

Lake Havasu City, Arizona

Water and Sewer Rate Study

Addended March 2022





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Section 1 – Executive Summary

Lake Havasu City (City) provides water service to customers within its Irrigation and Drainage District (IDD) as well as outside the IDD and sewer service to customers within the City’s boundaries. The City’s water and sewer enterprise funds are self-supporting and fund the operations and maintenance (O&M) associated with the two utilities, capital outlay and repayment of any associated debt, and routine repair and replacement of aging system components for the water and sewer systems. Water and sewer user rate revenue provides a stable secure revenue source for the two utilities, is the primary revenue source for the operations of both utilities and can only be used for each respective utility. Revenue from water and sewer user rates cannot be used for any other general or special.

There are two main objectives for this study. The first objective of this study was to develop ten-year financial plans to evaluate the current financial condition for each utility and ensure the water and sewer utilities are generating sufficient revenue over the ten-year period to cover the costs of operating the utilities. To the extent either of the utilities were found not to be generating adequate revenue under current rates, the financial plans include recommended rate revenue adjustments to ensure continued revenue sufficiency and stability. The second was to evaluate and make refinements to the existing water and sewer rate structures to ensure that each customer class was paying their proportionate share of operating the systems. These objectives are discussed in further detail in the body of this report.

1.1 Study Overview

The City contracted with Willdan Financial Services and Pat Walker Consulting LLC (“Willdan Team”), to complete a water and sewer rate study comprised of the following objectives:

- **Ten-Year Financial Plan:** Identify the revenues required by each utility to meet the respective annual costs of operation, maintenance, capital projects, debt repayment and accumulation and maintenance of appropriate reserves.
- **Rate Update:** Review and update the City’s existing water and sewer rates and comment on their adequacy to meet projected revenue requirements and meet the City’s objectives, as well as cost-of-service principles whereby the rates and charges are based upon the cost of providing service.

1.2 Financial Plans

The ten-year (current year plus nine years) water and sewer financial plans were developed based on the City’s projected revenues and expenditures, system growth and recent consumption and discharge

trends. The projections reflect the best available information and assessments developed and refined through numerous meetings and teleconferences between the Willdan Team and City staff. Upon completion of the financial plans, it was determined that projected revenues that would be generated for both the water and sewer utilities through anticipated system growth, existing user rates and projected system utilization alone will not be sufficient to meet anticipated system expenditures, and additional rate revenue increases will be required.

1.3 Cash Reserve Targets

Through the study process Willdan worked with City staff to identify and recommend a financially prudent cash reserve target for each utility to help ensure the continued financial viability of the water and sewer enterprise funds. The cash reserve target is:

- **Operating Reserve:** Cash reserve equivalent to 15% of a rolling five-year average of revenues.

1.4 Revenue Increase versus Rate Increase

The terms “*revenue increase*” and “*rate increase*” are often used interchangeably but are not always the same thing. A *revenue increase* represents the additional funding that is required in a given year. A *rate increase* represents the increase in the utility rates paid by an individual customer and in turn how the additional revenue will be recovered. As way of an example the financial plan may indicate the need for 10% more revenue. One option to generate the additional revenue would be to raise the utility rates for all customer classes by 10%. In this case the *revenue increase* and the *rate increase* are the same. However, the 10% revenue increase may be achieved by raising the utility rates for the residential class by 6%, the commercial class by 4% and the irrigation class by 9%. In this case the additional revenue generated (*revenue increase*) is equal to 10% more revenue but the percentage *rate increase* by class varies.

1.5 User Rates

As suggested in section 1.2, rate revenue increases are projected for both the water and sewer utilities during the ten-year study period to meet the City’s obligations. The study also proposes refinements to the existing water and sewer user rates, to better align with the City’s goals of revenue stability, encouraging conservation and cost-based rates by class. This is discussed in more detail in Sections 5.1 and 5.2.

1.6 Findings and Recommendations

It is recommended that the City update the cashflow portion of this study each year to ensure that actual revenues and expenses for that year are tracking closely with projections developed for this study, and that revenue is sufficient to fund projected expenses going forward. This is important as actual operating results may differ from the projections, and assumptions made during this study may change and have a material impact on the analysis. As customer usage and discharge patterns change, or the composition of the City’s customer base changes, the City should conduct an in-depth cost-of-service analysis to ensure appropriate allocation of costs to customer classes. The proposed revenue increases, are illustrated in Table 1-1.

Table 1-1 Projected Revenue Increases Fiscal Years Ending June 30		
Description	Water Revenue Increases ⁽¹⁾	Sewer Revenue Increases ⁽¹⁾
2021-22	15.0%	3.0%
2022-23	15.0%	3.0%
2023-24	8.0%	3.0%
2024-25	8.0%	3.0%
2025-26	7.5%	2.0%
2026-27	7.5%	2.0%
2027-28	7.0%	2.0%
2028-29	7.0%	2.0%
2029-30	7.0%	2.0%
(1) The increase for FY 2021-22 is effective July 1, while the revenue increases for subsequent years are proposed to be effective September 1		

As discussed in Section 1.4, a revenue increase may be different from a rate increase. Through the study revisions to the existing rate structure were proposed in order to achieve the recommended revenue increases.

Water

Two rate structure options were developed for the single family class, with each option designed to generate the same amount of revenue. Option A most closely resembles the existing water rate



structure, but the water allotments by tier have been modified as have the unit costs by tier. Option B modifies the tier allotments and unit costs as well as changes the base charge from a fixed charge to a minimum charge. Under a fixed charge approach a customer pays a monthly base charge regardless of the amount of water that is consumed. Under a minimum charge approach the monthly base charge includes an allotment of water every month. In the case of Option B, the monthly base charge includes the first 500 cubic feet (CF) of water use. In other words, a customer does not start paying a volume rate for the water consumed until monthly water use is greater than 500 cubic feet.

One recommended rate option is proposed for all other customer classes (but a different rate structure for each class), representative of each class' proportionate cost-of-service). Tables 1-2, 1-3 show a five-year rate projection while the full ten-year rate schedule can be found in Appendix C.

Table 1-2
Proposed Water Rates – Base Charge
Current Through FY 2025-26

Monthly Base Charge							
Meter Size	Inside IDD	Outside IDD	All Customers ⁽¹⁾				
	Current		21-22 ⁽²⁾	22-23 ⁽³⁾	23-24 ⁽³⁾	24-25 ⁽³⁾	25-26 ⁽³⁾
3/4-inch	\$5.16	\$6.45	\$9.02	\$10.37	\$11.20	\$12.10	\$13.01
1-inch	8.17	10.21	15.06	17.32	18.70	20.20	21.72
1 ½-inch	16.69	20.86	30.03	34.53	37.30	40.28	43.30
2-inch	28.17	35.21	48.07	55.28	59.70	64.48	69.32
3-inch	52.66	65.83	96.14	110.56	119.41	128.96	138.63
4-inch	97.09	121.36	150.32	172.87	186.70	201.63	216.76
6-inch	198.95	248.69	300.61	345.70	373.36	403.23	433.47
8-inch	283.91	354.89	480.99	553.14	597.39	645.18	693.57

(1) The monthly base charge includes the first 500 cubic feet of water per month for the single family class under Option B
(2) Effective July 1
(3) Effective September 1



Table 1-3
Proposed Water Rates - Volume
Current Through FY 2025-26

Current			Proposed (Inside and Outside the IDD)					
Tiers	Inside IDD	Outside IDD	Tiers	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
				Single Family Option A – Volume Rate (\$/100 CF)				
0 – 1,300 CF	\$1.35	\$1.69	0 – 1,000 CF	\$1.00	\$1.15	\$1.24	\$1.34	\$1.44
1,301 – 2,500 CF	1.76	2.20	1,001 – 2,400 CF	1.88	2.16	2.33	2.52	2.70
2,501 – 5,000 CF	2.16	2.70	2,401 – 6,500 CF	2.06	2.37	2.56	2.77	2.98
Over 5,000 CF	2.70	3.38	Over 6,500 CF	2.27	2.61	2.82	3.04	3.27
Single Family Option B – Volume Rate (\$/100 CF)								
0 – 1,300 CF	\$1.35	\$1.69	0 – 500 CF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1,301 – 2,500 CF	1.76	2.20	501 – 4,000 CF	1.74	2.00	2.16	2.34	2.51
2,501 – 5,000 CF	2.16	2.70	4,001 – 10,000 CF	2.16	2.48	2.68	2.90	3.11
Over 5,000 CF	2.70	3.38	Over 10,000 CF	2.70	3.11	3.35	3.62	3.89
Multifamily – Volume Rate (\$/100 CF)								
0 – 2,600 CF	\$1.35	\$1.69	0 – 2,200 CF	\$1.47	\$1.70	\$1.83	\$1.98	\$2.13
2,601 – 55,000 CF	1.76	2.20	2,201 – 20,000 CF	1.84	2.12	2.29	2.47	2.66
55,001 – 200,000 CF	2.16	2.70	20,001 – 200,000 CF	2.30	2.65	2.86	3.09	3.32
Over 200,000 CF	2.70	3.38	Over 200,000 CF	2.88	3.31	3.58	3.86	4.15
Commercial/Industrial – Volume Rate (\$/100 CF)								
0 – 31,500 CF	\$1.76	\$2.20	0 – 15,000 CF	\$1.74	\$2.00	\$2.16	\$2.33	\$2.51
31,501 – 340,000 CF	2.16	2.70	15,601 – 340,000 CF	2.18	2.50	2.70	2.92	3.14
Over 340,000 CF	2.70	3.38	Over 340,000 CF	3.26	3.75	4.05	4.38	4.71
Single Family Irrigation – Volume Rate (\$/100 CF)								
0 – 1,200 CF	\$1.76	\$2.20	0 – 2,900 CF	\$1.67	\$1.92	\$2.08	\$2.24	\$2.41
1,201 – 3,700 CF	2.16	2.70	2,901 – 9,500 CF	2.51	2.89	3.12	3.37	3.62
Over 3,700 CF	2.70	3.38	Over 9,500 CF	5.02	5.77	6.23	6.73	7.24
Other Irrigation – Volume Rate (\$/100 CF)								
0 – 16,000 CF	\$1.76	\$2.20	0 – 9,000 CF	\$1.87	\$2.14	\$2.32	\$2.50	\$2.69
16,001 – 89,000 CF	2.16	2.70	9,001 – 40,000 CF	2.33	2.68	2.90	3.13	3.36
Over 89,000 CF	2.70	3.38	Over 40,000 CF	3.50	4.02	4.34	4.69	5.04
Hydrants – Volume Rate (\$/100 CF)								
All Use	\$2.70	\$3.38	All Use	\$2.24	\$2.58	\$2.79	\$3.01	\$3.23
RV Parks – Volume Rate (\$/100 CF)								
0 – 39,000 CF	\$1.35	\$1.69	0 – 1,750 CF	\$1.78	\$2.05	\$2.21	\$2.39	\$2.57
39,001 – 86,000 CF	1.76	2.20	1,751 – 20,000 CF	2.23	2.56	2.77	2.99	3.21
86,001 – 150,000 CF	2.16	2.70	20,001 – 60,000 CF	2.79	3.20	3.46	3.74	4.02
Over 150,000	2.70	3.38	Over 60,000	3.48	4.01	4.33	4.67	5.02

(1) Effective July 1
(2) Effective September 1

Sewer

Two rate structure options were developed for the single family class. The first (Option A) is a flat monthly charge, that is assessed to all customers regardless of sewer flows. The second option is a modification of the existing rate structure. Under the existing rates a single family customer is assessed a monthly minimum base charge which includes the first 567 CF of flows each month and then is assessed a flow rate based on any flows above 567 CF based on AWC. Under Option B, the monthly minimum charge remains, but the flow allotment is reduced to 500 CF per month. Flows are based on actual water use each month rather than AWC. Since actual monthly water use is used for the flow component of the monthly bill, the monthly flows are capped at 750 CF (typical use for a single family customer), under the assumption that any flows above 750 CF per month are for non-domestic uses and the water does not enter the sewer system to be treated. All other customer classes will continue to be billed under a base (per unit for condos apartments and multifamily and per spot for RV Parks) and flow approach (except septic haulers which are only charged a flow rate), with rates updated to reflect the proportionate cost of serving each class. Table 1-4 shows a five-year rate projection while the full ten-year rate schedule can be found in Appendix D.

