

HEBER PUBLIC UTILITY DISTRICT

Water & Sewer Rate Study

**Final Report
January 2017**

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BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS



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January 25, 2017

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Re: Water & Sewer Rate Study

Bartle Wells Associates is pleased to submit to the Heber Public Utility District (District) the attached Water & Sewer Rate Study. The study presents BWA's analysis of the operating and non-operating expenses of the District's water and sewer funds and provides five year cash flow projections and rates. The primary purpose of this study was to analyze the District's water & sewer enterprise funds and make recommendations that would achieve their financial sustainability in light of approaching capital projects that require the issuance of debt. Another important purpose was to review rates in light of the San Juan Capistrano court decision to ensure rates adhere to the State's legal requirements.

The report recommends updating rates and charges in order to more accurately recover the costs of providing service to the District's water and sewer customers. Recommendations were developed with substantial input from District staff. BWA finds that the rates and charges proposed in our report to be based on the cost of service, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. BWA believes that the proposed rates are fair and reasonable to the District's customers.

We have enjoyed working with you on the rate study and appreciate the assistance of Graciela Lopez, as well that of other staff throughout the project. Please contact us if you ever have any future questions about this study and the rate recommendations.

Yours truly,

Doug Dove, CIPFA
Principal

Fletcher Davis
Senior Consultant

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1 EXECUTIVE SUMMARY

1.1 Background

The Heber Public Utility District is located in Heber, California. Heber, an unincorporated community of approximately 1.63 square miles area is located in the Imperial Valley of California, 224 miles southeast of Los Angeles, 675 miles southeast of San Francisco, 117 miles east of San Diego, 240 miles west of Phoenix, and 6 miles north of Mexicali, Baja California, Mexico. The Heber Public Utility District (District) provides water and wastewater services to over 1,600 customers. The District Board of Directors acts as the governing body over the District.

The revenues from the District's water and sewer utilities are primarily derived from charges for services. The District must establish rates and charges adequate to fund the cost of providing water and wastewater services, including costs for operations and capital improvements needed to keep District's utility infrastructure in safe and reliable operating condition.

Rates were last reviewed in 2009. Phased-in rate increases were adopted in 2010 and they became effective from FY2010 – FY2013. Based on a survey of regional water and sewer agencies, the District's rates are close to the average in the region. However, the District's sewer rates are higher than the regional average.

In February 2015, the District retained Bartle Wells Associates (BWA) to develop a comprehensive rate analysis and study for District's water and sewer enterprises. Basic objectives of the rate study include:

- Identify rate setting principles.
- Develop long-term financial projections to determine future annual water and wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend water and wastewater designed to equitably recover the costs of providing service.

Based on input from District staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws.

1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in Proposition 218. Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and wastewater service. The substantive requirements of Article 13D, Section 6 require the District's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question.
- No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** The District must mail a notice of proposed rate increases to all affected property owners. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The District must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If more than 50% of affected property owners submit written protests against the proposed rate increases, the increases cannot be adopted.

1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed and variable charges that recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing water rates, charges, and fees contained and discussed in the American Water Works Association (AWWA) M1 Manual.

In developing water rates, it is important to know that there is no “one-size-fits-all” approach for establishing cost-based water rates, “the (M1 Manual) is aimed at outlining the basic elements involved in water rates and suggesting alternative rules of procedure for formulating rates, thus permitting the exercise of judgment and preference to meet local conditions and requirements.”¹

In reviewing District’s water rates and finances, BWA used the following criteria in developing our recommendations:

- 1) *Revenue Sufficiency*: Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact*: While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable*: Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical*: Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer and easy to understand.

¹ AWWA Manual M1 Manual, Principles of Water Rates, Fees, and Charges, Sixth Edition, 2012, page 5.

1.4 Water Overview

1.4.1 Water Customers

The District owns a potable water distribution system that serves 1,625 customers, 93% of which are residential. The District anticipates nominal growth by the end of FY2022, however there is a possibility of robust commercial development. In order to maintain conservative growth projections, BWA did not include this potential development in the financial projections.

1.4.2 Water System

Raw water used by the District is supplied by the Central Main Canal via the Dogwood Canal, both of which are under the jurisdiction of the Imperial Irrigation District (IID). This water has its origin in the Colorado River. The water is drawn from the canal, treated, used by the community and then re-treated in HPUD sewage treatment plant, and finally disposed of via agricultural drainage canals to the Salton Sea.

The raw water from IID is allowed to settle in 3 lined settling basins with a combined capacity of 5.8 million gallons. Water is pumped from the third settling basin and polyferric sulfate, a coagulant and Polymer, a coagulant aid is added and is mixed via static mixer. The water then flows through one of two U.S. Filter Co. Micro Floc Water Treatment System units.

The filtered water exits the treatment plant and is chlorinated prior to being pumped to three clearwell reservoirs that together store 5.45 million gallons. Water from the reservoirs is pressurized to 48 psi to feed the one pressure zone distribution system.

The District faces the need for substantial additional investments in rehabilitation and replacement as aging facilities approach the end of their useful lives, and as the EPA increases treatment requirements for their potable water system.

BWA recommends (1) updating rates to better reflect revenue requirements and the cost of service, including increasing operational and capital costs, (2) meeting and maintaining the District's reserve fund targets, (3) eliminating different service charges and variable charges for different customer classifications and reconfiguring those service charges to reflect meter size instead of classification.

1.4.3 Current Water Rates

Current monthly water rates are shown on Table 1. Rates were last increased in FY2013. The current rates have two tiers for all customer classifications with the base limit of water included in the monthly fixed charge, and a variable rate for any water used above the base limit.

Table 1: Current Monthly Water Rates
Heber Public Utility District
Water Rate Study

Class and Meter Size	Base Limit	Fixed Charge	Variable
	(Gallons)	(\$/month)	(\$/1000 gallons)
Residential:			
1" Meter or less	15,000	\$53.57	\$3.57
Multi-Residential:			
1" Meter or less	15,000	\$53.57	\$3.57
2" Meter	40,000	\$246.88	\$3.57
3" Meter	60,000	\$470.62	\$3.57
Commercial/Industrial:			
1" Meter or less	15,000	\$75.09	\$3.57
2" Meter	40,000	\$246.88	\$3.57
3" Meter	60,000	\$470.62	\$3.57
4" Meter	75,000	\$705.93	\$3.57
Public Agency			
1" Meter or less	15,000	\$75.09	\$1.79
2" Meter	40,000	\$246.88	\$1.79
3" Meter	60,000	\$470.62	\$1.79
Service Outside District (SOD)			
1" Meter	15,000	\$66.96	\$3.57
2" Meter	30,000	\$156.17	\$3.57

Any meter over 3" will be assessed a fee of 50% for each inch over 3" with an exceeding limit of 15,000 gallons per 1".

1.4.4 Proposed Water Rates

Table 2 shows the proposed monthly water fixed meter charges and water allotment for the next five years.

Table 2: Proposed Monthly Water Fixed Meter Charges and Water Allotment
 Heber Public Utility District
 Water Rate Study

WATER	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
	Allotment (Gallons)	(\$/month)										
Fixed Meter Charge Residential:												
1" Meter or less	15,000	\$53.57	15,000	\$56.07	15,000	\$57.84	15,000	\$59.54	15,000	\$61.30	15,000	\$64.01
Multi-Residential:												
1" Meter or less	15,000	\$53.57	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
2" Meter	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
3" Meter	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
Commercial/Industrial/Public												
1" Meter or less	15,000	\$75.09	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
2" Meter	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
3" Meter	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
4" Meter	75,000	\$705.93	75,000	\$715.73	75,000	\$737.22	75,000	\$759.32	75,000	\$780.95	75,000	\$816.49
Service Outside District (SOD)												
1" Meter	15,000	\$66.96	15,000	\$70.07	15,000	\$72.26	15,000	\$74.37	15,000	\$76.58	15,000	\$80.09
2" Meter	30,000	\$156.17	30,000	\$163.42	30,000	\$168.52	30,000	\$173.46	30,000	\$178.61	30,000	\$186.80

Table 3 shows the proposed volumetric rates charged to usage over the monthly allotment to be used for the next 5 years.

Table 3: Proposed Monthly Volumetric Rates
Heber Public Utility District
Water Rate Study

WATER	FY2017 (Current)	Proposed FY2018	Proposed FY2019	Proposed FY2020	Proposed FY2021	Proposed FY2022
	(\$ / 1,000 Gallons)	(\$ / 1,000 Gallons)	(\$ / 1,000 Gallons)	(\$ / 1,000 Gallons)	(\$ / 1,000 Gallons)	(\$ / 1,000 Gallons)
Volumetric Charge						
Residential Inside District	\$3.57	\$3.51	\$3.79	\$3.90	\$4.03	\$4.03
Public Agency	\$1.79	\$3.51	\$3.79	\$3.90	\$4.03	\$4.03
Commercial	\$3.57	\$3.51	\$3.79	\$3.90	\$4.03	\$4.03
Industrial	\$3.57	\$3.51	\$3.79	\$3.90	\$4.03	\$4.03
Multi-residential	\$3.57	\$3.51	\$3.79	\$3.90	\$4.03	\$4.03
Outside District	\$3.57	\$4.16	\$4.49	\$4.63	\$4.78	\$4.78

1.5 Wastewater System Overview

1.5.1 Wastewater Customers

The District’s wastewater collection and treatment system serves 1,784 customers, 98% of which are single family or multifamily residential. The District anticipates nominal growth by the end of FY2022, however there is a possibility of robust commercial development. In order to maintain conservative growth projections, BWA did not include this potential development in the financial projections.

1.5.2 Wastewater System

The Heber Public Utility Wastewater Treatment Plant is a modified activated sludge plant which uses microorganisms to stabilize and treat the incoming wastewater.

The treatment system consist of a headworks consisting of two in-channel comminutors and one ultra-sonic flow meter; influent pump station consisting of four non-clog centrifugal pumps; headworks facility mechanical screens and grit trap; two oxidation ditches (treatment system) with a design capacity of 0.405 million gallons per day (MGD) each; STM Aerotor treatment system with a design capacity of 0.8 million gallons per day (MGD); flows from the Oxidation Ditch(es) and or STM Aerotor can flow into two sets of clarifiers; a Clarified Sludge Pump Station; a Return Activated Sludge pump station, which direct sludge back to the oxidation ditches/ STM Aerotor; a Waste Activated Sludge pump station to direct sludge to two Sludge

Thickeners, two Aerobic Digesters, Sludge Dewatering Unit, or sludge drying beds; and a Ultraviolet Disinfection system (two units for redundancy).

The final wastewater effluent is then discharged to the Central Drain 3-D No.1 an Imperial Valley Drain, water of the United States, and tributary to the Alamo River within the Salton Sea Watershed. Although the District doesn't face any immediate large capital needs for the wastewater system, there is still need for additional investments in rehabilitation and replacement as aging facilities approach the end of their useful lives.

BWA recommends (1) updating rates to better reflect revenue requirements and the cost of service, including increasing operational and capital costs, (2) meeting and maintaining the District's reserve fund targets, (3) eliminating different service charges for different customer classifications and implementing a volumetric charge for commercial customers to reflect the different types of sewer customers within the system.

1.5.3 Current Wastewater Rates

The current monthly wastewater charge is shown on Table 4. Wastewater rates were last increased in FY2013 and last reviewed in 2010. The current rates have service charges that vary by customer classification and by the size of the sewer lateral connection.

Table 4: Current Monthly Wastewater Rates
Heber Public Utility District
Wastewater Rate Study

Residential [1] [2]	Monthly
4" Connection	\$52.31
6" Connection	\$78.47
Multi-Family, Commercial, Industrial, and Public [1] [2]	
4" Connection	\$71.62
6" Connection	\$107.42
8" Connection	\$143.23

[1] Connections over 4" will be assessed a 50% fee per every 2" over 4".

[2] Any customer Class that exceeds a rate of 45% of water consumption into the wastewater system will be required to negotiate a wastewater rate commensurate with capacity/treatment.

1.5.4 Proposed Wastewater Rates

Table 5 shows the proposed wastewater rates for the next five years. BWA recommends eliminating different service charges for different customer classifications and implementing a volumetric charge for commercial customers to reflect the different types of sewer customers within the system.

Table 5: Proposed Monthly Wastewater Rates
Heber Public Utility District
Water and Wastewater Rate Analysis and Study

WASTEWATER	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
	Current	Proposed	Proposed	Proposed	Proposed	Proposed
Fixed Meter Charge						
Residential	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
4" Connection	\$52.31	\$54.76	\$56.66	\$58.62	\$60.66	\$62.76
6" Connection	\$78.47	\$117.00	\$120.48	\$124.65	\$128.97	\$133.44
Multifamily	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
Per Dwelling Unit	\$71.62	\$54.76	\$56.66	\$58.62	\$60.66	\$62.76
Commercial, Industrial, and Public	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
4" Connection	\$71.62	\$49.66	\$51.21	\$52.82	\$54.49	\$56.22
6" Connection	\$107.42	\$109.25	\$112.66	\$116.20	\$119.88	\$123.69
8" Connection	\$143.23	\$198.64	\$204.84	\$211.28	\$217.96	\$224.88
Volumetric Charge (\$/1,000 gallons)						
Commercial, Industrial, Public	N/A	\$0.57	\$0.59	\$0.61	\$0.63	\$0.65

2 WATER FINANCES & RATES

2.1 Water Financial Overview

Bartle Wells Associates conducted an independent evaluation of the District's water enterprise finances. Key observations include:

- Water rates have not been increased since FY2013. Staff has strived to keep costs down, water expenses have been relatively flat year to year. However, with a large capital project associated with the water treatment plant expansion and upgrade, debt service will increase starting in FY2018. Without a rate increase, the water fund will deplete all funds by FY2022.
- Water use has decreased between fiscal years 2013 and 2016.
- Total water reserves at the beginning of FY2016 were \$1.025 million and are projected to be \$1.148 million by the end of FY2016. A great deal of these reserve requirements are tied to USDA and State Water Resources Control Board loan reserve requirements and the District's own reserve guidelines established by the Board of Directors in August of 2016.
- The District has \$12.8 million in capital improvement projects (CIP) planned between FY2016 and FY2022. A majority of this cost is associated with a \$9.9 million water treatment plant upgrade and expansion as well as a \$2 million distribution line project.
- As mentioned in Section 1.3, water rates were developed using generally accepted cost-based principles and methodologies for establishing water rates, charges, and fees contained and discussed in the AWWA M1 Manual.
- Water expenses were determined by developing projections based on historical averages based on audits and budgets, as well as up to date information provided by the District. Annual revenue requirements were determined by taking into account projected expenses as well as minimum reserve fund targets.

2.2 Current Monthly Water Rates

The District bills water service on a monthly basis. As shown in Table 1, the current water rates include two components:

- 1) **Fixed Meter Charge:** Customers are charged the fixed charges based on their meter size and customer type. Meter size is used as a proxy for the estimated demand that each customer can place on the water system. A significant portion of a water system's design and in turn, the utility's operating and capital costs are related to meeting capacity requirements. The fixed charge is levied regardless of water consumption and recognizes that even when a customer does not use any water, the District incurs fixed costs in connection with maintaining the ability or readiness to serve each connection. The District also gives each customer an allowance of water included in their monthly fixed meter charge, called a base limit. Customers are not charged for water usage below this allowance. Fixed charges currently recover about 70% of total water rate revenues.
- 2) **Variable Charges:** Residential customers are billed according to uniform volumetric rate structure in which the cost per unit is the same for all water used above the base limit included in the monthly fixed meter charge. Commercial, residential and industrial customers are charged the same rate while Public Agencies (schools, libraries, etc...) are charged at 50% of the standard rate. Units are in 1,000 gallons (Kgal). The water consumption charges are intended to recover costs that vary based on the amount of water consumed and currently generate 30% of total water rate revenues.

Table 6 shows water meter flow rates and meter ratios. The District currently does not use the American Water Works Association's meter service equivalent standards to calculate service charges for meters greater than 1". However BWA recommends moving to this method of calculating service charges which is the national standard.

Table 6: Proposed Water Meter Flow Rates and Meter Ratios
 Heber Public Utility District
 Water Rate Study

Meter Size	Max Flow Rate (GPM)	Ratio [1]
1" Meter or less	50	1.00
2" Meter	160	3.20
3" Meter	350	7.00
4" Meter	630	12.60
6" Meter	1400	28.00
8" Meter	2400	48.00

[1] American Water Works Association Standards
 (AWWA). Manual M22, 2nd edition, 2004, page 62

2.3 Current Water Accounts

Table 7 shows current number of water accounts by meter size and customer class.

Table 7: Current Water Accounts
 Heber Public Utility District
 Water Rate Study

	Residential	Multifamily	Commercial	Industrial	Public Agency	Outside District	Total
1" or less	1,527	1	10	-	2	27	1,567
2"	-	9	11	17	13	2	52
3"	-	3	-	-	1	-	4
4"	-	-	-	1	1	-	2
	1,527	13	21	18	17	29	1,625

2.4 Financial Challenges / Key Drivers of Rate Increases

Going forward, the District's water enterprise is facing a number of financial challenges that will require the District to raise its water rates. Key drivers of future rate increases are summarized as follows.

