chemicals: This expense varies directly with water usage and is assigned as a 100 percent Base cost.
- Water Production – All Other, High Service Pumping – All Other, and System Pumping and Storage – All Other: These expenses are associated with meeting maximum day demands as well as average day usage, and are split between Base (average day) and

Extra Capacity – Peak Day based on the system max day/average day design parameter of 2.2.

Item	Joint	All-But-Resale	Owners	Resale	Total
Water Production					
Chemicals	91.3%	8.7%	0.0%	0.0%	100.0%
All Other	91.3%	8.7%	0.0%	0.0%	100.0%
High Service Pumping					
Utilities (80% to Base)	91.3%	8.7%	0.0%	0.0%	100.0%
All Other	91.3%	8.7%	0.0%	0.0%	100.0%
System Pumping and Storage					
Utilities (80% to Base)	14.5%	48.4%	30.0%	7.2%	100.0%
All Other	12.3%	41.1%	25.5%	21.1%	100.0%
Distribution System					
Fire Hydrants	0.0%	100.0%	0.0%	0.0%	100.0%
All Other	36.4%	46.9%	16.7%	0.0%	100.0%
Customer Billing and Meter	91.3%	8.7%	0.0%	0.0%	100.0%
Administrative	91.3%	8.7%	0.0%	0.0%	100.0%
<b>Total O&amp;M-Related Non-Rate Revenues</b>					
3121 Street Sprinkling	0.0%	0.0%	100.0%	0.0%	100.0%
3122 Sewer Flushing	0.0%	0.0%	100.0%	0.0%	100.0%
Water Permits	0.0%	0.0%	100.0%	0.0%	100.0%
Misc. Revenue	0.0%	0.0%	100.0%	0.0%	100.0%
Collection of Bad Debt	0.0%	0.0%	100.0%	0.0%	100.0%
Sale of Material/Labor	0.0%	0.0%	100.0%	0.0%	100.0%
Public Water Supply	0.0%	0.0%	100.0%	0.0%	100.0%
Water Service Line Repair	0.0%	0.0%	100.0%	0.0%	100.0%
Water Service Line Admin.	0.0%	0.0%	100.0%	0.0%	100.0%
Unused	0.0%	0.0%	100.0%	0.0%	100.0%
Late Payment Interest	0.0%	0.0%	100.0%	0.0%	100.0%
Hydrant Meter Rental Fee	0.0%	0.0%	100.0%	0.0%	100.0%
Charge for Services	0.0%	0.0%	100.0%	0.0%	100.0%
Transfer to O&M for Pipebursting Projects	36.4%	46.9%	16.7%	0.0%	100.0%
Interest Earnings - Operating Fund (502 & 505)	0.0%	0.0%	100.0%	0.0%	100.0%
Transfers In	0.0%	0.0%	100.0%	0.0%	100.0%

**Table 4.1: Functionalization of FY22 and FY23 O&M Revenue Requirements by Ownership**

- High Service Pumping – Utilities, and System Pumping and Storage – Utilities: These expenses are classified as 80 percent Base and 20 percent Extra Capacity – Peak Day based on a review of 2013 – 2020 daily pumping data.
- Distribution System – All Other: These are costs that are driven by peak hour, as well as peak day, and are therefore classified based on system parameters for meeting peak day and peak hour requirements, with the remainder classified as average day costs.

Item	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire	Total
Water Production							
Chemicals	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
All Other	45.5%	54.5%	0.0%	0.0%	0.0%	0.0%	100.0%
High Service Pumping							
Utilities (80% to Base)	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	100.0%
All Other	45.5%	54.5%	0.0%	0.0%	0.0%	0.0%	100.0%
System Pumping and Storage							
Utilities (80% to Base)	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	100.0%
All Other	45.5%	54.5%	0.0%	0.0%	0.0%	0.0%	100.0%
Distribution System							
Fire Hydrants	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
All Other	29.4%	35.3%	35.3%	0.0%	0.0%	0.0%	100.0%
Customer Billing and Meter	0.0%	0.0%	0.0%	40.6%	59.4%	0.0%	100.0%
Administrative	27.9%	33.5%	7.5%	8.4%	12.3%	10.3%	100.0%
Total O&M-Related Non-Rate Revenues							
Water Permits	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Misc. Revenue	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Collection of Bad Debt	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Sale of Material/Labor	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Public Water Supply	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Water Service Line Repair	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Water Service Line Admin.	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Late Payment Interest	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Hydrant Meter Rental Fee	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Charge for Services	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Transfer to O&M for Pipebursting Projects	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Interest Earnings - Operating Fund (502 & 505)	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%
Transfers In	40.4%	29.5%	5.9%	6.6%	9.6%	8.1%	100.0%

**Table 4.2: Classification of FY22 and FY23 O&M Revenue Requirements**

Tables 4.3 and 4.4, respectively, summarize the O&M revenue requirements by classification for FY22 and the allocated O&M revenue requirements to each user class for FY22. Similarly, Tables 4.5 and 4.6 present the O&M revenue requirements by classification and the allocated O&M revenue requirements to each user class for FY23, respectively. Detailed allocation tables are found in Appendix B.

Item	Total	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$ 545,000	\$ 545,000	\$ -	\$ -	\$ -	\$ -	\$ -
All Other	\$ 3,638,320	\$ 1,653,782	\$ 1,984,538	\$ -	\$ -	\$ -	\$ -
High Service Pumping							
Utilities (80% to Base)	\$ 1,276,266	\$ 1,021,013	\$ 255,253	\$ -	\$ -	\$ -	\$ -
All Other	\$ 39,122	\$ 17,783	\$ 21,339	\$ -	\$ -	\$ -	\$ -
System Pumping and Storage							
Utilities (80% to Base)	\$ 476,734	\$ 381,387	\$ 95,347	\$ -	\$ -	\$ -	\$ -
All Other	\$ 234,730	\$ 106,696	\$ 128,035	\$ -	\$ -	\$ -	\$ -
Distribution System							
Fire Hydrants	\$ 847,375	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 847,375
All Other	\$ 1,740,152	\$ 511,809	\$ 614,171	\$ 614,171	\$ -	\$ -	\$ -
Customer Billing and Meter	\$ 1,699,610	\$ -	\$ -	\$ -	\$ 690,042	\$ 1,009,568	\$ -
Administrative	\$ 2,579,716	\$ 720,515	\$ 864,618	\$ 193,234	\$ 217,105	\$ 317,636	\$ 266,606
<b>Total O&amp;M Allocations</b>	<b>\$ 13,077,025</b>	<b>\$ 4,957,985</b>	<b>\$ 3,963,302</b>	<b>\$ 807,405</b>	<b>\$ 907,147</b>	<b>\$ 1,327,205</b>	<b>\$ 1,113,982</b>
3121 Street Sprinkling	\$ 1,700	\$ 686	\$ 502	\$ 99	\$ 112	\$ 163	\$ 137
3122 Sewer Flushing	\$ 6,000	\$ 2,422	\$ 1,771	\$ 351	\$ 394	\$ 577	\$ 484
Water Permits	\$ 56,000	\$ 22,606	\$ 16,531	\$ 3,276	\$ 3,681	\$ 5,386	\$ 4,520
Misc. Revenue	\$ 17,200	\$ 6,943	\$ 5,077	\$ 1,006	\$ 1,131	\$ 1,654	\$ 1,388
Collection of Bad Debt	\$ 3,000	\$ 1,211	\$ 886	\$ 176	\$ 197	\$ 289	\$ 242
Sale of Material/Labor	\$ 280,000	\$ 113,028	\$ 82,653	\$ 16,382	\$ 18,406	\$ 26,929	\$ 22,602
Public Water Supply	\$ 62,000	\$ 25,028	\$ 18,302	\$ 3,627	\$ 4,076	\$ 5,963	\$ 5,005
Water Service Line Repair	\$ 526,000	\$ 212,331	\$ 155,269	\$ 30,775	\$ 34,577	\$ 50,588	\$ 42,460
Water Service Line Admin.	\$ 25,000	\$ 10,092	\$ 7,380	\$ 1,463	\$ 1,643	\$ 2,404	\$ 2,018
Hydrant Meter Rental Fee	\$ 23,000	\$ 9,284	\$ 6,789	\$ 1,346	\$ 1,512	\$ 2,212	\$ 1,857
Charge for Services	\$ 69,000	\$ 27,853	\$ 20,368	\$ 4,037	\$ 4,536	\$ 6,636	\$ 5,570
<b>Net Revenue Requirements</b>	<b>\$ 12,008,125</b>	<b>\$ 4,526,500</b>	<b>\$ 3,647,775</b>	<b>\$ 744,867</b>	<b>\$ 836,882</b>	<b>\$ 1,224,404</b>	<b>\$ 1,027,697</b>

Table 4.3: Classified FY22 O&M Revenue Requirements

Customer Class	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire	Total
Owners							
Residential	\$ 1,811,397	\$ 1,753,724	\$ 181,220	\$ 737,063	\$ 958,189	\$ -	\$ 5,441,593
Multi-Family Residential	\$ 435,687	\$ 105,454	\$ 80,949	\$ 22,986	\$ 71,728	\$ -	\$ 716,805
Commercial	\$ 805,862	\$ 243,814	\$ 86,381	\$ 57,223	\$ 153,412	\$ -	\$ 1,346,692
Industrial	\$ 9,675	\$ 2,927	\$ 346	\$ 161	\$ 1,242	\$ -	\$ 14,352
Seasonal	\$ 234,217	\$ 354,312	\$ 41,843	\$ 10,955	\$ 23,713	\$ -	\$ 665,039
Public Fire Protection	\$ -	\$ 346,484	\$ 229,391	\$ -	\$ -	\$ 882,252	\$ 1,458,128
Private Fire Protection	\$ -	\$ 54,966	\$ 36,391	\$ -	\$ -	\$ 139,961	\$ 231,318
Non-Owners							
Residential	\$ 16,277	\$ 15,625	\$ 1,439	\$ 7,387	\$ 9,599	\$ -	\$ 50,327
Commercial	\$ 572,585	\$ 171,765	\$ 54,248	\$ 1,080	\$ 5,099	\$ -	\$ 804,778
Resale	\$ 640,800	\$ 596,613	\$ 31,425	\$ 27	\$ 1,422	\$ -	\$ 1,270,285
Private Fire Protection	\$ -	\$ 2,091	\$ 1,234	\$ -	\$ -	\$ 5,484	\$ 8,809
<b>Total O&amp;M Revenue Requirements</b>	<b>\$ 4,526,500</b>	<b>\$ 3,647,775</b>	<b>\$ 744,867</b>	<b>\$ 836,882</b>	<b>\$ 1,224,404</b>	<b>\$ 1,027,697</b>	<b>\$ 12,008,125</b>

Table 4.4: Projected FY22 O&M Revenue Requirements by Customer Classes

Item	Total	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$ 558,625	\$ 558,625	\$ -	\$ -	\$ -	\$ -	\$ -
All Other	\$ 3,747,470	\$ 1,703,395	\$ 2,044,074	\$ -	\$ -	\$ -	\$ -
High Service Pumping							
Utilities (80% to Base)	\$ 1,314,554	\$ 1,051,644	\$ 262,911	\$ -	\$ -	\$ -	\$ -
All Other	\$ 40,295	\$ 18,316	\$ 21,979	\$ -	\$ -	\$ -	\$ -
System Pumping and Storage							
Utilities (80% to Base)	\$ 491,036	\$ 392,828	\$ 98,207	\$ -	\$ -	\$ -	\$ -
All Other	\$ 241,772	\$ 109,896	\$ 131,876	\$ -	\$ -	\$ -	\$ -
Distribution System							
Fire Hydrants	\$ 872,797	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 872,797
All Other	\$ 1,792,356	\$ 527,164	\$ 632,596	\$ 632,596	\$ -	\$ -	\$ -
Customer Billing and Meter	\$ 1,750,598	\$ -	\$ -	\$ -	\$ 710,743	\$ 1,039,855	\$ -
Administrative	\$ 2,657,107	\$ 742,131	\$ 890,557	\$ 199,031	\$ 223,618	\$ 327,166	\$ 274,605
<b>Total Allocations</b>	<b>\$ 13,466,611</b>	<b>\$ 5,103,999</b>	<b>\$ 4,082,201</b>	<b>\$ 831,628</b>	<b>\$ 934,361</b>	<b>\$ 1,367,021</b>	<b>\$ 1,147,401</b>
3121 Street Sprinkling	\$ 1,700	\$ 686	\$ 502	\$ 99	\$ 112	\$ 163	\$ 137
3122 Sewer Flushing	\$ 6,000	\$ 2,422	\$ 1,771	\$ 351	\$ 394	\$ 577	\$ 484
Water Permits	\$ 56,000	\$ 22,606	\$ 16,531	\$ 3,276	\$ 3,681	\$ 5,386	\$ 4,520
Misc. Revenue	\$ 17,200	\$ 6,943	\$ 5,077	\$ 1,006	\$ 1,131	\$ 1,654	\$ 1,388
Collection of Bad Debt	\$ 3,000	\$ 1,211	\$ 886	\$ 176	\$ 197	\$ 289	\$ 242
Sale of Material/Labor	\$ 280,000	\$ 113,028	\$ 82,653	\$ 16,382	\$ 18,406	\$ 26,929	\$ 22,602
Public Water Supply	\$ 62,000	\$ 25,028	\$ 18,302	\$ 3,627	\$ 4,076	\$ 5,963	\$ 5,005
Water Service Line Repair	\$ 526,000	\$ 212,331	\$ 155,269	\$ 30,775	\$ 34,577	\$ 50,588	\$ 42,460
Water Service Line Admin.	\$ 25,000	\$ 10,092	\$ 7,380	\$ 1,463	\$ 1,643	\$ 2,404	\$ 2,018
Late Payment Interest	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hydrant Meter Rental Fee	\$ 23,000	\$ 9,284	\$ 6,789	\$ 1,346	\$ 1,512	\$ 2,212	\$ 1,857
Charge for Services	\$ 69,000	\$ 27,853	\$ 20,368	\$ 4,037	\$ 4,536	\$ 6,636	\$ 5,570
<b>Net Requirements</b>	<b>\$ 12,397,711</b>	<b>\$ 4,672,514</b>	<b>\$ 3,766,674</b>	<b>\$ 769,089</b>	<b>\$ 864,097</b>	<b>\$ 1,264,221</b>	<b>\$ 1,061,116</b>

**Table 4.5: Classified FY23 O&M Revenue Requirements**

Customer Class	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Residential	\$ 1,869,881	\$ 1,810,095	\$ 187,481	\$ 761,112	\$ 989,891	\$ -	\$ 5,618,460
Multi-Family Residential	\$ 449,754	\$ 108,844	\$ 83,746	\$ 23,729	\$ 73,909	\$ -	\$ 739,981
Commercial	\$ 831,881	\$ 251,651	\$ 89,365	\$ 59,073	\$ 158,158	\$ -	\$ 1,390,128
Industrial	\$ 9,938	\$ 3,006	\$ 356	\$ 166	\$ 1,277	\$ -	\$ 14,743
Seasonal	\$ 241,779	\$ 365,700	\$ 43,289	\$ 11,311	\$ 24,457	\$ -	\$ 686,536
Public Fire Protection	\$ -	\$ 355,851	\$ 236,143	\$ -	\$ -	\$ 910,978	\$ 1,502,971
Private Fire Protection	\$ -	\$ 56,452	\$ 37,462	\$ -	\$ -	\$ 144,518	\$ 238,432
<b>Non-Owners</b>							
Residential	\$ 16,657	\$ 15,997	\$ 1,477	\$ 7,572	\$ 9,843	\$ -	\$ 51,545
Commercial	\$ 585,949	\$ 175,855	\$ 55,688	\$ 1,107	\$ 5,229	\$ -	\$ 823,827
Resale	\$ 666,676	\$ 621,094	\$ 32,822	\$ 27	\$ 1,458	\$ -	\$ 1,322,076
Private Fire Protection	\$ -	\$ 2,130	\$ 1,261	\$ -	\$ -	\$ 5,621	\$ 9,012
<b>Total O&amp;M Revenue Requirements</b>	<b>\$ 4,672,514</b>	<b>\$ 3,766,674</b>	<b>\$ 769,089</b>	<b>\$ 864,097</b>	<b>\$ 1,264,221</b>	<b>\$ 1,061,116</b>	<b>\$ 12,397,711</b>

**Table 4.6: Projected FY23 O&M Revenue Requirements by Customer Classes**

### 4.3 Fixed Asset Allocations

Table 3.5 presented the fixed assets by asset type and Tables 3.7 and 3.8 summarized total fixed assets by ownership for FY22 and FY23, respectively. Tables 4.7 and 4.8, respectively, summarize the functionalized FY22 and FY23 fixed assets by ownership and asset type, excluding contributed assets. Functionalization of fixed assets and depreciation costs, addressed later in this Section, was similar to that described for the corresponding O&M cost categories. The following bullets summarize specific assumptions behind the capital functionalization.

- Source of Supply, Water Treatment, High Service Pumping, General Plant, Meter and Service Connection facilities were functionalized as Joint costs.
- Distribution System Pump Station facilities serving Pressure Zones 1, 2, and 4 were functionalized to All-But-Resale. Based on an evaluation of the capital cost associated with the Walter Pump Station as completed by the design engineer for the facility, 40 percent of the Walter Pump Station was functionalized to the Resale class and the remainder was functionalized as an Owner cost, consistent with the previous analyses.
- Reservoirs and Tanks serving the Resale customer (Fox, Leavens, and Willet) were functionalized as Joint costs. The remaining facilities that support pressure zones 1, 2, and 4 were functionalized as All-But-Resale costs, and the remaining facilities were functionalized to Owner classes.
- Transmission pipelines greater than 12 inches in diameter were functionalized as Joint costs and transmission pipelines equal to 12 inches were functionalized as All-But-Resale due to the connection of outside users. Based on a review of miles of pipe within Pressure Zones 1, 2, and 4, 60 percent of distribution lines were allocated as All-But-Resale.
- Hydrants and Hydrant mains were functionalized as All-But-Resale.

Tables 4.9 and 4.10, respectively, summarize fixed assets by classification for FY22 and FY23. Classification of the functionalized fixed asset and depreciation costs is similar to the approach taken for classification of O&M costs. The following bullets summarize the key assumptions for capital classification.

- Source of Supply, Water Treatment, and High Service Pumping components were primarily classified based on peak day and average day parameters. Exceptions to this include the intake and the water treatment plant site/landscaping, which were classified as an average day cost associated with providing a baseline level of service.
- Distribution Pump stations were classified based on peak day and average day parameters, and booster stations were assumed to include a peak hour component as well as peak day and average day.
- Storage Reservoirs and Tanks and Transmission/Distribution components were classified based on peak hour, peak day, and average day.
- Meters and Service Connections were classified as customer costs.

- Hydrants and Hydrant Mains were classified to the Direct Fire classification.
- General Plant components were classified to peak hour, peak day, and average day based on the composite classification of all other direct capital.

Table 4.11 and 4.12 present the allocated fixed assets to each user class for FY22 and FY23, respectively. Detailed tables are found in Appendix B.