Table 1-4
Proposed Sewer Rates
Current Through FY 2025-26

	Current	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
Residential – Option A						
Base	\$41.00	\$54.25	\$55.88	\$57.55	\$59.28	\$60.47
Flow (\$/100 CF) ⁽³⁾	7.30	n/a	n/a	n/a	n/a	n/a
Residential – Option B						
Base	41.00	52.14	53.71	55.32	56.98	58.12
Flow (\$/100 CF) ⁽⁴⁾	7.30	1.76	1.81	1.86	1.92	1.96
Apartments						
Base (per unit)	23.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.30	6.26	6.45	6.65	6.85	6.98
Condos						
Base (per unit)	11.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.30	6.26	6.45	6.65	6.85	6.98
Bars ⁽⁵⁾						
Base	52.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.47	10.44	10.75	11.07	11.40	11.63
Church ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.14	10.44	10.75	11.07	11.40	11.63
Car Wash ⁽⁵⁾						
Base	58.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	8.35	10.44	10.75	11.07	11.40	11.63
Retail ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.41	10.44	10.75	11.07	11.40	11.63
Fitness ⁽⁵⁾						
Base	48.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	6.85	10.44	10.75	11.07	11.40	11.63
Grocery ⁽⁵⁾						
Base	79.00	48.67	\$50.13	51.63	53.18	54.25
Flow (\$/100 CF)	11.28	10.44	10.75	11.07	11.40	11.63

Table 1-4
Proposed Sewer Rates
Current Through FY 2025-26

	Current	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
Hospital ⁽⁵⁾						
Base	\$51.00	\$48.67	\$50.13	\$51.63	\$53.18	\$54.25
Flow (\$/100 CF)	7.30	10.44	10.75	11.07	11.40	11.63
Ice Manufacturing ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.14	10.44	10.75	11.07	11.40	11.63
Dry Cleaner ⁽⁵⁾						
Base	58.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	8.38	10.44	10.75	11.07	11.40	11.63
Laundromat ⁽⁵⁾						
Base	49.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.02	10.44	10.75	11.07	11.40	11.63
Mortuary ⁽⁵⁾						
Base	79.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	11.28	10.44	10.75	11.07	11.40	11.63
Social Club ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.14	10.44	10.75	11.07	11.40	11.63
Professional Office ⁽⁵⁾						
Base	48.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	6.85	10.44	10.75	11.07	11.40	11.63
RV Park						
Base (per spot)	4.50	24.34	25.07	25.82	26.59	27.12
Flow (\$/100 CF)	7.30	3.13	3.23	3.32	3.42	3.49
Service Station ⁽⁵⁾						
Base	\$53.50	\$48.67	\$50.13	\$51.63	\$53.18	\$54.25
Flow (\$/100 CF)	7.66	10.44	10.75	11.07	11.40	11.63

Table 1-4
Proposed Sewer Rates
Current Through FY 2025-26

	Current	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
Deli ⁽⁵⁾						
Base	\$53.50	\$48.67	\$50.13	\$51.63	\$53.18	\$54.25
Flow (\$/100 CF)	7.66	10.44	10.75	11.07	11.40	11.63
Hotel w/ Restaurant ⁽⁶⁾						
Base (per room)	22.00	17.87	18.41	18.96	19.53	19.92
Flow (\$/100 CF)	9.57	9.37	9.65	9.94	10.23	10.44
Hotel w/o Restaurant ⁽⁶⁾						
Base (per room)	10.50	17.87	18.41	18.96	19.53	19.92
Flow (\$/100 CF)	7.57	9.37	9.65	9.94	10.23	10.44
Restaurant ⁽⁵⁾						
Base	81.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	11.59	10.44	10.75	11.07	11.40	11.63
School w/ Cafeteria ⁽⁵⁾						
Base	76.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	10.95	10.44	10.75	11.07	11.40	11.63
School w/ Gym ⁽⁵⁾						
Base	56.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	8.09	10.44	10.75	11.07	11.40	11.63
School ⁽⁵⁾						
Base	48.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	6.92	10.44	10.75	11.07	11.40	11.63
Septic Hauler						
Base	0.00	0.00	0.00	0.00	0.00	0.00
Flow (\$/100 CF)	61.40	67.87	69.91	72.00	74.16	75.65
Industrial ⁽⁵⁾						
Base	54.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.71	10.44	10.75	11.07	11.40	11.63

(1) Effective July 1
(2) Effective September 1
(3) Current includes first 567 cubic feet per month based on average with consumption
(4) Includes first 500 cubic feet up to 750 cubic feet per month based on actual water use
(5) Proposed to be consolidated into a single "Commercial Class"
(6) Proposed to be consolidated into a single "Hotel Class"



Section 2 - Introduction

2.1 Introduction

Willdan Financial Services and Pat Walker Consulting LLC (“Willdan Team”) were retained by Lake Havasu City, Arizona (“City”) to conduct a Water and Sewer Rate and Financial Study (“Rate Study”) for the City’s water and sewer utilities (“Utilities”). This report details the results of the Rate Study analysis for the forecast period, where estimated actuals for fiscal year (FY) 2019-20 were used as the starting point for the forecast period FY 2020-21 through FY 2029-30, the results of which are presented in this Rate Study Report.

The results of the Rate Study presented herein are a financial plan with suggested rate adjustments designed to provide revenues sufficient to fund the ongoing operating, maintenance and capital costs necessary to operate the City’s water and sewer utilities. The Rate Study was developed to meet the financial requirements and goals set forth by the City’s for the water and sewer enterprise funds, including maintenance of adequate reserves while adhering to the principles of cost-of-service.

Based on discussions with City staff, this report presents the recommended financial plans and adjustments to meet the City’s objectives.

2.2 Goal and Objectives

A primary goal of the Rate Study was to develop financial plans for each of the two utilities that evaluate the adequacy of the current revenue streams to meet ongoing costs (operations & maintenance, debt service and capital), and to maintain industry standard financially prudent cash reserves. More specifically the Rate Study was undertaken to:

- Conduct the analysis in accordance with industry standards consistent with American Water Works (“AWWA”) and Water Environment Federation (“WEF”) guidelines and utilizing City specific revenue and expense, growth and customer billing data;
- Develop financial plans consistent with industry standards and best practices while recognizing the needs specific to the City; and
- Recommend rates that adhere to and meet cost-of-service principles, which requires a matching between the fees being assessed to customers and the cost they place on the systems.

2.3 Organization of this Report

This Rate Study presents an overview of the rate-making concepts employed in the development of the analysis contained here. The analysis is followed by a discussion of the data, assumptions and results associated with each component of the analysis. Finally, appendices with detailed schedules are presented for further insight into the data, assumptions and calculations which drive the results presented in this Rate Study. The report is organized as follows:

- Section 1 – Executive Summary
- Section 2 – Introduction
- Section 3 – Overview of Utility Rate-Making Principles, Processes and Issues
- Section 4 – Rate Study Development and Results
- Section 5 – Rate Design Analysis
- Section 6 – Conclusions and Recommendations
- Appendix A – Water System Financial Plan
- Appendix B – Sewer System Financial Plan
- Appendix C – Water Cost-of-Service Analysis and Rate Design
- Appendix D – Sewer Cost-of-Service Analysis and Rate Design

2.4. Reliance on Data

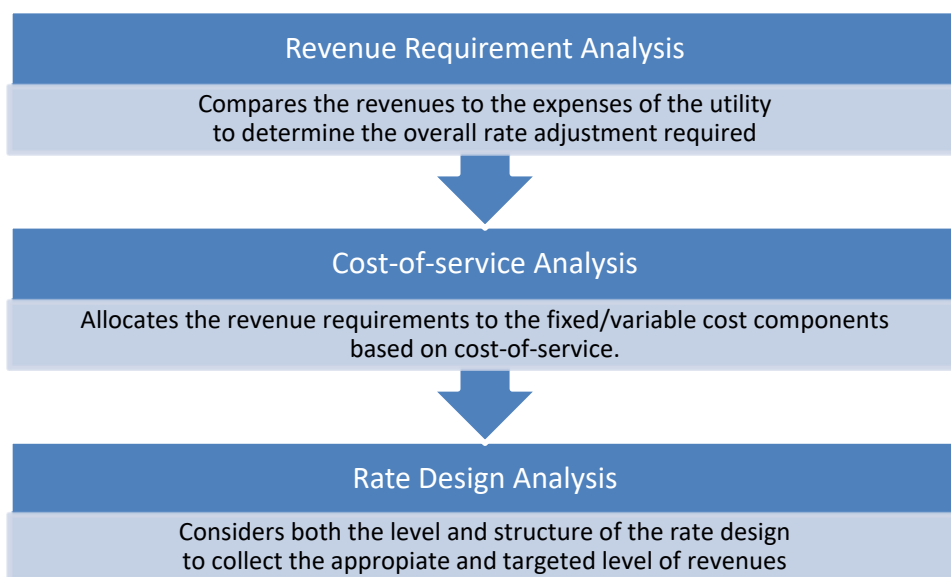
During this project the City (and/or its representatives) provided the Willdan Team with a variety of financial and technical information, including system operating metrics, fund balances, budget data, historical operating results, capital project costs and demographic data. This data was used by the Willdan Team in the process of developing the financial plans and recommended rate adjustments. The Willdan Team did not independently assess or test for the accuracy of such data, historic or projected, but worked with City staff to better understand the data and its sources and believe it to be the best available information at the time of the study.

Section 3 – Overview of Financial Planning Principles, Processes and Issues

3.1 Introduction

The scope of this study also included the development of cost-based water and sewer user charges through cost-of-service and rate design analysis using City specific expense and customer billing data and system flow and production data. Utility rates must be set at a level where operating, maintenance and capital expenses are met with the revenues received from customers; and that revenues generated from utility rates are used only for this purpose. In addition, the user rates for customers must be based upon their proportionate share of the costs of operating the systems. This is a significant point, as failure to achieve this level could lead to insufficient funds being available to adequately maintain the system. A comprehensive rate study typically consists of following three interrelated analyses:

- I. **Financial Planning/Revenue Requirement Analysis:** Create a ten-year plan (current plus nine years) to support an orderly, efficient program of on-going maintenance and operating costs, capital improvement and replacement activities, and retirement of any outstanding debt. In addition, the long-term plan should fund and maintain appropriate reserve balances to adequate levels based on industry standards and the City of Lake Havasu City's fiscal policies and specific needs.
- II. **Cost-of-Service Analysis:** Identifies and apportions annual revenue requirements to functional cost components based on the demands placed on the utility system based on City specific financial and system performance data.
- III. **Rate Design:** Develops an equitable and proportionate fixed/variable schedule of rates for the City's customer base. The policy objectives are harmonized with cost-of-service objectives to achieve the balance between customer equity and financial stability goals. The balance of fixed and variable charges ensures that the City has a stable revenue source (the fixed charge) to cover fixed operating costs, while the variable component of the rate structure helps to ensure those customers who place higher demands and costs on the system (through higher water and sewer use, particularly during peak periods) incur a higher bill reflective of their system use.



This Rate Study utilized generally accepted rate-making principles and standards established by the industries governing bodies, American Water Works Association (AWWA) in its “M1 Principles of Water Rates Fees and Charges” manual and by the Water Environment Federation (WEF) in its “Financing and Charges for Sewer Systems, Manual of Practice No. 27 (2004)”. While generally accepted industry standards were used as the basis and approach of the cost-of-service and rate design, the analysis was completed using City specific system performance and production data, as well as cost and customer billing data. The principles used resulted in the development of rates and charges which are projected to: 1) generate sufficient revenue to meet the financial requirements of the water and sewer utilities, and 2) address the need to recover costs from users in a manner which is proportionate to the cost of providing service on a fair and equitable basis relative to the service provided, and which does not exceed the cost of providing the service. A discussion of some of the key principles of rate-making, and how the processes employed herein are guided by those principles, is presented below.

3.2 Discussion of General Financial Planning Principles

While the individual rates for each of the utilities vary based on a variety of factors, rates should be consistent with general rate-making principles set forth in utility rate-making practice and literature. The principles by which rate practitioners are guided is that rates designed for any utility should strike a reasonable balance between several key factors. In general, rates designed should:

-
- Generate a stable rate revenue stream which, when combined with other sources of funds, is sufficient to meet the financial requirements and goals of the utility;
 - Be based upon the proportionate cost of providing the service and not exceed the cost of providing the service;
 - Be fair and equitable – that is, they should generate revenue from customer classes which is reasonably in proportion to the cost to provide service to that customer class;
 - Be easy to understand by customers; and
 - Be easy to administer by the utility.

Striking the appropriate balance between the principles of rate-making is the result of a detailed process of evaluation of revenue requirements and cost-of-service, and how those translate into the rate design alternatives which meet legal requirements and the specific objectives of the utility under the circumstances in which it operates. A review of the City's existing rates and their adherence to these principles is discussed in Section 4.2.2 of this report.