2.4.1 Ongoing Operating Cost Inflation

The District faces ongoing operating cost inflation due to annual increases in a range of expenses such as utilities, supplies, as well as the cost of salaries, benefits, etc. Water operating cost inflation has historically been at or lower than the Consumer Price Index (CPI) for consumer goods and services. Since 1996, the average annual CPI for all urban customers has been 2.3%, whereas the average for the Construction Cost Index Engineering News Record (CCI ENR) 20-Cities average is 3.1%. As the District has historically been able to control costs, BWA uses a 2% operating cost inflation assumption. Appendix A includes a detailed description of water expense projections through FY2022.

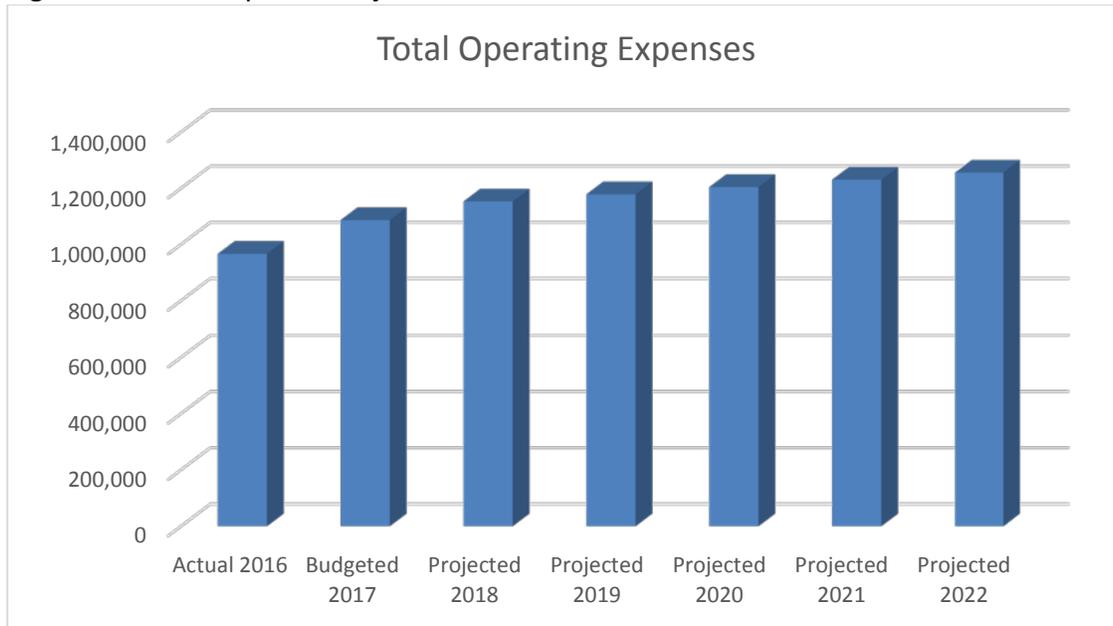
2.4.2 Water Reserve Funds

Maintaining a prudent minimal level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and non-catastrophic emergency capital repairs. Maintaining healthy reserve levels is arguably the biggest driver for water rate increases. Currently the District has established by resolution 6 different reserve funds and the current cash on hand is greater than the combined target reserve amount. Appendix A includes a detailed description of water reserves and ending balances through FY2022.

2.4.3 Water Expense Projections

Figure 1 shows projected water enterprise expense for the study period. Rate increases are needed to continue to fund increasing operating and capital expenses.

Figure 1: Water Expense Projections



2.4.4 Debt Service Coverage Requirements

In order to secure loans from private and public sources, the District is required to meet specific financial targets. One of the most important targets is strong debt service coverage. Debt service coverage is the amount of revenues collected above operating and maintenance costs reserved to pay annual debt service. Debt service coverage over 1.0 means that the net revenues after O&M expenses is equal to annual debt service. The District is targeting 1.20 debt service coverage in order to secure the lowest possible interest rate for and projected loans in the future. BWA projects the District will meet this target in every year.

2.5 Water Enterprise Revenue Requirements

2.5.1 Water Revenue Requirements: Cash Flow Projection

The water cash flow projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions. Key assumptions include:

Growth & Water Demand Assumptions

- Projections are conservative and assume annual growth during the study period.
- Future water sales are projected to increase at the same rate as growth, with no discernable bounce-back from previous years of low sales.

Revenue Assumptions

- Rate increases will become effective annually on July 1 of each year, with the first year of rates becoming effective July 1st, 2017. The District will adopt rate increases for the five year period from FY2018 through FY2022.
- Water rate revenues for FY2016 account for 93% of total water utility revenues and escalate in future years to account for projected rate increases.
- Investment income is estimated based on District estimates of earnings on all funds. Future projections are estimated based on conservative interest earning rates; actual amounts will vary based on reserves and future interest earning rates.
- Other revenues are projected to stay constant for the study period.

Expense Assumptions

- Operating & Maintenance Expenses are based on the FY 2016 Actual and FY2017 Budget and escalate at the annual rate of 2% to account for inflation.
- Capital Improvement Program expenditures include \$13.35 million in projects through FY2022. Capital cost inflation is set at 2% for the study period, starting in 2018.

Table 8 shows the cash flow projection. The recommended annual rate increases beginning in FY2018 are needed to fund revenue requirements for annual operating and capital expenses and to reach debt service coverage and cash reserve targets.

Table 8

Heber Public Utility District
 Water Rate Study
 Cash Flow

	FY2016 (Current)	FY2017 (Current)	FY2018 (Restructuring)	FY2019 (Projected)	FY2020 (Projected)	FY2021 (Projected)	FY2022 (Projected)
Beginning Balance	\$1,024,686	\$1,148,148	\$1,364,851	\$1,456,344	\$3,309,474	\$2,485,013	\$1,101,560
<u>Revenues</u>							
Fixed Meter [1]	1,209,264	962,453	1,020,200	1,061,008	1,099,506	1,141,946	1,186,084
Volumetric [1]	223,686	470,497	498,727	518,676	537,496	558,243	579,820
Capacity Fees [2]	0	48,293	48,776	49,264	49,756	50,254	50,756
Fire Protection Revenues	0	0	17,697	18,329	18,981	19,403	19,403
Other Revenue [3]	<u>50,134</u>	<u>48,600</u>	<u>49,086</u>	<u>49,577</u>	<u>50,073</u>	<u>50,573</u>	<u>51,079</u>
Total Operating Revenue	1,483,084	1,529,843	1,634,486	1,696,853	1,755,811	1,820,420	1,887,143
<u>Debt Proceeds</u>							
Grant [4]	1,150,000	3,850,000	0	0	0	0	0
Proposed Loan [5]	0	0	0	0	0	0	0
SRF Loan [6]	<u>1,035,000</u>	<u>3,815,000</u>	<u>0</u>	<u>2,340,000</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Financing Revenue	2,185,000	7,665,000	0	2,340,000	0	0	0
Total Revenue	3,668,084	9,194,843	1,634,486	4,036,853	1,755,811	1,820,420	1,887,143
Total Operating Expenses [7]	966,573	1,086,800	1,153,234	1,178,473	1,204,286	1,230,682	1,255,765
<u>Long Term Debt [8]</u>							
USDA COPs	145,800	146,165	147,000	146,000	170,000	167,000	167,000
Water Loan	0	0	0	0	0	0	0
WTP Loan	0	0	162,000	162,000	162,000	162,000	162,000
Proposed Loan	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>111,000</u>	<u>111,000</u>	<u>111,000</u>
Total Debt Service	145,800	146,165	309,000	308,000	443,000	440,000	440,000
Total Capital Projects [9]	2,432,248	7,745,175	80,759	697,250	932,988	1,533,190	143,724
Projected Surplus/Deficit	370,710	296,878	172,252	210,380	108,526	149,738	191,378
Ending Balance	\$1,148,148	\$1,364,851	\$1,456,344	\$3,309,474	\$2,485,013	\$1,101,560	\$1,149,214
Debt Coverage [10]	3.54	3.03	1.56	1.68	1.24	1.34	1.43
Target Balance [11]	746,249	775,894	792,275	798,498	915,863	922,372	928,557
Over/Under Target Balance	401,899	588,957	664,069	2,510,976	1,569,149	179,188	220,658
Annual Surplus/Deficit	123,462	216,703	91,493	1,853,130	(824,462)	(1,383,453)	47,655
OMDR Ratio	1.09	1.19	1.08	1.10	1.03	1.05	1.03

[1] From Table 9A and 9B

[2] Capacity Fee calculated by BWA @ \$3,087 per equivalent dwelling unit

[3] Other operating revenue includes fees, penalties, and misc. charges

[4] To fund Water Treatment Plant and distribution line replacement, from Table 7

[5] 20 year, semi-annual payments, 3% interest

[6] To fund Water Treatment Plant and distribution line replacements, from Table 7

[7] From Table 6

[8] From Table 8

[9] From Table 7

[10] (operating Revenue - operating expenses) / (long term debt). Minimum 1.20x coverage

[11] Derived from Resolution 2016-08 Reserve Guidelines. Detailed build-up can be found in Table 15

[12] (Operating Revenues)/ (O&M + Debt Service + Replacement CIP)

2.6 Cost of Service

Water utilities have used a wide range of approaches or perspectives for allocating and recovering their costs for providing service, and these costs are most commonly recovered from a combination of fixed and variable charges. The percentage of revenues derived from the fixed and variable charges varies for each agency and should be proportional to each system's expenditures and must not exceed the cost of providing service. A higher level of fixed charges provides better revenue stability and less dependence on variable sales. On the other hand, higher dependence on volumetric revenues provides a better conservation incentive.

Depending on perspective, the same costs can reasonably be allocated 100 percent to fixed revenue recovery, 100 percent to variable rate recovery, or to some combination of the two. For example, debt service used to fund water treatment facilities can legitimately be treated as a) a fixed annual cost that should be recovered from fixed charges, b) a cost related to providing water supply to meet customer demand and therefore a cost that should be recovered from variable rates, or c) a cost that can be recovered from both fixed and variable rates in recognition of the two alternative perspectives.

Many of the utility's costs are variable costs that vary by water consumption, such as the replacement water costs, as well as costs for personnel and utilities. However, a portion of these variable costs can reasonably be apportioned to fixed rate recovery, and vice-versa with fixed costs. For example, a share of the fixed cost of salaries related to water production can reasonably be recovered from usage-based charges as these costs are incurred to provide water supply to meet customer demand. Likewise, debt service payments may be fixed annual costs, but it is reasonable to recover some of these costs from usage-based rates as the costs are incurred to fund infrastructure that will improve the water delivery system.

While there is no single correct approach, BWA believes that costs should be allocated within a reasonable range that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency in cases where a range of reasonable approaches can be justified.

The water utility currently collects approximately 70% on average of total water sales revenues from fixed charges and 30% from the variable charges. With input from the District, BWA recommends maintaining this split in order that revenues remain stable even during times of decreased consumption. 9 shows a breakdown of the water utility's operating, capital, and reserve contributions expenses based on input from staff. As shown, the majority of the District's water system's costs are variable. Agencies that purchase water tend to have a higher allocation of variable costs compared to fixed costs.

Table 9: Allocation of Water System Expenses and Revenues to Fixed & Variable Costs
 Heber Public Utility District
 Water Rate Study

Table 9
 Heber Public Utility District
 Water Rate Study
 Cost Allocation

FY2018

Expenses	Residential Revenue				Non-residential Revenue				Fire Flow		Total	
		Fixed Charges		Volumetric		Fixed Charges		Volumetric	Fire Flow [1]			
Fixed Residential [1]	623,725	100%	623,725	0%	-	0%	-	0%	-	0%	-	100%
Variable Residential [1]	275,687	0%	-	100%	275,687	0%	-	0%	-	0%	-	100%
Fixed non-residential [1]	90,186	0%	-	0%	-	100%	90,186	0%	-	0%	-	100%
Variable non-residential [1]	74,320	0%	-	0%	-	0%	-	100%	74,320	0%	-	100%
Fire Flow O&M	89,315	0%	-	0%	-	0%	-	0%	-	100%	89,315	100%
Water Long Term Debt [2]	309,000	52%	162,206	23%	71,695	8%	23,454	6%	19,328	10%	32,316	100%
Capital Projects and Reserves [3]	56,693	52%	29,760	23%	13,154	8%	4,303	6%	3,546	10%	5,929	100%
Total Allocation	1,518,927	54%	815,692	24%	360,537	8%	117,943	6%	97,194	8.4%	127,560	100%

2.7 Water Rate Structure Recommendations

BWA evaluated the District’s water rate structure for equity and compliance with the substantive provisions of Proposition 218. Rate structure recommendations listed below incorporate input received from staff.

2.7.1 Fixed Service Charge Recommendations

The current fixed charges are based on meter size and customer class. Meter capacity ratios provide a basis for charging customers proportional to the capacity that is reserved for them in the water system. Larger meters have the ability to place a greater demand on the water system and are therefore, charged based on that potential demand. Meter ratios are widely used in California rate setting and are consistent with meter ratios adopted by the California Public Utility Commission for private water companies. The fixed charges for larger meters are determined by multiplying the base charge by the corresponding meter equivalent ratio. This establishes a fixed cost per account. The District includes a certain amount of water in the base limit that varies by meter size. In order to account for this cost to the District, BWA calculated the average variable rate for the District, then multiplied that cost by the 37% of the base limit and included it into the monthly fixed charge. A portion of costs in the utility are specifically allocated to fire protection. Commercial and multifamily accounts have different fire protection needs than residential accounts. Specifically, we assume non-single family residential accounts require 2,500 gallons per minute (gpm) of fire flow, whereas single family residential customers require only 1,000 gpm for fire protection. BWA then

allocates the fire protection costs based on the total fire flow requirements for residential and non-residential customers. For the test year, FY2017, we found that fire protection costs are approximately \$10 per non-residential customer, and \$4 for residential customers. This is added to the fixed service charge to calculate the total fixed service charge for residential and non-residential customers. The fixed charges are escalated by the revenue requirement increases each year. Fixed meter rates through FY2022 are shown in Table 10, which have been determined sufficient to meet revenue requirements. Under Proposition 218, the rates shown below are the maximum rates that the District can enact each year. The District can adopt rates that are lower than those shown based upon an annual review of the water utility's finances to ensure that revenues are in line with expenses.

Table 10: Proposed Fixed Meter Rates
 Heber Public Utility District
 Water Rate Study

WATER	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
	Allotment (Gallons)	(\$/month)										
Fixed Meter Charge												
Residential:												
1" Meter or less	15,000	\$53.57	15,000	\$56.07	15,000	\$57.84	15,000	\$59.54	15,000	\$61.30	15,000	\$64.01
\$ Increase/Decrease				\$2.50		\$1.76		\$1.70		\$1.76		\$2.71
% Increase/Decrease				4.7%		3.1%		2.9%		3.0%		4.4%
Multi-Residential:												
1" Meter or less	15,000	\$53.57	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
\$ Increase/Decrease				\$8.82		\$1.99		\$1.94		\$1.91		\$2.71
% Increase/Decrease				16.5%		3.2%		3.0%		2.9%		4.0%
2" Meter	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
\$ Increase/Decrease				-\$52.17		\$5.85		\$6.03		\$5.94		\$8.78
% Increase/Decrease				-21.1%		3.0%		3.0%		2.9%		4.1%
3" Meter	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
\$ Increase/Decrease				-\$61.67		\$12.28		\$12.64		\$12.41		\$19.53
% Increase/Decrease				-13.1%		3.0%		3.0%		2.9%		4.4%
Commercial/Industrial/Public												
1" Meter or less	15,000	\$75.09	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
\$ Increase/Decrease				-\$12.70		\$1.99		\$1.94		\$1.91		\$2.71
% Increase/Decrease				-16.9%		3.2%		3.0%		2.9%		4.0%
2" Meter	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
\$ Increase/Decrease				-\$52.17		\$5.85		\$6.03		\$5.94		\$8.78
% Increase/Decrease				-21.1%		3.0%		3.0%		2.9%		4.1%
3" Meter	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
\$ Increase/Decrease				-\$61.67		\$12.28		\$12.64		\$12.41		\$19.53
% Increase/Decrease				-13.1%		3.0%		3.0%		2.9%		4.4%
4" Meter	75,000	\$705.93	75,000	\$715.73	75,000	\$737.22	75,000	\$759.32	75,000	\$780.95	75,000	\$816.49
\$ Increase/Decrease				\$9.80		\$21.48		\$22.10		\$21.63		\$35.54
% Increase/Decrease				1.4%		3.0%		3.0%		2.8%		4.6%
Service Outside District (SOD)												
1" Meter	15,000	\$66.96	15,000	\$70.07	15,000	\$72.26	15,000	\$74.37	15,000	\$76.58	15,000	\$80.09
\$ Increase/Decrease				\$3.11		\$2.19		\$2.12		\$2.21		\$3.51
% Increase/Decrease				4.6%		3.1%		2.9%		3.0%		4.6%
2" Meter	30,000	\$156.17	30,000	\$163.42	30,000	\$168.52	30,000	\$173.46	30,000	\$178.61	30,000	\$186.80
\$ Increase/Decrease				\$7.25		\$5.10		\$4.94		\$5.14		\$8.19
% Increase/Decrease				4.6%		3.1%		2.9%		3.0%		4.6%

2.7.2 Water Variable Charge Recommendations

Water sales volumetric charges are currently billed according to customer class, with residential and commercial playing one rate, and public agencies paying 50% of the other rates. All pay a uniform rate for water used over their monthly base limit. BWA recommends the District combine all customer classes into one and charge all customer classes the same volumetric rate. This change will better reflect the District’s cost for providing water service, as well ensure variable rates are legally defensible. BWA finds that the existing base limit amounts are acceptable and does not recommend changing them at this time.