Fixed Asset Type	Joint	All But Resale	Owners	Resale	Total
Source of Supply	\$ 6,859,551	\$ -	\$ -	\$ -	\$ 6,859,551
Water Treatment/HS Pumping	\$ 46,898,988	\$ -	\$ -	\$ -	\$ 46,898,988
Distribution Pumping	\$ 25,521	\$ 3,789,656	\$ 3,970,521	\$ 1,236,953	\$ 9,022,651
Reservoirs and Tanks	\$ 4,521,817	\$ 9,786,088	\$ 6,231,490	\$ -	\$ 20,539,395
Transmission and Meters and Hydrants	\$ 34,446,708	\$ 37,500,645	\$ 14,468,615	\$ -	\$ 86,415,968
General Plant	\$ 39,154	\$ 1,663,413	\$ -	\$ -	\$ 1,702,567
General Plant	\$ 2,039,888	\$ -	\$ 300,000	\$ -	\$ 2,339,888
<b>Total</b>	<b>\$ 94,831,627</b>	<b>\$ 52,739,802</b>	<b>\$ 24,970,626</b>	<b>\$ 1,236,953</b>	<b>\$ 173,779,008</b>

**Table 4.7: Functionalization of FY22 Fixed Assets to Ownership Category by Asset Type**

Fixed Asset Type	Joint	All But Resale	Owners	Resale	Total
Source of Supply	\$ 27,207,400	\$ -	\$ -	\$ -	\$ 27,207,400
Water Treatment/HS Pumping	\$ 112,892,815	\$ -	\$ -	\$ -	\$ 112,892,815
Distribution Pumping	\$ 23,600	\$ 3,607,700	\$ 4,431,963	\$ 1,526,020	\$ 9,589,283
Reservoirs and Tanks	\$ 6,132,720	\$ 9,909,100	\$ 6,078,800	\$ -	\$ 22,120,620
Transmission and Meters and Hydrants	\$ 34,620,000	\$ 46,549,009	\$ 20,754,673	\$ -	\$ 101,923,682
General Plant	\$ 32,300	\$ 1,564,800	\$ -	\$ -	\$ 1,597,100
General Plant	\$ 2,453,543	\$ -	\$ 555,000	\$ -	\$ 3,008,543
<b>Total</b>	<b>\$ 183,362,378</b>	<b>\$ 61,630,609</b>	<b>\$ 31,820,436</b>	<b>\$ 1,526,020</b>	<b>\$ 278,339,444</b>

**Table 4.8: Functionalization of FY23 Fixed Assets to Ownership Category by Asset Type**

Fixed Asset Type	Base	Max Day	Max Hour	Meter	Direct Fire	Total
Source of Supply	\$ 5,910,575	\$ 948,976	\$ -	\$ -	\$ -	\$ 6,859,551
Water Treatment/HS Pumping	\$ 21,372,521	\$ 25,519,282	\$ 6,875	\$ 7	\$ 303	\$ 46,898,988
Distribution Pumping	\$ 4,100,207	\$ 4,920,249	\$ 2,194	\$ -	\$ -	\$ 9,022,651
Reservoirs and Tanks	\$ 6,042,268	\$ 7,250,721	\$ 7,246,406	\$ -	\$ -	\$ 20,539,395
Transmission and Distribution	\$ 25,416,461	\$ 30,499,753	\$ 30,499,753	\$ -	\$ -	\$ 86,415,968
Meters and Hydrants	\$ -	\$ -	\$ -	\$ 39,154	\$ 1,663,413	\$ 1,702,567
General Plant	\$ 987,141	\$ 861,235	\$ 470,301	\$ 488	\$ 20,724	\$ 2,339,888
<b>Total</b>	<b>\$ 63,829,174</b>	<b>\$ 70,000,216</b>	<b>\$ 38,225,529</b>	<b>\$ 39,649</b>	<b>\$ 1,684,441</b>	<b>\$ 173,779,008</b>

**Table 4.9: Classification of FY22 Fixed Assets by Asset Type**

Fixed Asset Type	Base	Max Day	Max Hour	Meter	Direct Fire	Total
Source of Supply	\$ 26,311,109	\$ 896,291	\$ -	\$ -	\$ -	\$ 27,207,400
Water Treatment/HS Pumping	\$ 51,356,633	\$ 61,529,975	\$ 5,939	\$ 6	\$ 262	\$ 112,892,815
Distribution Pumping	\$ 4,357,770	\$ 5,229,325	\$ 2,188	\$ -	\$ -	\$ 9,589,283
Reservoirs and Tanks	\$ 6,506,065	\$ 7,807,278	\$ 7,807,278	\$ -	\$ -	\$ 22,120,620
Transmission and Distribution	\$ 29,977,554	\$ 35,973,064	\$ 35,973,064	\$ -	\$ -	\$ 101,923,682
Meters and Hydrants	\$ -	\$ -	\$ -	\$ 32,300	\$ 1,564,800	\$ 1,597,100
General Plant	\$ 1,351,097	\$ 1,055,223	\$ 576,233	\$ 598	\$ 25,392	\$ 3,008,543
<b>Total</b>	<b>\$ 119,860,228</b>	<b>\$ 112,491,155</b>	<b>\$ 44,364,702</b>	<b>\$ 32,904</b>	<b>\$ 1,590,454</b>	<b>\$ 278,339,444</b>

**Table 4.10: Classification of FY23 Fixed Assets by Asset Type**

Customer Class	Base	Max Day	Max Hour	Meter	Direct Fire	Total
<b>Owners</b>						
Residential	\$ 27,540,094	\$ 36,037,336	\$ 9,549,943	\$ 31,058	\$ -	\$ 73,158,430
Multi-Family Residential	\$ 6,624,098	\$ 2,166,975	\$ 4,265,868	\$ 2,325	\$ -	\$ 13,059,266
Commercial	\$ 12,252,160	\$ 5,010,141	\$ 4,552,094	\$ 4,973	\$ -	\$ 21,819,368
Industrial	\$ 147,099	\$ 60,151	\$ 18,217	\$ 40	\$ -	\$ 225,508
Seasonal	\$ 3,560,979	\$ 7,280,761	\$ 2,205,042	\$ 769	\$ -	\$ 13,047,550
Public Fire Protection	\$ -	\$ 7,119,913	\$ 12,088,503	\$ -	\$ 1,446,664	\$ 20,655,079
Private Fire Protection	\$ -	\$ 1,129,504	\$ 1,917,722	\$ -	\$ 229,499	\$ 3,276,724
<b>Non-Owners</b>						\$ -
Residential	\$ 195,824	\$ 255,190	\$ 63,589	\$ 286	\$ -	\$ 514,890
Commercial	\$ 6,888,744	\$ 2,805,349	\$ 2,396,733	\$ 152	\$ -	\$ 12,090,978
Resale	\$ 6,620,177	\$ 8,100,741	\$ 1,113,290	\$ 46	\$ -	\$ 15,834,255
Private Fire Protection	\$ -	\$ 34,155	\$ 54,528	\$ -	\$ 8,278	\$ 96,960
<b>Total</b>	<b>\$ 63,829,174</b>	<b>\$ 70,000,216</b>	<b>\$ 38,225,529</b>	<b>\$ 39,649</b>	<b>\$ 1,684,441</b>	<b>\$ 173,779,008</b>

**Table 4.11: Allocation of FY22 Fixed Assets to Customer Classes**

Customer Class	Base	Max Day	Max Hour	Meter	Direct Fire	Total
<b>Owners</b>						
Residential	\$ 50,276,141	\$ 56,664,764	\$ 11,160,023	\$ 25,788	\$ -	\$ 118,126,716
Multi-Family Residential	\$ 12,092,699	\$ 3,407,332	\$ 4,985,075	\$ 1,925	\$ -	\$ 20,487,031
Commercial	\$ 22,367,074	\$ 7,877,898	\$ 5,319,558	\$ 4,120	\$ -	\$ 35,568,650
Industrial	\$ 267,202	\$ 94,111	\$ 21,183	\$ 33	\$ -	\$ 382,529
Seasonal	\$ 6,500,788	\$ 11,448,198	\$ 2,576,802	\$ 637	\$ -	\$ 20,526,426
Public Fire Protection	\$ -	\$ 11,139,858	\$ 14,056,635	\$ -	\$ 1,365,989	\$ 26,562,482
Private Fire Protection	\$ -	\$ 1,767,228	\$ 2,229,946	\$ -	\$ 216,701	\$ 4,213,876
<b>Non-Owners</b>						\$ -
Residential	\$ 376,526	\$ 414,550	\$ 71,623	\$ 236	\$ -	\$ 862,935
Commercial	\$ 13,245,503	\$ 4,557,227	\$ 2,699,526	\$ 125	\$ -	\$ 20,502,381
Resale	\$ 14,734,296	\$ 15,064,781	\$ 1,183,219	\$ 38	\$ -	\$ 30,982,333
Private Fire Protection	\$ -	\$ 55,209	\$ 61,113	\$ -	\$ 7,765	\$ 124,086
<b>Total</b>	<b>\$ 119,860,228</b>	<b>\$ 112,491,155</b>	<b>\$ 44,364,702</b>	<b>\$ 32,904</b>	<b>\$ 1,590,454</b>	<b>\$ 278,339,444</b>

**Table 4.12: Allocation of FY23 Fixed Assets to Customer Classes**

From the values in Table 4.11, it can be determined that the total FY22 Fixed Asset base for Non-Owners is \$28,537,082. This value was previously reported in Table 3.10. To determine the rate of return component of the revenue requirements as illustrated in Table 3.10, the total fixed assets for non-owners in Table 4.11 was added to a working capital allowance of 12.5 percent of the non-owners share of O&M. This resulted in a total asset base of \$28,803,857 for Non-Owners, to which the rate of return of 4.20 percent was applied to calculate a return on rate base for Non-Owners of \$1,208,896. Allocation of the balance of capital-related revenue requirements to the Owner user classes under similar parameters resulted in return on rate base-component of the owner cost of service equal to 4.23 percent for FY22.

#### 4.4 Depreciation Allocations

Tables 3.5 and 3.6 presented the depreciation by asset type and Tables 3.7 and 3.8 summarized total depreciation by ownership for FY22 and FY23, respectively. Tables 4.13 and 4.14 summarize functionalized depreciation expense by asset type and ownership for FY22 and FY23, respectively. Functionalization of depreciation expense was previously described in Sub-section 4.3.

Asset Type	Joint	All-But-Resale	Owners	Resale	Total
Source of Supply	\$ 232,100	\$ -	\$ -	\$ -	\$ 232,100
Water Treatment/HS Pumping	\$ 2,086,860	\$ -	\$ -	\$ -	\$ 2,086,860
Distribution Pumping	\$ 1,963	\$ 181,926	\$ 142,302	\$ 56,038	\$ 382,228
Reservoirs and Tanks	\$ 349,195	\$ 123,722	\$ 152,609	\$ -	\$ 625,527
Transmission and Distribution	\$ 1,301,623	\$ 1,147,210	\$ 510,966	\$ -	\$ 2,959,799
Meters and Hydrants	\$ 6,811	\$ 98,639	\$ -	\$ -	\$ 105,450
General Plant	\$ 344,213	\$ 145,235	\$ 15,000	\$ -	\$ 504,448
<b>Total</b>	<b>\$4,322,765</b>	<b>\$ 1,696,733</b>	<b>\$820,876</b>	<b>\$56,038</b>	<b>\$6,896,412</b>

Table 4.13: FY22 Depreciation Expense by Ownership

Asset Type	Joint	All-But-Resale	Owners	Resale	Total
Source of Supply	\$ 652,100	\$ -	\$ -	\$ -	\$ 652,100
Water Treatment/HS Pumping	\$ 3,018,782	\$ -	\$ -	\$ -	\$ 3,018,782
Distribution Pumping	\$ 1,963	\$ 181,926	\$ 152,710	\$ 61,988	\$ 398,587
Reservoirs and Tanks	\$ 475,600	\$ 131,722	\$ 152,609	\$ -	\$ 759,931
Transmission and Distribution	\$ 1,331,723	\$ 1,357,080	\$ 650,879	\$ -	\$ 3,339,682
Meters and Hydrants	\$ 6,811	\$ 98,639	\$ -	\$ -	\$ 105,450
General Plant	\$ 348,013	\$ 145,235	\$ 30,000	\$ -	\$ 523,248
<b>Total</b>	<b>\$5,834,991</b>	<b>\$1,914,603</b>	<b>\$986,198</b>	<b>\$61,988</b>	<b>\$8,797,779</b>

**Table 4.14: FY23 Depreciation Expense by Ownership**

Tables 4.15 and 4.16 summarize depreciation expense by asset type classification and Tables 4.17 and 4.18 present the allocated depreciation expense to each user class for FY22 and FY23, respectively. Classification of depreciation expense was previously described in Sub-section 4.3. Detailed tables are found in Appendix B.

Asset Type	Base	Max Day	Max Hour	Meter	Direct Fire	Total
Source of Supply	\$ 179,414	\$ 52,686	\$ -	\$ -	\$ -	\$ 232,100
Water Treatment/HS Pumping	\$ 1,018,567	\$ 1,192,566	\$ 936	\$ 1	\$ 41	\$ 2,212,111
Distribution Pumping	\$ 173,739	\$ 208,487	\$ 2	\$ -	\$ -	\$ 382,228
Reservoirs and Tanks	\$ 190,303	\$ 228,363	\$ 221,891	\$ -	\$ -	\$ 640,556
Transmission and Distribution	\$ 870,529	\$ 1,044,635	\$ 1,044,635	\$ -	\$ -	\$ 2,959,799
Meters and Hydrants	\$ -	\$ -	\$ -	\$ 6,811	\$ 98,639	\$ 105,450
General Plant	\$ 136,894	\$ 144,695	\$ 79,015	\$ 82	\$ 3,482	\$ 364,168
<b>Total</b>	<b>\$2,569,445</b>	<b>\$2,871,433</b>	<b>\$1,346,478</b>	<b>\$6,894</b>	<b>\$102,162</b>	<b>\$6,896,412</b>

**Table 4.15: FY22 Depreciation Expense by Classification**

Asset Type	Base	Max Day	Max Hour	Meter	Direct Fire	Total
Source of Supply	\$ 599,414	\$ 52,686	\$ -	\$ -	\$ -	\$ 652,100
Water Treatment/HS Pumping	\$ 1,482,313	\$ 1,749,061	\$ 936	\$ 1	\$ 41	\$ 3,232,353
Distribution Pumping	\$ 181,175	\$ 217,410	\$ 2	\$ -	\$ -	\$ 398,587
Reservoirs and Tanks	\$ 202,046	\$ 242,455	\$ 238,140	\$ -	\$ -	\$ 682,641
Transmission and Distribution	\$ 982,259	\$ 1,178,711	\$ 1,178,711	\$ -	\$ -	\$ 3,339,682
Meters and Hydrants	\$ -	\$ -	\$ -	\$ 6,811	\$ 98,639	\$ 105,450
General Plant	\$ 147,799	\$ 152,268	\$ 83,150	\$ 86	\$ 3,664	\$ 386,968
<b>Total</b>	<b>\$3,595,006</b>	<b>\$3,592,592</b>	<b>\$1,500,939</b>	<b>\$6,898</b>	<b>\$102,344</b>	<b>\$ 8,797,779</b>

**Table 4.16: FY23 Depreciation Expense by Classification**

Customer Class	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Res Residential	\$ 1,089,577	\$ 1,448,462	\$ 333,684	\$ -	\$ 5,400	\$ -	\$ 2,877,123
Mul Multi-Family Residential	\$ 262,071	\$ 87,098	\$ 149,054	\$ -	\$ 404	\$ -	\$ 498,627
Cor Commercial	\$ 484,736	\$ 201,375	\$ 159,055	\$ -	\$ 865	\$ -	\$ 846,029
Ind Industrial	\$ 5,820	\$ 2,418	\$ 637	\$ -	\$ 7	\$ -	\$ 8,881
Sea Seasonal	\$ 140,884	\$ 292,638	\$ 77,046	\$ -	\$ 134	\$ -	\$ 510,702
Pub Public Fire Protection	\$ -	\$ 286,173	\$ 422,384	\$ -	\$ -	\$ 87,741	\$ 796,298
Priv Private Fire Protection	\$ -	\$ 45,399	\$ 67,007	\$ -	\$ -	\$ 13,919	\$ 126,325
<b>Non-Owners</b>							
Res Residential	\$ 7,986	\$ 10,608	\$ 2,269	\$ -	\$ 50	\$ -	\$ 20,912
Cor Commercial	\$ 280,927	\$ 116,615	\$ 85,512	\$ -	\$ 26	\$ -	\$ 483,080
Res Resale	\$ 297,445	\$ 379,227	\$ 47,886	\$ -	\$ 8	\$ -	\$ 724,566
Priv Private Fire Protection	\$ -	\$ 1,420	\$ 1,945	\$ -	\$ -	\$ 502	\$ 3,867
<b>Total</b>	<b>\$ 2,569,445</b>	<b>\$ 2,871,433</b>	<b>\$ 1,346,478</b>	<b>\$ -</b>	<b>\$ 6,894</b>	<b>\$ 102,162</b>	<b>\$ 6,896,412</b>

**Table 4.17: Allocated FY22 Depreciation Expense by User Class**

Customer Class	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Res Residential	\$ 1,508,232	\$ 1,802,705	\$ 374,101	\$ -	\$ 5,406	\$ -	\$ 3,690,445
Mul Multi-Family Residential	\$ 362,768	\$ 108,399	\$ 167,107	\$ -	\$ 404	\$ -	\$ 638,679
Cor Commercial	\$ 670,989	\$ 250,624	\$ 178,320	\$ -	\$ 864	\$ -	\$ 1,100,796
Ind Industrial	\$ 8,016	\$ 2,994	\$ 710	\$ -	\$ 7	\$ -	\$ 11,727
Sea Seasonal	\$ 195,017	\$ 364,207	\$ 86,378	\$ -	\$ 134	\$ -	\$ 645,736
Pub Public Fire Protection	\$ -	\$ 354,398	\$ 471,200	\$ -	\$ -	\$ 87,900	\$ 913,498
Priv Private Fire Protection	\$ -	\$ 56,222	\$ 74,751	\$ -	\$ -	\$ 13,944	\$ 144,917
<b>Non-Owners</b>							
Res Residential	\$ 11,233	\$ 13,221	\$ 2,474	\$ -	\$ 50	\$ -	\$ 26,978
Cor Commercial	\$ 395,163	\$ 145,342	\$ 93,246	\$ -	\$ 26	\$ -	\$ 633,778
Res Resale	\$ 443,587	\$ 492,718	\$ 50,541	\$ -	\$ 8	\$ -	\$ 986,855
Priv Private Fire Protection	\$ -	\$ 1,761	\$ 2,111	\$ -	\$ -	\$ 500	\$ 4,372
<b>Total</b>	<b>\$ 3,595,006</b>	<b>\$ 3,592,592</b>	<b>\$ 1,500,939</b>	<b>\$ -</b>	<b>\$ 6,898</b>	<b>\$ 102,344</b>	<b>\$ 8,797,779</b>

**Table 4.18: Allocated FY23 Depreciation Expense by User Class**

## 4.5 Capital Cost Allocations

The capital-related revenue requirements were introduced in Table 3.4. Tables 4.19 and 4.20, respectively, show the capital-related revenue requirements allocated to each user class for FY22 and FY23.

Customer Class	Base	Max Day	Max Hr.	Meter	Direct Fire	Total
<b>Owners</b>						
Residential	\$ 2,249,412	\$ 3,428,288	\$ 1,263,697	\$ 2,537	\$ -	\$ 6,943,934
Multi-Family Residential	\$ 541,041	\$ 206,148	\$ 564,481	\$ 190	\$ -	\$ 1,311,860
Commercial	\$ 1,000,729	\$ 476,622	\$ 602,356	\$ 406	\$ -	\$ 2,080,114
Industrial	\$ 12,015	\$ 5,722	\$ 2,411	\$ 3	\$ -	\$ 20,151
Seasonal	\$ 290,853	\$ 594,676	\$ 180,103	\$ 63	\$ -	\$ 1,065,694
Public Fire Protection	\$ -	\$ (43,798)	\$ (74,362)	\$ -	\$ 118,160	\$ 0
Private Fire Protection	\$ -	\$ 92,255	\$ 156,635	\$ -	\$ 18,745	\$ 267,635
<b>Non-Owners</b>						
Residential	\$ 16,753	\$ 25,427	\$ 8,813	\$ 24	\$ -	\$ 51,018
Commercial	\$ 589,326	\$ 279,527	\$ 332,180	\$ 13	\$ -	\$ 1,201,046
Resale	\$ 566,350	\$ 693,011	\$ 95,241	\$ 4	\$ -	\$ 1,354,606
Private Fire Protection	\$ -	\$ 2,922	\$ 4,665	\$ -	\$ 708	\$ 8,295
<b>Total</b>	<b>\$5,266,478</b>	<b>\$5,760,801</b>	<b>\$3,136,220</b>	<b>\$3,240</b>	<b>\$198,026</b>	<b>\$14,304,353</b>

**Table 4.19: Summary of FY22 Allocated Capital-Related Revenue Requirements**

Customer Class	Base	Max Day	Max Hr.	Meter	Direct Fire	Total
<b>Owners</b>						
Residential	\$ 2,656,951	\$ 3,465,275	\$ 936,550	\$ 1,363	\$ -	\$ 7,060,139
Multi-Family Residential	\$ 639,065	\$ 208,372	\$ 418,348	\$ 102	\$ -	\$ 1,265,886
Commercial	\$ 1,182,036	\$ 481,765	\$ 446,418	\$ 218	\$ -	\$ 2,110,436
Industrial	\$ 14,121	\$ 5,755	\$ 1,778	\$ 2	\$ -	\$ 21,656
Seasonal	\$ 343,548	\$ 605,005	\$ 136,177	\$ 34	\$ -	\$ 1,084,763
Public Fire Protection	\$ -	\$ (31,916)	\$ (40,273)	\$ -	\$ 72,189	\$ -
Private Fire Protection	\$ -	\$ 93,393	\$ 117,846	\$ -	\$ 11,452	\$ 222,691
<b>Non-Owners</b>						
Residential	\$ 26,690	\$ 34,004	\$ 8,062	\$ 17	\$ -	\$ 68,774
Commercial	\$ 938,911	\$ 373,818	\$ 303,870	\$ 9	\$ -	\$ 1,616,608
Resale	\$ 1,044,445	\$ 1,067,871	\$ 83,873	\$ 3	\$ -	\$ 2,196,192
Private Fire Protection	\$ -	\$ 3,913	\$ 4,332	\$ -	\$ 550	\$ 8,796
<b>Total</b>	<b>\$6,845,768</b>	<b>\$6,400,649</b>	<b>\$2,534,827</b>	<b>\$1,746</b>	<b>\$198,026</b>	<b>\$15,878,632</b>

**Table 4.20: Summary of FY23 Allocated Capital-Related Revenue Requirements**

## 5.0 Results and Proposed Rates

### 5.1 Cost of Service Results

For FY22, the total revenue requirements to be recovered through rates or use of cash reserves total \$26,312,478. Tables 5.1 and 5.2 summarize the allocated revenue requirements by user class for FY22 and FY23, respectively. Note that the Max Day and Max Hour revenue requirements allocated to Owner and Non-Owner Residential, Commercial, and Industrial user classes include public fire protection costs. The Resale user class is not allocated fire protection charges as the Resale system provides its own fire protection. Tables 5.3 and 5.4, respectively, present the calculated unit costs of service for each user class for FY22 and FY23.