3.3 The Revenue Sufficiency Process

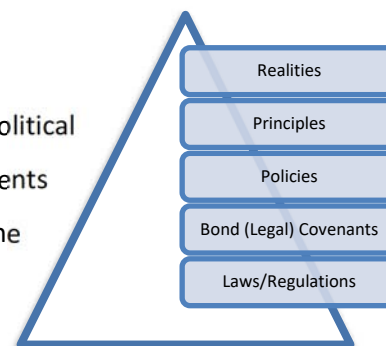
To evaluate whether existing rates and charges which will generate sufficient revenue to meet the fiscal requirements of the water and sewer utilities, a determination of the annual rate revenue required must be completed. The first step in the process is the Revenue Sufficiency Analysis. The Revenue Sufficiency Analysis compares the forecasted revenues of the utility under its existing rates to its expenses associated with forecasted operations and maintenance, capital, debt and reserve costs to determine the adequacy of the existing rates to recover the utility's projected costs.

To the extent that the existing revenue stream is projected to be insufficient to meet the annual revenue requirements of the system during the projection period, a series of recommended rate revenue increases are calculated which if enacted, would provide revenue sufficient to meet those needs.

3.3.1 Determination of the Revenue Requirements

Considerations in Setting Revenue Requirements

There are a multitude of considerations, ranging from financial to policy, political and legal that must be analyzed or discussed during the revenue requirements process of a rate study. This section provides an overview of the considerations that are reviewed during this process.



Capital Budgeting and Financing

Capital needs are identified in the City’s Water and Sewer Capital Improvement Plan which is updated on an annual basis. As part of its budget and planning process, the City identifies capital improvements that are necessary for the continued delivery of clean, safe, drinking water, and collection and treatment of sewer flows. The Capital Improvement Plan is funded by a variety of sources including, utility rates, capital reserves and debt.

Capital Funding: Debt vs. PAYGO

The selection of the appropriate funding strategy for capital projects is primarily a policy decision between use of cash (“Pay-as-you-go financing” or PAYGO), the issuance of debt, or a combination. PAYGO is the use or build-up of cash to fund capital improvements. With debt financing, capital improvements are funded with borrowed funds (usually through the issuance of bonds) with the obligation of repayment, typically with interest, in future years. Development of an optimal capital financial plan depends on the definition of optimal. Each funding mechanism has a different impact on water and sewer rates in the short and long run, different net present values, risks, and legal obligations. Due to the borrowing costs associated with debt, cash funding can be cheaper in the end (by not having to incur interest costs on borrowed money). However, debt typically ensures greater generational equity for larger and longer lasting capital projects (by contributing to annual debt payments, new customers who connect to the system help pay for the infrastructure that was installed prior to their arrival, but still benefits them). Also, using cash to fund capital projects typically causes a more significant immediate impact on customers due to the higher rates that are required to provide the funding.

The City, as is typical for a public utility, operates its water and sewer utilities on a “cash basis”. Under the “cash basis” approach, revenues and expenses are recognized at the time physical cash is received or paid out. Revenue requirements are determined for a specified period of time (in the case of the City an annual fiscal year ending June 30), by summing the total anticipated expenses to be paid out during the fiscal

year. Where cash flows and balances are insufficient, the revenue requirements analysis results in recommendations to ensure the needed additional cash flows are available to meet funding goals. The two primary categories of expenses are as follows:

- Operations and Maintenance (O&M) expenses, such as salaries and benefits of utility personnel, costs associated with plant and system operations and treatment (chemicals, power, etc.), transfers out, existing and anticipated debt service, and reserves; and
- Capital expenses, such as the annual capital improvement program, including water main replacements and effluent pond liner projects.

Financial Planning

The financial models developed for this study consider the City’s existing and targeted debt service coverage ratios and operating cash balances (cash on hand). As existing debt is redeemed, additional debt may be utilized to fund additional capital improvements required due to aging infrastructure. At this juncture the City is not anticipating the issuance of additional debt.

3.4 Financial Management Goals of the City

The establishment of specific financial management goals of a utility is a key step in developing financial plans which will ensure the financial health of the utility remains strong. The financial management goals of the City are described below.

3.4.1 Cash Reserve Target

In order to maintain financially stable and sustainable utilities, the City has identified a reserve target for each utility that it will seek to maintain. The reserve target policy is identified in Table 3-1, while Table 3-2 illustrates the actual targets for water and sewer. Tables 3-1 and 3-2 show a five-year snapshot while the full ten-year projections can be found in Appendices A and B.

Table 3-1 Reserve Targets		
Reserve	Purpose	Minimum Balance
Water and Sewer Operating Reserves	Manage timing differences between revenue receipt and expense payments	15% of rolling five-year average of revenues

Table 3-2						
Operating Reserve Targets						
Fiscal Years Ending June 30 (\$ thousands)						
	20-21	21-22	22-23	23-24	24-25	25-26
Water						
Target Cash Balance	\$2,602	\$2,665	\$2,562	\$2,495	\$2,459	\$2,514
Sewer						
Target Cash Balance	\$3,439	\$3,475	\$3,576	\$3,683	\$3,764	\$3,948
Note: Values are rounded to the nearest \$1,000						

While it is not essential that the City meet their identified operating reserve on annual basis (it is not a legal requirement), prudent financial planning suggests that the City should strive to maintain the operating reserve and should not dip below the minimum balance on a continuous basis.

3.4.2 Debt Service Coverage

The City currently has outstanding water and sewer related debt which includes covenants requiring the City to maintain rates and charges such that a debt service coverage ratio, defined as Current Year Net Revenues divided by Annual Debt Service, be maintained at a minimum of 1.20. The coverage requirement of 1.20x is associated with all outstanding debt for each specific year the coverage is being calculated. While the 1.20x coverage is the legal requirement, the City strives to achieve a higher target coverage ratio of 1.50x. The recommended revenue increases presented as part of this rate study result in a plan moving towards the achievement of this target by the end of the forecast period. While the operating reserve target identified in section 3.4.1 is a City policy, the debt service coverage requirement is a legal obligation that must be met on an annual basis.

3.4.3 Financial Management Conclusions

The City’s utilities should strive to satisfy both reserve fund targets and debt service coverage (while only debt service coverage is a legal requirement) as each test provides a different perspective on the utilities’ revenue needs and overall financial viability. An appropriate level of revenue requirements may result in an overlapping of the tests such that each separate set of objectives are met. As an example, the goal to maintain a 1.50x debt service coverage may generate a positive cashflow allowing for the funding of the identified cash reserve targets. Similarly, the need to meet and maintain the cash reserve targets may generate sufficient cashflow to meet the required debt service coverage ratio on an annual basis. The



ability of the utilities to satisfy both sets of requirements will reduce overall financial risk, increase stability, and help with a long-term strategy of utility financial planning.



Section 4 – Rate Study Development and Results

4.1 Revenue Sufficiency Analysis

4.1.1 General Methodology

Revenue requirements were compared to the total sources of funds during each year of the forecast period to determine the adequacy of projected revenues to meet requirements. To the extent that the existing revenue streams are not sufficient to meet the annual revenue requirements of the systems, a series of rate revenue increases are calculated, which if implemented, would provide revenue sufficient to meet those needs.

4.1.2 Data Items

Key data items reviewed, discussed, and incorporated into the Revenue Sufficiency Analysis were:

- Financial management goals of the City
- FY 2019-20 Beginning of Year Fund Balances
- FY 2019-20 Unaudited Revenues and Expenditures
- FY 2020-21 Adopted Budgets
- Capital Improvement needs based on City's plans
- Outstanding Debt Service Schedules
- IDD Property Tax Revenue
- General assumptions related to:
 - Customer growth
 - Cost escalation factors

A discussion of each of the above data items is presented below.

4.1.3 FY 2019-20 Beginning of Year Cash Balance

To better understand the available funds the City's utilities had on hand to start the forecast period, a detailed review of cash balances as of the beginning of FY 2019-20 was conducted and discussed with City

staff. A summary of the fund balances associated with the water and sewer utility enterprise funds for the beginning of FY 2019-20, as adjusted for use in this analysis, is presented in Table 4-2 below.

Table 4-2 Beginning Fund Balance Fiscal Year 2019-20		
Description	Water	Sewer
Cash Balance	\$38,374,805	\$19,103,503

4.1.4 FY 2019-20 Unaudited Actuals and FY 2020-21 Budgets

For both utilities Staff provided Willdan with the FY 2019-20 unaudited actual revenues and expenditures as well as the FY 2020-21 Adopted Budgets, and associated line-item detail. The FY 2020-21 budgets served as the basis for the financial projections for the forecast period. The line-item projected expenses for FY 2020-21 were used as the basis for the projection of future budgetary line-items for the remainder of the forecast period.

Cost escalation factors were reviewed by staff and were used to project increases in line-item costs beyond the FY 2020-21 budget. These factors were applied based on line-item cost classifications.

A five-year summary of the FY 2020-21 budget, and subsequent projected budgetary expenses is presented below in Table 4-3. A more detailed presentation of the line-item budgeted and projected revenues and expenses is presented in Schedules A-2 through A-4 and B-2 through B-4 respectively, in the Appendices.



Table 4-3
Operating Budget
Fiscal Years Ending June 30 (\$ thousands)

Description	20-21	21-22	22-23	23-24	24-25	25-26
Water						
O&M	\$10,007	\$8,490	\$8,835	\$9,106	\$9,385	\$9,672
Debt Service and Loans	625	624	613	613	613	613
Transfers Out and Capital Outlay	6,304	4,465	4,554	4,691	4,832	4,977
Capital Projects from CIP	<u>6,412</u>	<u>4,978</u>	<u>5,331</u>	<u>4,180</u>	<u>4,454</u>	<u>8,031</u>
Total Expenses	\$23,348	\$18,557	\$19,333	\$18,590	\$19,284	\$23,293
Sewer						
O&M	\$8,844	\$7,516	\$7,872	\$8,111	\$8,357	\$8,610
Debt Service and Loans	13,720	13,720	13,720	13,723	13,719	13,719
Transfers Out and Capital Outlay	4,690	4,062	4,124	4,188	4,253	4,321
Capital Projects from CIP	<u>5,269</u>	<u>1,927</u>	<u>951</u>	<u>1,629</u>	<u>865</u>	<u>1,004</u>
Total Expenses	\$32,523	\$27,225	\$26,667	\$27,651	\$27,194	\$27,654

Note: Variances due to rounding

4.1.5 Capital Improvements Plan (CIP)

The City provided Willdan with a forecast of capital requirements for the study period. The CIP the City provided was in current day dollars and has been escalated for future years using an inflationary rate of 2.79% (based on the 5-year ENR construction cost index compound annual average). The water CIP, inflated for FY 2020-21 through FY 2025-26, totals \$33.4 million. The sewer CIP, inflated for FY 2020-21 through FY 2025-26, totals \$11.6 million. A summary table of the CIP (in inflated dollars) for the FY 2020-21 – FY 2025-26 forecast period is presented below in Table 4-4. The CIP is presented in Schedules A-5 through A-8 and B-5 through B-6, respectively, in the Appendices.

Table 4-4							
Capital Improvement Plan							
Fiscal Years Ending June 30 (\$ thousands)							
	20-21	21-22	22-23	23-24	24-25	25-26	Total
Water	\$6,412	\$4,978	\$5,331	\$4,180	\$4,454	\$8,031	\$33,386
Sewer	5,269	1,927	951	1,629	865	1,004	11,645

Note: Values are rounded to the nearest \$1,000

4.1.6 Outstanding Debt

The City, like many utilities, has utilized long-term debt to fund capital assets in the past. The City has both outstanding water and sewer related debt. The current financial plans do not anticipate the issuance of any new debt during the study period.

4.1.7 General Assumptions

In order to develop the financial and rate projections, certain assumptions were made with regard to elements of the revenue sufficiency analysis. A summary of those assumptions is presented below.

4.1.7.1. System Growth

The City anticipates average growth of the water system of approximately 0.70% per year while average sewer system growth is anticipated at approximately 0.90% per year. The model assumes a direct correlation between customer growth and service charge revenue growth. In other words, it is assumed that service charge revenues will also grow by an average of 0.70% per year for water and an average of 0.97% per year for sewer.

4.1.7.2. O&M Escalation Factors

Willdan worked with City Staff to identify reasonable cost escalation factors to be applied to operations and maintenance expenses in recognition of increasing costs over time. It was determined that a 3% inflationary factor represented a reasonable estimate of annual cost increases during the study period.