Table 11 shows the proposed volumetric rates to be used for all customer classes over the next 5 years. Under Proposition 218, the rates shown below are the maximum rates that the District can enact each year. The District can adopt rates that are lower than those shown based upon an annual review of the water utility’s finances to ensure that revenues are in line with expenses.

Table 11: Proposed Volumetric Water Rates
Heber Public Utility District
Water Rate Study

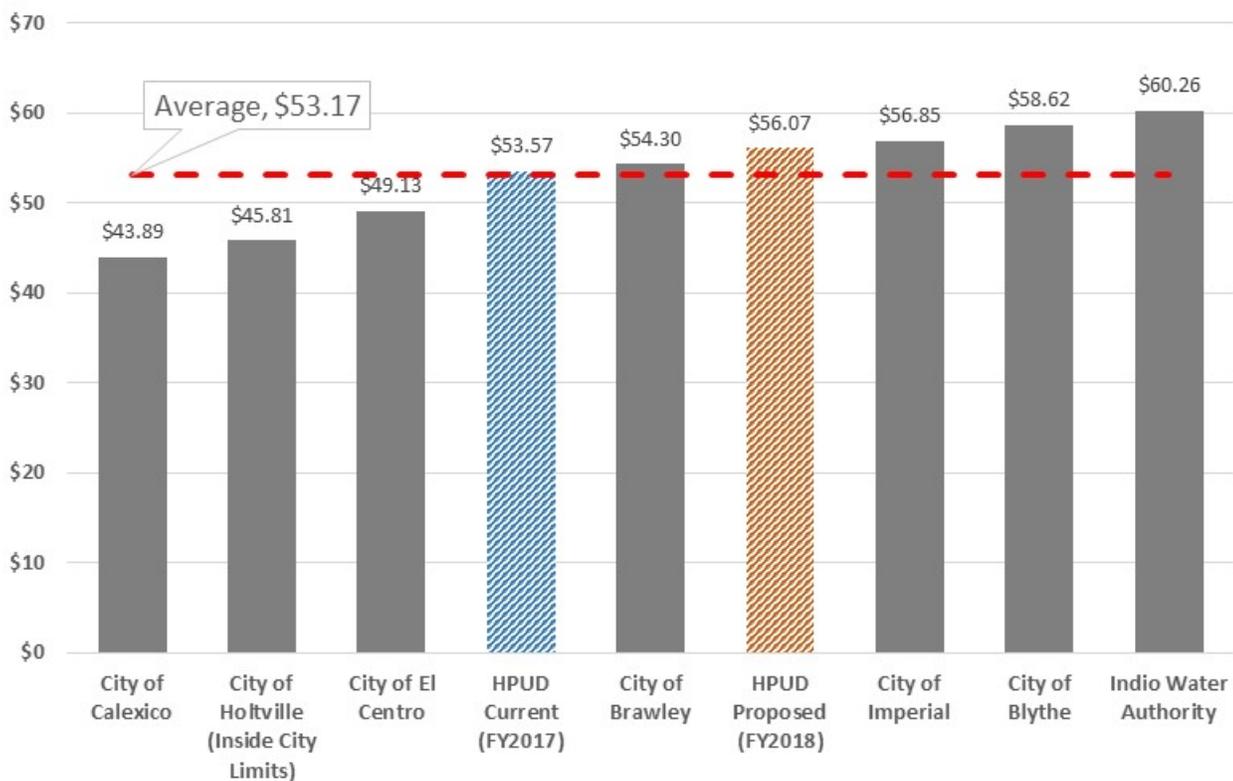
WATER	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)
Volumetric Charge (\$/1000 gallons)												
Residential Inside District	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Public Agency	0.0%	\$1.79	95.9%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				\$1.72		\$0.28		\$0.12		\$0.13		\$0.00
Commercial	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Industrial	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Multi-residential	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Outside District	0.0%	\$3.57	16.5%	\$4.16	7.9%	\$4.49	3.1%	\$4.63	3.2%	\$4.78	0.0%	\$4.78
\$ Increase/Decrease				\$0.59		\$0.33		\$0.14		\$0.15		\$0.00

2.8 Regional Water Rate Survey

Figure 2 compares the District’s current and proposed monthly rates to those of other regional agencies for a single family home using 15 CCF of water, or 11,000 gallons (monthly), the District’s average single family monthly consumption. The District’s current water rates are very close to the average of other regional agencies, and the District would remain near this average with the proposed rates for FY2018. Figure 2 is shown for comparative purposes only.

Figure 2: Regional Monthly Water Rate Survey

Water Rate Survey of Surrounding Area - Monthly Based on 15 HCF of usage and a 1" Meter



3 WASTEWATER FINANCES & RATES

3.1 Wastewater Financial Overview

Bartle Wells Associates conducted an independent evaluation of the District's wastewater system finances. Key observations include:

- Wastewater rates have not been increased since FY2013. Staff has strived to keep costs down, and expenses have been relatively flat year to year. However, BWA believes inflation will force operating and capital costs up. Without a rate increase, the wastewater fund will drop below their reserve targets by FY2021.
- The District currently provides wastewater collection and treatment services to approximately 1,800 customers. The District anticipates the nominal even growth of 1% over the study period.
- Total wastewater reserves at the beginning of FY2016 were \$1.47 million. Reserves are projected to drop slightly during the study period, down to \$1.28 million in FY2022, but still remain above the District's reserve policy.
- The District has \$1.8 million in capital improvement projects from FY2016 – FY2022, which includes repair and replacement of collection lines and manholes.
- Existing and proposed wastewater rates are determined based on cost of service per equivalent dwelling unit (EDU) and size of sewer line connection.

3.2 Current Monthly Wastewater Rates

Table 12 shows the District’s current monthly wastewater rates, as of July 1, 2013.

Table 12: Monthly Wastewater Rates
Heber Public Utility District
Water and Wastewater Rate Analysis and Study

Residential [1] [2]	Monthly
4" Connection	\$52.31
6" Connection	\$78.47
Multi-Family, Commercial, Industrial, and Public [1] [2]	
4" Connection	\$71.62
6" Connection	\$107.42
8" Connection	\$143.23

[1] Connections over 4" will be assessed a 50% fee per every 2" over 4".

[2] Any customer Class that exceeds a rate of 45% of water consumption into the wastewater system will be required to negotiate a wastewater rate commensurate with capacity/treatment.

3.3 Current Wastewater Accounts

Table 13 shows current wastewater customer accounts.

Table 13: Current Wastewater Customer Accounts
Heber Public Utility District
Water and Wastewater Rate Analysis and Study

Connection Size/Class	No. of Connections
Single Family Residential	
4" Connection	1,521
Multi-residential	
4" Connection	228
Commercial	
4" Connection	13
6" Connection	3
Industrial	
4" Connection	9
Public Agency	
4" Connection	2
8" Connection	10

3.4 Financial Challenges / Key Drivers of Rate Increases

Going forward, the District’s wastewater enterprise is facing a number of financial challenges that will require the District to continue with scheduled rate increases. Key drivers of scheduled wastewater rate increases are summarized below.

3.4.1 Capital Improvements / Aging Infrastructure

The District has recurring repair and maintenance related capital improvement projects planned throughout the study period. It is ideal for the District to fund these projects with annual revenues rather than debt. Rate increases are required for the District to have enough net income after O&M to fund those capital projects.

3.4.2 Ongoing Operating Cost Inflation

The District faces ongoing operating cost inflation due to annual cost increases in utilities, transfers, salaries, benefits, etc. Water and wastewater operating cost inflation has historically been lower than the Consumer Price Index (CPI) for consumer goods and services. Since 1996, the average annual CPI for all urban customers has been 2.3%, whereas the ENR-CCI 20-city average has been 3.1%. As the District has historically been able to control costs, BWA uses a 2% operating cost inflation assumption. Appendix B includes a detailed description of wastewater expense projections through FY2025.

3.4.3 Wastewater Reserve Funds

Maintaining a prudent minimal level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and non-catastrophic emergency capital repairs. Maintaining healthy reserve levels is arguably the biggest driver for water rate increases. Currently the District has established by resolution 6 different reserve funds and the current cash on hand is greater than the combined target reserve amount. Appendix A includes a detailed description of wastewater reserves and ending balances through FY2022.

3.4.4 Wastewater Expense Projections

Figure 3 shows the wastewater expense projections from FY2016 – FY2022. Rate increases are needed to continue to fund increasing operating and capital expenses.

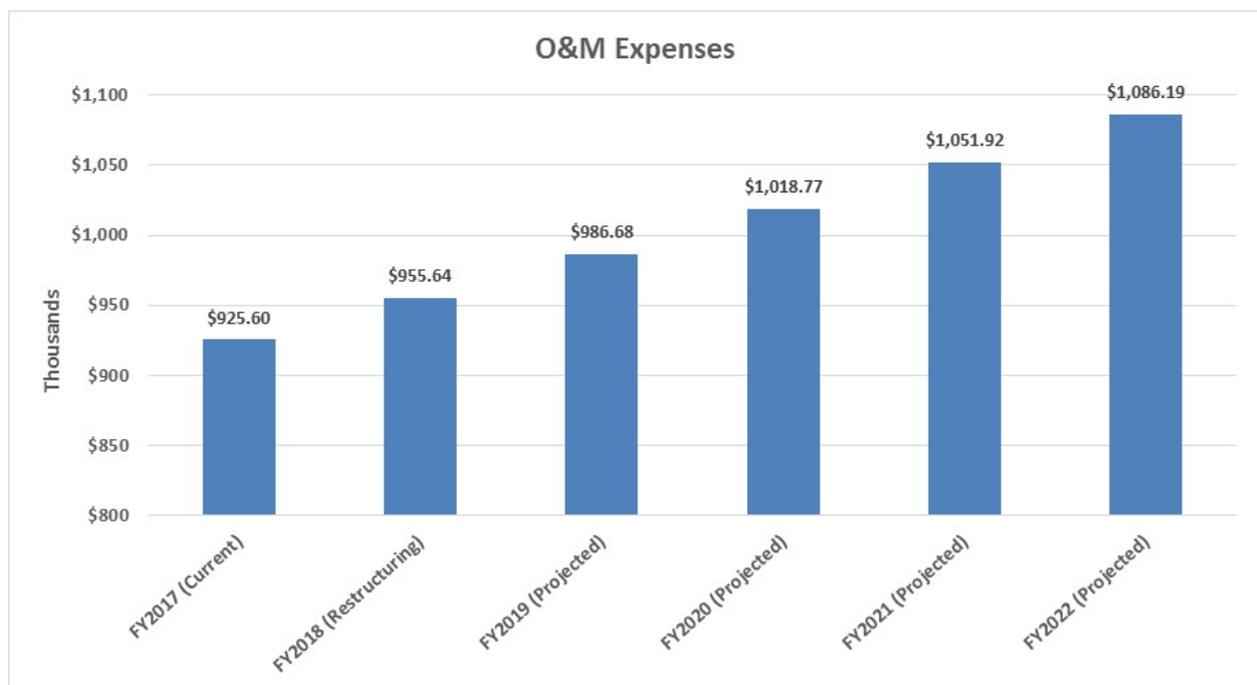


Figure 3: Wastewater Expense Projections

3.4.1 Wastewater Debt

The District currently has one SRF loan, with annual payments of \$211,000 continuing for the study period. BWA does not project the need for any additional debt to fund future capital.

3.5 Wastewater Enterprise Financial Projections

The wastewater cash flow projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions. BWA recommends a rate increases of 4.7% for FY2018, then 3.5% for the remainder of the study period through FY 2022. Key assumptions include:

Growth Assumptions

- Projections are conservative and assume annual growth during the study period.
- Future wastewater volumes are projected to increase at the same rate as growth.

Revenue Assumptions

- Rate increases will become effective annually on July 1 of each year, with the first year of rates becoming effective July 1st, 2017. The District will adopt rate increases for the five year period from FY2018 through FY2022.
- Wastewater rate revenues for FY2016 account for 96% of total water utility revenues and escalate in future years to account for projected rate increases.
- Other revenues are projected to stay constant for the study period.

Expense Assumptions

- Operating & Maintenance Expenses are based on the FY2017 Budget and escalate at the annual rate of 2% to account for inflation.
- Capital Improvement Program expenditures include \$2.3 million in projects through FY2022. Capital cost inflation is set at 2% for the study period, starting in 2018.

Table 14 shows the cash flow projection with the proposed rate increases.

Table 14: Wastewater Cash Flow Projection
 Heber Public Utility District
 Water and Wastewater Rate Analysis and Study

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Beginning Balance	\$1,466,146	\$1,395,265	\$1,415,989	\$1,376,502	\$852,641	\$825,675	\$819,266
Revenues							
Fixed Revenue [1]	1,192,396	1,174,871	1,221,866	1,276,850	1,329,719	1,387,177	1,447,221
Volumetric Revenue [1]	0	17,525	18,226	19,046	19,834	20,691	21,587
Capacity Fees [2]	0	123,038	123,038	123,038	125,511	126,767	128,034
Other Revenue [1]	43,910	39,900	40,299	40,702	41,109	41,520	41,935
Debt Proceeds							
Grant	0	0	0	0	0	0	0
Proposed Loan	0	0	0	0	0	0	0
SRF Loan	0	0	0	0	0	0	0
Total Financing Revenue	0	0	0	0	0	0	0
Total Revenue	1,236,306	1,355,334	1,403,429	1,459,636	1,516,174	1,576,155	1,638,778
Operating Expenses [3]	870,625	925,600	955,640	986,683	1,018,765	1,051,922	1,086,191
Net Operating Revenues	365,681	429,734	447,789	472,953	497,409	524,233	552,587
Debt Service [4]	211,000	211,000	211,000	211,000	211,000	211,000	211,000
Capital Projects [5]	225,563	198,010	276,277	785,814	313,375	319,642	326,035
Ending Balance	\$1,395,265	\$1,415,989	\$1,376,502	\$852,641	\$825,675	\$819,266	\$834,818
Target Balance [6]	\$751,641	\$765,385	\$772,895	\$780,656	\$788,676	\$796,965	\$805,533
Over/Under Target Balance	\$643,623	\$650,604	\$603,607	\$71,985	\$36,998	\$22,301	\$29,285
Annual Surplus/Deficit	(70,881)	20,725	(39,487)	(523,861)	(26,966)	(6,409)	15,552
Debt Coverage [7]	1.73	2.04	2.12	2.24	2.36	2.48	2.62
OMDR Ratio [8]	0.99	1.11	1.12	0.97	0.99	1.00	1.01

[1] From Table 8A - 8C

[2] Updated capacity fees calculated by BWA @ \$6,660 per equivalent dwelling unit

[3] From Table 4

[4] From Table 6

[5] From Table 7

[6] From Table 10

[7] (Operating Revenue - Operating Expenses) / (Long Term Debt). Minimum 1.25x coverage

[8] (Operating Revenues) / (O&M + Debt Service + Replacement CIP)

3.6 Cost of Service

Bartle Wells Associates follows the same process for allocating costs for the sewer utility as is explained in the water section of this report. Many of the utility's costs are variable costs that vary by wastewater flow, such as the chemical costs, as well as costs for personnel and utilities. However, a portion of these variable costs can reasonably be apportioned to fixed rate recovery, and vice-versa with fixed costs. For example, a share of the fixed cost of salaries related to wastewater treatment can reasonably be recovered from flow-based charges as these costs are incurred to provide treatment. Likewise, debt service payments may be fixed annual costs, but it is reasonable to recover some of these costs from volume-based rates as the costs are incurred to fund infrastructure that will improve the sewer system.

While there is no single correct approach, BWA believes that costs should be allocated within a reasonable range that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency in cases where a range of reasonable approaches can be justified.