Customer Class	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire	Total
<b>Owners Cost Allocation</b>							
Residential	\$4,060,810	\$4,697,172	\$961,237	\$737,063	\$960,725	\$0	\$11,417,008
Multi-Family Residential	\$976,729	\$282,448	\$429,376	\$22,986	\$71,918	\$0	\$1,783,456
Commercial	\$1,806,591	\$653,031	\$458,185	\$57,223	\$153,819	\$0	\$3,128,849
Industrial	\$21,690	\$7,840	\$1,834	\$161	\$1,245	\$0	\$32,771
Seasonal	\$525,069	\$948,988	\$221,946	\$10,955	\$23,776	\$0	\$1,730,733
Public Fire Protection	\$0	\$928,022	\$1,216,753	\$0	\$0	\$1,000,412	\$3,145,188
Private Fire Protection	\$0	\$147,222	\$193,026	\$0	\$0	\$158,706	\$498,953
<b>Non-Owners</b>							
Residential	\$33,029	\$37,456	\$6,879	\$7,387	\$9,624	\$0	\$94,375
Commercial	\$1,161,911	\$411,760	\$259,287	\$1,080	\$5,112	\$0	\$1,839,150
Resale	\$1,207,150	\$1,289,624	\$126,666	\$27	\$1,426	\$0	\$2,624,892
Private Fire Protection	\$0	\$5,013	\$5,899	\$0	\$0	\$6,192	\$17,104
<b>Subtotal Owner and Non-Owner Cost Allocation</b>							<b>\$26,312,478</b>
<b>Public Fire Protection Adjustment</b>							
<b>Owners</b>							
Residential	\$0	\$1,049,695	\$810,249	\$0	\$0	\$0	\$1,859,944
Multi-Family Residential	\$0	\$63,120	\$361,930	\$0	\$0	\$0	\$425,050
Commercial	\$0	\$145,935	\$386,215	\$0	\$0	\$0	\$532,150
Industrial	\$0	\$1,752	\$1,546	\$0	\$0	\$0	\$3,298
Public Fire Protection	\$0	-\$1,360,891	-\$1,784,297	\$0	\$0	\$0	(\$3,145,188)
<b>Non-Owners</b>							
Residential	\$0	\$8,370	\$5,799	\$0	\$0	\$0	\$14,169
Commercial	\$0	\$92,018	\$218,559	\$0	\$0	\$0	\$310,576
<b>Subtotal Fire Protection Adjustment</b>							<b>\$0</b>
<b>Adjusted Cost Allocation</b>							
<b>Owners</b>							
Residential	\$4,060,810	\$5,746,868	\$1,771,486	\$737,063	\$960,725	\$0	\$13,276,952
Multi-Family Residential	\$976,729	\$345,567	\$791,306	\$22,986	\$71,918	\$0	\$2,208,506
Commercial	\$1,806,591	\$798,966	\$844,400	\$57,223	\$153,819	\$0	\$3,660,999
Industrial	\$21,690	\$9,592	\$3,379	\$161	\$1,245	\$0	\$36,068
Seasonal	\$525,069	\$948,988	\$221,946	\$10,955	\$23,776	\$0	\$1,730,733
Public Fire Protection	\$0	-\$432,868	-\$567,544	\$0	\$0	\$1,000,412	\$0
Private Fire Protection	\$0	\$147,222	\$193,026	\$0	\$0	\$158,706	\$498,953
<b>Non-Owners</b>							
Residential	\$33,029	\$45,826	\$12,678	\$7,387	\$9,624	\$0	\$108,545
Commercial	\$1,161,911	\$503,778	\$477,845	\$1,080	\$5,112	\$0	\$2,149,726
Resale	\$1,207,150	\$1,289,624	\$126,666	\$27	\$1,426	\$0	\$2,624,892
Private Fire Protection	\$0	\$5,013	\$5,899	\$0	\$0	\$6,192	\$17,104
<b>Total Adjusted Cost Allocation</b>							<b>\$26,312,478</b>

Table 5.1: Summary of FY22 Cost of Service Results

Customer Class	Base	Max Day	Max Hr.	Customer	Meter	Direct Fire	Total
<b>Owners Cost Allocation</b>							
Residential	\$4,526,832	\$4,804,666	\$777,257	\$761,112	\$991,254	\$0	\$11,861,122
Multi-Family Residential	\$1,088,819	\$288,911	\$347,193	\$23,729	\$74,010	\$0	\$1,822,663
Commercial	\$2,013,917	\$667,975	\$370,489	\$59,073	\$158,376	\$0	\$3,269,830
Industrial	\$24,059	\$7,980	\$1,475	\$166	\$1,279	\$0	\$34,958
Seasonal	\$585,327	\$970,705	\$179,465	\$11,311	\$24,491	\$0	\$1,771,299
Public Fire Protection	\$0	\$944,561	\$978,996	\$0	\$0	\$983,167	\$2,906,723
Private Fire Protection	\$0	\$149,845	\$155,308	\$0	\$0	\$155,970	\$461,123
Non-Owners							
Residential	\$43,347	\$45,382	\$6,554	\$7,572	\$9,860	\$0	\$112,715
Commercial	\$1,524,860	\$498,895	\$247,044	\$1,107	\$5,237	\$0	\$2,277,144
Resale	\$1,711,120	\$1,688,965	\$116,694	\$27	\$1,460	\$0	\$3,518,267
Private Fire Protection	\$0	\$6,044	\$5,593	\$0	\$0	\$6,171	\$17,807
<b>Subtotal Owner and Non-Owner Cost Allocation</b>							<b>\$28,053,652</b>
<b>Public Fire Protection Adjustment</b>							
Owners							
Residential	\$0	\$1,086,176	\$657,057	\$0	\$0	\$0	\$1,743,233
Multi-Family Residential	\$0	\$65,313	\$293,501	\$0	\$0	\$0	\$358,814
Commercial	\$0	\$151,007	\$313,194	\$0	\$0	\$0	\$464,201
Industrial	\$0	\$1,804	\$1,247	\$0	\$0	\$0	\$3,051
Public Fire Protection	\$0	-\$1,427,344	-\$1,479,379	\$0	\$0	\$0	(\$2,906,723)
Non-Owners							
Residential	\$0	\$10,259	\$5,541	\$0	\$0	\$0	\$15,800
Commercial	\$0	\$112,784	\$208,840	\$0	\$0	\$0	\$321,623
<b>Subtotal Fire Protection Adjustment</b>							<b>(\$0)</b>
<b>Adjusted Cost Allocation</b>							
Owners							
Residential	\$4,526,832	\$5,890,843	\$1,434,314	\$761,112	\$991,254	\$0	\$13,604,355
Multi-Family Residential	\$1,088,819	\$354,225	\$640,694	\$23,729	\$74,010	\$0	\$2,181,477
Commercial	\$2,013,917	\$818,983	\$683,683	\$59,073	\$158,376	\$0	\$3,734,031
Industrial	\$24,059	\$9,784	\$2,722	\$166	\$1,279	\$0	\$38,009
Seasonal	\$585,327	\$970,705	\$179,465	\$11,311	\$24,491	\$0	\$1,771,299
Public Fire Protection	\$0	-\$482,783	-\$500,384	\$0	\$0	\$983,167	\$0
Private Fire Protection	\$0	\$149,845	\$155,308	\$0	\$0	\$155,970	\$461,123
Non-Owners							
Residential	\$43,347	\$55,642	\$12,095	\$7,572	\$9,860	\$0	\$128,515
Commercial	\$1,524,860	\$611,679	\$455,884	\$1,107	\$5,237	\$0	\$2,598,768
Resale	\$1,711,120	\$1,688,965	\$116,694	\$27	\$1,460	\$0	\$3,518,267
Private Fire Protection	\$0	\$6,044	\$5,593	\$0	\$0	\$6,171	\$17,807
<b>Total Adjusted Cost Allocation</b>	<b>\$11,518,282</b>	<b>\$10,073,930</b>	<b>\$3,186,069</b>	<b>\$864,097</b>	<b>\$1,265,967</b>	<b>\$198,026</b>	<b>\$28,053,652</b>

Table 5.2: Summary of FY23 Cost of Service Results

Customer Class	Base (\$/kgal)	Max Day (\$/kgal)	Max Hour (\$/kgal)	Customer (\$/month)	Meter (\$/month for 3/4-inch Meter)	Direct Fire (\$/month for 6-inch Meter)
<b>Owners</b>						
Residential	\$1.66	\$2.35	\$0.72	\$2.24	\$2.91	\$0.00
Multi-Family Residential	\$1.66	\$0.58	\$1.32	\$2.24	\$2.91	\$0.00
Commercial	\$1.66	\$0.73	\$0.78	\$2.24	\$2.91	0.00
Industrial	\$1.66	\$0.73	\$0.26	\$2.24	\$2.91	0.00
Seasonal	\$1.62	\$2.90	\$0.69	\$2.24	\$2.91	0.00
Public Fire Protection	N/A	N/A	N/A	0.00	0.00	0.00
Private Fire Protection	N/A	N/A	N/A	0.00	0.00	57.06
<b>Non-Owners</b>						
Residential	\$1.59	\$2.21	\$0.61	\$2.43	\$3.16	\$0.00
Commercial	\$1.59	\$0.69	\$0.66	\$2.43	\$3.16	0.00
Resale	\$1.29	\$1.37	\$0.13	\$2.22	\$2.88	0.00
Private Fire Protection	N/A	N/A	N/A	0.00	0.00	54.14

**Table 5.3: Summary of FY22 Cost of Service Results – Unit Results**

Customer Class	Base (\$/kgal)	Max Day (\$/kgal)	Max Hour (\$/kgal)	Customer (\$/month)	Meter (\$/month for 3/4-inch Meter)	Direct Fire (\$/month for 6-inch Meter)
<b>Owners</b>						
Residential	\$1.84	\$2.39	\$0.58	\$2.30	\$2.99	\$0.00
Multi-Family Residential	\$1.84	\$0.59	\$1.06	\$2.30	\$2.99	\$0.00
Commercial	\$1.84	\$0.74	\$0.62	2.30	2.99	0.00
Industrial	\$1.84	\$0.75	\$0.21	2.30	2.99	0.00
Seasonal	\$1.80	\$2.96	\$0.56	2.30	2.99	0.00
Public Fire Protection	N/A	N/A	N/A	0.00	0.00	0.00
Private Fire Protection	N/A	N/A	N/A	0.00	0.00	52.48
<b>Non-Owners</b>						
Residential	\$2.09	\$2.69	\$0.58	\$2.49	\$3.24	\$0.00
Commercial	2.09	0.84	0.63	2.49	3.24	0.00
Resale	1.79	1.77	0.12	2.28	2.95	0.00
Private Fire Protection	N/A	N/A	N/A	0.00	0.00	56.37

**Table 5.4: Summary of FY23 Cost of Service Results – Unit Results**

## 5.2 Resale Water Rate

Based on parameters outlined in the 2009 Memorandum of Agreement between the City of Billings and the County Water District of Billings Heights, the City’s rate model applies the utility basis cost of service approach to establish the water rate for the Resale user class. As part of this study, the functionalization, classification, and allocation assumptions upon which the analyses is based were reviewed and updated, where applicable, to reflect the current configuration and operation of the system, as well as recent historical demands on the system. Table 5.5 summarizes the FY22 and FY23 Resale rate calculations.

Resale Water Rate Summary		
	FY2022	FY2023
Projected Water Purchase (kgal)	938,998	955,900
Actual Water Sales (kgal)		
Peaking Factor - Peak Day	2.60	2.60
Peaking Factor - Peak Hour	3.83	3.83
Allocated O&M Revenue Requirements - Resale		
	FY2022	FY2023
Base	\$ 640,800	\$ 666,676
Max Day	\$ 596,613	\$ 621,094
Max Hr.	\$ 31,425	\$ 32,822
Customer	\$ 27	\$ 27
Meter	\$ 1,422	\$ 1,458
Direct Fire	\$ -	\$ -
<b>Total Resale O&amp;M Revenue Requirements</b>	<b>\$ 1,270,285</b>	<b>\$ 1,322,076</b>
Debt/Equity		
	FY2022	FY2023
Total Outstanding Debt	\$ 25,887,726	\$ 95,118,503
Interest on Outstanding Debt	\$ 673,459	\$ 2,760,258
Effective Interest Rate on Outstanding Debt	2.60%	2.90%
Total Fund Equity	\$ 193,911,655	\$ 197,390,579
Rate of Return on Equity	4.41%	4.41%
Total Equity and Debt	\$ 219,799,381	\$ 292,509,082
Weighted Cost of Capital	4.20%	3.92%
Summary of Capital Revenue Requirements - Non-Owners		
	FY2022	FY2023
Net Plant in Service for Non-Owners	\$ 28,537,082	\$ 52,471,735
Share of Working Capital for Non-Owners	\$ 266,775	\$ 275,807
Total Rate Base for Non-Owners	\$ 28,803,857	\$ 52,747,542
Return on Rate Base for Non-Owners	\$ 1,208,896	\$ 2,067,492
Depreciation Less Amortization for Non-Owners	\$ 1,232,426	\$ 1,651,982
<b>Total Capital-Based Revenue Requirements for Non-Owners</b>	<b>\$ 2,441,322</b>	<b>\$ 3,719,474</b>
Allocated Capital Revenue Requirements - Resale		
	FY2022	FY2023
Base	\$ 566,350	\$ 1,044,445
Max Day	\$ 693,011	\$ 1,067,871
Max Hr.	\$ 95,241	\$ 83,873
Customer	\$ -	\$ -
Meter	\$ 4	\$ 3
Direct Fire	\$ -	\$ -
<b>Total Resale Capital Revenue Requirements</b>	<b>\$ 1,354,606</b>	<b>\$ 2,196,192</b>
<b>Total Resale Revenue Requirements</b>	<b>\$ 2,624,892</b>	<b>\$ 3,518,267</b>
<b>Calculated Rate - Resale (\$/kgal)</b>	<b>\$ 2.80</b>	<b>\$ 3.69</b>

Table 5.5: Summary of Resale Water Rate Calculations – FY22-FY23

The increase in allocated cost to the Resale user was barely inflationary from FY21 to FY22 primarily due to the reduction in the calculated cost of capital, which is used to calculate the allocable return on rate base. Based on the capital expenditures currently planned for the remainder of FY21 and FY22, the Source of Supply and Treatment components of the asset base as anticipated increase significantly by FY23. Specifically, improvements to the intake and the West End Water Treatment Plant are currently anticipated to come onto the rate base in FY23. Additionally, the West End Reservoir project is anticipated to come onto the rate based in FY24. Because these supply and treatment components of the asset base are jointly allocated to all user classes, the Resale customer will see an increase in its applicable rate base and a corresponding increase in the capital-related revenue requirements. This is demonstrated in the calculated unit costs in Tables 5.3 and 5.4, which show an increase in the base and max day unit costs of approximately 40 percent and 28 percent, respectively, from FY22 to FY23. At the projected flows for FY23, the calculated cost of service-based rate for the Resale user increases approximately 31 percent from FY22 due to an increase in the allocable rate base. It is anticipated that an additional increase will be required to the Resale rate in FY24 when the West End Reservoir project is incorporated into the rate base.

### **5.3 Single-Family Residential Volumetric Rate Design**

Section 2.0 of this report outlined two volumetric structures evaluated for the Single-Family Residential Class:

- Scenario 1: Existing Four-Tier Inclining Block Tier Structure; and
- Scenario 2: Four-Tier Inclining Block with Reduced Tier 1 Volume.

Scenarios 1 and 2 were modeled based on FY20 Single-Family Residential water sales and are shown in Table 5.6. Rates for each tier were calculated based on the projected requirement of \$9,860,000 in volumetric rate revenue from Single-Family volumetric rates in FY22.

The results from the rate design analysis in Table 5.6 demonstrate that by reducing the volume billed at the Tier 1 rate, the resulting increased revenue generated by billing that additional volume at the Tier 2 rate would serve to reduce the rate charged for all tiers. By setting the Tier 1 volume to capture indoor water use, the City would continue to provide baseline water service, generally seen as essential for sanitary and cooking needs, at the lowest rate possible. Rate recommendations associated with both Scenarios 1 and 2 are provided in the next Sub-section.

Scenario 1: Existing Tier Structure					
	Tier Range (Kgal)	Kgal	Charge Ratio	\$/Kgal	Revenue (\$)
<b>Tier 1</b>	<b>0-10</b>	1,717,576	1.00	\$ <b>3.73</b>	\$ 6,406,557
<b>Tier 2</b>	<b>11-32</b>	579,473	1.20	\$ <b>4.49</b>	\$ 2,601,832
<b>Tier 3</b>	<b>33-75</b>	118,357	1.30	\$ <b>5.84</b>	\$ 691,204
<b>Tier 4</b>	<b>&gt;75</b>	17,389	1.50	\$ <b>8.78</b>	\$ 152,673
<b>Total</b>		2,432,794			\$ 9,852,266
Scenario 2: Reduce Tier 1 to Average Indoor Usage					
	Tier Range (Kgal)	Kgal	Charge Ratio	\$/Kgal	Revenue (\$)
<b>Tier 1</b>	<b>0-5</b>	1,251,433	1.00	\$ <b>3.62</b>	\$ 4,530,188
<b>Tier 2</b>	<b>6-32</b>	1,045,615	1.20	\$ <b>4.36</b>	\$ 4,558,881
<b>Tier 3</b>	<b>33-75</b>	118,357	1.30	\$ <b>5.67</b>	\$ 671,083
<b>Tier 4</b>	<b>&gt;75</b>	17,389	1.50	\$ <b>8.52</b>	\$ 148,152
<b>Total</b>		2,432,794			\$ 9,908,305

Table 5.6: Single-Family Residential Volumetric Rate Design Scenario Results

#### 5.4 Recommended FY22 and FY23 Water Rates

Based on the results of this study, the recommended monthly meter rates for FY22 and FY23 are shown in Table 5.7. To balance the overall need for a revenue increase between the fixed and volumetric rates, meter rate increases are recommended for both FY22 and FY23. Tables 5.8 and 5.9 summarize the cost of service-based recommendations for Fire Protection charges for Owners and Non-Owners, respectively.

Meter Size	Inside City Recommended Rate FY22	Outside City Recommended Rate FY22	% Increase from FY21	Inside City Recommended Rate FY23	Outside City Recommended Rate FY23	% Increase from FY22
3/4"	\$8.30	\$8.95	1.8%	\$8.45	\$9.15	1.8%
1"	\$9.35	\$10.20	2.2%	\$9.55	\$10.40	2.1%
1-1/2"	\$11.30	\$12.30	2.0%	\$11.55	\$12.55	2.2%
2"	\$16.20	\$17.70	1.8%	\$16.50	\$18.05	1.9%
3"	\$50.50	\$54.90	2.0%	\$51.50	\$56.00	2.0%
4"	\$65.80	\$71.50	2.0%	\$67.10	\$72.95	2.0%
6"	\$98.70	\$107.25	2.0%	\$100.65	\$109.40	2.0%
8"	\$134.85	\$146.55	2.0%	\$137.55	\$149.50	2.0%

Table 5.7: Recommended FY22 and FY23 Meter Charges for Owners and Non-Owners

Meter Size	Inside City Current Rate FY21 (\$/Year)	Inside City Recommended Rate FY22	% Increase from FY21	Inside City Recommended Rate FY23 (\$/Year)	% Increase from FY22
1-1/4"	\$27.65	\$29.30	6.0%	\$30.75	5.0%
1-1/2"	\$36.90	\$39.10		\$41.05	
2"	\$59.05	\$62.60		\$65.75	
3"	\$147.50	\$156.35		\$164.15	
4"	\$258.10	\$273.60		\$287.30	
6"	\$589.85	\$625.25		\$656.50	
8"	\$1,032.25	\$1,094.20		\$1,148.90	
10"	\$1,622.05	\$1,719.35		\$1,805.30	
12"	\$2,335.80	\$2,475.95		\$2,599.75	
14"	\$3,179.25	\$3,370.00		\$3,538.50	

**Table 5.8: Recommended Annual Fire Protection Charges for Owners – FY22/FY23**

Meter Size	Outside City Current Rate FY21 (\$/Year)	Outside City Recommended Rate FY22 (\$/Year)	% Increase from FY21	Outside City Recommended Rate FY23 (\$/Year)	% Increase from FY22
1-1/4"	\$28.05	\$29.75	6.0%	\$31.25	5.0%
1-1/2"	\$37.35	\$39.60		\$41.60	
2"	\$59.80	\$63.40		\$66.55	
3"	\$149.55	\$158.50		\$166.45	
4"	\$261.65	\$277.35		\$291.20	
6"	\$598.05	\$633.95		\$665.65	
8"	\$1,046.60	\$1,109.40		\$1,164.85	
10"	\$1,644.65	\$1,743.35		\$1,830.50	
12"	\$2,368.25	\$2,510.35		\$2,635.85	
14"	\$3,223.50	\$3,416.90		\$3,587.75	

**Table 5.9: Calculated Annual Fire Protection Charges for Non-Owners – FY22/FY23**

Tables 5.10 and 5.11 present the recommended FY22 and FY23 volumetric rates for Single-Family Residential users that are Owners (within City limits) of the system under Scenarios 1 and 2, respectively. Consistent with the approach taken in the previous analysis, rate increase percentages for Non-Owner Residential users are equal to the increases recommended for the Owner Single Family Residential user class in FY22 and FY23. Tables 5.12 and 5.13 present the calculated FY22 and FY23 volumetric rates for Non-Owner Single Family Residential accounts both Scenarios 1 and 2, respectively.

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-14	0-10	\$3.56	\$3.72	4.3%	\$3.88	4.3%
Tier 2	15-43	11-32	\$4.26	\$4.45		\$4.64	
Tier 3	44-100	33-75	\$5.55	\$5.79		\$6.04	
Tier 4	>100	>75	\$8.33	\$8.69		\$9.06	

**Table 5.10: Scenario 1: Recommended FY22 and FY23 Volumetric Charges for Owners**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-7	0-5	\$3.56	\$3.66	3.0%	\$3.77	2.8%
Tier 2	8-43	6-32	\$4.26	\$4.40		\$4.52	
Tier 3	44-100	33-75	\$5.55	\$5.71		\$5.87	
Tier 4	>100	>75	\$8.33	\$8.58		\$8.82	

**Table 5.11: Scenario 2: Recommended FY22 and FY23 Volumetric Charges for Owners**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate	% Increase from FY22
Tier 1	0-14	0-10	\$3.69	\$3.85	4.3%	\$4.01	4.3%
Tier 2	15-43	11-32	\$4.43	\$4.61		\$4.81	
Tier 3	44-100	33-75	\$5.76	\$6.02		\$6.28	
Tier 4	>100	>75	\$8.64	\$9.01		\$9.40	

**Table 5.12: Scenario 1: Recommended FY22 and FY23 Volumetric Charges for Non-Owners**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-7	0-5	\$3.69	\$3.80	3.0%	\$3.90	2.8%
Tier 2	8-43	6-32	\$4.43	\$4.56		\$4.69	
Tier 3	44-100	33-75	\$5.76	\$5.94		\$6.10	
Tier 4	>100	>75	\$8.64	\$8.89		\$9.14	

**Table 5.13: Scenario 2: Recommended FY22 and FY23 Volumetric Charges for Non-Owners**

Table 5.14 presents the recommended non-residential volumetric rates for FY22 and FY23 for Owner and Non-Owner user classes.