4.1.7.3. Debt Service Coverage

The City's bond covenants require a 1.20x debt service coverage on outstanding debt, however, the City targets a more conservative 1.50x coverage as a matter of best financial practices. Our analysis shows that the revenues for each utility are sufficient to meet or exceed the 1.20x minimum target for the FY 2021-22 through FY 2025-26 period on existing debt. The debt service coverage ratios are summarized in Table 4-5 below.

Table 4-5 Debt Service Coverage by Fiscal Year						
FY	Legal Target	21-22	22-23	23-24	24-25	25-26
Water ⁽¹⁾	1.20	9.31	1.86	3.24	4.54	5.91
Sewer	1.20	1.29	1.32	1.37	1.41	1.44
(1) FY 2022-23 represents the first year without the IDD property tax as a water utility revenue source						

4.1.8 Results of the Revenue Sufficiency Analysis

After a thorough review of the above-mentioned data elements, a draft of the Revenue Sufficiency Analysis was developed and reviewed with City Staff. This draft provided the forum in which various alternative assumptions were discussed, tested and evaluated for their reasonableness and their impact upon the ultimate financial health of the utilities, while striving to meet the identified objectives. In some cases, inputs or assumptions were modified based on these discussions.

The resulting financial plan presented herein is the embodiment of the data, assumptions and review process undertaken with City staff through the course of several meetings. Table 4-6 provides a summary of the annual revenue requirements (O&M, debt service and CIP) for both the water and sewer utilities incorporating the assumptions in Section 4.1.7 of this report as compared to the revenues under existing rates and system growth.



Table 4-6
Revenue Requirements vs. Revenue Under Existing Rates
Fiscal Years Ending June 30 (\$ thousands)

	20-21	21-22	22-23	23-24	24-25	25-26
Water						
Beginning Cash Balance	\$44,491	\$37,568	\$36,275	\$28,502	\$21,498	\$13,798
Cash Inflows						
Rate Revenue Under Existing Rates	9,107	10,012	10,083	10,154	10,225	10,296
Non-Rate Revenue ⁽¹⁾	<u>7,318</u>	<u>7,253</u>	<u>1,477</u>	<u>1,432</u>	<u>1,358</u>	<u>1,284</u>
Total Cash Inflows	16,425	17,265	11,560	11,585	11,582	11,580
Cash Outflows						
Annual O&M Expense	10,007	8,490	8,835	9,105	9,384	9,671
Debt Service and Loans	625	624	613	613	613	613
Capital Outlay, Transfers and CIP	<u>12,716</u>	<u>9,444</u>	<u>9,885</u>	<u>8,871</u>	<u>9,285</u>	<u>13,007</u>
Total Cash Outflows	<u>23,348</u>	<u>18,558</u>	<u>19,333</u>	<u>18,589</u>	<u>19,282</u>	<u>23,291</u>
Net Cashflow	(6,923)	(1,293)	(7,774)	(7,004)	(7,700)	(11,712)
Ending Cash Balance	\$37,568	\$36,275	\$28,502	\$21,498	\$13,798	\$2,085
Target Cash Balance	\$2,602	\$2,610	\$2,428	\$2,235	\$2,036	\$1,890
Debt Service Coverage (Required 1.20)	0.18	6.91	(2.98)	(3.60)	(4.29)	(5.00)
Sewer						
Beginning Cash Balance	\$19,104	\$8,634	\$5,476	\$3,050	(\$187)	(\$2,901)
Cash Inflows						
Rate Revenue Under Existing Rates	21,023	23,249	23,491	23,692	23,892	24,092
Non-Rate Revenue	<u>1,031</u>	<u>818</u>	<u>750</u>	<u>722</u>	<u>588</u>	<u>574</u>
Total Cash Inflows	22,053	24,067	24,241	24,414	24,480	24,666
Cash Outflows						
Annual O&M Expense	8,844	7,516	7,872	8,111	8,357	8,610
Debt Service and Loans	13,720	13,720	13,720	13,723	13,719	13,719
Capital Outlay, Transfers and CIP	<u>9,959</u>	<u>5,989</u>	<u>5,075</u>	<u>5,817</u>	<u>5,118</u>	<u>5,325</u>
Total Cash Outflows	<u>32,523</u>	<u>27,225</u>	<u>26,667</u>	<u>27,651</u>	<u>27,194</u>	<u>27,654</u>
Net Cashflow	(10,470)	(3,158)	(2,426)	(3,237)	(2,714)	(2,988)
Ending Cash Balance	\$8,634	\$5,476	\$3,050	(\$187)	(\$2,901)	(\$5,889)
Target Cash Balance	\$3,439	\$3,454	\$3,512	\$3,554	\$3,545	\$3,622
Debt Service Coverage (Required 1.20)	0.95	1.24	1.22	1.21	1.19	1.18
(1) IDD property tax revenue is eliminated at the end of FY 2021-22						
Note: Values are rounded to the nearest \$1,000						

The revenues and expenditures identified in Table 4-6 represent revenues under existing rates and system growth and operating expenditures under the identified assumptions. As noted in the table, water revenues increasing due to just system growth will not be sufficient to meet ongoing expenses. Sewer revenues from system growth alone are also insufficient to meet annual expenses and the fund balance

is negative beginning in FY 2023-24. Both utilities are projected to have in a negative cashflow through FY 2025-26, based on existing rates.

4.1.8.1. Rate Revenue Increases Required

Our analysis of the water and sewer utilities indicate that assuming all expenditures occur as projected, there will not be sufficient operating revenue to fund ongoing operations and maintenance, routine repair and replacement of aging system components, planned capital improvements, and debt service throughout the study period. In part this is because anticipated growth is projected to be less than the expected cost increases associated with operating expenses. Therefore, we recommend increases each year for the water and sewer utilities in order to maintain pace with increasing operating costs, fund capital needs and pay annual debt service.

As noted in Section 1.4, a revenue increase may differ from a rate increase, where a revenue increase represents the additional revenue needed to meet costs whereas a rate increase is the impact to an individual customer class. Table 4-7 below reflects our projections of revenue increases required during the forecast period in order for the City to meet its ongoing operational costs.

Table 4-7 Projected Revenue Increases Fiscal Years Ending June 30		
Description	Water Revenue Increases ⁽¹⁾	Sewer Revenue Increases ⁽¹⁾
2021-22	15.0%	3.0%
2022-23	15.0%	3.0%
2023-24	8.0%	3.0%
2024-25	8.0%	3.0%
2025-26	7.5%	2.0%
2026-27	7.5%	2.0%
2027-28	7.0%	2.0%
2028-29	7.0%	2.0%
2029-30	7.0%	2.0%

(1) The increase for FY 2021-22 is effective July 1, while the increases for subsequent years are proposed to be effective September 1



4.1.8.2. Summary of Revenue Sufficiency Analysis

The resulting financial plans, including recommended revenue adjustments are presented in Table 4-8 and provide for funding of projected revenue requirements during the forecast period.

A more detailed presentation of the financial plan, including fund balance reconciliations for each fund, is presented in Schedules A-1 and B-1 in the appendices.



Table 4-8
Revenue Requirements vs. Revenue Under Proposed Rates
Fiscal Years Ending June 30 (\$ thousands)

	20-21	21-22	22-23	23-24	24-25	25-26
Water						
Beginning Cash Balance	\$44,491	\$37,568	\$37,777	\$32,972	\$30,168	\$27,885
Cash Inflows						
Rate Revenue Under Proposed Rates	9,107	11,514	13,045	14,324	15,577	16,874
Non-Rate Revenue ⁽¹⁾	<u>7,318</u>	<u>7,253</u>	<u>1,485</u>	<u>1,462</u>	<u>1,423</u>	<u>1,398</u>
Total Cash Inflows	16,425	18,767	14,529	15,875	17,001	18,272
Cash Outflows						
Annual O&M Expense	10,007	8,490	8,835	9,105	9,384	9,671
Debt Service	625	624	613	613	613	613
Capital Outlay, Transfers and CIP	<u>12,716</u>	<u>9,444</u>	<u>9,885</u>	<u>8,871</u>	<u>9,285</u>	<u>13,007</u>
Total Cash Outflows	<u>23,348</u>	<u>18,558</u>	<u>19,333</u>	<u>18,589</u>	<u>19,282</u>	<u>23,291</u>
Net Cashflow	(6,923)	209	(4,805)	(2,805)	(2,282)	(5,021)
Ending Cash Balance	\$37,568	\$37,77	\$32,972	\$30,168	\$27,885	\$22,864
Target Cash Balance	\$2,602	\$2,610	\$2,428	\$2,235	\$2,036	\$1,890
Debt Service Coverage (Required 1.20)	0.18	9.31	1.86	3.24	4.54	5.91
Sewer						
Beginning Cash Balance	\$19,104	\$8,634	\$6,174	\$5,170	\$4,120	\$4,400
Cash Inflows						
Rate Revenue Under Proposed Rates	21,023	23,946	24,910	25,864	26,854	27,613
Non-Rate Revenue	<u>1,031</u>	<u>818</u>	<u>754</u>	<u>736</u>	<u>620</u>	<u>616</u>
Total Cash Inflows	22,053	24,765	25,663	26,601	27,474	28,229
Cash Outflows						
Annual O&M Expense	8,844	7,516	7,872	8,111	8,357	8,610
Debt Service	13,720	13,720	13,720	13,723	13,719	13,719
Capital Outlay, Transfers and CIP	<u>9,959</u>	<u>5,989</u>	<u>5,075</u>	<u>5,817</u>	<u>5,118</u>	<u>5,325</u>
Total Cash Outflows	<u>32,523</u>	<u>27,225</u>	<u>26,667</u>	<u>27,651</u>	<u>27,194</u>	<u>27,654</u>
Net Cashflow	(10,470)	(2,460)	(1,004)	(1,050)	280	575
Ending Cash Balance	\$8,634	\$6,174	\$5,170	\$4,120	\$4,400	\$4,975
Target Cash Balance	\$3,439	\$3,454	\$3,512	\$3,554	\$3,545	\$3,622
Debt Service Coverage (Required 1.20)	0.95	1.29	1.32	1.37	1.41	1.44
(1) IDD property tax revenue is eliminated at the end of FY 2021-22						
Note: Values are rounded to the nearest \$1,000						

4.1.8.3. Revenue Sufficiency Analysis Conclusions

Based on the revenue requirements identified in our analysis, it is our opinion that:

-
- Revenue projections for the water and sewer utilities based on existing rates are insufficient to meet the revenue requirements for FY 2021-22 through FY 2025-26;
 - Rate revenue adjustments are needed for both utilities in order to keep pace with increasing O&M and capital costs; and
 - The proposed rate revenue increases identified in Table 4-7, are needed to ensure debt service coverage and operating reserve targets are met based upon the assumptions contained in this report.

4.2 Cost-of-Service Analysis

4.2.1 General Methodology

Rate design goals of the City were reviewed to identify areas the City wanted to address over the forecast period were included in this Rate Study. Next, an assessment of the existing rate design was completed to identify areas which have worked well for the City with regard to their specific goals and objectives, and the general goals and objectives of utility rate-making. In addition to the City's goals, rate design should seek to achieve the following industry standard objectives:

- Generate a stable rate revenue stream which, when combined with other sources of funds, is sufficient to meet the financial requirements and goals of the utility;
- Be fair and equitable – that is, they should generate revenue from customer classes which is reasonably in proportion to the cost to provide service to that customer class;
- Be easy to understand by customers; and
- Be easy to administer by the utility;
- Adhere to cost-of-service principles, whereby the rates must be based upon the proportionate cost of providing water and sewer service.

4.2.2 Cost-of-Service Analysis

The City's current water rates are comprised of two components, first a monthly base charge which varies by meter size; and second, a volume rate per 100 cubic feet (CCF) of all water use. The volume component of the rate structure is a tiered rate structure (except for the hydrant rate which is uniform) and varies by class (single family, commercial irrigation etc.). Due to the fact that customers within the IDD pay a

property tax, an outside IDD differential exists whereby the rates assessed to customers outside the IDD are higher. This is in recognition of the fact that they are not assessed the IDD property tax which supports the water utility. The City's sewer rate structure is comprised of a monthly base charge (the residential base charge includes the first 567 CF of flow) and flow rate (per 100 cubic feet) which varies by type of customer (restaurants, hotels, service stations etc).

In order to provide guidance for the water utility as to how to adequately recover the rate revenue requirements identified in the Revenue Sufficiency Analysis, in a manner consistent with generally accepted rate-making principles using City specific system, cost and customer billing data, a Cost-of-Service Analysis was conducted.