The wastewater utility currently collects all revenues from fixed charges. With input from the District, BWA recommends implementing a volumetric rate for all non-residential customers while recovering volume-related residential costs via the fixed charge, in line with the current rate structure. T5 shows a breakdown of the wastewater utility's operating, capital, reserve contributions expenses based on input from staff.

Table 15: Wastewater Cost Allocation
 Heber Public Utility District
 Wastewater Rate Study

FY2017

Expenses	Residential Revenue		Non-Residential Revenue				Total
		<u>Fixed Charges</u>	<u>Fixed Charges</u>		<u>Volumetric</u>		
Fixed Residential [1]	782,783	100% 782,783	0%	0	0%	0	100%
Variable Residential [1]	93,570	100% 93,570	0%	0	0%	0	100%
Fixed Non-Residential [1]	32,542	0% 0	100%	32,542	0%	0	100%
Variable Non-Residential [1]	16,705	0% 0	0%	0	100%	16,705	100%
Long Term Debt [2]	211,000	96% 202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	55,796	52,965		2,011		820	
Total Allocation	1,192,396	95% 1,131,897	4%	42,974	1%	17,525	100%

3.7 Wastewater Rate Projections

3.7.1 Current Wastewater Rate Structure

The current monthly wastewater charge is shown on Table 16. Wastewater rates were last increased in FY2013 and last reviewed in 2010. The current rates have service charges that vary by customer classification and by the size of the sewer lateral connection.

Table 16: Current and Future Adapted Monthly Wastewater Rates
Heber Public Utility District
Wastewater Rate Study

Residential [1] [2]	Monthly
4" Connection	\$52.31
6" Connection	\$78.47
Multi-Family, Commercial, Industrial, and Public [1] [2]	
4" Connection	\$71.62
6" Connection	\$107.42
8" Connection	\$143.23

[1] Connections over 4" will be assessed a 50% fee per every 2" over 4".

[2] Any customer Class that exceeds a rate of 45% of water consumption into the wastewater system will be required to negotiate a wastewater rate commensurate with capacity/treatment.

3.8 Proposed Wastewater Rates

BWA recommends eliminating different service charges for different customer classifications and implementing a volumetric charge for commercial customers to reflect the different types of sewer customers within the system.

The recommended rate adjustments are shown on Table 17. Under Proposition 218, the wastewater rates shown on Table 17 are the maximum rates that the District can enact each year. The District can adopt rates that are lower than those shown based upon an annual review of the wastewater utility's finances to ensure that revenues are in line with expenses.

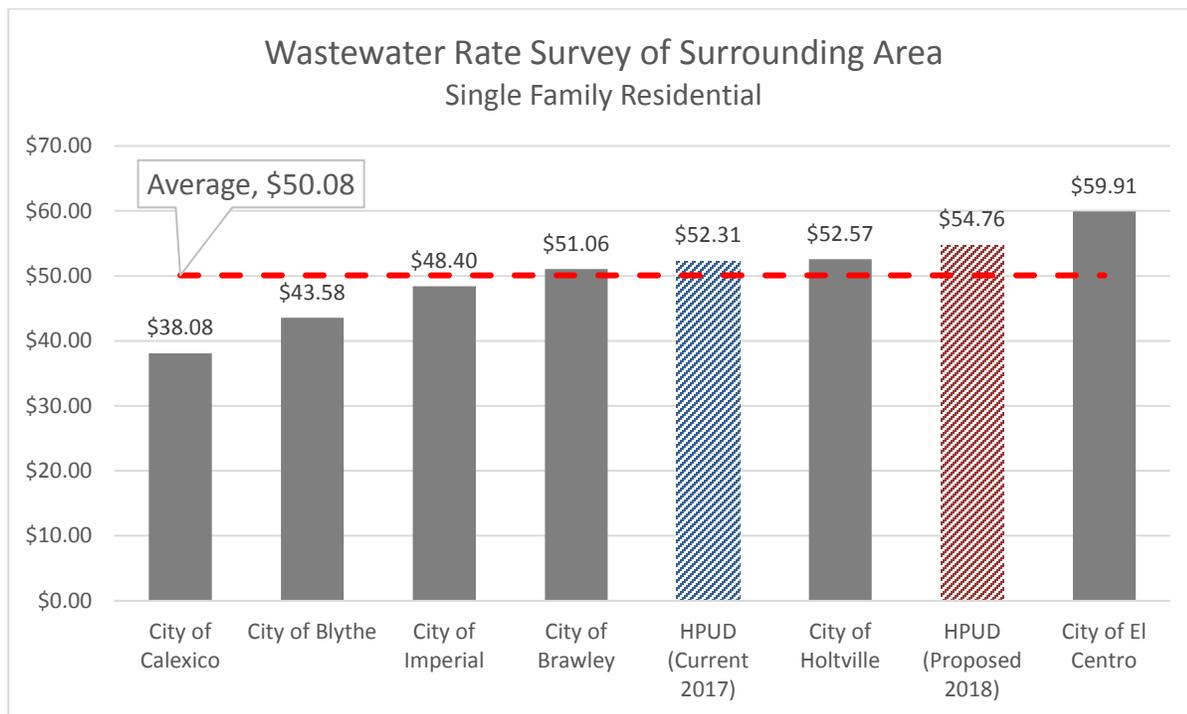
Table 17: Proposed Wastewater Rate Increases
 Heber Public Utility District
 Water and Wastewater Rate Analysis and Study

WASTEWATER	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
	Current	Proposed	Proposed	Proposed	Proposed	Proposed
Fixed Meter Charge						
Residential	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
4" Connection	\$52.31	\$54.76	\$56.66	\$58.62	\$60.66	\$62.76
\$ Increase/Decrease		\$2.45	\$1.90	\$1.96	\$2.03	\$2.10
% Increase/Decrease		4.7%	3.5%	3.5%	3.5%	3.5%
6" Connection	\$78.47	\$117.00	\$120.48	\$124.65	\$128.97	\$133.44
\$ Increase/Decrease		\$38.53	\$3.48	\$4.18	\$4.32	\$4.47
% Increase/Decrease		49.1%	3.0%	3.5%	3.5%	3.5%
Multifamily	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
Per Dwelling Unit 4" Connection	\$71.62	\$54.76	\$56.66	\$58.62	\$60.66	\$62.76
\$ Increase/Decrease		-\$16.86	\$1.90	\$1.96	\$2.03	\$2.10
% Increase/Decrease		-23.5%	3.5%	3.5%	3.5%	3.5%
Commercial, Industrial, and Public	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
4" Connection	\$71.62	\$49.66	\$51.21	\$52.82	\$54.49	\$56.22
\$ Increase/Decrease		-\$21.96	\$1.55	\$1.61	\$1.67	\$1.73
% Increase/Decrease		-30.7%	3.1%	3.1%	3.2%	3.2%
6" Connection	\$107.42	\$109.25	\$112.66	\$116.20	\$119.88	\$123.69
\$ Increase/Decrease		\$1.83	\$3.41	\$3.54	\$3.67	\$3.81
% Increase/Decrease		1.7%	3.1%	3.1%	3.2%	3.2%
8" Connection	\$143.23	\$198.64	\$204.84	\$211.28	\$217.96	\$224.88
\$ Increase/Decrease		\$55.41	\$6.21	\$6.44	\$6.68	\$6.93
% Increase/Decrease		38.7%	3.1%	3.1%	3.2%	3.2%
Volumetric Charge (\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)
Commercial, Industrial, Public	N/A	\$0.57	\$0.59	\$0.61	\$0.63	\$0.65
\$ Increase/Decrease		N/A	\$0.02	\$0.02	\$0.02	\$0.02
% Increase/Decrease		N/A	3.5%	3.5%	3.5%	3.5%

3.9 Regional Wastewater Rate Survey

For comparison purposes, Figure 4 shows the District’s current and proposed wastewater rates relative to those of other regional agencies for a single family home paying a flat residential rate. As shown on the chart, the proposed wastewater rate increase for residential customers is \$2.45 a month. As show in Figure 4, The District’s residential wastewater charges will remain close to the regional average, but still is still higher than average.

Figure 4: Monthly Residential Wastewater Rate Survey of Regional Agencies



3.10 Sample Combined Water and Wastewater Bill Impacts

Table 18 and 19 shows sample water and wastewater bill impacts. Residential customers see increases that average approximately 3.7% annually, slightly less than overall rate increases due to the difference in allocation of costs in FY2018.

Table 18: Sample Combined Water and Wastewater Bill Impacts – Residential & Multi-Residential
Heber Public Utility District

CUSTOMER CLASS	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
	Allotment (Gallons)	(\$/month)										
Residential:												
Water	15,000	\$53.57	15,000	\$56.07	15,000	\$57.84	15,000	\$59.54	15,000	\$61.30	15,000	\$64.01
Wastewater 4" Connection		\$52.31		\$54.76		\$56.66		\$58.62		\$60.66		\$62.76
Combined Bill		\$105.88		\$110.84		\$114.50		\$118.16		\$121.96		\$126.77
\$ Increase/Decrease				\$4.96		\$3.66		\$3.67		\$3.79		\$4.82
% Increase/Decrease				4.7%		3.3%		3.2%		3.2%		3.9%
Multi-Residential:												
1" Meter or less Water	15,000	\$53.57	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
Assuming 4 MF Units Wastewater		\$286.48		\$219.05		\$226.65		\$234.50		\$242.63		\$251.03
Combined Bill		\$340.05		\$281.45		\$291.03		\$300.82		\$310.85		\$321.98
\$ Increase/Decrease				-\$58.60		\$9.58		\$9.79		\$10.04		\$11.12
% Increase/Decrease				-17.2%		3.4%		3.4%		3.3%		3.6%
2" Meter Water	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
Assuming 8 MF Units Wastewater		\$572.96		\$438.11		\$453.29		\$469.00		\$485.25		\$502.07
Combined Bill		\$819.84		\$632.82		\$653.86		\$675.59		\$697.78		\$723.38
\$ Increase/Decrease				-\$187.02		\$21.04		\$21.73		\$22.19		\$25.60
% Increase/Decrease				-22.8%		3.3%		3.3%		3.3%		3.7%
3" Meter Water	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
Assuming 20 MF Units Wastewater		\$1,432.40		\$1,095.27		\$1,133.23		\$1,172.50		\$1,213.13		\$1,255.17
Combined Bill		\$1,903.02		\$1,504.22		\$1,554.46		\$1,606.37		\$1,659.41		\$1,720.98
\$ Increase/Decrease				-\$398.80		\$50.24		\$51.91		\$53.04		\$61.57
% Increase/Decrease				-21.0%		3.3%		3.3%		3.3%		3.7%
Assumes Customer Uses Up to But Not Over Water Allotment												

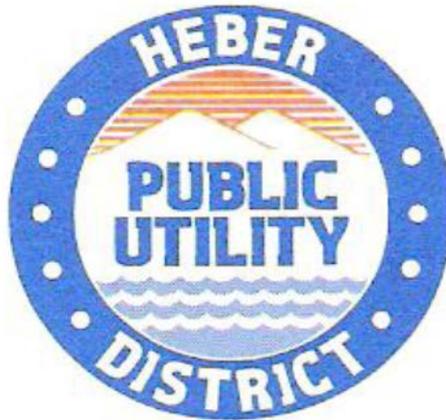
Table 19: Sample Combined Water and Wastewater Bill Impacts – Non-Residential
 Heber Public Utility District
 Water and Wastewater Rate Analysis and Study

CUSTOMER CLASS	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
Commercial/Industrial/Public:												
1" Meter or less Water	15,000	\$75.09	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
Wastewater 4" Line		<u>\$71.62</u>		\$49.66		\$51.21		\$52.82		\$54.49		\$56.22
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$8.52</u>		<u>\$8.81</u>		<u>\$9.12</u>		<u>\$9.43</u>		<u>\$9.76</u>
Combined Bill		\$146.71		\$120.57		\$124.40		\$128.26		\$132.15		\$136.92
\$ Increase/Decrease				-\$26.14		\$3.84		\$3.85		\$3.90		\$4.77
% Increase/Decrease				-17.8%		3.2%		3.1%		3.0%		3.6%
2" Meter Water	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
Wastewater 6" Connection		\$107.42		\$109.25		\$112.66		\$116.20		\$119.88		\$123.69
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$22.71</u>		<u>\$23.50</u>		<u>\$24.31</u>		<u>\$25.16</u>		<u>\$26.03</u>
Combined Bill		\$354.30		\$326.68		\$336.73		\$347.11		\$357.56		\$371.03
\$ Increase/Decrease				-\$27.62		\$10.06		\$10.38		\$10.45		\$13.46
% Increase/Decrease				-7.8%		3.1%		3.1%		3.0%		3.8%
3" Meter Water Water	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
Wastewater 6" Connection		\$107.42		\$109.25		\$112.66		\$116.20		\$119.88		\$123.69
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$34.07</u>		<u>\$35.25</u>		<u>\$36.47</u>		<u>\$37.73</u>		<u>\$39.04</u>
Combined Bill		\$578.04		\$552.27		\$569.15		\$586.55		\$603.89		\$628.54
\$ Increase/Decrease				-\$25.77		\$16.88		\$17.40		\$17.34		\$24.65
% Increase/Decrease				-4.5%		3.1%		3.1%		3.0%		4.1%
4" Meter Water	75,000	\$705.93	75,000	\$715.73	75,000	\$737.22	75,000	\$759.32	75,000	\$780.95	75,000	\$816.49
Wastewater 8" Connection		\$143.23		\$198.64		\$204.84		\$211.28		\$217.96		\$224.88
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$42.58</u>		<u>\$44.06</u>		<u>\$45.59</u>		<u>\$47.17</u>		<u>\$48.80</u>
Combined Bill		\$849.16		\$956.95		\$986.12		\$1,016.19		\$1,046.08		\$1,090.18
\$ Increase/Decrease				\$107.79		\$29.16		\$30.07		\$29.89		\$44.10
% Increase/Decrease				12.7%		3.0%		3.0%		2.9%		4.2%

Assumes Customer Uses Up to But Not Over Water Allotment

APPENDIX A

Water Rate Study Tables



Tables

Heber Public Utility District

Water Rate Study



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

1/26/2017

Table ES-COMBINED
EXECUTIVE SUMMARY - BILL IMPACT SUMMARY

CUSTOMER CLASS	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
	Allotment (Gallons)	\$/month										
Residential:												
Water	15,000	\$53.57	15,000	\$56.07	15,000	\$57.84	15,000	\$59.54	15,000	\$61.30	15,000	\$64.01
Wastewater 4" Connection		<u>\$52.31</u>		<u>\$54.76</u>		<u>\$56.66</u>		<u>\$58.62</u>		<u>\$60.66</u>		<u>\$62.76</u>
Combined Bill		\$105.88		\$110.84		\$114.50		\$118.16		\$121.96		\$126.77
\$ Increase/Decrease				\$4.96		\$3.66		\$3.67		\$3.79		\$4.82
% Increase/Decrease				4.7%		3.3%		3.2%		3.2%		3.9%
Multi-Residential:												
1" Meter or less Water	15,000	\$53.57	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
Assuming 4 MF Units Wastewater		<u>\$286.48</u>		<u>\$219.05</u>		<u>\$226.65</u>		<u>\$234.50</u>		<u>\$242.63</u>		<u>\$251.03</u>
Combined Bill		\$340.05		\$281.45		\$291.03		\$300.82		\$310.85		\$321.98
\$ Increase/Decrease				-\$58.60		\$9.58		\$9.79		\$10.04		\$11.12
% Increase/Decrease				-17.2%		3.4%		3.4%		3.3%		3.6%
2" Meter Water	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
Assuming 8 MF Units Wastewater		<u>\$572.96</u>		<u>\$438.11</u>		<u>\$453.29</u>		<u>\$469.00</u>		<u>\$485.25</u>		<u>\$502.07</u>
Combined Bill		\$819.84		\$632.82		\$653.86		\$675.59		\$697.78		\$723.38
\$ Increase/Decrease				-\$187.02		\$21.04		\$21.73		\$22.19		\$25.60
% Increase/Decrease				-22.8%		3.3%		3.3%		3.3%		3.7%
3" Meter Water	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
Assuming 20 MF Units Wastewater		<u>\$1,432.40</u>		<u>\$1,095.27</u>		<u>\$1,133.23</u>		<u>\$1,172.50</u>		<u>\$1,213.13</u>		<u>\$1,255.17</u>
Combined Bill		\$1,903.02		\$1,504.22		\$1,554.46		\$1,606.37		\$1,659.41		\$1,720.98
\$ Increase/Decrease				-\$398.80		\$50.24		\$51.91		\$53.04		\$61.57
% Increase/Decrease				-21.0%		3.3%		3.3%		3.3%		3.7%
Assumes Customer Uses Up to But Not Over Water Allotment												