	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Owners					
Multi-Family Residential - Scenario 1	\$3.60	\$3.76	4.4%	\$3.92	4.3%
Multi-Family Residential - Scenario 2	\$3.60	\$3.70	2.8%	\$3.81	3.0%
Non-Residential	\$3.07	\$3.20	4.2%	\$3.29	2.8%
Seasonal	\$5.07	\$5.37	5.9%	\$5.48	2.0%
Non-Owners					
Non-Residential	\$3.25	\$3.38	4.0%	\$3.49	3.3%
Resale	\$2.79	\$2.81	0.7%	\$3.68	31.0%

**Table 5.14: Recommended Multi-Family and Non-Residential Volumetric Rates for Owners and Non-Owners – FY22 and FY23**

Table 5.15 summarizes the projected revenue adequacy of the Water Utility for FY22 and FY23 based on the recommended rates. As shown in Table 5.15, the adoption of rates for FY22 that are less than the calculated cost of service results in a projected revenue deficiency for FY22; however, as shown in Table 5.16, even with significant investment of reserve funds in capital projects in FY22, it is anticipated that utility reserves would be adequate to adsorb the projected revenue deficiency. At the recommended rates, projected revenues in FY23 are forecast to be adequate to meet revenue requirements given the current assumptions. In summary, under the projected water sales and given the current cash reserve balances, the recommended rates for FY22 and FY23 will present a stable near-term approach to rate-setting approach without significantly impacting overall revenue adequacy.

	FY2022	FY2023
<b>Rate Revenue Requirements</b>		
O&M-Related	\$ 13,077,025	\$ 13,466,611
Less Other Operating Revenue	\$ (1,068,900)	\$ (1,068,900)
Capital-Related	\$ 23,639,415	\$ 25,385,780
Less Cash Reserves	\$ (9,335,061)	\$ (9,729,839)
<b>Net Rate Revenue Requirements</b>	<b>\$ 26,312,478</b>	<b>\$ 28,053,652</b>
<b>Projected Rate Revenues</b>		
Owners		
Residential	\$ 12,592,485	\$ 13,129,521
Multi-Family	\$ 2,359,881	\$ 2,475,865
Non-Residential	\$ 3,865,521	\$ 3,976,538
Seasonal	\$ 1,756,760	\$ 1,800,626
Fire Protection	\$ 455,595	\$ 478,375
Non-Owners		
Residential	\$ 114,843	\$ 119,159
Non-Residential	\$ 2,474,634	\$ 2,552,770
Resale	\$ 2,638,944	\$ 3,517,113
Fire Protection	\$ 16,690	\$ 17,525
<b>Total Projected Rate Revenue</b>	<b>\$ 26,275,355</b>	<b>\$ 28,067,492</b>
<b>Projected Revenue Adequacy</b>	<b>\$ (37,123)</b>	<b>\$ 13,840</b>

**Table 5.12: Net Cash-Based Rate Revenue Requirements – FY22 and FY23**

	2021	2022	2023
Total Water Fund Balance	\$ 28,420,496	\$ 19,048,311	\$ 9,332,312
O&M Reserve	\$ 3,435,000	\$ 3,530,797	\$ 3,635,985
Debt Service Reserve	\$ 1,385,000	\$ 1,385,000	\$ 1,385,000
Capital/Rate Stabilization Reserve	\$ 23,600,496	\$ 14,132,515	\$ 4,311,327

**Table 5.13: Projected Cash Reserve Balances – FY22 and FY23**

### 5.5 Potential Grant-Related Modifications to FY23 Rates

The rate recommendations in Sub-section 5.4 are based on the current CIP, which does not account for any grant funding for upcoming construction projects. There is potential, however, for funding to be awarded to the projects listed in Table 5.14.

Project	Year	Cost (\$)	Potential Grant (\$)
Water - West End Intake, Pump Station, and Pipeline	FY22	\$21,000,000	\$11,998,385
Water - West End Treatment Plant	FY22	\$57,000,000	\$14,552,029
Water - West End Reservoir/City Lakes	FY23	\$34,000,000	\$23,449,586

**Table 5.14: Capital Projects with Potential Grant Funding**

In the event that grant funding is received for any portion of these projects, it will be appropriate to make revisions to the rates presented in Section 5.4. Specifically, the grant-funded portions of these projects would become contributed capital and thus excluded from the rate base for the purpose of calculated rates to Non-Owner customers. Tables 5.15 through 5.19 summarize the projected volumetric rates associated with a scenario in which a total of \$50M in grant funding is obtained for these projects. It is recommended that if grant funding is obtained, the calculations in the FY22/FY23 rate model be updated to conform with the City’s established rate approach.

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-14	0-10	\$3.56	\$3.70	4.0%	\$3.81	3.0%
Tier 2	15-43	11-32	\$4.26	\$4.44		\$4.57	
Tier 3	44-100	33-75	\$5.55	\$5.78		\$5.95	
Tier 4	>100	>75	\$8.33	\$8.66		\$8.92	

**Table 5.15: Scenario 1: Modified FY22 and FY23 Volumetric Charge Recommendations for Owners (\$50M Grant Funding)**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-14	0-10	\$3.56	\$3.65	2.5%	\$3.70	1.5%
Tier 2	15-43	11-32	\$4.26	\$4.37		\$4.44	
Tier 3	44-100	33-75	\$5.55	\$5.68		\$5.76	
Tier 4	>100	>75	\$8.33	\$8.54		\$8.68	

**Table 5.16: Scenario 2: Modified FY22 and FY23 Volumetric Charge Recommendations for Owners (\$50M Grant Funding)**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-14	0-10	\$3.69	\$3.84	4.0%	\$3.96	3.0%
Tier 2	15-43	11-32	\$4.43	\$4.60		\$4.73	
Tier 3	44-100	33-75	\$5.76	\$5.99		\$6.16	
Tier 4	>100	>75	\$8.64	\$8.98		\$9.25	

**Table 5.17: Scenario 1: Modified FY22 and FY23 Volumetric Charge Recommendations for Non-Owners (\$50M Grant Funding)**

Single Family Residential	Tier Volume (CCF)	Tier Volume (kgal)	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
Tier 1	0-14	0-10	\$3.69	\$3.78	2.5%	\$3.84	1.5%
Tier 2	15-43	11-32	\$4.43	\$4.53		\$4.60	
Tier 3	44-100	33-75	\$5.76	\$5.91		\$6.00	
Tier 4	>100	>75	\$8.64	\$8.85		\$8.98	

**Table 5.18: Scenario 1: Modified FY22 and FY23 Volumetric Charge Recommendations for Non-Owners (\$50M Grant Funding)**

	Current FY21 Rate (\$/kgal)	Recommended FY22 Rate (\$/kgal)	% Increase from FY21	Recommended FY23 Rate (\$/kgal)	% Increase from FY22
<b>Owners</b>					
Multi-Family Residential - Scenario 1	\$3.60	\$3.74	3.9%	\$3.85	2.9%
Multi-Family Residential - Scenario 2	\$3.60	\$3.69	2.5%	\$3.74	1.4%
Non-Residential	\$3.07	\$3.20	4.2%	\$3.26	1.9%
Seasonal	\$5.07	\$5.37	5.9%	\$5.51	2.6%
<b>Non-Owners</b>					
Non-Residential	\$3.25	\$3.38	4.0%	\$3.45	2.1%
Resale	\$2.79	\$2.81	0.7%	\$3.46	23.1%

**Table 5.19: Modified Multi-Family and Non-Residential Volumetric Rates for Owners and Non-Owners – FY22 and FY23 (\$50M Grant Funding)**

## 6.0 Revenue Forecasting

The recommended rates presented in Section 5.4 are based on a number of assumptions outlined in this report, primarily: O&M revenue requirements, capital revenue requirements, number of users, and water sales. While actual expenditures rarely are exactly equal to the budget, utilities are very good at forecasting and managing expenditures. The most volatile variable in the forecasting model is water sales, which can be attributed to factors outside the control of the utility – primarily weather.

Rate-setting approaches generally involve making a realistic but conservative estimate of future water sales. If sales are overestimated, rates can be set too low to obtain the required revenue, while taking an overly conservative approach and greatly underestimating sales can result in rate increases that place an undue burden on the users. In the end, projecting water sales involves determining the amount of risk that can be reasonably accepted by the utility.

To assess the potential risk to the City of Billings posed by lower water sales, a probabilistic revenue forecasting model developed by the Alliance for Water Efficiency was utilized. The model evaluates the probability of varying levels of water sales and revenue based on a minimum of 15 years of monthly maximum temperature and total rainfall values and a recent year of billed water sales.

For the purpose of this analysis, actual meter and flow data (existing fire services) from FY20 was evaluated based on 20 years of weather data. Table 6.1 summarizes the total precipitation by (fiscal) year for the City of Billings and indicates that the 20-year average is 13.90 inches.

Year	Total Precipitation (Inches)	Year	Total Precipitation (Inches)
2019	19.1	2009	10.91
2018	19.01	2008	13.89
2017	17.63	2007	13.46
2016	14.89	2006	13.11
2015	12.96	2005	15.27
2014	14.03	2004	11.08
2013	16.7	2003	9.74
2012	7.13	2002	9.24
2011	19.54	2001	10.95
2010	18.75	2000	10.7

**Table 6.1: Precipitation Data, City of Billings (National Oceanic and Atmospheric Administration)**

A review of recent annual residential water sales as compared to precipitation found that the City of Billings’ water use patterns followed a predictable pattern – there is a general inverse relationship between water use and precipitation, as show in Figure 6.1.

Other factors considered in the revenue forecasting model included existing and projected water rates, growth factors, and demand elasticity factors. Once all data was entered, the model ran through 1,000 simulations to project the average, maximum, and minimum water sales and revenue values. The model results are shown in Figure 6.2 and Table 6.2.

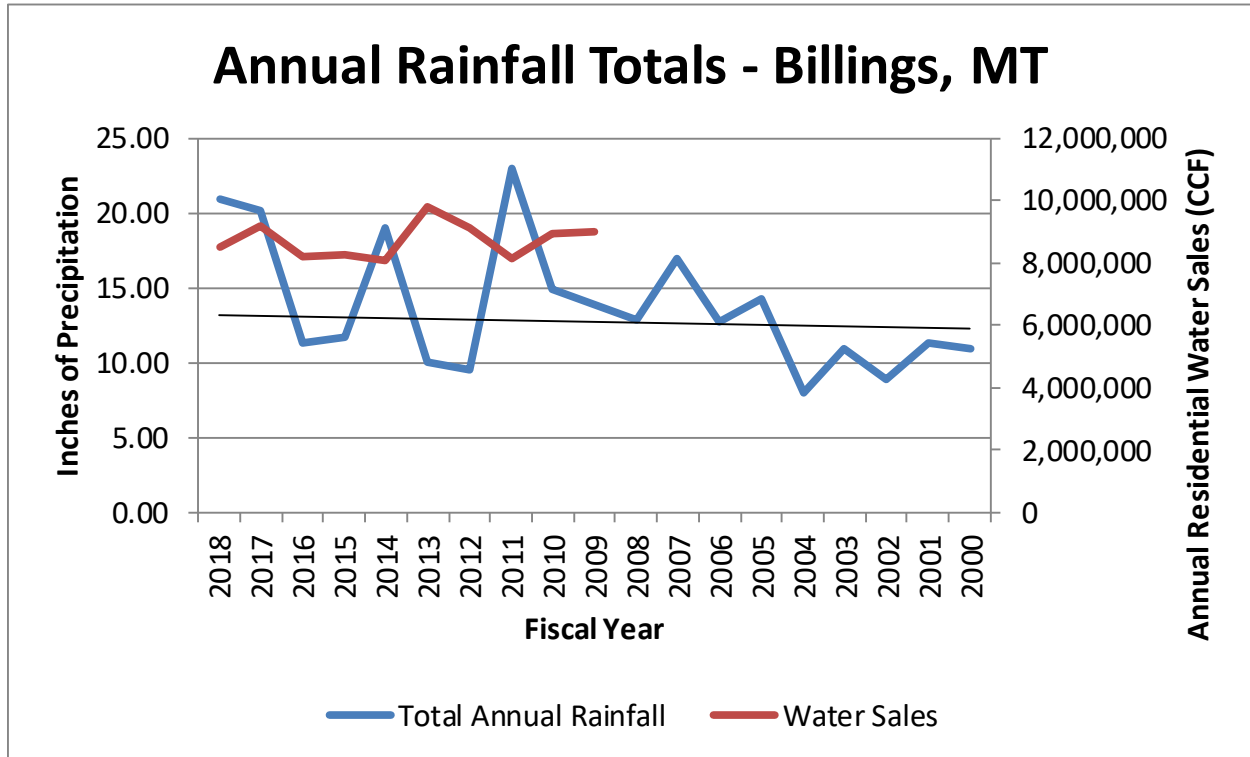


Figure 6.1: Precipitation Data vs Residential Water Sales, City of Billings

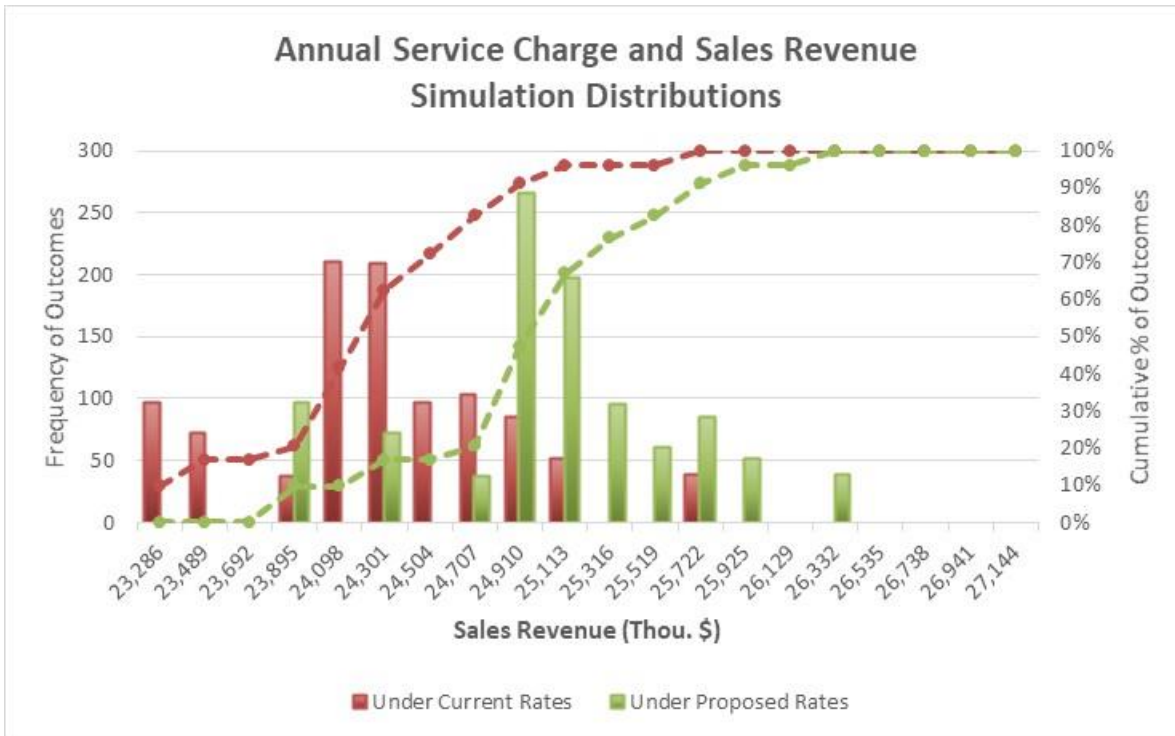


Figure 6.2: Probabilistic Revenue Forecast for FY22

	\$25.52 Million	\$25.32 Million	\$24.71 Million	\$23.69 Million
<b>Probability to Meet/Exceed</b>	17%	23%	79%	100%

Table 6.2: Estimated Probability of Achieving Revenue at Varying Targets (FY22)

Figure 6.2 and Table 6.2 give an illustration of the risk associated with adoption of the FY22 rates. Total FY22 rate revenues, excluding fire protection, from Table 5.12, are projected at \$25.8M. Figure 6.2 would suggest that the probability of obtaining revenues at that level is low. However, there are other factors that warrant consideration when determining the City’s comfort with the level of risk associated with the current water sales projections. Although the revenue forecasting model indicated that target revenue of \$25.8M is not achieved at a high confidence interval, it should be noted that:

- Given that the City’s O&M expenditures are typically less than budgeted (for the most recent three-year period the average was 91.3 percent), it is reasonable to assume for the purposes of the forecast modeling that total target revenue requirements for FY22 may be reduced by \$1.13M with no anticipated net impact on cash position of the

utility. If this were the case, total rate revenue requirements would be reduced to \$24.67M.

- The model projects a high probability of reaching a revenue target of that magnitude.

In summary, reducing water sales projections based solely on the outputs of the water sales forecasting from the model would require the City to implement rate increases in excess of those currently proposed, which does not seem prudent given the factors noted above. As long as the City continues its practice of evaluating rates at least once every two years and maintaining a healthy cash position, it appears that the maximum revenue shortfall as predicted by the forecasting model could be readily offset using existing cash reserves should a shortfall materialize.

## Appendix A: Fixed Asset Tables

Fixed Asset	Original Cost	Annual Depreciation	Accumulated Depreciation Through FY2020	Net Fixed Assets (Book Value FY2022)	Allocated Depreciation Expense FY2022	Net Fixed Assets (Book Value FY2023)	Allocated Depreciation Expense FY2023
Booster Station - 12th Ave N & 27th	\$6,230	\$6	\$0	\$6,217	\$6	\$6,200	6
Chapple Pump Station	\$1,238,738	\$18,194	\$1,001,043	\$201,306	\$18,194	\$183,100	18,194
Christensen Pump Station	\$3,403,350	\$154	\$3,249,148	\$153,894	\$154	\$153,700	154
Fox Pump Station	\$2,420,426	\$80,681	\$87,404	\$2,171,660	\$80,681	\$2,091,000	80,681
Leavens Pump Station	\$995,805	\$8,268	\$840,698	\$138,571	\$8,268	\$130,300	8,268
Staples Pump Station #1	\$2,702,665	\$81,088	\$1,155,454	\$1,385,034	\$81,088	\$1,303,900	81,088
Staples Pump Station #2	\$39,135	\$1,957	\$9,784	\$25,438	\$1,957	\$23,500	1,957
Terrace Estates Pump Station	\$255,748	\$8,525	\$76,719	\$161,979	\$8,525	\$153,500	8,525
Thomas Pump Station	\$79,522	\$148	\$1,186	\$78,040	\$148	\$77,900	148
Voelker Pump Station	\$791,150	\$14,060	\$591,516	\$1,329,316	\$33,356	\$1,382,033	34,840
Waldo Pump Station	\$452,109	\$7,794	\$183,230	\$253,291	\$7,794	\$245,500	7,794
Walter Pumping Station	\$3,668,523	\$122,918	\$1,360,858	\$3,092,383	\$140,094	\$3,815,050	154,969
Willet Pumping St #1	\$842,465	\$0	\$842,465	\$0	\$0	\$0	0
Willet Pumping St #4	\$39,262	\$1,963	\$9,815	\$25,521	\$1,963	\$23,600	1,963
Cold Storage Building	\$188,305	\$3,206	\$135,942	\$45,951	\$3,206	\$42,700	3,206
Communication Equipment	\$487,970	\$37,738	\$379,056	\$33,438	\$37,738	\$0	33,438
Construction Equipment	\$1,076,164	\$19,307	\$996,976	\$40,574	\$19,307	\$21,300	19,307
Gas Pumps	\$18,617	\$931	\$3,646	\$13,110	\$931	\$12,200	931
Office Furniture & Equip	\$8,243	\$2,748	\$5,267	\$0	\$229	\$0	0
Office Furniture & Equipment	\$438,864	\$19,995	\$363,929	\$34,945	\$19,995	\$14,900	19,995
Rights & Licenses	\$68,101	\$0	\$68,101	\$300,000	\$15,000	\$555,000	30,000
Site Work & Landscaping	\$120,139	\$955	\$116,399	\$201,831	\$4,955	\$388,900	8,955
Tools & Working Equipment	\$502,410	\$25,577	\$401,168	\$50,088	\$25,577	\$24,500	25,577
Transportation Equipment	\$1,938,038	\$202,657	\$1,047,323	\$485,401	\$202,657	\$282,700	202,657
Utilities Service Center	\$998,292	\$23,633	\$582,258	\$1,134,552	\$34,572	\$1,666,343	42,901
Hydrants	\$3,793,051	\$98,639	\$1,932,359	\$1,663,413	\$98,639	\$1,564,800	98,639
Meters	\$2,648,535	\$6,811	\$2,595,760	\$39,154	\$6,811	\$32,300	6,811
Service Connections	\$29,182	\$0	\$29,182	\$0	\$0	\$0	0
Fox Reservoir	\$3,746,659	\$157,376	\$1,405,330	\$2,026,576	\$157,376	\$1,869,200	157,376
Leavens Reservoir	\$80,527	\$0	\$80,527	\$2,487,330	\$49,747	\$4,263,520	87,787
Logan Reservoir	\$330,763	\$0	\$330,763	\$123,200	\$2,464	\$120,700	2,464
Staples Reservoir #1	\$21,856	\$22	\$0	\$21,812	\$22	\$21,800	22
Staples Reservoir #2	\$1,804,940	\$53,294	\$1,067,713	\$630,640	\$53,294	\$969,300	61,294
Staples Reservoir #3	\$663,177	\$18,561	\$307,473	\$318,582	\$18,561	\$300,000	18,561
Staples Reservoir #4	\$33,544	\$0	\$33,544	\$0	\$0	\$0	0
Staples Reservoir #5	\$33,057	\$0	\$33,057	\$0	\$0	\$0	0
Staples Reservoir #6	\$568,098	\$0	\$568,098	\$0	\$0	\$0	0
Staples Reservoir #7	\$105,782	\$106	\$0	\$105,571	\$106	\$105,500	106
Staples Reservoir #8	\$53,163	\$0	\$53,163	\$0	\$0	\$0	0
Waldo Reservoir	\$3,555,572	\$70,301	\$327,572	\$3,087,398	\$70,301	\$3,017,100	70,301