The Cost-of-Service Analysis resulted in the identification of the cost to provide service to City customers based on functional cost categories. This provided the rationale for the allocation of costs to expense categories related to water service. These water cost allocations were then used as the basis for the assignment of revenue requirements to customer classes upon which the development of rates and charges presented herein is based.

For the purposes of this analysis, the cost-of-service analysis for water was based on the Base-Extra Capacity methodology, as detailed in the American Water Works Association (AWWA) M1 Manual – Principles of Water Rates, Fees and Charges while incorporating City specific system performance and production data and cost and customer billing data.

The general approach to the development of cost-of-service allocations under the Base-Extra Capacity Cost Allocation methodology was to: 1) identify the City's costs by functional cost category, 2) allocate the functionalized costs further to base-extra capacity categories and then to 3) allocate the City's costs and rate revenue requirements to the City's customer classes based on the distribution of costs and customer characteristics. The Cost-of-Service Analysis and Results is presented below.

4.2.2.1. Allocation to Functional Cost Categories

Water costs are allocated to functional cost categories based on their need to meet base demand, peak demand (max day and max hour water needs), as well as customer service costs such as billing and collection.

The City's functionalized costs were then further allocated based on the Base-extra Capacity Method, as presented in the AWWA M1 Manual of Practice. The Base-Extra Capacity method results in the allocation of functionalized costs in a manner consistent with the functional reality behind each type of cost. For



instance, transmission costs are related to not only a base, (or average), level of water flow, but are also related to the fact that transmission assets are typically sized to meet maximum day and maximum hour demands. Therefore, some portion of transmission costs should be allocated to the base component, and further to the extra capacity component (max day and max hour). Table 4-9 below presents the results of the Base-extra Capacity method.

Table 4-9						
Water System - Summary of Functional Allocations to Cost Categories						
Fiscal Year 2021-22						
Functional Cost	Base	Max Day	Max Hour	Meters & Services	Billing & Collection	Total
Treatment	\$4,156,933	\$3,401,127	\$0	\$0	\$0	\$7,558,060
Transmission & Distribution	455,727	768,416	971,331	-	-	2,195,475
Customer Service	-	-	-	61,440	61,440	122,879
Admin	85,298	-	-	42,649	42,649	170,595
Source of Supply	25,565	-	-	-	-	25,565
Transfers	2,162,219	-	-	720,740	-	2,882,959
Debt Service	467,981	-	-	155,994	-	623,975
CIP	3,982,625	-	-	995,656	-	4,978,282
Non-Operating Revenue/Changes in Reserves ⁽¹⁾	<u>(3,743,722)</u>	<u>(2,266,947)</u>	<u>(528,105)</u>	<u>(448,452)</u>	<u>(56,592)</u>	<u>(7,043,818)</u>
Total	\$7,592,626	\$1,902,597	\$443,226	\$1,528,026	\$47,496	\$11,513,971
Units (CCF/Equiv. Meters/Bills)	<u>4,558,438</u>	<u>30,848</u>	<u>65,235</u>	<u>31,915</u>	<u>382,981</u>	
Cost per Unit	\$1.67	\$61.68	\$6.79	\$47.88	\$0.12	
(1) A positive value results in an increase of reserves through rates, while a negative value indicates use of non-operating revenue and existing reserves to meet annual expenses in addition to rates.						

Table 4-9 illustrates the allocation of costs to functional components necessary to provide water service to customers. Total costs are allocated to functional categories such as treatment or transmission and distribution and then to cost categories such as base or max day.

Sewer costs are allocated based on their need to meet general capacity requirements, strength of discharge as well as customer related costs such as billing and collection. Table 4-10 summarizes the cost-of-service based allocation of the City's Sewer costs.

Table 4-10
Sewer System - Summary of Functional Allocations to Cost Categories
Fiscal Year 2021-22

Functional Cost	Volume and Capacity	Strength		Customer Service/Billing & Collection	Total
		Suspended Solids (SS)	Biochemical Oxygen Demand (BOD)		
Treatment	\$1,868,458	\$934,229	\$934,229	\$0	\$3,736,916
Collection	4,560,532	-	-	-	4,560,532
Admin	3,168,117	-	-	-	3,168,117
Customer Service	-	-	-	112,152	112,152
CIP	1,927,230	-	-	-	1,927,230
Debt Service	13,720,424	-	-	-	13,720,424
Non-Operating Revenue/Changes in Reserves ⁽¹⁾	<u>(3,4035,735)</u>	<u>(126,036)</u>	<u>(126,036)</u>	<u>(15,130)</u>	<u>(3,672,936)</u>
Total	\$21,839,027	\$808,193	\$808,193	\$97,022	\$23,552,435
Units (CCF/Bills)	<u>1,828,684</u>	<u>3,825,832</u>	<u>7,162,978</u>	<u>338,760</u>	
Cost per Unit	\$11.94	\$0.21	\$0.11	\$0.28	

(1) A positive value results in an increase of reserves through rates, while a negative value indicates use of non-operating revenue and existing reserves to meet annual expenses in addition to rates.

4.2.2.1. Summary of Cost-of-Service Analysis

The Cost-of-Service Analysis presented herein sets forth how to appropriately recover the rate revenue requirements for FY 2021-22 and subsequent years. The allocations presented herein were used, along with the other goals and objectives of the utilities, in the development of the water and sewer rates and charges presented in the next section.

Section 5 – Rate Design Analysis

5.1 Proposed Water Rate Structure Changes

Through discussions with City staff it was determined that improvements could be made to provide additional revenue stability and encourage conservation within the existing water rate structure. All customer classes are assigned rates that are designed to recover their proportionate cost-of-service.

The goal of increased revenue stability was achieved through an increase in the monthly base charge that is assessed to all customers. As is the case with all utilities, the City's water utility incurs costs every month regardless of the amount of water that is consumed. These fixed costs include items such as system repair and maintenance, debt service and customer service related costs. By assessing a higher monthly base charge (a more stable and reliable revenue source), the City is better equipped to pay their fixed monthly costs. For the volume rate components, the tier thresholds (water allotment by tier) and/or unit price by tier has been modified with the goal of sending a conservation oriented message to customers to curtail their water use. The proposed rate structures maintain their existing number of tiers by class with incrementally higher unit costs of water in each subsequent tier, however, the tier thresholds have been modified. It should also be noted that while an outside IDD differential (higher rates for customers outside the IDD) currently exists, with the end of IDD property tax, the same water rates will be assessed to customers regardless of location (inside or outside the IDD).

Two rate structure options were developed for the single family class, with each option designed to generate the same amount of revenue. Option A most closely resembles the existing water rate structure, but the water allotments by tier have been modified as have the unit costs by tier. Option B modifies the tier allotments and unit costs as well as changes the base charge from a fixed charge to a minimum charge. Under a fixed charge approach a customer pays a monthly base charge regardless of the amount of water that is consumed. Under a minimum charge approach the monthly base charge includes an allotment of water every month. In the case of Option B, the monthly base charge includes the first 500 cubic feet (CF) of water use. In other words, a customer does not start paying a volume rate for the water consumed until monthly water use is greater than 500 cubic feet.

One recommended rate option is proposed for all other customer classes (but a different rate structure for each class), representative of each class' proportionate cost-of-service).

Tables 5-1 and 5-2 illustrate the proposed water rates through FY 2025-26.



Table 5-1
 Proposed Water Rates – Base Charge
 Current Through FY 2025-26

Monthly Base Charge							
Meter Size	Inside IDD	Outside IDD	All Customers ⁽¹⁾				
	Current		21-22 ⁽²⁾	22-23 ⁽³⁾	23-24 ⁽³⁾	24-25 ⁽³⁾	25-26 ⁽³⁾
3/4-inch	\$5.16	\$6.45	\$9.02	\$10.37	\$11.20	\$12.10	\$13.01
1-inch	8.17	10.21	15.06	17.32	18.70	20.20	21.72
1 ½-inch	16.69	20.86	30.03	34.53	37.30	40.28	43.30
2-inch	28.17	35.21	48.07	55.28	59.70	64.48	69.32
3-inch	52.66	65.83	96.14	110.56	119.41	128.96	138.63
4-inch	97.09	121.36	150.32	172.87	186.70	201.63	216.76
6-inch	198.95	248.69	300.61	345.70	373.36	403.23	433.47
8-inch	283.91	354.89	480.99	553.14	597.39	645.18	693.57

(1) The monthly base charge includes the first 500 cubic feet of water per month for the single family class under Option B
 (2) Effective July 1
 (3) Effective September 1



Table 5-2
Proposed Water Rates - Volume
Current Through FY 2025-26

Current			Proposed (Inside and Outside the IDD)					
Tiers	Inside IDD	Outside IDD	Tiers	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
Single Family Option A – Volume Rate (\$/100 CF)								
0 – 1,300 CF	\$1.69	\$1.69	0 – 1,000 CF	\$1.00	\$1.15	\$1.24	\$1.34	\$1.44
1,301 – 2,500 CF	1.76	2.20	1,001 – 2,400 CF	1.88	2.16	2.33	2.52	2.70
2,501 – 5,000 CF	2.16	2.70	2,401 – 6,500 CF	2.06	2.37	2.56	2.77	2.98
Over 5,000 CF	2.70	3.38	Over 6,500 CF	2.27	2.61	2.82	3.04	3.27
Single Family Option B – Volume Rate (\$/100 CF)								
0 – 1,300 CF	\$1.69	\$1.69	0 – 500 CF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1,301 – 2,500 CF	1.76	2.20	501 – 4,000 CF	1.74	2.00	2.16	2.34	2.51
2,501 – 5,000 CF	2.16	2.70	4,001 – 10,000 CF	2.16	2.48	2.68	2.90	3.11
Over 5,000 CF	2.70	3.38	Over 10,000 CF	2.70	3.11	3.35	3.62	3.89
Multifamily – Volume Rate (\$/100 CF)								
0 – 2,600 CF	\$1.35	\$1.69	0 – 2,200 CF	\$1.47	\$1.70	\$1.83	\$1.98	\$2.13
2,601 – 55,000 CF	1.76	2.20	2,201 – 20,000 CF	1.84	2.12	2.29	2.47	2.66
55,001 – 200,000 CF	2.16	2.70	20,001 – 200,000 CF	2.30	2.65	2.86	3.09	3.32
Over 200,000 CF	2.70	3.38	Over 200,000 CF	2.88	3.31	3.58	3.86	4.15
Commercial/Industrial – Volume Rate (\$/100 CF)								
0 – 31,500 CF	\$1.76	\$2.20	0 – 15,000 CF	\$1.74	\$2.00	\$2.16	\$2.33	\$2.51
31,501 – 340,000 CF	2.16	2.70	15,601 – 340,000 CF	2.18	2.50	2.70	2.92	3.14
Over 340,000 CF	2.70	3.38	Over 340,000 CF	3.26	3.75	4.05	4.38	4.71
Single Family Irrigation – Volume Rate (\$/100 CF)								
0 – 1,200 CF	\$1.76	\$2.20	0 – 2,900 CF	\$1.67	\$1.92	\$2.08	\$2.24	\$2.41
1,201 – 3,700 CF	2.16	2.70	2,901 – 9,500 CF	2.51	2.89	3.12	3.37	3.62
Over 3,700 CF	2.70	3.38	Over 9,500 CF	5.02	5.77	6.23	6.73	7.24
Other Irrigation – Volume Rate (\$/100 CF)								
0 – 16,000 CF	\$1.76	\$2.20	0 – 9,000 CF	\$1.87	\$2.14	\$2.32	\$2.50	\$2.69
16,001 – 89,000 CF	2.16	2.70	9,001 – 40,000 CF	2.33	2.68	2.90	3.13	3.36
Over 89,000 CF	2.70	3.38	Over 40,000 CF	3.50	4.02	4.34	4.69	5.04
Hydrants – Volume Rate (\$/100 CF)								
All Use	\$2.70	\$3.38	All Use	\$2.24	\$2.58	\$2.79	\$3.01	\$3.23
RV Parks – Volume Rate (\$/100 CF)								
0 – 39,000 CF	\$1.35	\$1.69	0 – 1,750 CF	\$1.78	\$2.05	\$2.21	\$2.39	\$2.57
39,001 – 86,000 CF	1.76	2.20	1,751 – 20,000 CF	2.23	2.56	2.77	2.99	3.21
86,001 – 150,000 CF	2.16	2.70	20,001 – 60,000 CF	2.79	3.20	3.46	3.74	4.02
Over 150,000	2.70	3.38	Over 60,000	3.48	4.01	4.33	4.67	5.02

(1) Effective July 1
(2) Effective September 1

As noted in table 5-1, the monthly base charge is assessed to all customers regardless of class or volume of water used and acts to ensure safe and reliable water systems such that customers can be assured of ongoing system maintenance and available water when the service is needed.