Table ES-COMBINED
EXECUTIVE SUMMARY - BILL IMPACT SUMMARY

CUSTOMER CLASS	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
Commercial/Industrial/Public:												
1" Meter or less Water	15,000	\$75.09	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
Wastewater 4" Line		<u>\$71.62</u>		\$49.66		\$51.21		\$52.82		\$54.49		\$56.22
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$8.52</u>		<u>\$8.81</u>		<u>\$9.12</u>		<u>\$9.43</u>		<u>\$9.76</u>
Combined Bill		\$146.71		\$120.57		\$124.40		\$128.26		\$132.15		\$136.92
\$ Increase/Decrease				-\$26.14		\$3.84		\$3.85		\$3.90		\$4.77
% Increase/Decrease				-17.8%		3.2%		3.1%		3.0%		3.6%
2" Meter Water	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
Wastewater 6" Connection		\$107.42		\$109.25		\$112.66		\$116.20		\$119.88		\$123.69
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$22.71</u>		<u>\$23.50</u>		<u>\$24.31</u>		<u>\$25.16</u>		<u>\$26.03</u>
Combined Bill		\$354.30		\$326.68		\$336.73		\$347.11		\$357.56		\$371.03
\$ Increase/Decrease				-\$27.62		\$10.06		\$10.38		\$10.45		\$13.46
% Increase/Decrease				-7.8%		3.1%		3.1%		3.0%		3.8%
3" Meter Water Water	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
Wastewater 6" Connection		\$107.42		\$109.25		\$112.66		\$116.20		\$119.88		\$123.69
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$34.07</u>		<u>\$35.25</u>		<u>\$36.47</u>		<u>\$37.73</u>		<u>\$39.04</u>
Combined Bill		\$578.04		\$552.27		\$569.15		\$586.55		\$603.89		\$628.54
\$ Increase/Decrease				-\$25.77		\$16.88		\$17.40		\$17.34		\$24.65
% Increase/Decrease				-4.5%		3.1%		3.1%		3.0%		4.1%
4" Meter Water	75,000	\$705.93	75,000	\$715.73	75,000	\$737.22	75,000	\$759.32	75,000	\$780.95	75,000	\$816.49
Wastewater 8" Connection		\$143.23		\$198.64		\$204.84		\$211.28		\$217.96		\$224.88
Wastewater Volume Charge		<u>\$0.00</u>		<u>\$42.58</u>		<u>\$44.06</u>		<u>\$45.59</u>		<u>\$47.17</u>		<u>\$48.80</u>
Combined Bill		\$849.16		\$956.95		\$986.12		\$1,016.19		\$1,046.08		\$1,090.18
\$ Increase/Decrease				\$107.79		\$29.16		\$30.07		\$29.89		\$44.10
% Increase/Decrease				12.7%		3.0%		3.0%		2.9%		4.2%

Assumes Customer Uses Up to But Not Over Water Allotment

Table ES-1

EXECUTIVE SUMMARY - CURRENT AND PROPOSED WATER RATES

WATER	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
	Allotment (Gallons)	(\$/month)										
Fixed Meter Charge												
Residential:												
1" Meter or less	15,000	\$53.57	15,000	\$56.07	15,000	\$57.84	15,000	\$59.54	15,000	\$61.30	15,000	\$64.01
\$ Increase/Decrease				\$2.50		\$1.76		\$1.70		\$1.76		\$2.71
% Increase/Decrease				4.7%		3.1%		2.9%		3.0%		4.4%
Multi-Residential:												
1" Meter or less	15,000	\$53.57	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
\$ Increase/Decrease				\$8.82		\$1.99		\$1.94		\$1.91		\$2.71
% Increase/Decrease				16.5%		3.2%		3.0%		2.9%		4.0%
2" Meter	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
\$ Increase/Decrease				-\$52.17		\$5.85		\$6.03		\$5.94		\$8.78
% Increase/Decrease				-21.1%		3.0%		3.0%		2.9%		4.1%
3" Meter	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
\$ Increase/Decrease				-\$61.67		\$12.28		\$12.64		\$12.41		\$19.53
% Increase/Decrease				-13.1%		3.0%		3.0%		2.9%		4.4%
Commercial/Industrial/Public												
1" Meter or less	15,000	\$75.09	15,000	\$62.39	15,000	\$64.38	15,000	\$66.32	15,000	\$68.23	15,000	\$70.94
\$ Increase/Decrease				-\$12.70		\$1.99		\$1.94		\$1.91		\$2.71
% Increase/Decrease				-16.9%		3.2%		3.0%		2.9%		4.0%
2" Meter	40,000	\$246.88	40,000	\$194.71	40,000	\$200.57	40,000	\$206.59	40,000	\$212.53	40,000	\$221.31
\$ Increase/Decrease				-\$52.17		\$5.85		\$6.03		\$5.94		\$8.78
% Increase/Decrease				-21.1%		3.0%		3.0%		2.9%		4.1%
3" Meter	60,000	\$470.62	60,000	\$408.95	60,000	\$421.24	60,000	\$433.88	60,000	\$446.28	60,000	\$465.81
\$ Increase/Decrease				-\$61.67		\$12.28		\$12.64		\$12.41		\$19.53
% Increase/Decrease				-13.1%		3.0%		3.0%		2.9%		4.4%
4" Meter	75,000	\$705.93	75,000	\$715.73	75,000	\$737.22	75,000	\$759.32	75,000	\$780.95	75,000	\$816.49
\$ Increase/Decrease				\$9.80		\$21.48		\$22.10		\$21.63		\$35.54
% Increase/Decrease				1.4%		3.0%		3.0%		2.8%		4.6%
Service Outside District (SOD)												
1" Meter	15,000	\$66.96	15,000	\$70.07	15,000	\$72.26	15,000	\$74.37	15,000	\$76.58	15,000	\$80.09
\$ Increase/Decrease				\$3.11		\$2.19		\$2.12		\$2.21		\$3.51
% Increase/Decrease				4.6%		3.1%		2.9%		3.0%		4.6%
2" Meter	30,000	\$156.17	30,000	\$163.42	30,000	\$168.52	30,000	\$173.46	30,000	\$178.61	30,000	\$186.80
\$ Increase/Decrease				\$7.25		\$5.10		\$4.94		\$5.14		\$8.19
% Increase/Decrease				4.6%		3.1%		2.9%		3.0%		4.6%

Table ES-1

EXECUTIVE SUMMARY - CURRENT AND PROPOSED WATER RATES

WATER	FY2017 (Current)		Proposed FY2018		Proposed FY2019		Proposed FY2020		Proposed FY2021		Proposed FY2022	
	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)	% Increase	(\$/Kgals)
Volumetric Charge (\$/1000 gallons)												
Residential Inside District	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Public Agency	0.0%	\$1.79	95.9%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				\$1.72		\$0.28		\$0.12		\$0.13		\$0.00
Commercial	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Industrial	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Multi-residential	0.0%	\$3.57	-1.8%	\$3.51	7.9%	\$3.79	3.1%	\$3.90	3.2%	\$4.03	0.0%	\$4.03
\$ Increase/Decrease				-\$0.06		\$0.28		\$0.12		\$0.13		\$0.00
Outside District	0.0%	\$3.57	16.5%	\$4.16	7.9%	\$4.49	3.1%	\$4.63	3.2%	\$4.78	0.0%	\$4.78
\$ Increase/Decrease				\$0.59		\$0.33		\$0.14		\$0.15		\$0.00
Private Fire Line (\$/meter)	% Increase	(\$/meter)	% Increase	(\$/meter)	% Increase	(\$/meter)	% Increase	(\$/meter)	% Increase	(\$/meter)	% Increase	(\$/meter)
1" Meter or less	N/A	N/A	N/A	\$10.53	3.6%	\$10.91	3.6%	\$11.30	2.2%	\$11.55	0.0%	\$11.55
\$ Increase/Decrease						\$0.38		\$0.39		\$0.25		\$0.00
2" Meter	N/A	N/A	N/A	\$33.71	3.6%	\$34.91	3.6%	\$36.15	2.2%	\$36.96	0.0%	\$36.96
\$ Increase/Decrease						\$1.20		\$1.24		\$0.81		\$0.00
3" Meter	N/A	N/A	N/A	\$73.74	3.6%	\$76.37	3.6%	\$79.09	2.2%	\$80.85	0.0%	\$80.85
\$ Increase/Decrease						\$2.63		\$2.72		\$1.76		\$0.00
4" Meter	N/A	N/A	N/A	\$132.73	3.6%	\$137.47	3.6%	\$142.36	2.2%	\$145.53	0.0%	\$145.53
\$ Increase/Decrease						\$4.74		\$4.89		\$3.17		\$0.00
6" Meter / Hydrant	N/A	N/A	N/A	\$210.68	3.6%	\$218.20	3.6%	\$225.96	2.2%	\$230.99	0.0%	\$230.99
\$ Increase/Decrease						\$7.52		\$7.76		\$5.03		\$0.00
6" Meter / Hydrant /Year				\$2,528.19	3.6%	\$2,618.44	3.6%	\$2,711.54	2.2%	\$2,771.92	0.0%	\$2,771.92
\$ Increase/Decrease						\$90.25		\$93.10		\$60.38		\$0.00
Temporary Hydrant Meter / Month				\$136.30		\$140.19		\$144.19		\$148.48		\$0.00
Hydrant Meter Volumetric Charge (\$/1,000 gallons)				\$3.51		\$3.79		\$3.90		\$4.03		\$4.03

Table 1

Heber Public Utility District

Water Rate Study

Meters by Class and Size

	Residential	Multifamily	Commercial	Industrial	Public Agency	Outside District	Total
1" or less	1,527	1	10	-	2	27	1,567
2"	-	9	11	17	13	2	52
3"	-	3	-	-	1	-	4
4"	-	-	-	1	1	-	2
	<u>1,527</u>	<u>13</u>	<u>21</u>	<u>18</u>	<u>17</u>	<u>29</u>	<u>1,625</u>

Table 2

Heber Public Utility District
Water Rate Study
Current Rates as of July 1, 2013

Class and Meter Size	Base Limit	Fixed Charge	Variable
	(Gallons)	(\$/month)	(\$/1000 gallons)
Residential:			
1" Meter or less	15,000	\$53.57	\$3.57
Multi-Residential:			
1" Meter or less	15,000	\$53.57	\$3.57
2" Meter	40,000	\$246.88	\$3.57
3" Meter	60,000	\$470.62	\$3.57
Commercial/Industrial:			
1" Meter or less	15,000	\$75.09	\$3.57
2" Meter	40,000	\$246.88	\$3.57
3" Meter	60,000	\$470.62	\$3.57
4" Meter	75,000	\$705.93	\$3.57
Public Agency			
1" Meter or less	15,000	\$75.09	\$1.79
2" Meter	40,000	\$246.88	\$1.79
3" Meter	60,000	\$470.62	\$1.79
Service Outside District (SOD)			
1" Meter	15,000	\$66.96	\$3.57
2" Meter	30,000	\$156.17	\$3.57

Any meter over 3" will be assessed a fee of 50% for each inch over 3" with an exceeding limit of 15,000 gallons per 1".

Table 3Heber Public Utility District
Water Rate Study
Consumption by Class

Class	Base Consumption	Variable Consumption	Total
Residential	182,924,669	28,510,246	211,434,915
Multi-Residential	4,752,794	5,330,036	10,082,830
Commercial	3,059,429	1,634,249	4,693,678
Industrial	5,403,216	4,157,325	9,560,541
Public Agency	4,267,795	15,683,978	19,951,773
Service Outside District	3,735,435	617,585	4,353,020
Compound	9,850,264	14,543,766	24,394,030
Other (No Charge)	<u>0</u>	<u>0</u>	<u>26,733,265</u>
	213,993,601	70,477,186	311,204,052

Meter Size	Base Consumption	Variable Consumption	Total
1" or less Meter	188,260,196	30,937,244	219,197,440
2" Meter	20,234,681	28,811,557	49,046,238
3" Meter	3,698,722	6,214,187	9,912,909
4" Meter	1,800,002	4,514,198	6,314,200
Other (No Charge)	<u>0</u>	<u>0</u>	<u>26,733,265</u>
	213,993,601	70,477,186	311,204,052

Units in gallons

Table 4

Heber Public Utility District
 Water Rate Study
 Consumption Projection

	FY2016 (Current)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	% of Total
Residential Growth Rate [1]		1%	1%	1%	1%	1%	1%	
Commercial Growth Rate [1]		1%	1%	1%	1%	1%	1%	
Residential [2]	215,787,935	217,945,814	220,125,272	222,326,525	224,549,790	226,795,288	226,795,288	79%
Non-Residential [3]	68,682,852	58,754,401	59,341,906	59,929,411	60,528,706	61,133,993	61,133,993	21%
Total Consumption	284,470,787	276,700,216	279,467,179	282,255,937	285,078,496	287,929,281	287,929,281	100%
Total Growth Rate		-2.7%	1.0%	1.0%	1.0%	1.0%	0.0%	
Proposed Allotments (All classes)								
1" meter or less	15,000	15,000	15,000	15,000	15,000	15,000	15,000	
2" meter	40,000	40,000	40,000	40,000	40,000	40,000	40,000	
3" meter	60,000	60,000	60,000	60,000	60,000	60,000	60,000	
4" meter	75,000	75,000	75,000	75,000	75,000	75,000	75,000	
6" meter	150,000	150,000	150,000	150,000	150,000	150,000	150,000	

Units in gallons

[1] Growth projections from Finance. Does not include Imperial Center Development of numerous commercial properties

[2] Includes residential and service outside of district (residential)

[3] Includes commercial, industrial, public agency, and multi-residential

Table 5

Heber Public Utility District
 Water Rate Study
 FY2016 Service Revenue Estimation (Current Rates)

FIXED REVENUE	No. of meters [1]	Monthly Rate [2] (\$/month)	Annual Revenue
Residential:			
1" Meter or less	1,529	\$53.57	\$982,902
1" Meter	2	\$75.09	\$1,802
Service Outside District			
1" Meter	27	\$66.96	\$21,695
2" Meter	2	\$156.17	<u>\$3,748</u>
Total estimated FY2016 residential fixed revenue			\$1,010,148
Other Classes			
Other Classes	No. of meters [1]	Monthly Rate [2]	Annual Revenue
Multi-Residential:			
1" Meter or less	1	\$53.57	\$643
2" Meter	9	\$246.88	\$26,663
3" Meter	3	\$470.62	\$16,942
Commercial/Industrial/Public			
1" Meter or less	12	\$75.09	\$10,813
2" Meter	41	\$246.88	\$121,465
3" Meter	1	\$470.62	\$5,647
4" Meter	2	\$705.93	<u>\$16,942</u>
Total estimated FY2016 non-residential fixed revenue			\$199,116
VOLUMETRIC REVENUE			
VOLUMETRIC REVENUE	Consumption [3] (1,000 Gallons)	Rate (\$/1,000 gallons)	Annual Revenue
Residential	29,128	3.57	<u>\$103,986</u>
Total estimated FY2016 residential volumetric revenue			\$103,986
Public Agency	15,684	\$1.79	\$28,074
All Other Classes	25,665	\$3.57	<u>\$91,625</u>
Total estimated FY2016 non-residential volumetric revenue			\$119,700
Total FY2016 Service charge revenue			\$1,432,950

[1] From Table 1

[2] From Table 2

[3] All consumption over the base allotment.