Fixed Asset	Original Cost	Annual Depreciation	Accumulated Depreciation Through FY2020	Net Fixed Assets (Book Value FY2022)	Allocated Depreciation Expense FY2022	Net Fixed Assets (Book Value FY2023)	Allocated Depreciation Expense FY2023
Willet Pumping St #2	\$237,334	\$11,867	\$205,689	\$7,911	\$11,867	\$0	7,911
Willet Pumping St #3	\$505,359	\$0	\$505,359	\$0	\$0	\$0	0
Zone 3 Chapple Reservoir	\$6,579,214	\$131,584	\$526,337	\$5,789,708	\$131,584	\$5,658,100	131,584
Zone 4 Reservoir	\$7,478,484	\$145,235	\$1,247,346	\$5,940,668	\$145,235	\$5,795,400	145,235
Low Duty Pumping St #1	\$10,271	\$0	\$10,271	\$103,100	\$1,718	\$101,400	1,718
Low Duty Pumping St #2	\$86,793	\$0	\$86,793	\$0	\$0	\$0	0
Low Duty Pumping St #3	\$2,402,292	\$72,121	\$815,638	\$1,442,413	\$72,121	\$1,370,300	72,121
Low Duty Pumping St #4	\$118,525	\$2,777	\$57,205	\$55,766	\$2,777	\$53,000	2,777
Low Duty Pumping St #5	\$256,827	\$16,667	\$137,383	\$86,111	\$16,667	\$69,400	16,667
Low Duty Pumping St #6	\$138,233	\$3,309	\$79,215	\$52,399	\$3,309	\$49,100	3,309
River Intake #1	\$46,199	\$0	\$46,199	\$0	\$0	\$0	0
River Intake #10	\$63,356	\$634	\$10,032	\$52,057	\$634	\$51,400	634
River Intake #12	\$140,000	\$140	\$0	\$139,720	\$140	\$139,600	140
River Intake #13	\$66,188	\$3,309	\$7,170	\$52,399	\$3,309	\$49,100	3,309
River Intake #15	\$165,652	\$8,283	\$8,973	\$140,114	\$8,283	\$131,800	8,283
River Intake #2	\$199,365	\$0	\$199,365	\$0	\$0	\$0	0
River Intake #3	\$184,281	\$6	\$178,646	\$5,624	\$6	\$5,600	6
River Intake #4	\$89,140	\$0	\$89,140	\$0	\$0	\$0	0
River Intake #5	\$286,956	\$0	\$286,956	\$0	\$0	\$0	0
River Intake #6	\$1,466,906	\$48,653	\$506,000	\$863,599	\$48,653	\$814,900	48,653
River Intake #7	\$1,106,430	\$36,594	\$243,411	\$789,830	\$36,594	\$753,200	36,594
River Intake #8	\$21,827	\$22	\$0	\$21,783	\$22	\$21,800	22
River Intake #9	\$3,786,740	\$37,867	\$656,369	\$3,054,637	\$37,867	\$23,596,800	457,867
Distribution Mains < 12"	\$42,768,112	\$965,308	\$20,271,239	\$36,171,537	\$1,277,414	\$51,886,682	1,627,197
Transmission main 12" & Up-	\$41,653,320	\$906,438	\$22,591,007	\$17,249,437	\$906,438	\$16,343,000	906,438
Transmission Mains = 12"	\$19,038,107	\$380,762	\$2,478,860	\$15,797,723	\$380,762	\$15,417,000	380,762
Transmission Mains > 12"	\$19,741,645	\$394,833	\$1,772,295	\$17,197,271	\$395,185	\$18,277,000	425,285
Chemical Bldg & Treatment Basin	\$8,909,458	\$223,201	\$2,905,002	\$11,212,819	\$303,983	\$72,346,823	1,195,449
Clear Well Standpipe #1	\$641,250	\$0	\$641,250	\$0	\$0	\$0	0
Clear Well Standpipe #2	\$35,843	\$0	\$35,843	\$0	\$0	\$0	0
Clear Well Standpipe #3	\$127,594	\$0	\$127,594	\$0	\$0	\$0	0
Clear Well Standpipe #4	\$2,597,191	\$77,924	\$1,525,487	\$915,857	\$77,924	\$837,900	77,924
Clear Well Standpipe #5	\$2,425,638	\$121,282	\$818,653	\$1,364,421	\$121,282	\$1,243,100	121,282
Clear Well Standpipe #7	\$628,231	\$12,565	\$29,317	\$573,785	\$12,565	\$561,200	12,565
Filter Bldg, Clr Basin, and PS	\$29,870,635	\$993,940	\$13,836,485	\$16,423,981	\$1,027,908	\$16,857,999	1,049,280
Heated Storage Bldg & Yrd Storage	\$110,224	\$4,255	\$70,461	\$31,253	\$4,255	\$27,000	4,255
High Service Pumping Station	\$8,667,564	\$243,800	\$6,906,510	\$2,601,911	\$265,941	\$3,210,833	281,024
Laboratory & Test Equipment	\$397,164	\$24,627	\$242,445	\$105,465	\$24,627	\$80,800	24,627
Maint & Personnel Bldg	\$68,310	\$0	\$68,310	\$0	\$0	\$0	0
Plant Electrical Shop	\$559,167	\$18,639	\$234,539	\$287,350	\$18,639	\$268,700	18,639
Plant Maintenance Whse	\$17,990	\$0	\$17,990	\$0	\$0	\$0	0
UV Building	\$3,319,730	\$165,986	\$635,948	\$2,351,808	\$165,986	\$2,185,800	165,986

Fixed Asset	Original Cost	Annual Depreciation	Accumulated Depreciation Through FY2020	Net Fixed Assets (Book Value FY2022)	Allocated Depreciation Expense FY2022	Net Fixed Assets (Book Value FY2023)	Allocated Depreciation Expense FY2023
West End Reservoir	\$2,023,582	\$2,026	\$0	\$8,428,519	\$130,205	\$12,729,660	222,525
Yard Piping & Flumes	\$5,989,334	\$58,796	\$3,269,923	\$2,601,820	\$58,796	\$2,543,000	58,796
Net Fixed Assets & Depreciation	\$255,274,635	\$6,201,062	\$106,656,579	\$173,779,008	\$6,896,412	\$278,339,444	\$8,797,779

## Appendix B: Detailed Allocation Tables

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
<b>Owners</b>						
Single Family Residential	39.8%	47.2%	23.3%	88.1%	78.3%	0.0%
Multi-Family Residential	9.6%	2.8%	10.4%	2.7%	5.9%	0.0%
Commercial	17.7%	6.6%	11.1%	6.8%	12.5%	0.0%
Industrial	0.2%	0.1%	0.0%	0.0%	0.1%	0.0%
Seasonal	5.2%	9.5%	5.4%	1.3%	1.9%	0.0%
Public Fire Protection	0.0%	9.3%	29.5%	0.0%	0.0%	85.9%
Private Fire Protection	0.0%	1.5%	4.7%	0.0%	0.0%	13.6%
<b>Non-Owners</b>						
Residential	0.3%	0.4%	0.2%	0.8%	0.7%	0.0%
Commercial	11.9%	4.4%	7.4%	0.1%	0.4%	0.0%
Resale	15.3%	18.1%	7.9%	0.0%	0.1%	0.0%
Private Fire Protection	0.0%	0.1%	0.2%	0.0%	0.0%	0.5%
<b>Total - Joint</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table B.1: Summary of Customer Service Characteristics - Joint

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
<b>Owners</b>						
Single Family Residential	47.0%	57.7%	25.3%	88.1%	78.4%	0.0%
Multi-Family Residential	11.3%	3.5%	11.3%	2.7%	5.9%	0.0%
Commercial	20.9%	8.0%	12.0%	6.8%	12.6%	0.0%
Industrial	0.3%	0.1%	0.0%	0.0%	0.1%	0.0%
Seasonal	6.1%	11.6%	5.8%	1.3%	1.9%	0.0%
Public Fire Protection	0.0%	11.4%	32.0%	0.0%	0.0%	85.9%
Private Fire Protection	0.0%	1.8%	5.1%	0.0%	0.0%	13.6%
<b>Non-Owners</b>						
Residential	0.4%	0.5%	0.2%	0.8%	0.7%	0.0%
Commercial	14.0%	5.4%	8.1%	0.1%	0.4%	0.0%
Resale	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Private Fire Protection	0.0%	0.1%	0.2%	0.0%	0.0%	0.5%
<b>Total -All-But-Resale</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table B.2: Summary of Customer Service Characteristics – All-But-Resale

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
<b>Owners</b>						
Single Family Residential	54.9%	61.3%	27.6%	89.0%	79.3%	0.0%
Multi-Family Residential	13.2%	3.7%	12.3%	2.8%	5.9%	0.0%
Commercial	24.4%	8.5%	13.2%	6.9%	12.7%	0.0%
Industrial	0.3%	0.1%	0.1%	0.0%	0.1%	0.0%
Seasonal	7.1%	12.4%	6.4%	1.3%	2.0%	0.0%
Public Fire Protection	0.0%	12.1%	34.9%	0.0%	0.0%	86.3%
Private Fire Protection	0.0%	1.9%	5.5%	0.0%	0.0%	13.7%
<b>Total - Owner</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Table B.3: Summary of Customer Service Characteristics – Owner**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
<b>Non-Owners</b>						
Residential	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Commercial	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Resale	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Private Fire Protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total - Resale</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Table B.4: Summary of Customer Service Characteristics – Resale**

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$497,351	\$497,351	\$0	\$0	\$0	\$0	\$0
All Other	3,320,224	1,509,193	1,811,032	0	0	0	0
High Service Pumping							
Utilities	1,164,683	931,747	232,937	0	0	0	0
All Other	35,701	16,228	19,473	0	0	0	0
System Pumping & Storage							
Utilities	68,961	55,169	13,792	0	0	0	0
All Other	28,855	13,116	15,739	0	0	0	0
Distribution System							
Fire Hydrants	0	0	0	0	0	0	0
All Other	633,005	186,178	223,414	223,414	0	0	0
Customer Billing & Meter	1,551,014	0	0	0	629,712	921,303	0
Admin.	2,354,173	657,521	789,026	176,340	198,124	289,866	243,297
O&M - Total	\$9,653,969	\$3,866,502	\$3,105,412	\$399,754	\$827,836	\$1,211,168	\$243,297
Less: O&M Non-Rate Rev							
Water Permits	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Misc. Revenue	0	0	0	0	0	0	0
Collection of Bad Debt	0	0	0	0	0	0	0
Sale of Material/Labor	0	0	0	0	0	0	0
Public Water Supply	0	0	0	0	0	0	0
Water Svc Line Repair	0	0	0	0	0	0	0
Water Svc Line Admin.	0	0	0	0	0	0	0
Hydrant Mtr Rental Fee	0	0	0	0	0	0	0
Charge for Services	0	0	0	0	0	0	0
Total O&M Non-Rate Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Joint O&M Rev Req.	\$9,653,969	\$3,866,502	\$3,105,412	\$399,754	\$827,836	\$1,211,168	\$243,297

**Table B.5: Joint O&M Costs by Functional Cost Component – FY22**

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$47,649	\$47,649	\$0	\$0	\$0	\$0	\$0
All Other	318,096	144,589	173,507	0	0	0	0
High Service Pumping							
Utilities	111,583	89,266	22,317	0	0	0	0
All Other	3,420	1,555	1,866	0	0	0	0
System Pumping & Storage							
Utilities	230,674	184,539	46,135	0	0	0	0
All Other	96,520	43,873	52,647	0	0	0	0
Distribution System							
Fire Hydrants	847,375	0	0	0	0	0	847,375
All Other	815,793	239,939	287,927	287,927	0	0	0
Customer Billing & Meter	148,596	0	0	0	60,330	88,266	0
Admin.	225,543	62,994	75,593	16,894	18,981	27,771	23,309
O&M - Total	\$2,845,249	\$814,404	\$659,991	\$304,821	\$79,311	\$116,036	\$870,685
Less: O&M Non-Rate Rev							
Water Permits	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Misc. Revenue	0	0	0	0	0	0	0
Collection of Bad Debt	0	0	0	0	0	0	0
Sale of Material/Labor	0	0	0	0	0	0	0
Public Water Supply	0	0	0	0	0	0	0
Water Srvc Line Repair	0	0	0	0	0	0	0
Water Srvc Line Admin.	0	0	0	0	0	0	0
Hydrant Mtr Rental Fee	0	0	0	0	0	0	0
Charge for Services	0	0	0	0	0	0	0
Total O&M Non-Rate Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total All-But-Resale O&M Rev Req.	\$2,845,249	\$814,404	\$659,991	\$304,821	\$79,311	\$116,036	\$870,685

**Table B.6: All-But-Resale O&M Costs by Functional Cost Component – FY22**

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	0	0	0	0	0	0	0
High Service Pumping							
Utilities	0	0	0	0	0	0	0
All Other	0	0	0	0	0	0	0
System Pumping & Storage							
Utilities	142,967	114,373	28,593	0	0	0	0
All Other	59,821	27,191	32,630	0	0	0	0
Distribution System							
Fire Hydrants	0	0	0	0	0	0	0
All Other	291,353	85,692	102,831	102,831	0	0	0
Customer Billing & Meter	0	0	0	0	0	0	0
Admin.	0	0	0	0	0	0	0
O&M - Total	\$494,141	\$227,257	\$164,054	\$102,831	\$0	\$0	\$0
Less: O&M Non-Rate Rev							
3121 Street Sprinkling	\$1,700	\$686	\$502	\$99	\$112	\$163	\$137
3122 Sewer Flushing	\$6,000	\$2,422	\$1,771	\$351	\$394	\$577	\$484
Water Permits	\$56,000	\$22,606	\$16,531	\$3,276	\$3,681	\$5,386	\$4,520
Misc. Revenue	17,200	6,943	5,077	1,006	1,131	1,654	1,388
Collection of Bad Debt	3,000	1,211	886	176	197	289	242
Sale of Material/Labor	280,000	113,028	82,653	16,382	18,406	26,929	22,602
Public Water Supply	62,000	25,028	18,302	3,627	4,076	5,963	5,005
Water Srvc Line Repair	526,000	212,331	155,269	30,775	34,577	50,588	42,460
Water Srvc Line Admin.	25,000	10,092	7,380	1,463	1,643	2,404	2,018
Hydrant Mtr Rental Fee	23,000	9,284	6,789	1,346	1,512	2,212	1,857
Charge for Services	69,000	27,853	20,368	4,037	4,536	6,636	5,570
Total O&M Non-Rate Rev	\$1,068,900	\$431,485	\$315,527	\$62,539	\$70,264	\$102,800	\$86,285
Total Owner O&M Rev Req.	(\$574,759)	(\$204,228)	(\$151,473)	\$40,292	(\$70,264)	(\$102,800)	(\$86,285)

**Table B.7: Owner O&M Costs by Functional Cost Component – FY22**

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	0	0	0	0	0	0	0
High Service Pumping							
Utilities	0	0	0	0	0	0	0
All Other	0	0	0	0	0	0	0
System Pumping & Storage							
Utilities	34,132	27,306	6,826	0	0	0	0
All Other	49,534	22,516	27,019	0	0	0	0
Distribution System							
Fire Hydrants	0	0	0	0	0	0	0
All Other	0	0	0	0	0	0	0
Customer Billing & Meter	0	0	0	0	0	0	0
Admin.	0	0	0	0	0	0	0
O&M - Total	\$83,666	\$49,821	\$33,845	\$0	\$0	\$0	\$0
Less: O&M Non-Rate Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Resale O&M Rev Req.	\$83,666	\$49,821	\$33,845	\$0	\$0	\$0	\$0

**Table B.8: Resale O&M Costs by Functional Cost Component – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	\$1,540,570	\$1,466,019	\$93,073	\$729,672	\$948,713	\$0	\$4,778,046
Multi-Family Residential	\$370,547	\$88,154	\$41,575	\$22,756	\$71,019	\$0	\$594,050
Commercial	685,376	203,815	44,364	56,649	151,895	0	1,142,100
Industrial	8,229	2,447	178	160	1,230	0	12,243
Seasonal	199,198	296,185	21,490	10,845	23,479	0	551,197
Public Fire Protection	0	289,642	117,813	0	0	208,951	616,407
Private Fire Protection	0	45,949	18,690	0	0	33,148	97,787
Non-Owners							
Residential	\$13,036	\$12,405	\$788	\$6,741	\$8,759	\$0	\$41,728
Commercial	458,569	136,368	29,683	986	4,653	0	630,259
Resale	590,978	562,768	31,425	27	1,422	0	1,186,619
Private Fire Protection	0	1,660	675	0	0	1,198	3,533
<b>Total - Joint</b>	<b>\$3,866,502</b>	<b>\$3,105,412</b>	<b>\$399,754</b>	<b>\$827,836</b>	<b>\$1,211,168</b>	<b>\$243,297</b>	<b>\$9,653,969</b>

**Table B.9: Allocation of Joint O&M Costs to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Single Family Residential	\$383,037	\$380,533	\$77,025	\$69,909	\$90,999	\$0	\$1,001,502
Multi-Family Residential	\$92,130	\$22,882	\$34,406	\$2,180	\$6,812	\$0	\$158,411
Commercial	170,407	52,904	36,715	5,427	14,569	0	280,023
Industrial	2,046	635	147	15	118	0	2,961
Seasonal	49,527	76,880	17,785	1,039	2,252	0	147,484
Public Fire Protection	0	75,182	97,500	0	0	747,772	920,454
Private Fire Protection	0	11,927	15,467	0	0	118,627	146,021
<b>Non-Owners</b>							
Residential	\$3,241	\$3,220	\$652	\$646	\$840	\$0	\$8,599
Commercial	114,016	35,397	24,565	94	446	0	174,518
Resale	0	0	0	0	0	0	0
Private Fire Protection	0	431	559	0	0	4,286	5,276
<b>Total - All-But-Resale</b>	<b>\$814,404</b>	<b>\$659,991</b>	<b>\$304,821</b>	<b>\$79,311</b>	<b>\$116,036</b>	<b>\$870,685</b>	<b>\$2,845,249</b>

**Table B.10: Allocation of All-But-Resale O&M Costs to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Single Family Residential	(\$112,210)	(\$92,827)	\$11,122	(\$62,518)	(\$81,522)	\$0	(\$337,956)
Multi-Family Residential	(\$26,989)	(\$5,582)	\$4,968	(\$1,950)	(\$6,103)	\$0	(\$35,656)
Commercial	(49,920)	(12,905)	5,301	(4,854)	(13,052)	0	(75,431)
Industrial	(599)	(155)	21	(14)	(106)	0	(852)
Seasonal	(14,509)	(18,754)	2,568	(929)	(2,017)	0	(33,642)
Public Fire Protection	0	(18,340)	14,078	0	0	(74,471)	(78,733)
Private Fire Protection	0	(2,909)	2,233	0	0	(11,814)	(12,490)
<b>Total - Owner</b>	<b>(\$204,228)</b>	<b>(\$151,473)</b>	<b>\$40,292</b>	<b>(\$70,264)</b>	<b>(\$102,800)</b>	<b>(\$86,285)</b>	<b>(\$574,759)</b>

**Table B.11: Allocation of Owner O&M Costs to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Non-Owners</b>							
Residential	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial	0	0	0	0	0	0	0
Resale	49,821	33,845	0	0	0	0	83,666
Private Fire Protection	0	0	0	0	0	0	0
<b>Total - Resale</b>	<b>\$49,821</b>	<b>\$33,845</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$83,666</b>

**Table B.12: Allocation of Resale O&M Costs to Customer Class – FY22**

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$509,785	\$509,785	\$0	\$0	\$0	\$0	\$0
All Other	\$3,419,831	\$1,554,469	\$1,865,362	\$0	\$0	\$0	\$0
High Service Pumping							
Utilities	\$1,199,624	\$959,699	\$239,925	\$0	\$0	\$0	\$0
All Other	\$36,772	\$16,715	\$20,058	\$0	\$0	\$0	\$0
System Pumping & Storage							
Utilities	\$71,030	\$56,824	\$14,206	\$0	\$0	\$0	\$0
All Other	\$29,721	\$13,509	\$16,211	\$0	\$0	\$0	\$0
Distribution System							
Fire Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	\$651,995	\$191,763	\$230,116	\$230,116	\$0	\$0	\$0
Customer Billing & Meter	\$1,597,545	\$0	\$0	\$0	\$648,603	\$948,942	\$0
Admin.	\$2,424,799	\$677,247	\$812,696	\$181,630	\$204,067	\$298,562	\$250,596
O&M - Total	\$9,941,101	\$3,980,011	\$3,198,574	\$411,746	\$852,671	\$1,247,503	\$250,596
Less: O&M Non-Rate Rev							
Water Permits	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Misc. Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Collection of Bad Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sale of Material/Labor	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Public Water Supply	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Srvc Line Repair	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Srvc Line Admin.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrant Mtr Rental Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Charge for Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total O&M Non-Rate Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Joint O&amp;M Rev Req.</b>	<b>\$9,941,101</b>	<b>\$3,980,011</b>	<b>\$3,198,574</b>	<b>\$411,746</b>	<b>\$852,671</b>	<b>\$1,247,503</b>	<b>\$250,596</b>