The proposed fixed charges increase by meter size based on the ratio of flow capacities by meter size as identified by AWWA. It should be noted that a 1-inch meter has the ability to provide more water per minute (greater capacity) than a $\frac{3}{4}$ -inch meter and the cost-of-service analysis calculated a higher rate for a 1-inch meter compared to a $\frac{3}{4}$ -inch meter.

The full water cost-of-service analysis can be found in Appendix C.

5.2 Proposed Sewer Rate Structure Changes

As was the case for the water rate structure, new sewer rate structures are being proposed. The main goals of the sewer structure refinements were to increase revenue stability and simplify the structure. The base charges for residential customers are proposed to increase, providing additional revenue stability for the utility. The single family class is currently assessed a flow rate based on the customer's average winter consumption (AWC). Under the proposed options the AWC based billing practice is eliminated. The City currently has 24 non-residential customer classes which are proposed to be consolidated into four customer classes.

Two rate structure options were developed for the single family class. The first (Option A) is a flat monthly charge, that is assessed to all customers regardless of sewer flows. The second option is a modification of the existing rate structure. Under the existing rates a single family customer is assessed a monthly minimum base charge which includes the first 567 CF of flows each month and then is assessed a flow rate based on any flows above 567 CF based on AWC. Under Option B, the monthly minimum charge remains, but the flow allotment is reduced to 500 CF per month. Flows are based on actual water use each month rather than AWC. Since actual monthly water use is used for the flow component of the monthly bill, the monthly flows are capped at 750 CF (typical use for a single family customer), under the assumption that any flows above 750 CF per month are for non-domestic uses and the water does not enter the sewer system to be treated. All other customer classes will continue to be billed under a base (per unit for apartments condos and multifamily and per spot for RV Parks) and flow approach (except septic haulers which are only charged a flow rate), with rates updated to reflect the proportionate cost of serving each class. Table 5-3 summarizes the current and proposed sewer rates.

Table 5-3
Proposed Sewer Rates
Current Through FY 2025-26

	Current	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
Residential – Option A						
Base	\$41.00	\$54.25	\$55.88	\$57.55	\$59.28	\$60.47
Flow (\$/100 CF) ⁽³⁾	7.30	n/a	n/a	n/a	n/a	n/a
Residential – Option B						
Base	41.00	52.14	53.71	55.32	56.98	58.12
Flow (\$/100 CF) ⁽⁴⁾	7.30	1.76	1.81	1.86	1.92	1.96
Apartments						
Base (per unit)	23.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.30	6.26	6.45	6.65	6.85	6.98
Condos						
Base (per unit)	11.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.30	6.26	6.45	6.65	6.85	6.98
Bars ⁽⁵⁾						
Base	52.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.47	10.44	10.75	11.07	11.40	11.63
Church ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.14	10.44	10.75	11.07	11.40	11.63
Car Wash ⁽⁵⁾						
Base	58.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	8.35	10.44	10.75	11.07	11.40	11.63
Retail ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.41	10.44	10.75	11.07	11.40	11.63
Fitness ⁽⁵⁾						
Base	48.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	6.85	10.44	10.75	11.07	11.40	11.63
Grocery ⁽⁵⁾						
Base	79.00	48.67	\$50.13	51.63	53.18	54.25
Flow (\$/100 CF)	11.28	10.44	10.75	11.07	11.40	11.63



Table 5-3
Proposed Sewer Rates
Current Through FY 2025-26

	Current	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
Hospital ⁽⁵⁾						
Base	\$51.00	\$48.67	\$50.13	\$51.63	\$53.18	\$54.25
Flow (\$/100 CF)	7.30	10.44	10.75	11.07	11.40	11.63
Ice Manufacturing ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.14	10.44	10.75	11.07	11.40	11.63
Dry Cleaner ⁽⁵⁾						
Base	58.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	8.38	10.44	10.75	11.07	11.40	11.63
Laundromat ⁽⁵⁾						
Base	49.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.02	10.44	10.75	11.07	11.40	11.63
Mortuary ⁽⁵⁾						
Base	79.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	11.28	10.44	10.75	11.07	11.40	11.63
Social Club ⁽⁵⁾						
Base	50.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.14	10.44	10.75	11.07	11.40	11.63
Professional Office ⁽⁵⁾						
Base	48.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	6.85	10.44	10.75	11.07	11.40	11.63
RV Park						
Base (per spot)	4.50	24.34	25.07	25.82	26.59	27.12
Flow (\$/100 CF)	7.30	3.13	3.23	3.32	3.42	3.49
Service Station ⁽⁵⁾						
Base	\$53.50	\$48.67	\$50.13	\$51.63	\$53.18	\$54.25
Flow (\$/100 CF)	7.66	10.44	10.75	11.07	11.40	11.63



Table 5-3
Proposed Sewer Rates
Current Through FY 2025-26

	Current	21-22 ⁽¹⁾	22-23 ⁽²⁾	23-24 ⁽²⁾	24-25 ⁽²⁾	25-26 ⁽²⁾
Deli ⁽⁵⁾						
Base	\$53.50	\$48.67	\$50.13	\$51.63	\$53.18	\$54.25
Flow (\$/100 CF)	7.66	10.44	10.75	11.07	11.40	11.63
Hotel w/ Restaurant ⁽⁶⁾						
Base (per room)	22.00	17.87	18.41	18.96	19.53	19.92
Flow (\$/100 CF)	9.57	9.37	9.65	9.94	10.23	10.44
Hotel w/o Restaurant ⁽⁶⁾						
Base (per room)	10.50	17.87	18.41	18.96	19.53	19.92
Flow (\$/100 CF)	7.57	9.37	9.65	9.94	10.23	10.44
Restaurant ⁽⁵⁾						
Base	81.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	11.59	10.44	10.75	11.07	11.40	11.63
School w/ Cafeteria ⁽⁵⁾						
Base	76.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	10.95	10.44	10.75	11.07	11.40	11.63
School w/ Gym ⁽⁵⁾						
Base	56.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	8.09	10.44	10.75	11.07	11.40	11.63
School ⁽⁵⁾						
Base	48.50	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	6.92	10.44	10.75	11.07	11.40	11.63
Septic Hauler						
Base	0.00	0.00	0.00	0.00	0.00	0.00
Flow (\$/100 CF)	61.40	67.87	69.91	72.00	74.16	75.65
Industrial ⁽⁵⁾						
Base	54.00	48.67	50.13	51.63	53.18	54.25
Flow (\$/100 CF)	7.71	10.44	10.75	11.07	11.40	11.63

- (1) Effective July 1
- (2) Effective September 1
- (3) Current includes first 567 cubic feet per month based on average with consumption
- (4) Includes first 500 cubic feet up to 750 cubic feet per month based on actual water use
- (5) Proposed to be consolidated into a single "Commercial Class"
- (6) Proposed to be consolidated into a single "Hotel Class"



The full Sewer cost-of-service analysis can be found in Appendix D.

Section 6 – Conclusions and Recommendations

6.1 Conclusions

- Projected operating revenues and operating expenses for the forecast period were developed by, and/or in consultation with, City staff and are based upon reasonable projections;
- The projected capital project expenses have been developed by City staff, to address anticipated water and sewer system needs;
- Based on the prior two conclusions, we are of the opinion that the financial projections presented herein address the water and sewer utilities' goals to meet its ongoing obligations with regard to:
 - Operating and maintenance expenses, including repair and replacement of aging system components and repayment of debt;
 - Non-operating expenses;
 - Capital project expenses, and
 - Provision for key financial policies, including:
 - Maintenance of at least a rolling 15% average of the prior five-year's revenues;
 - Legal debt service coverage of at least 1.20 and target debt service coverage of 1.50.
- The proposed rates presented herein are in conformance with industry standard rate-making practices using City specific performance and financial data, cost-of-service principles and the City's rate policies with respect to:
 - The fair and equitable recovery of costs through water and sewer rates;
 - Water and sewer rates based upon the proportionate cost of providing services, and
 - Generation of sufficient revenue to recover system revenue requirements and reserve requirements.

6.2 Recommendations

- It is recommended that the City implement the proposed FY 2021-22 rates and charges presented in July 1, 2021, followed by annual adjustments each subsequent September 1, beginning on September 1, 2022.
- It is recommended that the City update the revenue sufficiency analysis portion of this study each year to ensure projected revenue continues to be sufficient to fund projected expenses going forward as assumptions made during this analysis may change and have a material impact upon the analysis.



-
- It is recommended that the City update the cost-of-service analysis portion of this study every three to five years to ensure costs are recovered consistent with cost-of-service principles and customer characteristics.



Section 7 – Addendum – Sewer Rate Revisions

7.1 Introduction

The City of Lake Havasu City, Arizona, Water and Sewer Rate Study was presented to the City Council by the Willdan Team in May of 2021. The water and sewer rates contained in Section 5 of this report were proposed to be adopted by the City Council with an effective date of July 1, 2021. After the July 1 effective date for the newly adopted rates, some condo, multifamily, apartment and RV Park customers expressed concerns regarding the large increases they were experiencing in their monthly sewer bill. City staff requested the Willdan Team re-examine the sewer rate structure at the City Council's request in an attempt to reduce the financial burden and the high increases in bills being experienced by the City's condo, multifamily, apartment and RV park customers.

7.2 Modified Rates Proposal

The Willdan Team worked with City staff to identify alternatives to the adopted rate structure to present to the City Council for consideration, with the intent of balancing the impact being felt by City customers and the revenue generation needs of the sewer utility. A primary concern was the City's fixed costs, specifically annual debt service and the associated debt service coverage which combined represent 55% of the total annual sewer costs.

An option was developed whereby cost-of-service principles would be maintained (each class paid their proportionate share of costs with no one class subsidizing another). The option provided for a decrease of the monthly per dwelling unit base charge of \$48.67 for condo, multifamily and apartment customers (as illustrated in Appendix D-7) by \$20.00 to \$28.67. The flow rate that had been previously adopted was to remain unchanged. The base rate was then proposed to increase at an equal incremental amount for the next 4 years in order to phase-in the \$20 base charge reduction as well as the recommend annual rate increases identified in Table 4-7 of this report. The monthly per space base charge for RV parks of \$24.34 (Appendix D-10) was proposed to be reduced by \$10.00 to \$14.34. As was the case for the condo and apartment class, the previously adopted flow rate was to remain unchanged.

The revenue loss resulting from the decreased and subsequent phase in of base charges for condo, multifamily, apartment and RV park customers was anticipated to be offset from non-utility sources. This approach maintains the integrity of the cost-of-service, such that no customer class is subsidizing another customer class.

7.3 Revised Adopted Rates

The aforementioned rate proposal was presented to the City Council in October of 2021. After much discussion and alternatives developed by members of the City Council, the rates developed by City Council as summarized in Table 7-1 were adopted.

Table 7-1 Revised Sewer Rates			
Customer Class	Monthly Base Charge	Flow Rate (per 100 CF)	Monthly Cap
Apartments (per unit)	\$28.67	\$6.26	\$40.00
Condos, Multifamily (per unit)	18.67	6.26	40.00
RV Parks (per spot)	9.34	3.13	n/a

The revised rates adopted by Council reduced the monthly base charge for condo, multifamily and apartment customers, and a monthly cap was implemented. Under the cap, the maximum monthly charge a customer could incur per unit is \$40.00 per month. As an example, Table 7-2 illustrates customer bills under the prior rates and the new rates.

Table 7-2 Customer Bill Illustration					
Customer	Units	Monthly Flow	Original Bill	Revised Bill	Difference
Condo	20	19,115	\$1,286	\$800	\$486
Multifamily	6	4,732	386	240	146

The example customers illustrated in Table 7-2 would both see a savings (and in turn the City would experience a revenue loss) as a result of the reduction of the base charges and the cap for condo customers.

The monthly base charge for RV park customers was reduced, but unlike condos, multifamily and apartments classes a monthly cap was not implemented for the RV park customer class. Table 7-3 provides an example of a customer’s monthly bill under the prior and revised rates.

Table 7-3 Condo Customer Bill Illustration					
Customer	Spots	Monthly Flow	Original Bill	Revised Bill	Difference
RV Park	109	20,874	\$3,306	\$1,671	\$1,635

As was the case for the condo and multifamily example customers, the revised rates provide the RV park customer with a reduced monthly bill, and a corresponding revenue loss to the City.