Table 6

Heber Public Utility District
Water Rate Study
Projected Expenses

			FY2016 (Current)	FY17 (Budget)	FY2018	FY2019	FY2020	FY2021	FY2022		
			CPI	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
			Growth Rate	N/A	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	
Fixed [1]	Variable [2]	Fire Flow [3]	Operating Expenses								
100%	0%	Yes	SALARIES	346,763	367,800	375,156	382,659	390,312	398,119	406,081	
100%	0%	Yes	FRINGE - BENEFITS	181,200	195,600	199,512	203,502	207,572	211,724	215,958	
100%	0%	Yes	PERSONNEL	18,551	19,000	19,380	19,768	20,163	20,566	20,978	
100%	0%	No	SPONSORSHIP	1,070	1,000	1,020	1,040	1,061	1,082	1,104	
100%	0%	No	PUBLIC OUTREACH		2,900	2,958	3,017	3,078	3,139	3,202	
0%	100%	No	RAW WATER PURCHASE	17,500	20,000	20,400	20,808	21,224	21,649	22,082	
0%	100%	No	CHEMICALS	52,500	60,000	61,200	62,424	63,672	64,946	66,245	
0%	100%	No	LABORATORY TEST SERVICES	9,750	20,000	20,400	20,808	21,224	21,649	22,082	
0%	100%	Yes	MATERIALS & SUPPLIES	18,000	20,000	20,400	20,808	21,224	21,649	22,082	
100%	0%	No	OFFICE SERVICES	38,415	32,500	33,150	33,813	34,489	35,179	35,883	
100%	0%	No	OFFICE SUPPLIES	7,850	8,000	8,160	8,323	8,490	8,659	8,833	
100%	0%	No	UB POSTAGE/MAILING	5,000	5,500	5,610	5,722	5,837	5,953	6,072	
100%	0%	No	MISCELLANEOUS	3,700	3,700	3,774	3,849	3,926	4,005	4,085	
0%	100%	Yes	MAINT & REPAIRS (Parks, Distrib, Collection)	52,500	55,000	56,100	57,222	58,366	59,534	60,724	
0%	100%	No	OPERATION EQUIP REP & MAINT- Treatment	30,000	40,000	40,800	41,616	42,448	43,297	44,163	
100%	0%	Yes	AUTO & TRUCKS REP & MAINT	9,235	13,000	13,260	13,525	13,796	14,072	14,353	
0%	100%	Yes	OTHER EQUIP REP & MAINT	2,500	13,000	13,260	13,525	13,796	14,072	14,353	
100%	0%	No	PLANT LAB AND OFFICES REPAIR	4,300	5,000	5,100	5,202	5,306	5,412	5,520	
100%	0%	Yes	EQUIPMENT RENTAL	850	1,000	1,020	1,040	1,061	1,082	1,104	
0%	100%	Yes	FUEL (Diesel and Gasoline)	5,600	7,000	7,140	7,283	7,428	7,577	7,729	
100%	0%	No	U/B BAD DEBT	4,000	4,000	4,080	4,162	4,245	4,330	4,416	
100%	0%	No	ACCOUNTING & AUDITING FEES	11,692	23,000	23,460	23,929	24,408	24,896	25,394	
100%	0%	Yes	ENGINEERING FEES	7,500	10,000	10,300	10,609	10,927	11,255	11,480	
100%	0%	Yes	LEGAL FEES	6,250	10,000	10,300	10,609	10,927	11,255	11,480	
100%	0%	Yes	PLANNING CONTRACT FEES	1,500	5,000	5,150	5,304	5,464	5,627	5,740	
100%	0%	Yes	TEMP EMPLOYMENT SERVICES	886	2,000	2,060	2,122	2,185	2,251	2,296	
100%	0%	No	BANK FEES/MERCHANT FEES	4,980	5,500	5,665	5,835	6,010	6,190	6,314	
100%	0%	No	MEMBERSHIP FEES	3,600	3,600	3,708	3,819	3,934	4,052	4,133	
100%	0%	No	LICENSES & PERMITS	16,995	20,000	20,600	21,218	21,854	22,510	22,960	
0%	100%	Yes	COMPLIANCE & POLLUTION TESTS	6,500	10,000	10,300	10,609	10,927	11,255	11,480	
100%	0%	Yes	GENERAL LIABILITY	23,325	26,000	26,780	27,583	28,410	29,263	29,848	
0%	100%	Yes	UTILITIES	74,060	77,700	80,031	82,430	84,903	87,450	89,199	
0%	100%	Yes	Additional operations/maintenance: WTP	0	0	43,000	44,289	45,617	46,984	48,393	
			Total Operating Expenses	966,573	1,086,800	1,153,234	1,178,473	1,204,286	1,230,682	1,255,765	
			Fixed Expenses [3]								
			Allocated to residential	552,794	610,838	623,725	636,890	650,339	664,079	740,206	
			Allocated to non-residential	79,930	88,322	90,186	92,089	94,034	96,021	107,028	
			Total Fixed Expenses	632,723	699,160	713,911	728,979	744,373	760,100	847,234	62%
			Variable Expenses [4]								
			Allocated to residential	203,984	239,787	275,687	282,150	288,766	295,543	301,787	
			Allocated to non-residential	64,926	64,643	74,320	76,055	77,839	79,665	81,348	
			Total Variable Expenses	268,910	304,430	350,008	358,205	366,605	375,209	383,135	30%
			Fire Flow Expenses	0	83,210	89,315	91,289	93,308	95,373	97,328	8%

[1] Fixed operating expenses increase 2% annually adjusted for CPI

[2] Variable operating expenses increase 2% annually adjusted for CPI and at the annual growth rate

[3] If identified as fire flow related, 10% of the cost is allocated to fire flow

[4] Allocation from Table 11

[5] Allocation from Table 4

Table 7

Heber Public Utility District
 Water Rate Study
 Capital Projects

Water Treatment Plant [1]		Water Distribution Lines [2]	
Site Work	391,000	Application	15,000
Treatment		Engineering Design	184,900
Coagulation / Rapid Mixing	530,200	Planning	40,000
Sedimentation	414,900	Bidding and Construction	30,000
Filtration	2,218,600	Construction, Inspection, admin, etc.	<u>1,777,282</u>
Other Treatment	765,800	Total Project Cost	2,047,182
Disinfection	532,900		
Controls	1,112,600	District Office [3]	
Water Storage	898,800	Property	24,000
Distribution System	829,900	Construction	<u>460,000</u>
Miscellaneous	2,269,943	Total Project Cost	484,000
Total Project Cost	9,964,643		

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	Total
Water Treatment Plant	2,185,000	7,690,000	0	0	0	0	0	9,875,000
Distribution Lines	0	0	0	155,000	824,000	1,361,256	75,000	2,415,256
New District Office	0	0	24,000	460,000	0	0	0	484,000
6500 Equipment Outlay	235,026	48,375	48,375	48,375	48,375	48,375	48,375	525,276
6000 Equipment Outlay	12,222	6,800	6,800	6,800	6,800	6,800	6,800	53,022
Total Capital Projects	2,432,248	7,745,175	79,175	670,175	879,175	1,416,431	130,175	13,352,554
Capital Inflation Factor (2%)	1.00	1.00	1.02	1.04	1.06	1.08	1.10	
Total Inflated Capital Projects	2,432,248	7,745,175	80,759	697,250	932,988	1,533,190	143,724	13,421,610

[1] Source: SWRCB Tax Questionnaire Attachment F2, dated 10-15-15. Financed with \$5 million grant and \$4.5 million, 30 year, 0% interest loan

[2] Source: HPUD Five Year Capital Improvement Project List, Presented to HPUD Board of Directors on June 18, 2015.

[3] Total Project Cost is \$2,300,000. Project cost will be split 40% water, 40% sewer, and 20% general fund

Table 8

Heber Public Utility District

Water Rate Study

Debt Service

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
USDA COPs [1]	145,800	146,165	147,000	146,000	170,000	167,000	167,000
WTP Loan [2]	0	0	162,000	162,000	162,000	162,000	162,000
Proposed Loan [3]	0	0	0	0	111,000	111,000	111,000
Total Debt Service	145,800	146,165	309,000	308,000	443,000	440,000	440,000

[1] \$3,533,000, 40 year, 2.63% annual interest rate. Issuance: June 30, 2009. Maturity: June 1, 2049.

[2] \$4,850,000, 0% interest, 30 year loan. Funding the Water Treatment Plant Project.

[3] \$2,340,000, 20 year, 3% interest, semi-annual payments

Table 9A

Heber Public Utility District
 Water Rate Study
 Cost Allocation

FY2016 (Current)

Expenses	Residential Revenue				Non-residential Revenue				Fire Flow		Total	
		Fixed Charges		Volumetric		Fixed Charges		Volumetric		Fire Flow [1]		
Fixed Residential [1]	552,794	100%	552,794	0%	-	0%	-	0%	-	0%	-	100%
Variable Residential [1]	203,984	0%	-	100%	203,984	0%	-	0%	-	0%	-	100%
Fixed non-residential [1]	79,930	0%	-	0%	-	100%	79,930	0%	-	0%	-	100%
Variable non-residential [1]	64,926	0%	-	0%	-	0%	-	100%	64,926	0%	-	100%
Fire Flow O&M	-	0%	-	0%	-	0%	-	0%	-	100%	-	100%
Water Long Term Debt [2]	145,800	25%	36,450	25%	36,450	25%	36,450	25%	36,450	0%	-	100%
Capital Projects and Reserves [3]	385,516		420,904		(136,448)		82,736		18,324	0%	-	0%
Total Allocation [4]	1,432,950	<u>70.5%</u>	1,010,148	<u>7.3%</u>	103,986	<u>13.9%</u>	199,116	<u>8.4%</u>	119,700	0%	-	100%

FY2017

Expenses	Residential Revenue				Non-residential Revenue				Fire Flow		Total	
		Fixed Charges		Volumetric		Fixed Charges		Volumetric		Fire Flow [1]		
Fixed Residential [1]	610,838	100%	610,838	0%	-	0%	-	0%	-	0%	-	100%
Variable Residential [1]	239,787	0%	-	100%	239,787	0%	-	0%	-	0%	-	100%
Fixed non-residential [1]	88,322	0%	-	0%	-	100%	88,322	0%	-	0%	-	100%
Variable non-residential [1]	64,643	0%	-	0%	-	0%	-	100%	64,643	0%	-	100%
Fire Flow O&M	83,210	0%	-	0%	-	0%	-	0%	-	100%	83,210	100%
Water Long Term Debt [2]	146,165	54%	79,660	21%	31,271	8%	11,518	6%	8,430	10%	15,287	100%
Capital Projects and Reserves [3]	199,985	54%	108,991	21%	42,785	8%	15,759	6%	11,534	10%	20,915	100%
Total Allocation	1,432,950	<u>55.8%</u>	799,488	<u>21.9%</u>	313,843	<u>8.1%</u>	115,600	<u>5.9%</u>	84,607	<u>8.3%</u>	119,412	100%

FY2018

Expenses	Residential Revenue				Non-residential Revenue				Fire Flow		Total	
		Fixed Charges		Volumetric		Fixed Charges		Volumetric		Fire Flow [1]		
Fixed Residential [1]	623,725	100%	623,725	0%	-	0%	-	0%	-	0%	-	100%
Variable Residential [1]	275,687	0%	-	100%	275,687	0%	-	0%	-	0%	-	100%
Fixed non-residential [1]	90,186	0%	-	0%	-	100%	90,186	0%	-	0%	-	100%
Variable non-residential [1]	74,320	0%	-	0%	-	0%	-	100%	74,320	0%	-	100%
Fire Flow O&M	89,315	0%	-	0%	-	0%	-	0%	-	100%	89,315	100%
Water Long Term Debt [2]	309,000	52%	162,206	23%	71,695	8%	23,454	6%	19,328	10%	32,316	100%
Capital Projects and Reserves [3]	56,693	52%	29,760	23%	13,154	8%	4,303	6%	3,546	10%	5,929	100%
Total Allocation	1,518,927	<u>54%</u>	815,692	<u>24%</u>	360,537	8%	117,943	6%	97,194	<u>8.4%</u>	127,560	100%

[1] From Table 6

[2] From Table 8

[3] Capital Projects from Table 7

[4] From Table 5

Table 9B

Heber Public Utility District
 Water Rate Study
 Cost Allocation

FY2019

Expenses	Residential Revenue				Non-residential Revenue				Fire Flow		Total	
		Fixed Charges	Volumetric		Fixed Charges	Volumetric		Fire Flow [1]				
Fixed Residential [1]	636,890	100%	636,890	0%	-	0%	-	0%	-	100%		
Variable Residential [1]	282,150	0%	-	100%	282,150	0%	-	0%	-	100%		
Fixed non-residential [1]	92,089	0%	-	0%	-	100%	92,089	0%	-	100%		
Variable non-residential [1]	76,055	0%	-	0%	-	0%	-	100%	76,055	100%		
Fire Flow O&M	91,289	0%	-	0%	-	0%	-	0%	-	100%		
Water Long Term Debt [2]	308,000	52%	161,561	23%	71,574	8%	23,360	6%	19,293	10%	32,212	100%
Capital Projects and Reserves [3]	93,211	52%	48,894	23%	21,660	8%	7,070	6%	5,839	10%	9,748	100%
Total Allocation	1,579,684	53.6%	847,344	23.8%	375,384	7.8%	122,519	6.4%	101,187	8.4%	133,249	100%

FY2020

Expenses	Residential Revenue				Non-residential Revenue				Fire Flow		Total	
		Fixed Charges	Volumetric		Fixed Charges	Volumetric		Fire Flow [1]				
Fixed Residential [1]	650,339	100%	650,339	0%	-	0%	-	0%	-	100%		
Variable Residential [1]	288,766	0%	-	100%	288,766	0%	-	0%	-	100%		
Fixed non-residential [1]	94,034	0%	-	0%	-	100%	94,034	0%	-	100%		
Variable non-residential [1]	77,839	0%	-	0%	-	0%	-	100%	77,839	100%		
Fire Flow O&M	93,308	0%	-	0%	-	0%	-	0%	-	100%	93,308	100%
Water Long Term Debt [2]	443,000	52%	232,200	23%	103,103	8%	33,574	6%	27,792	10%	46,331	100%
Capital Projects and Reserves [3]	(4,415)	52%	(2,314)	23%	(1,027)	8%	(335)	6%	(277)	10%	(462)	100%
Total Allocation	1,642,871	53.6%	880,226	23.8%	390,841	7.7%	127,274	6.4%	105,354	8.5%	139,177	100%

FY2021

Expenses	Residential Revenue				Non-residential Revenue				Fire Flow		Total	
		Fixed Charges	Volumetric		Fixed Charges	Volumetric		Fire Flow [1]				
Fixed Residential [1]	664,079	100%	664,079	0%	-	0%	-	0%	-	100%		
Variable Residential [1]	295,543	0%	-	100%	295,543	0%	-	0%	-	100%		
Fixed non-residential [1]	96,021	0%	-	0%	-	100%	96,021	0%	-	100%		
Variable non-residential [1]	79,665	0%	-	0%	-	0%	-	100%	79,665	100%		
Fire Flow O&M	93,308	0%	-	0%	-	0%	-	0%	-	100%	93,308	100%
Water Long Term Debt [2]	440,000	52%	230,454	23%	102,562	8%	33,322	6%	27,646	10%	46,017	100%
Capital Projects and Reserves [3]	39,969	52%	20,934	23%	9,317	8%	3,027	6%	2,511	10%	4,180	100%
Total Allocation	1,708,586	53.6%	915,467	23.8%	407,422	7.7%	132,369	6.4%	109,823	8.4%	143,505	100%

[1] From Table 6

[2] From Table 8

[3] Capital Projects from Table 7

[4] From Table 5

Table 9C
 Heber Public Utility District
 Water Rate Study
 Cost Allocation

FY2022

Expenses		Residential Revenue				Non-residential Revenue				Fire Flow		Total
		Fixed Charges		Volumetric		Fixed Charges		Volumetric		Fire Flow [1]		
Fixed Residential [1]	740,206	100%	740,206	0%	-	0%	-	0%	-	0%	-	100%
Variable Residential [1]	301,787	0%	-	100%	301,787	0%	-	0%	-	0%	-	100%
Fixed non-residential [1]	107,028	0%	-	0%	-	100%	107,028	0%	-	0%	-	100%
Variable non-residential [1]	81,348	0%	-	0%	-	0%	-	100%	81,348	0%	-	100%
Fire Flow O&M	97,328	0%	-	0%	-	0%	-	0%	-	100%	97,328	100%
Water Long Term Debt [2]	440,000	54%	237,025	22%	96,637	8%	34,272	6%	26,049	10%	46,017	100%
Capital Projects and Reserves [3]	9,233	54%	4,974	22%	2,028	8%	719	6%	547	10%	966	100%
Total Allocation	1,776,929	<u>55.3%</u>	982,205	<u>22.5%</u>	400,451	<u>8.0%</u>	142,019	<u>6.1%</u>	107,944	<u>8.1%</u>	144,310	100%
	-											