**Table B.13: Joint O&M Costs by Functional Cost Component – FY23**

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$48,840	\$48,840	\$0	\$0	\$0	\$0	\$0
All Other	\$327,638	\$148,927	\$178,712	\$0	\$0	\$0	\$0
High Service Pumping							
Utilities	\$114,930	\$91,944	\$22,986	\$0	\$0	\$0	\$0
All Other	\$3,523	\$1,601	\$1,922	\$0	\$0	\$0	\$0
System Pumping & Storage							
Utilities	\$237,594	\$190,076	\$47,519	\$0	\$0	\$0	\$0
All Other	\$99,416	\$45,189	\$54,227	\$0	\$0	\$0	\$0
Distribution System							
Fire Hydrants	\$872,797	\$0	\$0	\$0	\$0	\$0	\$872,797
All Other	\$840,267	\$247,137	\$296,565	\$296,565	\$0	\$0	\$0
Customer Billing & Meter	\$153,053	\$0	\$0	\$0	\$62,140	\$90,914	\$0
Admin.	\$232,309	\$64,884	\$77,861	\$17,401	\$19,551	\$28,604	\$24,008
O&M - Total	\$2,930,368	\$838,598	\$679,791	\$313,966	\$81,690	\$119,518	\$896,805
Less: O&M Non-Rate Rev							
Water Permits	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Misc. Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Collection of Bad Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sale of Material/Labor	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Public Water Supply	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Srvc Line Repair	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Srvc Line Admin.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrant Mtr Rental Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Charge for Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total O&M Non-Rate Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total All-But-Resale O&amp;M Rev Req.</b>	<b>\$2,930,368</b>	<b>\$838,598</b>	<b>\$679,791</b>	<b>\$313,966</b>	<b>\$81,690</b>	<b>\$119,518</b>	<b>\$896,805</b>

**Table B.14: All-But-Resale O&M Costs by Functional Cost Component – FY23**

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping							
Utilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
System Pumping & Storage							
Utilities	\$147,256	\$117,804	\$29,451	\$0	\$0	\$0	\$0
All Other	\$61,616	\$28,007	\$33,609	\$0	\$0	\$0	\$0
Distribution System							
Fire Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	\$300,094	\$88,263	\$105,916	\$105,916	\$0	\$0	\$0
Customer Billing & Meter	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Admin.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M - Total	\$508,965	\$234,074	\$168,975	\$105,916	\$0	\$0	\$0
Less: O&M Non-Rate Rev							
3121 Street Sprinkling	\$1,700	\$686	\$502	\$99	\$112	\$163	\$137
3122 Sewer Flushing	\$6,000	\$2,422	\$1,771	\$351	\$394	\$577	\$484
Water Permits	\$56,000	\$22,606	\$16,531	\$3,276	\$3,681	\$5,386	\$4,520
Misc. Revenue	\$17,200	\$6,943	\$5,077	\$1,006	\$1,131	\$1,654	\$1,388
Collection of Bad Debt	\$3,000	\$1,211	\$886	\$176	\$197	\$289	\$242
Sale of Material/Labor	\$280,000	\$113,028	\$82,653	\$16,382	\$18,406	\$26,929	\$22,602
Public Water Supply	\$62,000	\$25,028	\$18,302	\$3,627	\$4,076	\$5,963	\$5,005
Water Srvc Line Repair	\$526,000	\$212,331	\$155,269	\$30,775	\$34,577	\$50,588	\$42,460
Water Srvc Line Admin.	\$25,000	\$10,092	\$7,380	\$1,463	\$1,643	\$2,404	\$2,018
Hydrant Mtr Rental Fee	\$23,000	\$9,284	\$6,789	\$1,346	\$1,512	\$2,212	\$1,857
Charge for Services	\$69,000	\$27,853	\$20,368	\$4,037	\$4,536	\$6,636	\$5,570
Total O&M Non-Rate Rev	\$1,068,900	\$431,485	\$315,527	\$62,539	\$70,264	\$102,800	\$86,285
<b>Total Owner O&amp;M Rev Req.</b>	<b>(\$559,935)</b>	<b>(\$197,410)</b>	<b>(\$146,552)</b>	<b>\$43,377</b>	<b>(\$70,264)</b>	<b>(\$102,800)</b>	<b>(\$86,285)</b>

Table B.15: Owner O&M Costs by Functional Cost Component – FY23

Line Item	Total	Base	Max Day	Max Hour	Customer	Meter	Direct Fire
Water Production							
Chemicals	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping							
Utilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
System Pumping & Storage							
Utilities	\$35,156	\$28,125	\$7,031	\$0	\$0	\$0	\$0
All Other	\$51,020	\$23,191	\$27,829	\$0	\$0	\$0	\$0
Distribution System							
Fire Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
All Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Customer Billing & Meter	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Admin.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M - Total	\$86,176	\$51,316	\$34,860	\$0	\$0	\$0	\$0
Less: O&M Non-Rate Rev	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Resale O&amp;M Rev Req.</b>	<b>\$86,176</b>	<b>\$51,316</b>	<b>\$34,860</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**Table B.16: Resale O&M Costs by Functional Cost Component – FY23**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	1,583,643	1,507,645	95,968	751,621	977,674	0	4,916,551
Multi-Family Residential	380,907	90,657	42,868	23,433	72,996	0	610,861
Commercial	704,538	209,602	45,744	58,336	156,206	0	1,174,427
Industrial	8,417	2,504	182	164	1,261	0	12,528
Seasonal	204,768	304,595	22,159	11,170	24,155	0	566,847
Public Fire Protection	0	296,391	120,876	0	0	215,225	632,493
Private Fire Protection	0	47,020	19,176	0	0	34,143	100,339
Non-Owners							
Residential	\$13,333	\$12,694	\$808	\$6,910	\$8,981	\$0	\$42,726
Commercial	\$469,045	\$139,543	\$30,454	\$1,010	\$4,771	\$0	\$644,823
Resale	\$615,360	\$586,233	\$32,822	\$27	\$1,458	\$0	\$1,235,900
Private Fire Protection	\$0	\$1,690	\$689	\$0	\$0	\$1,228	\$3,607
<b>Total - Joint</b>	<b>\$3,980,011</b>	<b>\$3,198,574</b>	<b>\$411,746</b>	<b>\$852,671</b>	<b>\$1,247,503</b>	<b>\$250,596</b>	<b>\$9,941,101</b>

**Table B.17: Allocation of Joint O&M Costs to Customer Class – FY23**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Single Family Residential	\$394,704	\$392,324	\$79,516	\$72,012	\$93,776	\$0	\$1,032,331
Multi-Family Residential	\$94,936	\$23,591	\$35,519	\$2,245	\$7,002	\$0	\$163,293
Commercial	\$175,598	\$54,543	\$37,902	\$5,589	\$14,983	\$0	\$288,615
Industrial	\$2,098	\$652	\$151	\$16	\$121	\$0	\$3,037
Seasonal	\$51,036	\$79,263	\$18,360	\$1,070	\$2,317	\$0	\$152,046
Public Fire Protection	\$0	\$77,128	\$100,155	\$0	\$0	\$770,224	\$947,506
Private Fire Protection	\$0	\$12,236	\$15,889	\$0	\$0	\$122,188	\$150,313
<b>Non-Owners</b>							
Residential	\$3,323	\$3,303	\$669	\$662	\$861	\$0	\$8,819
Commercial	\$116,904	\$36,312	\$25,233	\$97	\$458	\$0	\$179,004
Resale	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Private Fire Protection	\$0	\$440	\$571	\$0	\$0	\$4,393	\$5,404
<b>Total - All But Resale</b>	<b>\$838,598</b>	<b>\$679,791</b>	<b>\$313,966</b>	<b>\$81,690</b>	<b>\$119,518</b>	<b>\$896,805</b>	<b>\$2,930,368</b>

**Table B.18: Allocation of All-But-Resale O&M Costs to Customer Class – FY23**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Single Family Residential	(\$108,466)	(\$89,874)	\$11,997	(\$62,520)	(\$81,560)	\$0	(\$330,422)
Multi-Family Residential	(\$26,089)	(\$5,404)	\$5,359	(\$1,949)	(\$6,090)	\$0	(\$34,173)
Commercial	(\$48,255)	(\$12,495)	\$5,719	(\$4,852)	(\$13,031)	\$0	(\$72,914)
Industrial	(\$576)	(\$149)	\$23	(\$14)	(\$105)	\$0	(\$822)
Seasonal	(\$14,025)	(\$18,158)	\$2,770	(\$929)	(\$2,015)	\$0	(\$32,356)
Public Fire Protection	\$0	(\$17,669)	\$15,111	\$0	\$0	(\$74,471)	(\$77,028)
Private Fire Protection	\$0	(\$2,803)	\$2,397	\$0	\$0	(\$11,814)	(\$12,220)
<b>Total - Owner</b>	<b>(\$197,410)</b>	<b>(\$146,552)</b>	<b>\$43,377</b>	<b>(\$70,264)</b>	<b>(\$102,800)</b>	<b>(\$86,285)</b>	<b>(\$559,935)</b>

**Table B.19: Allocation of Owner O&M Costs to Customer Class – FY23**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Non-Owners</b>							
Residential	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Resale	\$51,316	\$34,860	\$0	\$0	\$0	\$0	\$86,176
Private Fire Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total - Resale</b>	<b>\$51,316</b>	<b>\$34,860</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$86,176</b>

**Table B.20: Allocation of Resale O&M Costs to Customer Class – FY23**

Fixed Asset	Joint	All But Resale	Owners	Resale	Total
Booster Station - 12th Ave N & 27th	\$0	\$6,217	\$0	\$0	\$6,217
Chapple Pump Station	\$0	\$201,306	\$0	\$0	\$201,306
Christensen Pump Station	\$0	\$0	\$153,894	\$0	\$153,894
Fox Pump Station	\$0	\$2,171,660	\$0	\$0	\$2,171,660
Leavens Pump Station	\$0	\$0	\$138,571	\$0	\$138,571
Staples Pump Station #1	\$0	\$1,385,034	\$0	\$0	\$1,385,034
Staples Pump Station #2	\$0	\$25,438	\$0	\$0	\$25,438
Terrace Estates Pump Station	\$0	\$0	\$161,979	\$0	\$161,979
Thomas Pump Station	\$0	\$0	\$78,040	\$0	\$78,040
Voelker Pump Station	\$0	\$0	\$1,329,316	\$0	\$1,329,316
Waldo Pump Station	\$0	\$0	\$253,291	\$0	\$253,291
Walter Pumping Station	\$0	\$0	\$1,855,430	\$1,236,953	\$3,092,383
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$25,521	\$0	\$0	\$0	\$25,521
Cold Storage Building	\$45,951	\$0	\$0	\$0	\$45,951
Communication Equipment	\$33,438	\$0	\$0	\$0	\$33,438
Construction Equipment	\$40,574	\$0	\$0	\$0	\$40,574
Gas Pumps	\$13,110	\$0	\$0	\$0	\$13,110
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$34,945	\$0	\$0	\$0	\$34,945
Rights & Licenses	\$0	\$0	\$300,000	\$0	\$300,000
Site Work & Landscaping	\$201,831	\$0	\$0	\$0	\$201,831
Tools & Working Equipment	\$50,088	\$0	\$0	\$0	\$50,088
Transportation Equipment	\$485,401	\$0	\$0	\$0	\$485,401
Utilities Service Center	\$1,134,552	\$0	\$0	\$0	\$1,134,552
Hydrants	\$0	\$1,663,413	\$0	\$0	\$1,663,413
Meters	\$39,154	\$0	\$0	\$0	\$39,154
Service Connections	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$2,026,576	\$0	\$0	\$0	\$2,026,576
Leavens Reservoir	\$2,487,330	\$0	\$0	\$0	\$2,487,330
Logan Reservoir	\$0	\$0	\$123,200	\$0	\$123,200
Staples Reservoir #1	\$0	\$21,812	\$0	\$0	\$21,812
Staples Reservoir #2	\$0	\$630,640	\$0	\$0	\$630,640
Staples Reservoir #3	\$0	\$0	\$318,582	\$0	\$318,582
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$105,571	\$0	\$0	\$105,571
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$3,087,398	\$0	\$0	\$3,087,398
Willet Pumping St #2	\$7,911	\$0	\$0	\$0	\$7,911
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$5,789,708	\$0	\$5,789,708
Zone 4 Reservoir	\$0	\$5,940,668	\$0	\$0	\$5,940,668
Low Duty Pumping St #1	\$103,100	\$0	\$0	\$0	\$103,100

Fixed Asset	Joint	All But Resale	Owners	Resale	Total
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$1,442,413	\$0	\$0	\$0	\$1,442,413
Low Duty Pumping St #4	\$55,766	\$0	\$0	\$0	\$55,766
Low Duty Pumping St #5	\$86,111	\$0	\$0	\$0	\$86,111
Low Duty Pumping St #6	\$52,399	\$0	\$0	\$0	\$52,399
River Intake #1	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$52,057	\$0	\$0	\$0	\$52,057
River Intake #12	\$139,720	\$0	\$0	\$0	\$139,720
River Intake #13	\$52,399	\$0	\$0	\$0	\$52,399
River Intake #15	\$140,114	\$0	\$0	\$0	\$140,114
River Intake #2	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$5,624	\$0	\$0	\$0	\$5,624
River Intake #4	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$863,599	\$0	\$0	\$0	\$863,599
River Intake #7	\$789,830	\$0	\$0	\$0	\$789,830
River Intake #8	\$21,783	\$0	\$0	\$0	\$21,783
River Intake #9	\$3,054,637	\$0	\$0	\$0	\$3,054,637
Distribution Mains < 12"	\$0	\$21,702,922	\$14,468,615	\$0	\$36,171,537
Transmission main 12" & Up- don't use	\$17,249,437	\$0	\$0	\$0	\$17,249,437
Transmission Mains = 12"	\$0	\$15,797,723	\$0	\$0	\$15,797,723
Transmission Mains > 12"	\$17,197,271	\$0	\$0	\$0	\$17,197,271
Chemical Bldg & Treatment Basin	\$11,212,819	\$0	\$0	\$0	\$11,212,819
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$915,857	\$0	\$0	\$0	\$915,857
Clear Well Standpipe #5	\$1,364,421	\$0	\$0	\$0	\$1,364,421
Clear Well Standpipe #7	\$573,785	\$0	\$0	\$0	\$573,785
Filter Bldg, Clr Basin, and PS	\$16,423,981	\$0	\$0	\$0	\$16,423,981
Heated Storage Bldg & Yrd Storage	\$31,253	\$0	\$0	\$0	\$31,253
High Service Pumping Station	\$2,601,911	\$0	\$0	\$0	\$2,601,911
Laboratory & Test Equipment	\$105,465	\$0	\$0	\$0	\$105,465
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$287,350	\$0	\$0	\$0	\$287,350
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0
UV Building	\$2,351,808	\$0	\$0	\$0	\$2,351,808
West End Reservoir	\$8,428,519	\$0	\$0	\$0	\$8,428,519
Yard Piping & Flumes	\$2,601,820	\$0	\$0	\$0	\$2,601,820
<b>Grandtotal</b>	<b>\$94,831,627</b>	<b>\$52,739,802</b>	<b>\$24,970,626</b>	<b>\$1,236,953</b>	<b>\$173,779,008</b>

**Table B.21: Allocation of Net Fixed Assets to Ownership Categories – FY22**

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$1,829	\$2,194	\$2,194	\$0	\$0	\$0	\$6,217
Chapple Pump Station	\$91,503	\$109,804	\$0	\$0	\$0	\$0	\$201,306
Christensen Pump Station	\$69,952	\$83,942	\$0	\$0	\$0	\$0	\$153,894
Fox Pump Station	\$987,118	\$1,184,542	\$0	\$0	\$0	\$0	\$2,171,660
Leavens Pump Station	\$62,987	\$75,584	\$0	\$0	\$0	\$0	\$138,571
Staples Pump Station #1	\$629,561	\$755,473	\$0	\$0	\$0	\$0	\$1,385,034
Staples Pump Station #2	\$11,563	\$13,875	\$0	\$0	\$0	\$0	\$25,438
Terrace Estates Pump Station	\$73,627	\$88,352	\$0	\$0	\$0	\$0	\$161,979
Thomas Pump Station	\$35,473	\$42,567	\$0	\$0	\$0	\$0	\$78,040
Voelker Pump Station	\$604,235	\$725,082	\$0	\$0	\$0	\$0	\$1,329,316
Waldo Pump Station	\$115,132	\$138,159	\$0	\$0	\$0	\$0	\$253,291
Walter Pumping Station	\$1,405,629	\$1,686,754	\$0	\$0	\$0	\$0	\$3,092,383
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$11,600	\$13,920	\$0	\$0	\$0	\$0	\$25,521
Cold Storage Building	\$16,878	\$18,509	\$10,108	\$0	\$10	\$445	\$45,951
Communication Equipment	\$12,282	\$13,469	\$7,355	\$0	\$8	\$324	\$33,438
Construction Equipment	\$14,903	\$16,344	\$8,925	\$0	\$9	\$393	\$40,574
Gas Pumps	\$4,815	\$5,281	\$2,884	\$0	\$3	\$127	\$13,110
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$12,835	\$14,076	\$7,687	\$0	\$8	\$339	\$34,945
Rights & Licenses	\$110,190	\$120,844	\$65,990	\$0	\$68	\$2,908	\$300,000
Site Work & Landscaping	\$201,831	\$0	\$0	\$0	\$0	\$0	\$201,831
Tools & Working Equipment	\$18,397	\$20,176	\$11,018	\$0	\$11	\$486	\$50,088
Transportation Equipment	\$178,288	\$195,525	\$106,772	\$0	\$111	\$4,705	\$485,401
Utilities Service Center	\$416,722	\$457,011	\$249,563	\$0	\$259	\$10,997	\$1,134,552
Hydrants	\$0	\$0	\$0	\$0	\$0	\$1,663,413	\$1,663,413
Meters	\$0	\$0	\$0	\$0	\$39,154	\$0	\$39,154
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$596,052	\$715,262	\$715,262	\$0	\$0	\$0	\$2,026,576
Leavens Reservoir	\$731,568	\$877,881	\$877,881	\$0	\$0	\$0	\$2,487,330
Logan Reservoir	\$36,235	\$43,482	\$43,482	\$0	\$0	\$0	\$123,200
Staples Reservoir #1	\$6,415	\$7,698	\$7,698	\$0	\$0	\$0	\$21,812
Staples Reservoir #2	\$185,482	\$222,579	\$222,579	\$0	\$0	\$0	\$630,640
Staples Reservoir #3	\$93,700	\$112,441	\$112,441	\$0	\$0	\$0	\$318,582
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$31,050	\$37,260	\$37,260	\$0	\$0	\$0	\$105,571
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$908,058	\$1,089,670	\$1,089,670	\$0	\$0	\$0	\$3,087,398
Willet Pumping St #2	\$3,596	\$4,315	\$0	\$0	\$0	\$0	\$7,911
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$1,702,855	\$2,043,426	\$2,043,426	\$0	\$0	\$0	\$5,789,708
Zone 4 Reservoir	\$1,747,255	\$2,096,706	\$2,096,706	\$0	\$0	\$0	\$5,940,668

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Low Duty Pumping St #1	\$46,864	\$56,236	\$0	\$0	\$0	\$0	\$103,100
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$655,642	\$786,771	\$0	\$0	\$0	\$0	\$1,442,413
Low Duty Pumping St #4	\$25,348	\$30,418	\$0	\$0	\$0	\$0	\$55,766
Low Duty Pumping St #5	\$39,141	\$46,970	\$0	\$0	\$0	\$0	\$86,111
Low Duty Pumping St #6	\$23,818	\$28,581	\$0	\$0	\$0	\$0	\$52,399
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$52,057	\$0	\$0	\$0	\$0	\$0	\$52,057
River Intake #12	\$139,720	\$0	\$0	\$0	\$0	\$0	\$139,720
River Intake #13	\$52,399	\$0	\$0	\$0	\$0	\$0	\$52,399
River Intake #15	\$140,114	\$0	\$0	\$0	\$0	\$0	\$140,114
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$5,624	\$0	\$0	\$0	\$0	\$0	\$5,624
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$863,599	\$0	\$0	\$0	\$0	\$0	\$863,599
River Intake #7	\$789,830	\$0	\$0	\$0	\$0	\$0	\$789,830
River Intake #8	\$21,783	\$0	\$0	\$0	\$0	\$0	\$21,783
River Intake #9	\$3,054,637	\$0	\$0	\$0	\$0	\$0	\$3,054,637
Distribution Mains < 12"	\$10,638,687	\$12,766,425	\$12,766,425	\$0	\$0	\$0	\$36,171,537
Transmission main 12" & Up- don't use	\$5,073,364	\$6,088,036	\$6,088,036	\$0	\$0	\$0	\$17,249,437
Transmission Mains = 12"	\$4,646,389	\$5,575,667	\$5,575,667	\$0	\$0	\$0	\$15,797,723
Transmission Mains > 12"	\$5,058,021	\$6,069,625	\$6,069,625	\$0	\$0	\$0	\$17,197,271
Chemical Bldg & Treatment Basin	\$5,096,736	\$6,116,083	\$0	\$0	\$0	\$0	\$11,212,819
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$416,298	\$499,558	\$0	\$0	\$0	\$0	\$915,857
Clear Well Standpipe #5	\$620,191	\$744,230	\$0	\$0	\$0	\$0	\$1,364,421
Clear Well Standpipe #7	\$260,811	\$312,973	\$0	\$0	\$0	\$0	\$573,785
Filter Bldg, Clr Basin, and PS	\$7,465,446	\$8,958,535	\$0	\$0	\$0	\$0	\$16,423,981
Heated Storage Bldg & Yrd Storage	\$11,479	\$12,589	\$6,875	\$0	\$7	\$303	\$31,253
High Service Pumping Station	\$1,182,687	\$1,419,224	\$0	\$0	\$0	\$0	\$2,601,911
Laboratory & Test Equipment	\$105,465	\$0	\$0	\$0	\$0	\$0	\$105,465
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$130,614	\$156,736	\$0	\$0	\$0	\$0	\$287,350
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$1,069,004	\$1,282,804	\$0	\$0	\$0	\$0	\$2,351,808
West End Reservoir	\$3,831,145	\$4,597,374	\$0	\$0	\$0	\$0	\$8,428,519
Yard Piping & Flumes	\$1,182,645	\$1,419,175	\$0	\$0	\$0	\$0	\$2,601,820
Net	63,829,174	70,000,216	38,225,529	0	39,649	1,684,441	173,779,008