The desired effect of reducing the financial burden being experienced by condo, multifamily, apartment and RV Parks will be achieved through the new rates. However, there is also a two-fold adverse impact from the new rates. The first is that while the flow rates were left unchanged, the reduction of the monthly base charge in conjunction with the cap on the maximum monthly bill per unit for condo, multifamily and apartment customers will result in less revenue generation for the sewer utility. The new rates will not generate the same amount of revenue as the rate structure that became effective July 1,



2021. In light of the decreased revenues, the City should monitor revenues resulting from the change to the condo, apartment, multifamily and RV park rates and make future adjustments as necessary to maintain the financial integrity of the sewer utility. The second and related consequence of the new rates is that the condo, multifamily, apartment and RV Park customer classes will no longer be meeting their respective class cost-of-service. The rate structure adopted July 1, 2021 was intended to generate the rate revenue by each class to meet the cost of providing service to each respective class. By lowering the revenue generated by the two identified classes, they are no longer generating the revenues to meet their costs as a class and therefore are deviating from cost-of-service.

APPENDIX A

Water Financial Plan

LAKE HAVASU CITY, AZ
WATER SYSTEM
PROJECTED OPERATING RESULTS - WATER

Line	Description	Unaudited 2020	Budget 2021	Fiscal Year Ending June 30,								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
REVENUES												
Operating Revenues												
1	Water Sales	\$ 9,940,802	\$ 9,107,000	\$ 11,513,971	\$ 13,044,870	\$ 14,323,674	\$ 15,577,497	\$ 16,874,087	\$ 18,264,460	\$ 19,690,949	\$ 21,212,322	\$ 22,850,202
Other Operating Revenues												
2	Miscellaneous Revenues	\$ 1,766,297	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780	\$ 1,107,780
3	IDD Property Tax	\$ 5,684,564	\$ 5,684,000	\$ 5,684,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Non-Operating Revenues												
4	Interest	806,411	526,692	461,004	376,724	353,745	315,699	290,264	253,748	206,962	150,897	88,505
5	Total Revenues	\$ 18,198,074	\$ 16,425,472	\$ 18,766,755	\$ 14,529,373	\$ 15,785,199	\$ 17,000,976	\$ 18,272,131	\$ 19,625,988	\$ 21,005,691	\$ 22,470,999	\$ 24,046,487
Current Expenses												
6	Irrigation & Drain District	\$ 7,134,499	\$ 10,007,062	\$ 8,490,174	\$ 8,835,320	\$ 9,105,898	\$ 9,384,791	\$ 9,672,248	\$ 9,968,542	\$ 10,273,936	\$ 10,588,714	\$ 10,913,168
7	Capital Outlay	128,769	3,005,275	1,582,400	1,584,872	1,632,418	1,681,390	1,731,832	1,783,787	1,837,301	1,892,420	1,949,192
8	Transfers Out	3,323,365	3,298,989	2,882,959	2,969,448	3,058,531	3,150,287	3,244,796	3,342,140	3,442,404	3,545,676	3,652,046
9	Total Current Expenses	\$ 10,586,634	\$ 16,311,326	\$ 12,955,533	\$ 13,389,640	\$ 13,796,847	\$ 14,216,468	\$ 14,648,876	\$ 15,094,469	\$ 15,553,641	\$ 16,026,810	\$ 16,514,406
10	Income Available for Debt Service	\$ 7,611,440	\$ 114,146	\$ 5,811,223	\$ 1,139,733	\$ 1,988,352	\$ 2,784,508	\$ 3,623,255	\$ 4,531,519	\$ 5,452,050	\$ 6,444,189	\$ 7,532,082
DEBT SERVICE												
Parity Indebtedness												
11	Refunding Bonds Series 1993	\$ -	\$ 11,325	\$ 10,663	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	WIFA 2007 Drinking Water	-	401,203	401,203	401,203	401,203	401,203	401,203	401,203	401,203	-	-
13	WIFA 2010 SR Water	-	212,109	212,109	212,109	212,109	212,109	212,109	212,109	212,109	212,109	212,109
14	Total Parity Indebtedness	\$ 600,750	\$ 624,637	\$ 623,975	\$ 613,312	\$ 613,312	\$ 613,312	\$ 613,312	\$ 613,312	\$ 212,109	\$ 212,109	\$ 212,109
Subordinate Indebtedness												
Water Existing Debt #1												
15	Total Subordinate Indebtedness	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Total Indebtedness	\$ 600,750	\$ 624,637	\$ 623,975	\$ 613,312	\$ 613,312	\$ 613,312	\$ 613,312	\$ 613,312	\$ 212,109	\$ 212,109	\$ 212,109
16	Net Results of Operations	\$ 7,010,690	\$ (510,491)	\$ 5,187,248	\$ 526,421	\$ 1,375,040	\$ 2,171,196	\$ 3,009,943	\$ 3,918,207	\$ 5,239,941	\$ 6,232,080	\$ 7,319,973
DEBT SERVICE COVERAGE												
Income Available for Debt Service												
17	From Operations	\$ 7,611,440	\$ 114,146	\$ 5,811,223	\$ 1,139,733	\$ 1,988,352	\$ 2,784,508	\$ 3,623,255	\$ 4,531,519	\$ 5,452,050	\$ 6,444,189	\$ 7,532,082
18	Plus: 0.00% of Operating Reserves Included Towards DSC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	Total Income Available for Debt Service	\$ 7,611,440	\$ 114,146	\$ 5,811,223	\$ 1,139,733	\$ 1,988,352	\$ 2,784,508	\$ 3,623,255	\$ 4,531,519	\$ 5,452,050	\$ 6,444,189	\$ 7,532,082
Debt Service Coverage - Total Indebtedness												
Excluding Operating Reserves												
20	Calculated	12.67	0.18	9.31	1.86	3.24	4.54	5.91	7.39	25.70	30.38	35.51
21	Required	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Including Operating Reserves												
22	Calculated	12.67	0.18	9.31	1.86	3.24	4.54	5.91	7.39	25.70	30.38	35.51
23	Required	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
24	Net Inflow/(Outflow)	\$ 7,010,690	\$ (510,491)	\$ 5,187,248	\$ 526,421	\$ 1,375,040	\$ 2,171,196	\$ 3,009,943	\$ 3,918,207	\$ 5,239,941	\$ 6,232,080	\$ 7,319,973
RESERVE FUND BALANCE ACTIVITY												
Projected Operating Results - Water												
25	Beginning Fund Balance	\$ 38,374,805	\$ 44,490,540	\$ 37,567,871	\$ 37,776,838	\$ 32,972,221	\$ 30,167,566	\$ 27,885,257	\$ 22,864,391	\$ 18,528,083	\$ 11,651,378	\$ 6,049,714
26	Deposit/(Withdrawal) from Operations	7,010,690	(510,491)	5,187,248	526,421	1,375,040	2,171,196	3,009,943	3,918,207	5,239,941	6,232,080	7,319,973
27	Capital Projects From Capital Improvement Plan	(894,955)	(6,412,178)	(4,978,282)	(5,331,038)	(4,179,696)	(4,453,505)	(8,030,809)	(8,254,515)	(12,116,646)	(11,833,745)	(10,182,531)
28	Ending Fund Balance	\$ 44,490,540	\$ 37,567,871	\$ 37,776,838	\$ 32,972,221	\$ 30,167,566	\$ 27,885,257	\$ 22,864,391	\$ 18,528,083	\$ 11,651,378	\$ 6,049,714	\$ 3,187,156
29	Targeted Fund Balance	\$ 2,617,951	\$ 2,601,669	\$ 2,655,307	\$ 2,562,400	\$ 2,495,232	\$ 2,458,842	\$ 2,513,750	\$ 2,539,021	\$ 2,732,789	\$ 2,932,826	\$ 3,143,638
30	Variance	\$ 41,872,590	\$ 34,966,202	\$ 35,121,530	\$ 30,409,821	\$ 27,672,333	\$ 25,426,415	\$ 20,350,641	\$ 15,989,062	\$ 8,918,590	\$ 3,116,888	\$ 43,518
31	Days Cash on Hand	1,534	841	1,064	899	798	716	570	448	273	138	70
32	Targeted Days Cash on Hand	90	90	90	90	90	90	90	90	90	90	90

LAKE HAVASU CITY, AZ
WATER SYSTEM
REVENUES

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	REVENUES										
41201	IDD Property Tax Current	\$ 5,684,000	\$ 5,684,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43204	Mohave County Flood Control	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43321	Direct Operating Non Categorical Federal Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
46001	Interest Earnings	\$ 50,712	\$ 50,712	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
46003	Investment Earnings	\$ 475,980	\$ 410,292	\$ 376,724	\$ 353,745	\$ 315,699	\$ 290,264	\$ 253,748	\$ 206,962	\$ 150,897	\$ 88,505
47101	Miscellaneous Revenues and Fees	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500
49101	Water Charges	\$ 9,107,000	\$ 11,513,971	\$ 13,044,870	\$ 14,323,674	\$ 15,577,497	\$ 16,874,087	\$ 18,264,460	\$ 19,690,949	\$ 21,212,322	\$ 22,850,202
49102	Non Taxable Water Sales	\$ 5,580	\$ 5,580	\$ 5,580	\$ 5,580	\$ 5,580	\$ 5,580	\$ 5,580	\$ 5,580	\$ 5,580	\$ 5,580
49103	Meter Fees	\$ 675,000	\$ 675,000	\$ 675,000	\$ 675,000	\$ 675,000	\$ 675,000	\$ 675,000	\$ 675,000	\$ 675,000	\$ 675,000
49104	Turn On Fees	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
49105	Backflow Prevention Prmts	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
49106	Horizon Six Fees	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500
49107	Cross Connection Monitorg	\$ 114,000	\$ 114,000	\$ 114,000	\$ 114,000	\$ 114,000	\$ 114,000	\$ 114,000	\$ 114,000	\$ 114,000	\$ 114,000
49108	Fireline Base Fee	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500
49109	Late Fee Penalties	\$ 99,200	\$ 99,200	\$ 99,200	\$ 99,200	\$ 99,200	\$ 99,200	\$ 99,200	\$ 99,200	\$ 99,200	\$ 99,200
49110	Misc Water	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000
	TOTAL REVENUES	\$ 16,425,472	\$ 18,766,755	\$ 14,529,373	\$ 15,785,199	\$ 17,000,976	\$ 18,272,131	\$ 19,625,988	\$ 21,005,691	\$ 22,470,999	\$ 24,046,487