[1] From Table 6

[2] From Table 8

[3] Capital Projects from Table 7

[4] From Table 5

Preliminary DRAFT

Table 10

Heber Public Utility District
Water Rate Study
Cash Flow

	FY2016 (Current)	FY2017 (Current)	FY2018 (Restructuring)	FY2019 (Projected)	FY2020 (Projected)	FY2021 (Projected)	FY2022 (Projected)
Fixed Meter Revenue Increase		0.0%	6.00%	4.00%	4.00%	4.00%	4.00%
Volumetric Revenue Increase		0.0%	6.00%	4.00%	4.00%	4.00%	4.00%
Beginning Balance	\$1,024,686	\$1,148,148	\$1,364,851	\$1,456,344	\$3,309,474	\$2,485,013	\$1,101,560
<u>Revenues</u>							
Fixed Meter [1]	1,209,264	962,453	1,020,200	1,061,008	1,099,506	1,141,946	1,186,084
Volumetric [1]	223,686	470,497	498,727	518,676	537,496	558,243	579,820
Capacity Fees [2]	0	48,293	48,776	49,264	49,756	50,254	50,756
Fire Protection Revenues	0	0	17,697	18,329	18,981	19,403	19,403
Other Revenue [3]	<u>50,134</u>	<u>48,600</u>	<u>49,086</u>	<u>49,577</u>	<u>50,073</u>	<u>50,573</u>	<u>51,079</u>
Total Operating Revenue	1,483,084	1,529,843	1,634,486	1,696,853	1,755,811	1,820,420	1,887,143
<u>Debt Proceeds</u>							
Grant [4]	1,150,000	3,850,000	0	0	0	0	0
Proposed Loan [5]	0	0	0	0	0	0	0
SRF Loan [6]	<u>1,035,000</u>	<u>3,815,000</u>	<u>0</u>	<u>2,340,000</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Financing Revenue	2,185,000	7,665,000	0	2,340,000	0	0	0
Total Revenue	3,668,084	9,194,843	1,634,486	4,036,853	1,755,811	1,820,420	1,887,143
Total Operating Expenses [7]	966,573	1,086,800	1,153,234	1,178,473	1,204,286	1,230,682	1,255,765
<u>Long Term Debt [8]</u>							
USDA COPs	145,800	146,165	147,000	146,000	170,000	167,000	167,000
Water Loan	0	0	0	0	0	0	0
WTP Loan	0	0	162,000	162,000	162,000	162,000	162,000
Proposed Loan	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>111,000</u>	<u>111,000</u>	<u>111,000</u>
Total Debt Service	145,800	146,165	309,000	308,000	443,000	440,000	440,000
Total Capital Projects [9]	2,432,248	7,745,175	80,759	697,250	932,988	1,533,190	143,724
Projected Surplus/Deficit	370,710	296,878	172,252	210,380	108,526	149,738	191,378
Ending Balance	\$1,148,148	\$1,364,851	\$1,456,344	\$3,309,474	\$2,485,013	\$1,101,560	\$1,149,214
Debt Coverage [10]	3.54	3.03	1.56	1.68	1.24	1.34	1.43
Target Balance [11]	746,249	775,894	792,275	798,498	915,863	922,372	928,557
Over/Under Target Balance	401,899	588,957	664,069	2,510,976	1,569,149	179,188	220,658
Annual Surplus/Deficit	123,462	216,703	91,493	1,853,130	(824,462)	(1,383,453)	47,655
OMDR Ratio	1.09	1.19	1.08	1.10	1.03	1.05	1.03

[1] From Table 9A and 9B

[2] Capacity Fee calculated by BWA @ \$3,087 per equivalent dwelling unit

[3] Other operating revenue includes fees, penalties, and misc. charges

[4] To fund Water Treatment Plant and distribution line replacement, from Table 7

[5] 20 year, semi-annual payments, 3% interest

[6] To fund Water Treatment Plant and distribution line replacements, from Table 7

[7] From Table 6

[8] From Table 8

[9] From Table 7

[10] (operating Revenue - operating expenses) / (long term debt). Minimum 1.20x coverage

[11] Derived from Resolution 2016-08 Reserve Guidelines. Detailed build-up can be found in Table 15

[12] (Operating Revenues)/ (O&M + Debt Service + Replacement CIP)

Table 11

Heber Public Utility District
Water Rate Study
Meter Equivalents - FY17

Residential					
Meter Size	No. of Meters [1]	Max Flow Rate (GPM) [2]	Ratio [3]	Meter Equivalents	% of Total
3/4" Meter Or Less	0	30	0.60	0	
1" Meter	1,558	50	1.00	1558	
2" Meter	2	160	3.20	6	
3" Meter	0	350	7.00	0	
4" Meter	0	630	12.60	0	
Total Residential 1" meter or less equivalents				1564	87%
Non-Residential					
Meter Size	No. of Meters [1]	Max Flow Rate (GPM) [1]	Ratio [2]	Meter Equivalents	% of Total
1" Meter or less	13	50	1.00	13	
2" Meter	50	160	3.20	160	
3" Meter	4	350	7.00	28	
4" Meter	2	630	12.60	25	
6" Meter	0	1400	28.00	0	
8" Meter	0	2400	48.00	0	
Total Non-residential 1" meter or less equivalents				226	13%
Total 1" or less meter equivalents				1791	100%

[1] From Table 1

[2] American Water Works Association Standards (AWWA). Manual M22, 2nd edition, 2004, page 62

[3] Flow ratio equal to 1" or less meter equivalent

Table 12Heber Public Utility District
Water Rate Study
Proposed Monthly Rates

Combined Fixed Charge	Existing	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Required Revenue [1]		\$915,088	\$933,635	\$969,863	\$1,007,499	\$1,047,836	\$1,124,224
Meter Equivalents							
Growth Rate [2]		1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Existing		1,791	1,809	1,827	1,845	1,863	1,882
Growth		18	18	18	18	19	19
Total Equivalents		1,809	1,827	1,845	1,863	1,882	1,901
Fixed Recovery [3]		\$42.17	\$42.59	\$43.81	\$45.06	\$46.40	\$49.29
Water Allotment							
Allotment per meter per month [4]		15,000	15,000	15,000	15,000	15,000	15,000
Recovery per meter per month [4]		5,656	5,656	5,723	5,723	5,723	5,723
Variable Rate (\$/1000 gallons) [5]		\$1.44	\$1.64	\$1.69	\$1.74	\$1.80	\$1.77
Fixed Water Allotment [6]		\$8.14	\$9.26	\$9.66	\$9.96	\$10.28	\$10.10
Total Fixed Charge (1")	\$53.57	\$50.31	\$51.86	\$53.47	\$55.02	\$56.68	\$59.39
\$/1,000 Gallons for Allotment		\$3.35	\$3.46	\$3.56	\$3.67	\$3.78	\$3.96

Table 13
Heber Public Utility District
Water Rate Study
Proposed Monthly Rates with Fire Protection

Combined Fixed Charge	Existing	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Fire Protection Costs		\$119,412	\$127,560	\$133,249	\$139,177	\$143,505	\$144,310
Total Equivalent Units		1,809	1,827	1,845	1,863	1,882	1,901
7 Existing Private Fire Hydrants		140	140	140	140	140	140
15 Private Fire Hydrants for Imperial Development		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Equivalent Fire Protection Units		1,949	1,967	1,985	2,003	2,022	2,041
Cost per Unit per Month		\$5.11	\$5.41	\$5.59	\$5.79	\$5.91	\$5.89
Total Residential Fire Flow Requirement (MG)		1.58	1.60	1.61	1.63	1.64	1.66
Total Non-Residential Fire Flow Requirement (MG)		0.92	0.93	0.93	0.94	0.94	0.95
Total Fire Flow Requirement		2.50	2.52	2.54	2.57	2.59	2.61
Non-Residential Fire Flow Cost		\$43,979	\$46,869	\$48,841	\$50,894	\$52,353	\$52,524
Residential Fire Flow Cost		\$75,432	\$80,692	\$84,408	\$88,283	\$91,152	\$91,786
Non-Residential Fire Protection Cost per Unit per Month		\$9.95	\$10.53	\$10.91	\$11.30	\$11.55	\$11.51
Smoothed Non-Residential Fire Protection Cost / Unit / Month		\$9.95	\$10.53	\$10.91	\$11.30	\$11.55	\$11.55
Non-Residential Fixed Charge (1")		\$60.26	\$62.39	\$64.38	\$66.32	\$68.23	\$70.94
Non-Residential Fixed Charge (1")	\$75.09	\$60.26	\$62.39	\$64.38	\$66.32	\$68.23	\$70.94
Increase			-16.9%	3.2%	3.0%	2.9%	4.0%
Residential Fire Protection Cost		\$75,432	\$80,692	\$84,408	\$88,283	\$91,152	\$91,786
Residential Fire Protection Cost per Unit per Month		\$3.98	\$4.21	\$4.36	\$4.52	\$4.62	\$4.61
Smoothed Residential Fire Protection Cost per Unit per Month		\$3.98	\$4.21	\$4.36	\$4.52	\$4.62	\$4.62
Residential Fixed Charge (1")	\$53.57	\$54.29	\$56.07	\$57.84	\$59.54	\$61.30	\$64.01
Increase			4.7%	3.1%	2.9%	3.0%	4.4%

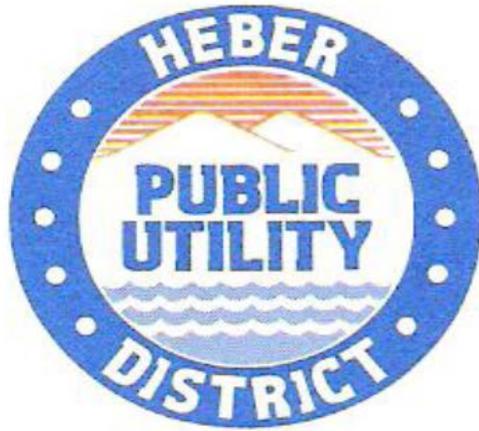
[A] - Assumes 2,500 gpm for Non-Residential fire protection and 1,000 gpm for residential fire protection

Table 15Heber Public Utility District
Water Rate Study
Restricted Reserves

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
<u>Committed Fund Balance</u>							
Capacity Fees	41,280	41,280	41,280	41,280	41,280	41,280	41,280
Capital Reserve Funds	88,000	88,000	88,000	88,000	88,000	88,000	88,000
Total Committed Fund Balance	<u>129,280</u>						
<u>Restricted Fund Balance</u>							
Debt Service Reserve Funds - USDA	62,432	62,432	62,432	62,432	62,432	62,432	62,432
SWRCBA Water Loan	150,000	150,000	150,000	150,000	150,000	150,000	150,000
SWRCBA Capital Replacement Reserve	166,204	166,204	166,204	166,204	166,204	166,204	166,204
New Proposed Loan Reserve Requirement	0	0	0	0	111,000	111,000	111,000
Total Restricted Fund Balance	<u>378,636</u>	<u>378,636</u>	<u>378,636</u>	<u>378,636</u>	<u>489,636</u>	<u>489,636</u>	<u>489,636</u>
<u>Assigned Fund Balance</u>							
O&M Reserve Funds (90 days O&M)	238,333	267,978	284,359	290,582	296,947	303,456	309,641
Total Assigned Fund Balance	<u>238,333</u>	<u>267,978</u>	<u>284,359</u>	<u>290,582</u>	<u>296,947</u>	<u>303,456</u>	<u>309,641</u>
Total Reserve Requirement	746,249	775,894	792,275	798,498	915,863	922,372	928,557

APPENDIX B

Sewer Rate Study Tables



Tables

Heber Public Utility District

Wastewater Rate Study



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

1/26/2017

Table ES-1

EXECUTIVE SUMMARY - CURRENT AND PROPOSED WASTEWATER RATES

WASTEWATER	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
	Current	Proposed	Proposed	Proposed	Proposed	Proposed
Fixed Meter Charge						
Residential	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
4" Connection	\$52.31	\$54.76	\$56.66	\$58.62	\$60.66	\$62.76
\$ Increase/Decrease		\$2.45	\$1.90	\$1.96	\$2.03	\$2.10
% Increase/Decrease		4.7%	3.5%	3.5%	3.5%	3.5%
Multifamily	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
Per Dwelling Unit	\$71.62	\$54.76	\$56.66	\$58.62	\$60.66	\$62.76
\$ Increase/Decrease		-\$16.86	\$1.90	\$1.96	\$2.03	\$2.10
% Increase/Decrease		-23.5%	3.5%	3.5%	3.5%	3.5%
Commercial, Industrial, and Public	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)	(\$/month)
4" Connection	\$71.62	\$49.66	\$51.21	\$52.82	\$54.49	\$56.22
\$ Increase/Decrease		-\$21.96	\$1.55	\$1.61	\$1.67	\$1.73
% Increase/Decrease		-30.7%	3.1%	3.1%	3.2%	3.2%
6" Connection	\$107.42	\$109.25	\$112.66	\$116.20	\$119.88	\$123.69
\$ Increase/Decrease		\$1.83	\$3.41	\$3.54	\$3.67	\$3.81
% Increase/Decrease		1.7%	3.1%	3.1%	3.2%	3.2%
8" Connection	\$143.23	\$198.64	\$204.84	\$211.28	\$217.96	\$224.88
\$ Increase/Decrease		\$55.41	\$6.21	\$6.44	\$6.68	\$6.93
% Increase/Decrease		38.7%	3.1%	3.1%	3.2%	3.2%
Volumetric Charge (\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)	(\$/kgal)
Commercial, Industrial, Public	N/A	\$0.57	\$0.59	\$0.61	\$0.63	\$0.65
\$ Increase/Decrease		N/A	\$0.02	\$0.02	\$0.02	\$0.02
% Increase/Decrease		N/A	3.5%	3.5%	3.5%	3.5%

Table 1

Heber Public Utility District
Wastewater Rate Study
Current Rates as of July 1, 2013

Residential [1] [2]	Monthly
4" Connection	\$52.31
6" Connection	\$78.47
8" Connection	\$117.71
Multi-Family, Commercial, Industrial, and Public [1] [2]	
4" Connection	\$71.62
6" Connection	\$107.42
8" Connection	\$143.23

[1] Connections over 4" will be assessed a 50% fee per every 2" over 4".

[2] Any customer Class that exceeds a rate of 45% of water consumption into the wastewater system will be required to negotiate a wastewater rate commensurate with capacity/treatment.

Table 2

Heber Public Utility District
Wastewater Rate Study
Connections by Class and Size FY2015

	Residential	Public	Industrial	Multifamily [1]	Commercial	Total
4" Connection	1,521	0	9	228	13	1,771
6" Connection	0	0	0	0	3	3
8" Connection	0	10	0	0	0	10
Total	1,521	10	9	228	16	1,784
	85.3%	0.6%	0.5%	12.8%	0.9%	100.0%

[1] 9 Multifamily accounts. 228 total units.

Table 3

Heber Public Utility District
Wastewater Rate Study
Projected Revenue - FY2016

Connection Size/Class	Monthly Rate [1]	No. of Connections [2]	Total
Single Family Residential			
4" Connection	52.31	1,521	954,762
Multi-residential			
4" Connection	71.62	228	195,952
Commercial			
4" Connection	71.62	13	11,173
6" Connection	107.42	3	3,867
Industrial			
4" Connection	71.62	9	7,735
Public Agency			
4" Connection	71.62	2	1,719
8" Connection	143.23	10	17,188
	Total Estimated FY2016 Revenue		\$1,192,396

[1] From Table 1

[2] From Table 2

Table 4
Heber Public Utility District
Wastewater Rate Study
Expenses

			CPI	3%	3%	3%	3%	3%	3%	
			Growth	2%	2%	2%	2%	2%	2%	
Operating Expenses	Fixed	Variable	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	
Salaries & Wages	100%	0%	296,261	312,600	321,978	331,637	341,586	351,834	362,389	
Fringe Benefits	100%	0%	185,113	180,100	185,503	191,068	196,800	202,704	208,785	
Personnel	100%	0%	14,793	19,000	19,570	20,157	20,762	21,385	22,026	
Sponsorship/Contributions	100%	0%	1,070	1,000	1,030	1,061	1,093	1,126	1,159	
Public Outreach	100%	0%	0	2,900	2,987	3,077	3,169	3,264	3,362	
Solid Waste Collection/Sludge Disposal	0%	100%	15,000	20,000	21,012	22,075	23,192	24,366	25,599	
Chemical Purchases	0%	100%	6,600	7,500	7,880	8,278	8,697	9,137	9,599	
Laboratory	100%	0%	33,500	32,000	32,960	33,949	34,967	36,016	37,097	
Materials & Supplies - Regular Operation	100%	0%	15,000	20,000	20,600	21,218	21,855	22,510	23,185	
Office Services	100%	0%	39,415	32,500	33,475	34,479	35,514	36,579	37,676	
Office Supplies	100%	0%	8,000	8,000	8,240	8,487	8,742	9,004	9,274	
Postage	100%	0%	4,680	5,500	5,665	5,835	6,010	6,190	6,376	
Miscellaneous	100%	0%	3,700	3,700	3,811	3,925	4,043	4,164	4,289	
Maintenance & Repairs (Collection)	75%	25%	30,000	30,000	31,055	32,146	33,276	34,446	35,656	
Operation Maint. & Repair - Treatment	75%	25%	60,000	30,000	31,055	32,146	33,276	34,446	35,656	
Equipment Replacement (all other)	100%	0%	3,500	15,000	15,450	15,914	16,391	16,883	17,389	
Plant, lab, Office Repairs (Buildings)	100%	0%	2,079	5,000	5,150	5,305	5,464	5,628	5,796	
Equipment Rental	100%	0%	0	1,000	1,030	1,061	1,093	1,126	1,159	
Fuel	50%	50%	2,818	7,000	7,282	7,576	7,881	8,198	8,529	
BAD DEBT	100%	0%	0	4,000	4,120	4,244	4,371	4,502	4,637	
Accounting/Auditing	100%	0%	11,692	11,000	11,330	11,670	12,020	12,381	12,752	
Engineering	100%	0%	3,600	10,000	10,300	10,609	10,927	11,255	11,593	
Legal	100%	0%	4,511	10,000	10,300	10,609	10,927	11,255	11,593	
Planning	100%	0%	0	5,000	5,150	5,305	5,464	5,628	5,796	
Bank & Merchant fees	100%	0%	4,980	5,500	5,665	5,835	6,010	6,190	6,376	
Memberships	100%	0%	3,211	3,600	3,708	3,819	3,934	4,052	4,173	
Temp Employment Services	100%	0%	0	2,000	2,060	2,122	2,185	2,251	2,319	
Licenses/Permits	100%	0%	18,059	20,000	20,600	21,218	21,855	22,510	23,185	
Compliance & Pollution Tests	100%	0%	7,260	10,000	10,300	10,609	10,927	11,255	11,593	
General Liability Insurance	100%	0%	15,600	26,000	26,780	27,583	28,411	29,263	30,141	
Utilities	25%	75%	<u>80,183</u>	<u>85,700</u>	<u>89,595</u>	<u>93,667</u>	<u>97,924</u>	<u>102,375</u>	<u>107,028</u>	
Total Operating Expenses			870,625	925,600	955,640	986,683	1,018,765	1,051,922	1,086,191	
	Total Fixed Expenses		764,978	815,325	840,384	866,219	892,854	920,316	948,629	87%
	Total Variable Expenses		105,646	110,275	115,256	120,465	125,911	131,606	137,562	13%
	Total Expenses		870,625	925,600	955,640	986,683	1,018,765	1,051,922	1,086,191	100%
	Allocation Breakdown		FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2021	
	Residential Fixed Expenses		734,446	782,783	806,842	831,646	857,218	883,584	910,767	96%
	Non-Residential Fixed Expenses		30,532	32,542	33,542	34,573	35,636	36,732	37,862	4%
										100%
	Residential Variable Expenses		89,644	93,570	97,797	102,218	106,839	111,672	116,725	85%
	Non-Residential Variable Expenses		16,002	16,705	17,459	18,247	19,072	19,934	20,836	15%
										100%
	Total Expenses		870,625	925,600	955,640	986,683	1,018,765	1,051,922	1,086,191	