Table B.22: Allocation of Net Fixed Assets to Functional Cost Component – FY22

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chapple Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Christensen Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Terrace Estates Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Thomas Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Voelker Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Walter Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$11,600	\$13,920	\$0	\$0	\$0	\$0	\$25,521
Cold Storage Building	\$16,878	\$18,509	\$10,108	\$0	\$10	\$445	\$45,951
Communication Equipment	\$12,282	\$13,469	\$7,355	\$0	\$8	\$324	\$33,438
Construction Equipment	\$14,903	\$16,344	\$8,925	\$0	\$9	\$393	\$40,574
Gas Pumps	\$4,815	\$5,281	\$2,884	\$0	\$3	\$127	\$13,110
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$12,835	\$14,076	\$7,687	\$0	\$8	\$339	\$34,945
Rights & Licenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Work & Landscaping	\$201,831	\$0	\$0	\$0	\$0	\$0	\$201,831
Tools & Working Equipment	\$18,397	\$20,176	\$11,018	\$0	\$11	\$486	\$50,088
Transportation Equipment	\$178,288	\$195,525	\$106,772	\$0	\$111	\$4,705	\$485,401
Utilities Service Center	\$416,722	\$457,011	\$249,563	\$0	\$259	\$10,997	\$1,134,552
Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$0	\$39,154	\$0	\$39,154
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$596,052	\$715,262	\$715,262	\$0	\$0	\$0	\$2,026,576
Leavens Reservoir	\$731,568	\$877,881	\$877,881	\$0	\$0	\$0	\$2,487,330
Logan Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #2	\$3,596	\$4,315	\$0	\$0	\$0	\$0	\$7,911
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 4 Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Low Duty Pumping St #1	\$46,864	\$56,236	\$0	\$0	\$0	\$0	\$103,100
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$655,642	\$786,771	\$0	\$0	\$0	\$0	\$1,442,413
Low Duty Pumping St #4	\$25,348	\$30,418	\$0	\$0	\$0	\$0	\$55,766
Low Duty Pumping St #5	\$39,141	\$46,970	\$0	\$0	\$0	\$0	\$86,111
Low Duty Pumping St #6	\$23,818	\$28,581	\$0	\$0	\$0	\$0	\$52,399
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$52,057	\$0	\$0	\$0	\$0	\$0	\$52,057
River Intake #12	\$139,720	\$0	\$0	\$0	\$0	\$0	\$139,720
River Intake #13	\$52,399	\$0	\$0	\$0	\$0	\$0	\$52,399
River Intake #15	\$140,114	\$0	\$0	\$0	\$0	\$0	\$140,114
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$5,624	\$0	\$0	\$0	\$0	\$0	\$5,624
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$863,599	\$0	\$0	\$0	\$0	\$0	\$863,599
River Intake #7	\$789,830	\$0	\$0	\$0	\$0	\$0	\$789,830
River Intake #8	\$21,783	\$0	\$0	\$0	\$0	\$0	\$21,783
River Intake #9	\$3,054,637	\$0	\$0	\$0	\$0	\$0	\$3,054,637
Distribution Mains < 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission main 12" & Up- don't use	\$5,073,364	\$6,088,036	\$6,088,036	\$0	\$0	\$0	\$17,249,437
Transmission Mains = 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains > 12"	\$5,058,021	\$6,069,625	\$6,069,625	\$0	\$0	\$0	\$17,197,271
Chemical Bldg & Treatment Basin	\$5,096,736	\$6,116,083	\$0	\$0	\$0	\$0	\$11,212,819
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$416,298	\$499,558	\$0	\$0	\$0	\$0	\$915,857
Clear Well Standpipe #5	\$620,191	\$744,230	\$0	\$0	\$0	\$0	\$1,364,421
Clear Well Standpipe #7	\$260,811	\$312,973	\$0	\$0	\$0	\$0	\$573,785
Filter Bldg, Clr Basin, and PS	\$7,465,446	\$8,958,535	\$0	\$0	\$0	\$0	\$16,423,981
Heated Storage Bldg & Yrd Storage	\$11,479	\$12,589	\$6,875	\$0	\$7	\$303	\$31,253
High Service Pumping Station	\$1,182,687	\$1,419,224	\$0	\$0	\$0	\$0	\$2,601,911
Laboratory & Test Equipment	\$105,465	\$0	\$0	\$0	\$0	\$0	\$105,465
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$130,614	\$156,736	\$0	\$0	\$0	\$0	\$287,350
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$1,069,004	\$1,282,804	\$0	\$0	\$0	\$0	\$2,351,808
West End Reservoir	\$3,831,145	\$4,597,374	\$0	\$0	\$0	\$0	\$8,428,519
Yard Piping & Flumes	\$1,182,645	\$1,419,175	\$0	\$0	\$0	\$0	\$2,601,820
Net	39,634,248	40,977,689	14,161,990	0	39,580	18,119	94,831,627

**Table B.23: Allocation of Net Fixed Assets to Functional Cost Component – Joint – FY22**

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$1,829	\$2,194	\$2,194	\$0	\$0	\$0	\$6,217
Chapple Pump Station	\$91,503	\$109,804	\$0	\$0	\$0	\$0	\$201,306
Christensen Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Pump Station	\$987,118	\$1,184,542	\$0	\$0	\$0	\$0	\$2,171,660
Leavens Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #1	\$629,561	\$755,473	\$0	\$0	\$0	\$0	\$1,385,034
Staples Pump Station #2	\$11,563	\$13,875	\$0	\$0	\$0	\$0	\$25,438
Terrace Estates Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Thomas Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Voelker Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Walter Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Storage Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Communication Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gas Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rights & Licenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Work & Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools & Working Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities Service Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrants	\$0	\$0	\$0	\$0	\$0	\$1,663,413	\$1,663,413
Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Logan Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #1	\$6,415	\$7,698	\$7,698	\$0	\$0	\$0	\$21,812
Staples Reservoir #2	\$185,482	\$222,579	\$222,579	\$0	\$0	\$0	\$630,640
Staples Reservoir #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$31,050	\$37,260	\$37,260	\$0	\$0	\$0	\$105,571
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$908,058	\$1,089,670	\$1,089,670	\$0	\$0	\$0	\$3,087,398
Willet Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 4 Reservoir	\$1,747,255	\$2,096,706	\$2,096,706	\$0	\$0	\$0	\$5,940,668
Low Duty Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #12	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #13	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #15	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #9	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution Mains < 12"	\$6,383,212	\$7,659,855	\$7,659,855	\$0	\$0	\$0	\$21,702,922
Transmission main 12" & Up	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains = 12"	\$4,646,389	\$5,575,667	\$5,575,667	\$0	\$0	\$0	\$15,797,723
Transmission Mains > 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemical Bldg & Treatment Basin	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Filter Bldg, Clr Basin, and PS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heated Storage Bldg & Yrd Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Laboratory & Test Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
West End Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Yard Piping & Flumes	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net	15,629,436	18,755,323	16,691,630	0	0	1,663,413	52,739,802

Table B.24: Allocation of Net Fixed Assets to Functional Cost Component – All-But-Resale – FY22

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chapple Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Christensen Pump Station	\$69,952	\$83,942	\$0	\$0	\$0	\$0	\$153,894
Fox Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Pump Station	\$62,987	\$75,584	\$0	\$0	\$0	\$0	\$138,571
Staples Pump Station #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Terrace Estates Pump Station	\$73,627	\$88,352	\$0	\$0	\$0	\$0	\$161,979
Thomas Pump Station	\$35,473	\$42,567	\$0	\$0	\$0	\$0	\$78,040
Voelker Pump Station	\$604,235	\$725,082	\$0	\$0	\$0	\$0	\$1,329,316
Waldo Pump Station	\$115,132	\$138,159	\$0	\$0	\$0	\$0	\$253,291
Walter Pumping Station	\$843,377	\$1,012,053	\$0	\$0	\$0	\$0	\$1,855,430
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Storage Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Communication Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gas Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rights & Licenses	\$110,190	\$120,844	\$65,990	\$0	\$68	\$2,908	\$300,000
Site Work & Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools & Working Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities Service Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Logan Reservoir	\$36,235	\$43,482	\$43,482	\$0	\$0	\$0	\$123,200
Staples Reservoir #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #3	\$93,700	\$112,441	\$112,441	\$0	\$0	\$0	\$318,582
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$1,702,855	\$2,043,426	\$2,043,426	\$0	\$0	\$0	\$5,789,708
Zone 4 Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Low Duty Pumping St #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #12	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #13	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #15	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #9	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution Mains < 12"	\$4,255,475	\$5,106,570	\$5,106,570	\$0	\$0	\$0	\$14,468,615
Transmission main 12" & Up- don't use	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains = 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains > 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemical Bldg & Treatment Basin	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Filter Bldg, Clr Basin, and PS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heated Storage Bldg & Yrd Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Laboratory & Test Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
West End Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Yard Piping & Flumes	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net	8,003,239	9,592,501	7,371,909	0	68	2,908	24,970,626

**Table B.25: Allocation of Net Fixed Assets to Functional Cost Component – Owner – FY22**

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chapple Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Christensen Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Terrace Estates Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Thomas Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Voelker Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Walter Pumping Station	\$562,251	\$674,702	\$0	\$0	\$0	\$0	\$1,236,953
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Storage Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Communication Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gas Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rights & Licenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Work & Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools & Working Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities Service Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Logan Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 4 Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #12	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #13	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #15	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #9	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution Mains < 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission main 12" & Up- don't use	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains = 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains > 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemical Bldg & Treatment Basin	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Filter Bldg, Clr Basin, and PS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heated Storage Bldg & Yrd Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Laboratory & Test Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
West End Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Yard Piping & Flumes	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net	562,251	674,702	0	0	0	0	1,236,953

**Table B.26: Allocation of Net Fixed Assets to Functional Cost Component – Resale – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Single Family Residential	\$15,791,879	\$19,344,959	\$3,297,270	\$0	\$31,003	\$0	\$38,465,111
Multi-Family Residential	\$3,798,351	\$1,163,239	\$1,472,859	\$0	\$2,321	\$0	\$6,436,770
Commercial	7,025,562	2,689,460	1,571,683	0	4,964	0	11,291,668
Industrial	84,349	32,290	6,290	0	40	0	122,968
Seasonal	2,041,916	3,908,336	761,326	0	767	0	6,712,345
Public Fire Protection	0	3,821,992	4,173,748	0	0	15,561	8,011,301
Private Fire Protection	0	606,321	662,124	0	0	2,469	1,270,914
<b>Non-Owners</b>							
Residential	\$133,624	\$163,688	\$27,900	\$0	\$286	\$0	\$325,498
Commercial	4,700,642	1,799,456	1,051,577	0	152	0	7,551,828
Resale	6,057,925	7,426,040	1,113,290	0	46	0	14,597,301
Private Fire Protection	0	21,908	23,924	0	0	89	45,922
<b>Total - Joint</b>	<b>\$39,634,248</b>	<b>\$40,977,689</b>	<b>\$14,161,990</b>	<b>\$0</b>	<b>\$39,580</b>	<b>\$18,119</b>	<b>\$94,831,627</b>

**Table B.27: Allocation of Joint Related Net Fixed Assets to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Single Family Residential	\$7,350,959	\$10,813,804	\$4,217,800	\$0	\$0	\$0	\$22,382,563
Multi-Family Residential	\$1,768,094	\$650,249	\$1,884,051	\$0	\$0	\$0	\$4,302,394
Commercial	\$3,270,327	\$1,503,404	\$2,010,465	\$0	\$0	\$0	\$6,784,196
Industrial	\$39,263	\$18,050	\$8,046	\$0	\$0	\$0	\$65,359
Seasonal	\$950,491	\$2,184,754	\$973,872	\$0	\$0	\$0	\$4,109,117
Public Fire Protection	\$0	\$2,136,488	\$5,338,973	\$0	\$0	\$1,428,593	\$8,904,053
Private Fire Protection	\$0	\$338,933	\$846,975	\$0	\$0	\$226,632	\$1,412,540
<b>Non-Owners</b>							
Residential	\$62,201	\$91,502	\$35,689	\$0	\$0	\$0	\$189,391
Commercial	\$2,188,101	\$1,005,893	\$1,345,156	\$0	\$0	\$0	\$4,539,150
Resale	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Private Fire Protection	\$0	\$12,247	\$30,603	\$0	\$0	\$8,189	\$51,039
<b>Total - All-But-Resale</b>	<b>\$15,629,436</b>	<b>\$18,755,323</b>	<b>\$16,691,630</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,663,413</b>	<b>\$52,739,802</b>

**Table B.28: Allocation of All-But-Resale Related Net Fixed Assets to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Owners</b>							
Single Family Residential	\$4,397,256	\$5,878,573	\$2,034,874	\$0	\$54	\$0	\$12,310,757
Multi-Family Residential	\$1,057,653	\$353,487	\$908,959	\$0	\$4	\$0	\$2,320,102
Commercial	1,956,271	817,277	969,947	0	9	0	3,743,503
Industrial	23,487	9,812	3,882	0	0	0	37,181
Seasonal	568,572	1,187,671	469,844	0	1	0	2,226,088
Public Fire Protection	0	1,161,432	2,575,782	0	0	2,510	3,739,724
Private Fire Protection	0	184,250	408,622	0	0	398	593,270
<b>Total - Owner</b>	<b>\$8,003,239</b>	<b>\$9,592,501</b>	<b>\$7,371,909</b>	<b>\$0</b>	<b>\$68</b>	<b>\$2,908</b>	<b>\$24,970,626</b>

**Table B.29: Allocation of Owner Related Net Fixed Assets to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
<b>Non-Owners</b>							
Residential	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial	0	0	0	0	0	0	0
Resale	562,251	674,702	0	0	0	0	1,236,953
Private Fire Protection	0	0	0	0	0	0	0
<b>Total - Resale</b>	<b>\$562,251</b>	<b>\$674,702</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,236,953</b>

**Table B.30: Allocation of Resale Related Net Fixed Assets to Customer Class – FY22**

Fixed Asset	Joint	All But Resale	Owners	Resale	Total
Booster Station - 12th Ave N & 27th	\$0	\$6	\$0	\$0	\$6
Chapple Pump Station	\$0	\$18,194	\$0	\$0	\$18,194
Christensen Pump Station	\$0	\$0	\$154	\$0	\$154
Fox Pump Station	\$0	\$80,681	\$0	\$0	\$80,681
Leavens Pump Station	\$0	\$0	\$8,268	\$0	\$8,268
Staples Pump Station #1	\$0	\$81,088	\$0	\$0	\$81,088
Staples Pump Station #2	\$0	\$1,957	\$0	\$0	\$1,957
Terrace Estates Pump Station	\$0	\$0	\$8,525	\$0	\$8,525
Thomas Pump Station	\$0	\$0	\$148	\$0	\$148
Voelker Pump Station	\$0	\$0	\$33,356	\$0	\$33,356
Waldo Pump Station	\$0	\$0	\$7,794	\$0	\$7,794
Walter Pumping Station	\$0	\$0	\$84,056	\$56,038	\$140,094
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$1,963	\$0	\$0	\$0	\$1,963
Cold Storage Building	\$3,206	\$0	\$0	\$0	\$3,206
Communication Equipment	\$37,738	\$0	\$0	\$0	\$37,738
Construction Equipment	\$19,307	\$0	\$0	\$0	\$19,307
Gas Pumps	\$931	\$0	\$0	\$0	\$931
Office Furniture & Equip	\$229	\$0	\$0	\$0	\$229
Office Furniture & Equipment	\$19,995	\$0	\$0	\$0	\$19,995
Rights & Licenses	\$0	\$0	\$15,000	\$0	\$15,000
Site Work & Landscaping	\$4,955	\$0	\$0	\$0	\$4,955
Tools & Working Equipment	\$25,577	\$0	\$0	\$0	\$25,577
Transportation Equipment	\$202,657	\$0	\$0	\$0	\$202,657
Utilities Service Center	\$34,572	\$0	\$0	\$0	\$34,572
Hydrants	\$0	\$98,639	\$0	\$0	\$98,639
Meters	\$6,811	\$0	\$0	\$0	\$6,811
Service Connections	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$157,376	\$0	\$0	\$0	\$157,376
Leavens Reservoir	\$49,747	\$0	\$0	\$0	\$49,747
Logan Reservoir	\$0	\$0	\$2,464	\$0	\$2,464
Staples Reservoir #1	\$0	\$22	\$0	\$0	\$22
Staples Reservoir #2	\$0	\$53,294	\$0	\$0	\$53,294
Staples Reservoir #3	\$0	\$0	\$18,561	\$0	\$18,561
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$106	\$0	\$0	\$106
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$70,301	\$0	\$0	\$70,301
Willet Pumping St #2	\$11,867	\$0	\$0	\$0	\$11,867
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$131,584	\$0	\$131,584
Zone 4 Reservoir	\$0	\$145,235	\$0	\$0	\$145,235
Low Duty Pumping St #1	\$1,718	\$0	\$0	\$0	\$1,718

Fixed Asset	Joint	All But Resale	Owners	Resale	Total
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$72,121	\$0	\$0	\$0	\$72,121
Low Duty Pumping St #4	\$2,777	\$0	\$0	\$0	\$2,777
Low Duty Pumping St #5	\$16,667	\$0	\$0	\$0	\$16,667
Low Duty Pumping St #6	\$3,309	\$0	\$0	\$0	\$3,309
River Intake #1	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$634	\$0	\$0	\$0	\$634
River Intake #12	\$140	\$0	\$0	\$0	\$140
River Intake #13	\$3,309	\$0	\$0	\$0	\$3,309
River Intake #15	\$8,283	\$0	\$0	\$0	\$8,283
River Intake #2	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$6	\$0	\$0	\$0	\$6
River Intake #4	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$48,653	\$0	\$0	\$0	\$48,653
River Intake #7	\$36,594	\$0	\$0	\$0	\$36,594
River Intake #8	\$22	\$0	\$0	\$0	\$22
River Intake #9	\$37,867	\$0	\$0	\$0	\$37,867
Distribution Mains < 12"	\$0	\$766,448	\$510,966	\$0	\$1,277,414
Transmission main 12" & Up- don't use	\$906,438	\$0	\$0	\$0	\$906,438
Transmission Mains = 12"	\$0	\$380,762	\$0	\$0	\$380,762
Transmission Mains > 12"	\$395,185	\$0	\$0	\$0	\$395,185
Chemical Bldg & Treatment Basin	\$303,983	\$0	\$0	\$0	\$303,983
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$77,924	\$0	\$0	\$0	\$77,924
Clear Well Standpipe #5	\$121,282	\$0	\$0	\$0	\$121,282
Clear Well Standpipe #7	\$12,565	\$0	\$0	\$0	\$12,565
Filter Bldg, Clr Basin, and PS	\$1,027,908	\$0	\$0	\$0	\$1,027,908
Heated Storage Bldg & Yrd Storage	\$4,255	\$0	\$0	\$0	\$4,255
High Service Pumping Station	\$265,941	\$0	\$0	\$0	\$265,941
Laboratory & Test Equipment	\$24,627	\$0	\$0	\$0	\$24,627
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$18,639	\$0	\$0	\$0	\$18,639
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0
UV Building	\$165,986	\$0	\$0	\$0	\$165,986
West End Reservoir	\$130,205	\$0	\$0	\$0	\$130,205
Yard Piping & Flumes	\$58,796	\$0	\$0	\$0	\$58,796
Net	\$4,322,765	\$1,696,733	\$820,876	\$56,038	\$6,896,412

Table B.31: Allocation of Depreciation Expense to Ownership Categories – FY22

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$2	\$2	\$2	\$0	\$0	\$0	\$6
Chapple Pump Station	\$8,270	\$9,924	\$0	\$0	\$0	\$0	\$18,194
Christensen Pump Station	\$70	\$84	\$0	\$0	\$0	\$0	\$154
Fox Pump Station	\$36,673	\$44,008	\$0	\$0	\$0	\$0	\$80,681
Leavens Pump Station	\$3,758	\$4,510	\$0	\$0	\$0	\$0	\$8,268
Staples Pump Station #1	\$36,858	\$44,230	\$0	\$0	\$0	\$0	\$81,088
Staples Pump Station #2	\$889	\$1,067	\$0	\$0	\$0	\$0	\$1,957
Terrace Estates Pump Station	\$3,875	\$4,650	\$0	\$0	\$0	\$0	\$8,525
Thomas Pump Station	\$67	\$81	\$0	\$0	\$0	\$0	\$148
Voelker Pump Station	\$15,162	\$18,194	\$0	\$0	\$0	\$0	\$33,356
Waldo Pump Station	\$3,543	\$4,251	\$0	\$0	\$0	\$0	\$7,794
Walter Pumping Station	\$63,679	\$76,415	\$0	\$0	\$0	\$0	\$140,094
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$892	\$1,071	\$0	\$0	\$0	\$0	\$1,963
Cold Storage Building	\$1,178	\$1,291	\$705	\$0	\$1	\$31	\$3,206
Communication Equipment	\$13,861	\$15,201	\$8,301	\$0	\$9	\$366	\$37,738
Construction Equipment	\$7,092	\$7,777	\$4,247	\$0	\$4	\$187	\$19,307
Gas Pumps	\$342	\$375	\$205	\$0	\$0	\$9	\$931
Office Furniture & Equip	\$84	\$92	\$50	\$0	\$0	\$2	\$229
Office Furniture & Equipment	\$7,344	\$8,054	\$4,398	\$0	\$5	\$194	\$19,995
Rights & Licenses	\$5,510	\$6,042	\$3,299	\$0	\$3	\$145	\$15,000
Site Work & Landscaping	\$4,955	\$0	\$0	\$0	\$0	\$0	\$4,955
Tools & Working Equipment	\$9,395	\$10,303	\$5,626	\$0	\$6	\$248	\$25,577
Transportation Equipment	\$74,436	\$81,633	\$44,578	\$0	\$46	\$1,964	\$202,657
Utilities Service Center	\$12,698	\$13,926	\$7,605	\$0	\$8	\$335	\$34,572
Hydrants	\$0	\$0	\$0	\$0	\$0	\$98,639	\$98,639
Meters	\$0	\$0	\$0	\$0	\$6,811	\$0	\$6,811
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$46,287	\$55,545	\$55,545	\$0	\$0	\$0	\$157,376
Leavens Reservoir	\$14,631	\$17,558	\$17,558	\$0	\$0	\$0	\$49,747
Logan Reservoir	\$725	\$870	\$870	\$0	\$0	\$0	\$2,464
Staples Reservoir #1	\$6	\$8	\$8	\$0	\$0	\$0	\$22
Staples Reservoir #2	\$15,675	\$18,809	\$18,809	\$0	\$0	\$0	\$53,294
Staples Reservoir #3	\$5,459	\$6,551	\$6,551	\$0	\$0	\$0	\$18,561
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$31	\$37	\$37	\$0	\$0	\$0	\$106
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$20,677	\$24,812	\$24,812	\$0	\$0	\$0	\$70,301
Willet Pumping St #2	\$5,394	\$6,473	\$0	\$0	\$0	\$0	\$11,867
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$38,701	\$46,442	\$46,442	\$0	\$0	\$0	\$131,584