Table 5
 Heber Public Utility District
 Wastewater Rate Study
 Flow Projection

	FY2016 (Current)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	Flow Allocation
Growth Rate [1]		1%	1%	1%	1%	1%	1%	
Commercial Growth Rate [1]		1%	1%	1%	1%	1%	1%	
Residential [2]	178,042,064	179,822,484	181,620,709	183,436,916	185,271,285	187,123,998	188,995,238	85%
Non-Residential								
Industrial	7,273,242	7,346,702	7,420,161	7,493,621	7,568,557	7,644,243	7,720,685	
Public Agency	20,310,117	20,515,249	20,720,381	20,925,514	21,134,769	21,346,116	21,559,578	
Commercial	4,198,378	4,240,782	4,283,186	4,325,589	4,368,845	4,412,534	4,456,659	
Total Non-Residential [3]	31,781,737	32,102,733	32,423,728	32,744,724	33,072,171	33,402,893	33,736,922	15%
Total Flow	209,823,801	211,925,217	214,044,438	216,181,640	218,343,457	220,526,891	222,732,160	100%

Units in gallons

[1] Growth projections from Finance. Does not include Imperial Center Development of numerous commercial properties

[2] Based on winter usage over an annual basis to determine average indoor water use. Includes residential and multifamily data.

[3] Based on annual usage times 75% to reflect water used in production or irrigation

Table 6

Heber Public Utility District
Wastewater Rate Study
Long-Term Debt

Debt Service	FY2016 (Current)	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
SRF Loan [1]	<u>211,000</u>	<u>211,000</u>	<u>211,000</u>	<u>211,000</u>	<u>211,000</u>	<u>211,000</u>	<u>211,000</u>
Total Debt Service	211,000	211,000	211,000	211,000	211,000	211,000	211,000

[1] 1% Interest 30-year State Revolving Fund Loan

Table 7

Heber Public Utility District
Wastewater Rate Study
Capital Projects

Manhole Rehab		District Office	
Engineering and Design	10,000	Property	24,000
Planning	10,000	Construction	<u>460,000</u>
Bidding and Construction	156,289		484,000
Contingency	15,630		
Total Project Cost	191,919		

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	Total
Tertiary WWTP Project	0	0	0	0	0	0	0	0
Manhole Rehab	47,769	102,710	92,710	0	0	0	0	243,188
Suction Line Rehab	0	0	58,850	0	0	0	0	58,850
New District Office	0	0	24,000	460,000	0	0	0	484,000
Future Capital Replacement	0	0	0	200,000	200,000	200,000	200,000	800,000
6500 Equipment Outlay	165,550	88,500	88,500	88,500	88,500	88,500	88,500	696,550
6000 Equipment Outlay	12,244	6,800	6,800	6,800	6,800	6,800	6,800	53,044
Total Capital Projects	225,563	198,010	270,860	755,300	295,300	295,300	295,300	2,335,632
Capital Inflation Factor (2%)	1.00	1.00	1.02	1.04	1.06	1.08	1.10	
Total Inflated Capital Projects	225,563	198,010	276,277	785,814	313,375	319,642	326,035	2,444,715

Table 8A

Heber Public Utility District
Wastewater Rate Study
Cost Allocation

FY2016 (Current)

Expenses		Residential Revenue		Non-Residential Revenue			Total	
		Fixed Charges		Fixed Charges	Volumetric			
Fixed Residential [1]	734,446	100%	734,446	0%	0	0%	0	100%
Fixed Non-Residential [1]	30,532	0%	0	100%	30,532	0%	0	100%
Variable Non-Residential [1]	16,002	0%	0	100%	16,002	0%	0	100%
Long Term Debt [2]	211,000	96%	202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	200,415		213,690		(13,275)	0%	0	
Total Allocation	1,192,396	97%	1,150,714	3%	41,681	0%	0	100%

FY2017

Expenses		Residential Revenue		Non-Residential Revenue			Total	
		Fixed Charges		Fixed Charges	Volumetric			
Fixed Residential [1]	782,783	100%	782,783	0%	0	0%	0	100%
Variable Residential [1]	93,570	100%	93,570	0%	0	0%	0	100%
Fixed Non-Residential [1]	32,542	0%	0	100%	32,542	0%	0	100%
Variable Non-Residential [1]	16,705	0%	0	0%	0	100%	16,705	100%
Long Term Debt [2]	211,000	96%	202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	55,796		52,965		2,011		820	
Total Allocation	1,192,396	95%	1,131,897	4%	42,974	1%	17,525	100%

[1] From Table 4

[2] From Table 6

Table 8B

Heber Public Utility District
 Wastewater Rate Study
 Cost Allocation

FY2018

Expenses		Residential Revenue		Non-Residential Revenue			Total	
			Fixed Charges	Fixed Charges		Volumetric		
Fixed Residential [1]	806,842	100%	806,842	0%	0	0%	0	100%
Variable Residential [1]	97,797	100%	97,797	0%	0	0%	0	100%
Fixed Non-Residential [1]	33,542	0%	0	100%	33,542	0%	0	100%
Variable Non-Residential [1]	17,459	0%	0	0%	0	100%	17,459	100%
Long Term Debt [2]	211,000	96%	202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	73,452		69,956		2,730		766	
Total Allocation	1,240,092	95%	1,177,173	4%	44,693	1%	18,226	100%

FY2019

Expenses		Residential Revenue		Non-Residential Revenue			Total	
			Fixed Charges	Fixed Charges		Volumetric		
Fixed Residential [1]	831,646	100%	831,646	0%	0	0%	0	100%
Variable Residential [1]	102,218	100%	102,218	0%	0	0%	0	100%
Fixed Non-Residential [1]	34,573	0%	0	100%	34,573	0%	0	100%
Variable Non-Residential [1]	18,247	0%	0	0%	0	100%	18,247	100%
Long Term Debt [2]	211,000	96%	202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	98,213		93,704		3,710		799	
Total Allocation	1,295,896	95%	1,230,146	4%	46,704	1%	19,046	100%

[1] From Table 4

[2] From Table 6

Table 8C

Heber Public Utility District
Wastewater Rate Study
Cost Allocation

FY2020

Expenses	Residential Revenue		Non-Residential Revenue				Total	
	Fixed Charges		Fixed Charges		Volumetric			
Fixed Residential [1]	857,218	100%	857,218	0%	0	0%	0	100%
Variable Residential [1]	106,839	100%	106,839	0%	0	0%	0	100%
Fixed Non-Residential [1]	35,636	0%	0	100%	35,636	0%	0	100%
Variable Non-Residential [1]	19,072	0%	0	0%	0	100%	19,072	100%
Long Term Debt [2]	211,000	96%	202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	124,446		118,866		4,748		831	
Total Allocation	1,354,211	95%	1,285,502	4%	48,806	1%	19,903	100%

FY2021

Expenses	Residential Revenue		Non-Residential Revenue				Total	
	Fixed Charges		Fixed Charges		Volumetric			
Fixed Residential [1]	883,584	100%	883,584	0%	0	0%	0	100%
Variable Residential [1]	111,672	100%	111,672	0%	0	0%	0	100%
Fixed Non-Residential [1]	36,732	0%	0	100%	36,732	0%	0	100%
Variable Non-Residential [1]	19,934	0%	0	0%	0	100%	19,934	100%
Long Term Debt [2]	211,000	96%	202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	152,229		145,516		5,849		864	
Total Allocation	1,415,150	95%	1,343,350	4%	51,002	1%	20,798	100%

FY2022

Expenses	Residential Revenue		Non-Residential Revenue				Total	
	Fixed Charges		Fixed Charges		Volumetric			
Fixed Residential [1]	910,767	100%	910,767	0%	0	0%	0	100%
Variable Residential [1]	116,725	100%	116,725	0%	0	0%	0	100%
Fixed Non-Residential [1]	37,862	0%	0	100%	37,862	0%	0	100%
Variable Non-Residential [1]	20,836	0%	0	0%	0	100%	20,836	100%
Long Term Debt [2]	211,000	96%	202,578	4%	8,422	0%	0	100%
Capital Projects and Reserves	181,642		173,730		7,014		898	
Total Allocation	1,478,832	95%	1,403,801	4%	53,297	1%	21,734	100%

[1] From Table 4

[2] From Table 6

Table 9

Heber Public Utility District
Wastewater Rate Study
Wastewater Enterprise Cashflow

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Beginning Balance	\$1,466,146	\$1,395,265	\$1,415,989	\$1,376,502	\$852,641	\$825,675	\$819,266
Revenues							
Fixed Revenue [1]	1,192,396	1,174,871	1,221,866	1,276,850	1,329,719	1,387,177	1,447,221
Volumetric Revenue [1]	0	17,525	18,226	19,046	19,834	20,691	21,587
Capacity Fees [2]	0	123,038	123,038	123,038	125,511	126,767	128,034
Other Revenue [1]	43,910	39,900	40,299	40,702	41,109	41,520	41,935
Debt Proceeds							
Grant	0	0	0	0	0	0	0
Proposed Loan	0	0	0	0	0	0	0
SRF Loan	0	0	0	0	0	0	0
Total Financing Revenue	0	0	0	0	0	0	0
Total Revenue	1,236,306	1,355,334	1,403,429	1,459,636	1,516,174	1,576,155	1,638,778
Operating Expenses [3]	870,625	925,600	955,640	986,683	1,018,765	1,051,922	1,086,191
Net Operating Revenues	365,681	429,734	447,789	472,953	497,409	524,233	552,587
Debt Service [4]	211,000	211,000	211,000	211,000	211,000	211,000	211,000
Capital Projects [5]	225,563	198,010	276,277	785,814	313,375	319,642	326,035
Ending Balance	\$1,395,265	\$1,415,989	\$1,376,502	\$852,641	\$825,675	\$819,266	\$834,818
Target Balance [6]	\$751,641	\$765,385	\$772,895	\$780,656	\$788,676	\$796,965	\$805,533
Over/Under Target Balance	\$643,623	\$650,604	\$603,607	\$71,985	\$36,998	\$22,301	\$29,285
Annual Surplus/Deficit	(70,881)	20,725	(39,487)	(523,861)	(26,966)	(6,409)	15,552
Debt Coverage [7]	1.73	2.04	2.12	2.24	2.36	2.48	2.62
OMDR Ratio [8]	0.99	1.11	1.12	0.97	0.99	1.00	1.01

[1] From Table 8A - 8C

[2] Updated capacity fees calculated by BWA @ \$6,660 per equivalent dwelling unit

[3] From Table 4

[4] From Table 6

[5] From Table 7

[6] From Table 10

[7] (Operating Revenue - Operating Expenses) / (Long Term Debt). Minimum 1.25x coverage

[8] (Operating Revenues) / (O&M + Debt Service + Replacement CIP)

Table 10Heber Public Utility District
Water Rate Study
Restricted Reserves

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
<u>Committed Fund Balance</u>							
Capacity Fees	18,600	18,600	18,600	18,600	18,600	18,600	18,600
Capital Reserve Funds	92,710	92,710	92,710	92,710	92,710	92,710	92,710
Manhole Replacement	<u>102,710</u>						
Total Committed Fund Balance	214,020	214,020	214,020	214,020	214,020	214,020	214,020
<u>Restricted Fund Balance</u>							
SWRCBA Wastewater Loan	211,000	211,000	211,000	211,000	211,000	211,000	211,000
SWRCBA Capital Replacement Reserve	108,965	108,965	108,965	108,965	108,965	108,965	108,965
New Proposed Loan Reserve Requirement	<u>0</u>						
Total Restricted Fund Balance	319,965	319,965	319,965	319,965	319,965	319,965	319,965
<u>Assigned Fund Balance</u>							
O&M Reserve Funds (90 days O&M)	<u>217,656</u>	<u>231,400</u>	<u>238,910</u>	<u>246,671</u>	<u>254,691</u>	<u>262,980</u>	<u>271,548</u>
Total Assigned Fund Balance	217,656	231,400	238,910	246,671	254,691	262,980	271,548
Total Reserve Requirement	751,641	765,385	772,895	780,656	788,676	796,965	805,533

Table 11

Heber Public Utility District
Wastewater Rate Study
Connections Equivalents - FY17

Residential

Connection Size	No. of connections [1]	Cross Sectional Pipe Area	Ratio [2]	Connections Equivalent
4" Connection	1,756	12.6	1.00	1,756
6" Connection	0	28.3	2.20	-
8" Connection	0	50.2	4.00	-
Total Residential 1" meter or less equivalents				1,756

Non-Residential

Connection Size	No. of connections [1]	Cross Sectional Pipe Area	Ratio [3]	Connections Equivalent
4" Connection	22	12.6	1.00	22
6" Connection	5	28.3	2.20	11
8" Connection	10	50.2	4.00	40
Total Non-residential 1" meter or less equivalents				73
Total 4" connection equivalents				1,829

[1] From Table 2 plus Growth

[2] Flow ratio equal to 4" connection equivalent

Table 12

Heber Public Utility District
Wastewater Rate Study
Proposed Monthly Rates

Residential / Multifamily	Current	FY2017	FY2018	FY2019	FY2020	FY2021	FY2021
Required Revenue [1]		\$1,131,897	\$1,177,173	\$1,230,146	\$1,285,502	\$1,343,350	\$1,403,801
Connections							
Growth Rate [2]		1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Existing		1,756	1,774	1,791	1,809	1,827	1,846
Growth		<u>18</u>	<u>18</u>	<u>18</u>	<u>18</u>	<u>18</u>	<u>18</u>
Total Connections		1,774	1,791	1,809	1,827	1,846	1,864
4" connection charge (\$/month)	\$52.31	\$53.18	\$54.76	\$56.66	\$58.62	\$60.66	\$62.76
		1.7%	3.0%	3.5%	3.5%	3.5%	3.5%
Industrial / Public / Commercial	Current	FY2017	FY2018	FY2019	FY2020	FY2021	FY2021
Required Revenue [1]		\$42,974	\$44,693	\$46,704	\$48,806	\$51,002	\$53,297
Connections							
Growth Rate [2]		1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Existing		73	74	75	76	77	78
Growth		<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Total Connections		74	75	76	77	78	79
4" connection charge (\$/month)	\$71.62	\$48.39	\$49.66	\$51.21	\$52.82	\$54.49	\$56.22
6" connection charge (\$/month)	\$107.42	\$106.47	\$109.25	\$112.66	\$116.20	\$119.88	\$123.69
8" connection charge (\$/month)	\$143.23	\$193.58	\$198.64	\$204.84	\$211.28	\$217.96	\$224.88

[1] From Table 8A - 8C

[2] From Table 5

Table 13Heber Public Utility District
Wastewater Rate Study
Proposed Volumetric Rates

Industrial, Public Agency, Commercial	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Growth Rate	1%	1%	1%	1%	1%	1%
Required Revenue [1]	\$17,525	\$18,226	\$19,046	\$19,903	\$20,798	\$21,734
Estimated Flow (Gallons) [2]	31,781,737	32,099,555	32,420,550	32,744,756	33,072,203	33,402,925
Proposed Volumetric Rate [3]	\$0.55	\$0.57	\$0.59	\$0.61	\$0.63	\$0.65

[1] From Table 8A -8C

[2] From Table 5

[3] Volume is charged based on estimated wastewater flow. Irrigation customers with partial indoor use will be charged 10% of billed water.