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Zone 4 Reservoir	\$42,716	\$51,259	\$51,259	\$0	\$0	\$0	\$145,235
Low Duty Pumping St #1	\$781	\$937	\$0	\$0	\$0	\$0	\$1,718
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$32,782	\$39,339	\$0	\$0	\$0	\$0	\$72,121
Low Duty Pumping St #4	\$1,262	\$1,515	\$0	\$0	\$0	\$0	\$2,777
Low Duty Pumping St #5	\$7,576	\$9,091	\$0	\$0	\$0	\$0	\$16,667
Low Duty Pumping St #6	\$1,504	\$1,805	\$0	\$0	\$0	\$0	\$3,309
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$634	\$0	\$0	\$0	\$0	\$0	\$634
River Intake #12	\$140	\$0	\$0	\$0	\$0	\$0	\$140
River Intake #13	\$3,309	\$0	\$0	\$0	\$0	\$0	\$3,309
River Intake #15	\$8,283	\$0	\$0	\$0	\$0	\$0	\$8,283
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$6	\$0	\$0	\$0	\$0	\$0	\$6
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$48,653	\$0	\$0	\$0	\$0	\$0	\$48,653
River Intake #7	\$36,594	\$0	\$0	\$0	\$0	\$0	\$36,594
River Intake #8	\$22	\$0	\$0	\$0	\$0	\$0	\$22
River Intake #9	\$37,867	\$0	\$0	\$0	\$0	\$0	\$37,867
Distribution Mains < 12"	\$375,710	\$450,852	\$450,852	\$0	\$0	\$0	\$1,277,414
Transmission main 12" & Up-	\$266,599	\$319,919	\$319,919	\$0	\$0	\$0	\$906,438
Transmission Mains = 12"	\$111,989	\$134,387	\$134,387	\$0	\$0	\$0	\$380,762
Transmission Mains > 12"	\$116,231	\$139,477	\$139,477	\$0	\$0	\$0	\$395,185
Chemical Bldg & Treatment Basin	\$138,174	\$165,809	\$0	\$0	\$0	\$0	\$303,983
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$35,420	\$42,504	\$0	\$0	\$0	\$0	\$77,924
Clear Well Standpipe #5	\$55,128	\$66,154	\$0	\$0	\$0	\$0	\$121,282
Clear Well Standpipe #7	\$5,711	\$6,853	\$0	\$0	\$0	\$0	\$12,565
Filter Bldg, Clr Basin, and PS	\$467,231	\$560,677	\$0	\$0	\$0	\$0	\$1,027,908
Heated Storage Bldg & Yrd Storage	\$1,563	\$1,714	\$936	\$0	\$1	\$41	\$4,255
High Service Pumping Station	\$120,882	\$145,058	\$0	\$0	\$0	\$0	\$265,941
Laboratory & Test Equipment	\$24,627	\$0	\$0	\$0	\$0	\$0	\$24,627
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$8,472	\$10,167	\$0	\$0	\$0	\$0	\$18,639
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$75,448	\$90,538	\$0	\$0	\$0	\$0	\$165,986
West End Reservoir	\$59,184	\$71,021	\$0	\$0	\$0	\$0	\$130,205
Yard Piping & Flumes	\$26,725	\$32,070	\$0	\$0	\$0	\$0	\$58,796
Net	\$2,569,445	\$2,871,433	\$1,346,478	\$0	\$6,894	\$102,162	\$6,896,412

Table B.32: Allocation of Depreciation Expense to Functional Cost Component – FY22

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chapple Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Christensen Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Terrace Estates Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Thomas Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Voelker Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Walter Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$892	\$1,071	\$0	\$0	\$0	\$0	\$1,963
Cold Storage Building	\$1,178	\$1,291	\$705	\$0	\$1	\$31	\$3,206
Communication Equipment	\$13,861	\$15,201	\$8,301	\$0	\$9	\$366	\$37,738
Construction Equipment	\$7,092	\$7,777	\$4,247	\$0	\$4	\$187	\$19,307
Gas Pumps	\$342	\$375	\$205	\$0	\$0	\$9	\$931
Office Furniture & Equip	\$84	\$92	\$50	\$0	\$0	\$2	\$229
Office Furniture & Equipment	\$7,344	\$8,054	\$4,398	\$0	\$5	\$194	\$19,995
Rights & Licenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Work & Landscaping	\$4,955	\$0	\$0	\$0	\$0	\$0	\$4,955
Tools & Working Equipment	\$9,395	\$10,303	\$5,626	\$0	\$6	\$248	\$25,577
Transportation Equipment	\$74,436	\$81,633	\$44,578	\$0	\$46	\$1,964	\$202,657
Utilities Service Center	\$12,698	\$13,926	\$7,605	\$0	\$8	\$335	\$34,572
Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$0	\$6,811	\$0	\$6,811
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$46,287	\$55,545	\$55,545	\$0	\$0	\$0	\$157,376
Leavens Reservoir	\$14,631	\$17,558	\$17,558	\$0	\$0	\$0	\$49,747
Logan Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #2	\$5,394	\$6,473	\$0	\$0	\$0	\$0	\$11,867
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Zone 4 Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #1	\$781	\$937	\$0	\$0	\$0	\$0	\$1,718
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$32,782	\$39,339	\$0	\$0	\$0	\$0	\$72,121
Low Duty Pumping St #4	\$1,262	\$1,515	\$0	\$0	\$0	\$0	\$2,777
Low Duty Pumping St #5	\$7,576	\$9,091	\$0	\$0	\$0	\$0	\$16,667
Low Duty Pumping St #6	\$1,504	\$1,805	\$0	\$0	\$0	\$0	\$3,309
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$634	\$0	\$0	\$0	\$0	\$0	\$634
River Intake #12	\$140	\$0	\$0	\$0	\$0	\$0	\$140
River Intake #13	\$3,309	\$0	\$0	\$0	\$0	\$0	\$3,309
River Intake #15	\$8,283	\$0	\$0	\$0	\$0	\$0	\$8,283
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$6	\$0	\$0	\$0	\$0	\$0	\$6
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$48,653	\$0	\$0	\$0	\$0	\$0	\$48,653
River Intake #7	\$36,594	\$0	\$0	\$0	\$0	\$0	\$36,594
River Intake #8	\$22	\$0	\$0	\$0	\$0	\$0	\$22
River Intake #9	\$37,867	\$0	\$0	\$0	\$0	\$0	\$37,867
Distribution Mains < 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission main 12" & Up	\$266,599	\$319,919	\$319,919	\$0	\$0	\$0	\$906,438
Transmission Mains = 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains > 12"	\$116,231	\$139,477	\$139,477	\$0	\$0	\$0	\$395,185
Chemical Bldg & Treatment Basin	\$138,174	\$165,809	\$0	\$0	\$0	\$0	\$303,983
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$35,420	\$42,504	\$0	\$0	\$0	\$0	\$77,924
Clear Well Standpipe #5	\$55,128	\$66,154	\$0	\$0	\$0	\$0	\$121,282
Clear Well Standpipe #7	\$5,711	\$6,853	\$0	\$0	\$0	\$0	\$12,565
Filter Bldg, Clr Basin, and PS	\$467,231	\$560,677	\$0	\$0	\$0	\$0	\$1,027,908
Heated Storage Bldg & Yrd Storage	\$1,563	\$1,714	\$936	\$0	\$1	\$41	\$4,255
High Service Pumping Station	\$120,882	\$145,058	\$0	\$0	\$0	\$0	\$265,941
Laboratory & Test Equipment	\$24,627	\$0	\$0	\$0	\$0	\$0	\$24,627
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$8,472	\$10,167	\$0	\$0	\$0	\$0	\$18,639
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$75,448	\$90,538	\$0	\$0	\$0	\$0	\$165,986
West End Reservoir	\$59,184	\$71,021	\$0	\$0	\$0	\$0	\$130,205
Yard Piping & Flumes	\$26,725	\$32,070	\$0	\$0	\$0	\$0	\$58,796
Net	1,779,400	1,923,947	609,150	0	6,890	3,378	4,322,765

**Table B.33: Allocation of Joint Related Depreciation Expense to Functional Cost Component – FY22**

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$2	\$2	\$2	\$0	\$0	\$0	\$6
Chapple Pump Station	\$8,270	\$9,924	\$0	\$0	\$0	\$0	\$18,194
Christensen Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Pump Station	\$36,673	\$44,008	\$0	\$0	\$0	\$0	\$80,681
Leavens Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #1	\$36,858	\$44,230	\$0	\$0	\$0	\$0	\$81,088
Staples Pump Station #2	\$889	\$1,067	\$0	\$0	\$0	\$0	\$1,957
Terrace Estates Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Thomas Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Voelker Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Walter Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Storage Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Communication Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gas Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rights & Licenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Work & Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools & Working Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities Service Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrants	\$0	\$0	\$0	\$0	\$0	\$98,639	\$98,639
Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Logan Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #1	\$6	\$8	\$8	\$0	\$0	\$0	\$22
Staples Reservoir #2	\$15,675	\$18,809	\$18,809	\$0	\$0	\$0	\$53,294
Staples Reservoir #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$31	\$37	\$37	\$0	\$0	\$0	\$106
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$20,677	\$24,812	\$24,812	\$0	\$0	\$0	\$70,301
Willet Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Zone 4 Reservoir	\$42,716	\$51,259	\$51,259	\$0	\$0	\$0	\$145,235
Low Duty Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #12	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #13	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #15	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #9	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution Mains < 12"	\$225,426	\$270,511	\$270,511	\$0	\$0	\$0	\$766,448
Transmission main 12" & Up- don't use	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains = 12"	\$111,989	\$134,387	\$134,387	\$0	\$0	\$0	\$380,762
Transmission Mains > 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemical Bldg & Treatment Basin	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Filter Bldg, Clr Basin, and PS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heated Storage Bldg & Yrd Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Laboratory & Test Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
West End Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Yard Piping & Flumes	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net	499,213	599,055	499,826	0	0	98,639	1,696,733

**Table B.34: Allocation of All-But-Resale Related Depreciation Expense to Functional Cost Component - FY22**

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chapple Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Christensen Pump Station	\$70	\$84	\$0	\$0	\$0	\$0	\$154
Fox Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Pump Station	\$3,758	\$4,510	\$0	\$0	\$0	\$0	\$8,268
Staples Pump Station #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Terrace Estates Pump Station	\$3,875	\$4,650	\$0	\$0	\$0	\$0	\$8,525
Thomas Pump Station	\$67	\$81	\$0	\$0	\$0	\$0	\$148
Voelker Pump Station	\$15,162	\$18,194	\$0	\$0	\$0	\$0	\$33,356
Waldo Pump Station	\$3,543	\$4,251	\$0	\$0	\$0	\$0	\$7,794
Walter Pumping Station	\$38,207	\$45,849	\$0	\$0	\$0	\$0	\$84,056
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Storage Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Communication Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gas Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rights & Licenses	\$5,510	\$6,042	\$3,299	\$0	\$3	\$145	\$15,000
Site Work & Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools & Working Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities Service Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Logan Reservoir	\$725	\$870	\$870	\$0	\$0	\$0	\$2,464
Staples Reservoir #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #3	\$5,459	\$6,551	\$6,551	\$0	\$0	\$0	\$18,561
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$38,701	\$46,442	\$46,442	\$0	\$0	\$0	\$131,584
Zone 4 Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #12	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #13	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #15	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #9	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution Mains < 12"	\$150,284	\$180,341	\$180,341	\$0	\$0	\$0	\$510,966
Transmission main 12" & Up- don't use	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains = 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains > 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemical Bldg & Treatment Basin	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Filter Bldg, Clr Basin, and PS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heated Storage Bldg & Yrd Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Laboratory & Test Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
West End Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Yard Piping & Flumes	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net	265,361	317,864	237,502	0	3	145	820,876

**Table B.35: Allocation of Owner Related Depreciation Expense to Functional Cost Component – FY22**

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Booster Station - 12th Ave N & 27th	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chapple Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Christensen Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Pump Station #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Terrace Estates Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Thomas Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Voelker Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Walter Pumping Station	\$25,472	\$30,566	\$0	\$0	\$0	\$0	\$56,038
Willet Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Storage Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Communication Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gas Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equip	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Office Furniture & Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rights & Licenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Work & Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools & Working Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transportation Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities Service Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Connections	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fox Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Leavens Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Logan Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Staples Reservoir #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waldo Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Willet Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 3 Chapple Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Zone 4 Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fixed Asset	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Low Duty Pumping St #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Duty Pumping St #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #12	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #13	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #15	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #6	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #8	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Intake #9	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution Mains < 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission main 12" & Up- don't use	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains = 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transmission Mains > 12"	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemical Bldg & Treatment Basin	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #2	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #3	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #4	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Well Standpipe #7	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Filter Bldg, Clr Basin, and PS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heated Storage Bldg & Yrd Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Service Pumping Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Laboratory & Test Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Maint & Personnel Bldg	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Electrical Shop	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plant Maintenance Whse	\$0	\$0	\$0	\$0	\$0	\$0	\$0
UV Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0
West End Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Yard Piping & Flumes	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net	25,472	30,566	0	0	0	0	56,038

**Table B.36: Allocation of Resale Related Depreciation Expense to Functional Cost Component – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	\$708,985	\$908,267	\$141,826	\$0	\$5,397	\$0	\$1,764,474
Multi-Family Residential	\$170,529	\$54,615	\$63,352	\$0	\$404	\$0	\$288,900
Commercial	315,416	126,273	67,603	0	864	0	\$510,156
Industrial	3,787	1,516	271	0	7	0	\$5,580
Seasonal	91,673	183,501	32,747	0	134	0	\$308,054
Public Fire Protection	0	179,447	179,525	0	0	2,901	\$361,873
Private Fire Protection	0	28,467	28,480	0	0	460	\$57,408
Non-Owners							\$0
Residential	\$5,999	\$7,685	\$1,200	\$0	\$50	\$0	\$14,934
Commercial	211,038	84,486	45,231	0	26	0	\$340,782
-Resale	271,974	348,661	47,886	0	8	0	\$668,528
Private Fire Protection	0	1,029	1,029	0	0	17	\$2,074
<b>Total - Joint</b>	<b>\$1,779,400</b>	<b>\$1,923,947</b>	<b>\$609,150</b>	<b>\$0</b>	<b>\$6,890</b>	<b>\$3,378</b>	<b>\$4,322,765</b>

**Table B.37: Allocation of Joint Depreciation Expense to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	\$234,794	\$345,399	\$126,301	\$0	\$0	\$0	\$706,493
Multi-Family Residential	\$56,474	\$20,769	\$56,417	\$0	\$0	\$0	\$133,661
Commercial	\$104,456	\$48,020	\$60,203	\$0	\$0	\$0	\$212,678
Industrial	\$1,254	\$577	\$241	\$0	\$0	\$0	\$2,072
Seasonal	\$30,359	\$69,782	\$29,162	\$0	\$0	\$0	\$129,304
Public Fire Protection	\$0	\$68,241	\$159,874	\$0	\$0	\$84,714	\$312,829
Private Fire Protection	\$0	\$10,826	\$25,362	\$0	\$0	\$13,439	\$49,627
Non-Owners							\$0
Residential	\$1,987	\$2,923	\$1,069	\$0	\$0	\$0	\$5,978
Commercial	\$69,889	\$32,129	\$40,280	\$0	\$0	\$0	\$142,298
-Resale	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Private Fire Protection	\$0	\$391	\$916	\$0	\$0	\$486	\$1,793
<b>Total - All-But-Resale</b>	<b>\$499,213</b>	<b>\$599,055</b>	<b>\$499,826</b>	<b>\$0</b>	<b>\$0</b>	<b>\$98,639</b>	<b>\$1,696,733</b>

**Table B.38: Allocation of All-But-Resale Depreciation Expense to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	\$145,799	\$194,797	\$65,558	\$0	\$3	\$0	\$406,156
Multi-Family Residential	\$35,068	\$11,713	\$29,284	\$0	\$0	\$0	\$76,066
Commercial	64,864	27,082	31,249	0	0	0	123,195
Industrial	779	325	125	0	0	0	1,229
Seasonal	18,852	39,356	15,137	0	0	0	73,345
Public Fire Protection	0	38,486	82,985	0	0	125	121,596
Private Fire Protection	0	6,105	13,165	0	0	20	19,290
<b>Total - Owner</b>	<b>\$265,361</b>	<b>\$317,864</b>	<b>\$237,502</b>	<b>\$0</b>	<b>\$3</b>	<b>\$145</b>	<b>\$820,876</b>

**Table B.39: Allocation of Owner Depreciation Expense to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Non-Owners							
Residential	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial	0	0	0	0	0	0	0
-Resale	25,472	30,566	0	0	0	0	56,038
Private Fire Protection	0	0	0	0	0	0	0
<b>Total - Resale</b>	<b>\$25,472</b>	<b>\$30,566</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$56,038</b>

**Table B.40: Allocation of Resale Depreciation Expense to Customer Class – FY22**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	\$1,069,070	\$1,180,195	\$147,778	\$0	\$5,401	\$0	\$2,402,443
Multi-Family Residential	\$257,139	\$70,967	\$66,011	\$0	\$403	\$0	\$394,520
Commercial	\$475,612	\$164,078	\$70,440	\$0	\$863	\$0	\$710,994
Industrial	\$5,682	\$1,960	\$280	\$0	\$7	\$0	\$7,929
Seasonal	\$138,232	\$238,439	\$34,121	\$0	\$133	\$0	\$410,926
Public Fire Protection	\$0	\$232,017	\$186,134	\$0	\$0	\$2,933	\$421,084
Private Fire Protection	\$0	\$36,807	\$29,528	\$0	\$0	\$465	\$66,801
Non-Owners							\$0
Residential	\$9,001	\$9,937	\$1,244	\$0	\$50	\$0	\$20,231
Commercial	\$316,638	\$109,235	\$46,895	\$0	\$26	\$0	\$472,795
-Resale	\$415,411	\$458,907	\$50,541	\$0	\$8	\$0	\$924,867
Private Fire Protection	\$0	\$1,323	\$1,062	\$0	\$0	\$17	\$2,402
<b>Total - Joint</b>	<b>\$2,686,785</b>	<b>\$2,503,865</b>	<b>\$634,035</b>	<b>\$0</b>	<b>\$6,891</b>	<b>\$3,415</b>	<b>\$5,834,991</b>

**Table B.41: Allocation of Joint Depreciation Expense to Customer Class – FY23**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	\$265,125	\$390,107	\$146,063	\$0	\$0	\$0	\$801,295
Multi-Family Residential	\$63,769	\$23,458	\$65,245	\$0	\$0	\$0	\$152,472
Commercial	\$117,950	\$54,235	\$69,622	\$0	\$0	\$0	\$241,808
Industrial	\$1,409	\$648	\$277	\$0	\$0	\$0	\$2,334
Seasonal	\$34,281	\$78,815	\$33,725	\$0	\$0	\$0	\$146,821
Public Fire Protection	\$0	\$76,692	\$183,973	\$0	\$0	\$84,716	\$345,382
Private Fire Protection	\$0	\$12,166	\$29,186	\$0	\$0	\$13,439	\$54,791
Non-Owners							\$0
Residential	\$2,232	\$3,284	\$1,230	\$0	\$0	\$0	\$6,746
Commercial	\$78,525	\$36,107	\$46,351	\$0	\$0	\$0	\$160,983
-Resale	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Private Fire Protection	\$0	\$437	\$1,049	\$0	\$0	\$483	\$1,970
<b>Total - All-But-Resale</b>	<b>\$563,292</b>	<b>\$675,950</b>	<b>\$576,721</b>	<b>\$0</b>	<b>\$0</b>	<b>\$98,639</b>	<b>\$1,914,603</b>

**Table B.42: Allocation of All-But-Resale Depreciation Expense to Customer Class – FY23**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Owners							
Single Family Residential	\$174,037	\$232,404	\$80,261	\$0	\$5	\$0	\$486,707
Multi-Family Residential	\$41,860	\$13,975	\$35,852	\$0	\$0	\$0	\$91,687
Commercial	\$77,427	\$32,310	\$38,257	\$0	\$1	\$0	\$147,995
Industrial	\$925	\$386	\$152	\$0	\$0	\$0	\$1,463
Seasonal	\$22,503	\$46,953	\$18,532	\$0	\$0	\$0	\$87,989
Public Fire Protection	\$0	\$45,689	\$101,092	\$0	\$0	\$251	\$147,032
Private Fire Protection	\$0	\$7,248	\$16,037	\$0	\$0	\$40	\$23,325
<b>Total - Owner</b>	<b>\$316,753</b>	<b>\$378,965</b>	<b>\$290,183</b>	<b>\$0</b>	<b>\$7</b>	<b>\$291</b>	<b>\$986,198</b>

**Table B.43: Allocation of Owner Depreciation Expense to Customer Class – FY23**

Customer Class	Base	Max Day	Max Hour	Customer	Meter	Direct Fire	Total
Non-Owners							
Residential	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial	\$0	\$0	\$0	\$0	\$0	\$0	\$0
-Resale	\$28,176	\$33,811	\$0	\$0	\$0	\$0	\$61,988
Private Fire Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total - Resale</b>	<b>\$28,176</b>	<b>\$33,811</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$61,988</b>

**Table B.44: Allocation of Resale Depreciation Expense to Customer Class – FY23**