LAKE HAVASU CITY, AZ
WATER SYSTEM
EXPENSES

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
IRRIGATION & DRAIN DISTRICT											
51101	Regular Salary and Wages	\$ 1,808,329	\$ 1,871,621	\$ 1,927,770	\$ 1,985,603	\$ 2,045,171	\$ 2,106,526	\$ 2,169,722	\$ 2,234,814	\$ 2,301,858	\$ 2,370,914
	Additional Salaries & Benefits		\$123,812	\$212,544	\$218,920	\$225,488	\$232,252	\$239,220	\$246,396	\$253,788	\$261,402
51102	Regular Overtime	\$ 91,000	\$ 94,185	\$ 97,011	\$ 99,921	\$ 102,919	\$ 106,007	\$ 109,187	\$ 112,463	\$ 115,837	\$ 119,312
51105	Stand By Pay	\$ 59,000	\$ 61,065	\$ 62,897	\$ 64,784	\$ 66,728	\$ 68,730	\$ 70,792	\$ 72,916	\$ 75,103	\$ 77,356
51115	Unclassified Wage	\$ 179,409	\$ 185,688	\$ 191,259	\$ 196,997	\$ 202,907	\$ 208,994	\$ 215,264	\$ 221,722	\$ 228,374	\$ 235,225
51116	Recognition Pay	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
51199	Labor Attrition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51201	Medical and Dental Insurance	\$ 487,213	\$ 504,265	\$ 521,914	\$ 540,181	\$ 559,087	\$ 578,655	\$ 598,908	\$ 619,870	\$ 641,565	\$ 664,020
51203	Workers Compensation	\$ 84,787	\$ 87,755	\$ 90,826	\$ 94,005	\$ 97,295	\$ 100,700	\$ 104,225	\$ 107,873	\$ 111,649	\$ 115,557
51204	Life Insurance	\$ 4,090	\$ 4,233	\$ 4,381	\$ 4,534	\$ 4,693	\$ 4,857	\$ 5,027	\$ 5,203	\$ 5,385	\$ 5,573
51205	Disability Insurance	\$ 9,328	\$ 9,654	\$ 9,992	\$ 10,342	\$ 10,704	\$ 11,079	\$ 11,467	\$ 11,868	\$ 12,283	\$ 12,713
51206	Retiree Medical Insurance	\$ 71,288	\$ 73,783	\$ 76,365	\$ 79,038	\$ 81,804	\$ 84,667	\$ 87,630	\$ 90,697	\$ 93,871	\$ 97,156
51207	Social Security	\$ 135,695	\$ 140,444	\$ 144,657	\$ 148,997	\$ 153,467	\$ 158,071	\$ 162,813	\$ 167,697	\$ 172,728	\$ 177,910
51208	Medicare	\$ 31,186	\$ 32,278	\$ 33,246	\$ 34,243	\$ 35,270	\$ 36,328	\$ 37,418	\$ 38,541	\$ 39,697	\$ 40,888
51209	Arizona State Retirement	\$ 275,339	\$ 284,976	\$ 293,525	\$ 302,331	\$ 311,401	\$ 320,743	\$ 330,365	\$ 340,276	\$ 350,484	\$ 360,999
51211	AZ State Retirement LTD	\$ 5,041	\$ 5,217	\$ 5,374	\$ 5,535	\$ 5,701	\$ 5,872	\$ 6,048	\$ 6,229	\$ 6,416	\$ 6,608
51213	Retirement Health Savings Plan	\$ 12,000	\$ 12,420	\$ 12,793	\$ 13,177	\$ 13,572	\$ 13,979	\$ 14,398	\$ 14,830	\$ 15,275	\$ 15,733
51215	Compensated Absences	\$ 31,070	\$ 32,157	\$ 33,122	\$ 34,116	\$ 35,139	\$ 36,193	\$ 37,279	\$ 38,397	\$ 39,549	\$ 40,735
51216	OPEB	\$ 41,426	\$ 42,876	\$ 44,162	\$ 45,487	\$ 46,852	\$ 48,258	\$ 49,706	\$ 51,197	\$ 52,733	\$ 54,315
52101	Water and Sewer	\$ 1,250	\$ 1,438	\$ 1,654	\$ 1,786	\$ 1,929	\$ 2,074	\$ 2,230	\$ 2,386	\$ 2,553	\$ 2,732
52103	Telephone	\$ 13,200	\$ 13,596	\$ 14,004	\$ 14,424	\$ 14,857	\$ 15,303	\$ 15,762	\$ 16,235	\$ 16,722	\$ 17,224
52104	Energy Fuels	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883	\$ 17,389	\$ 17,911	\$ 18,448	\$ 19,001	\$ 19,571
52105	Electricity	\$ 1,800,000	\$ 1,854,000	\$ 1,909,620	\$ 1,966,909	\$ 2,025,916	\$ 2,086,693	\$ 2,149,294	\$ 2,213,773	\$ 2,280,186	\$ 2,348,592
52207	Professional Other	\$ 30,000	\$ 30,900	\$ 31,827	\$ 32,782	\$ 33,765	\$ 34,778	\$ 35,821	\$ 36,896	\$ 38,003	\$ 39,143
52208	Mail Outsourcing	\$ 67,400	\$ 69,422	\$ 71,505	\$ 73,650	\$ 75,860	\$ 78,136	\$ 80,480	\$ 82,894	\$ 85,381	\$ 87,942
52210	Operating - Planning and Study Services	\$ 75,000	\$ 77,250	\$ 79,568	\$ 81,955	\$ 84,414	\$ 86,946	\$ 89,554	\$ 92,241	\$ 95,008	\$ 97,858
52211	Medical	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,160	\$ 1,195	\$ 1,231	\$ 1,268	\$ 1,306
52214	Laundry and Dry Cleaning	\$ 10,000	\$ 10,300	\$ 10,609	\$ 10,927	\$ 11,255	\$ 11,593	\$ 11,941	\$ 12,299	\$ 12,668	\$ 13,048
52215	Building and Ground Maintenance	\$ 6,000	\$ 6,180	\$ 6,365	\$ 6,556	\$ 6,753	\$ 6,956	\$ 7,165	\$ 7,380	\$ 7,601	\$ 7,829
52216	Machinery and Equipment	\$ 148,500	\$ 152,955	\$ 157,544	\$ 162,270	\$ 167,138	\$ 172,152	\$ 177,317	\$ 182,637	\$ 188,116	\$ 193,759
52218	Radio Pager Internet or ISP	\$ 10,000	\$ 10,300	\$ 10,609	\$ 10,927	\$ 11,255	\$ 11,593	\$ 11,941	\$ 12,299	\$ 12,668	\$ 13,048
52219	Vehicles	\$ 70,000	\$ 72,100	\$ 74,263	\$ 76,491	\$ 78,786	\$ 81,150	\$ 83,585	\$ 86,093	\$ 88,676	\$ 91,336
52220	Str Rpr Contractual Svcs	\$ 15,000	\$ 15,525	\$ 16,068	\$ 16,630	\$ 17,212	\$ 17,814	\$ 18,437	\$ 19,082	\$ 19,750	\$ 20,441
52221	Wtr Swr System Cont Svcs	\$ 6,000	\$ 6,180	\$ 6,365	\$ 6,556	\$ 6,753	\$ 6,956	\$ 7,165	\$ 7,380	\$ 7,601	\$ 7,829
52222	Water or Sewer Production Contract Services	\$ 176,500	\$ 181,795	\$ 187,249	\$ 192,866	\$ 198,652	\$ 204,612	\$ 210,750	\$ 217,073	\$ 223,585	\$ 230,293
52225	Repair and Maint Other	\$ 9,650	\$ 9,940	\$ 10,238	\$ 10,545	\$ 10,861	\$ 11,187	\$ 11,523	\$ 11,869	\$ 12,225	\$ 12,592
52227	Pavement Repairs	\$ 340,000	\$ 351,900	\$ 364,217	\$ 376,965	\$ 390,159	\$ 403,815	\$ 417,949	\$ 432,577	\$ 447,717	\$ 463,387
52228	Land and Building Leases and Rentals	\$ 42,000	\$ 43,260	\$ 44,558	\$ 45,895	\$ 47,272	\$ 48,690	\$ 50,151	\$ 51,656	\$ 53,206	\$ 54,802
52229	Equipment Lease	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,186	\$ 2,252	\$ 2,320	\$ 2,390	\$ 2,462	\$ 2,536	\$ 2,612
52231	Unemployment Compensation Ins	\$ 1,050	\$ 1,082	\$ 1,114	\$ 1,147	\$ 1,181	\$ 1,216	\$ 1,252	\$ 1,290	\$ 1,329	\$ 1,369
52232	General Insur and Claims	\$ 243,750	\$ 251,063	\$ 258,595	\$ 266,353	\$ 274,344	\$ 282,574	\$ 291,051	\$ 299,783	\$ 308,776	\$ 318,039
52234	Meetings or Training and Travel	\$ 16,900	\$ 17,407	\$ 17,929	\$ 18,467	\$ 19,021	\$ 19,592	\$ 20,180	\$ 20,785	\$ 21,409	\$ 22,051
52235	Advertising Legal Notices	\$ 500	\$ 515	\$ 530	\$ 546	\$ 562	\$ 579	\$ 596	\$ 614	\$ 632	\$ 651
52236	Printing and Forms	\$ 2,200	\$ 2,266	\$ 2,334	\$ 2,404	\$ 2,476	\$ 2,550	\$ 2,627	\$ 2,706	\$ 2,787	\$ 2,871
52237	Testing Services	\$ 30,000	\$ 30,900	\$ 31,827	\$ 32,782	\$ 33,765	\$ 34,778	\$ 35,821	\$ 36,896	\$ 38,003	\$ 39,143

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
IRRIGATION & DRAIN DISTRICT											
52238	Postage & Mailing	\$ 7,200	\$ 7,416	\$ 7,638	\$ 7,867	\$ 8,103	\$ 8,346	\$ 8,596	\$ 8,854	\$ 9,120	\$ 9,394
52241	Subscriptions and Memberships	\$ 65,341	\$ 67,301	\$ 69,320	\$ 71,400	\$ 73,542	\$ 75,748	\$ 78,020	\$ 80,361	\$ 82,772	\$ 85,255
52243	Fees	\$ 104,000	\$ 107,120	\$ 110,334	\$ 113,644	\$ 117,053	\$ 120,565	\$ 124,182	\$ 127,907	\$ 131,744	\$ 135,696
52246	Water Resources	\$ 19,320	\$ 19,900	\$ 20,497	\$ 21,112	\$ 21,745	\$ 22,397	\$ 23,069	\$ 23,761	\$ 24,474	\$ 25,208
52249	Merchant Credit Card Fees	\$ 42,000	\$ 43,260	\$ 44,558	\$ 45,895	\$ 47,272	\$ 48,690	\$ 50,151	\$ 51,656	\$ 53,206	\$ 54,802
52402	Office and Computer Supplies	\$ 4,300	\$ 4,429	\$ 4,562	\$ 4,699	\$ 4,840	\$ 4,985	\$ 5,135	\$ 5,289	\$ 5,448	\$ 5,611
52403	Bldg Maint and Ground Splys	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628	\$ 5,797	\$ 5,971	\$ 6,150	\$ 6,335	\$ 6,525
52405	Small Tools	\$ 6,500	\$ 6,695	\$ 6,896	\$ 7,103	\$ 7,316	\$ 7,535	\$ 7,761	\$ 7,994	\$ 8,234	\$ 8,481
52406	Shop and Janitorial Splys	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,160	\$ 1,195	\$ 1,231	\$ 1,268	\$ 1,306
52407	Vehicle Supplies	\$ 100,500	\$ 103,515	\$ 106,620	\$ 109,819	\$ 113,114	\$ 116,507	\$ 120,002	\$ 123,602	\$ 127,310	\$ 131,129
52408	Furniture and Equipment	\$ 63,000	\$ 64,890	\$ 66,837	\$ 68,842	\$ 70,907	\$ 73,034	\$ 75,225	\$ 77,482	\$ 79,806	\$ 82,200
52410	Street Restoration Supplies	\$ 14,000	\$ 14,490	\$ 14,997	\$ 15,522	\$ 16,065	\$ 16,627	\$ 17,209	\$ 17,811	\$ 18,434	\$ 19,079
52411	Traffic Control Supplies	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628	\$ 5,797	\$ 5,971	\$ 6,150	\$ 6,335	\$ 6,525
52413	Water Sewer System Supplies	\$ 811,000	\$ 835,330	\$ 860,390	\$ 886,202	\$ 912,788	\$ 940,172	\$ 968,377	\$ 997,428	\$ 1,027,351	\$ 1,058,172
52414	Chemical Supplies	\$ 105,100	\$ 108,253	\$ 111,501	\$ 114,846	\$ 118,291	\$ 121,840	\$ 125,495	\$ 129,260	\$ 133,138	\$ 137,132
52417	Water Sewer Prodctn Splys	\$ 162,000	\$ 166,860	\$ 171,866	\$ 177,022	\$ 182,333	\$ 187,803	\$ 193,437	\$ 199,240	\$ 205,217	\$ 211,374
52418	Other OM Supplies	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,160	\$ 1,195	\$ 1,231	\$ 1,268	\$ 1,306
52423	Instrumentation and Controls	\$ 80,500	\$ 82,915	\$ 85,402	\$ 87,964	\$ 90,603	\$ 93,321	\$ 96,121	\$ 99,005	\$ 101,975	\$ 105,034
52448	First Aid Supplies	\$ 300	\$ 309	\$ 318	\$ 328	\$ 338	\$ 348	\$ 358	\$ 369	\$ 380	\$ 391
52457	Miscellaneous Supplies	\$ 4,000	\$ 4,120	\$ 4,244	\$ 4,371	\$ 4,502	\$ 4,637	\$ 4,776	\$ 4,919	\$ 5,067	\$ 5,219
52459	Clothing and Uniforms	\$ 11,750	\$ 12,103	\$ 12,466	\$ 12,840	\$ 13,225	\$ 13,622	\$ 14,031	\$ 14,452	\$ 14,886	\$ 15,333
52603	Bad Debt Expense	\$ 25,000	\$ 11,000	\$ 11,330	\$ 11,670	\$ 12,020	\$ 12,381	\$ 12,752	\$ 13,135	\$ 13,529	\$ 13,935
52704	Wtr Conctrct Bureau of Rcl	\$ 5,500	\$ 5,665	\$ 5,835	\$ 6,010	\$ 6,190	\$ 6,376	\$ 6,567	\$ 6,764	\$ 6,967	\$ 7,176
52802	Intercost Transfer Out	\$ 2,798,989	\$ 2,882,959	\$ 2,969,448	\$ 3,058,531	\$ 3,150,287	\$ 3,244,796	\$ 3,342,140	\$ 3,442,404	\$ 3,545,676	\$ 3,652,046
52803	Operating Transfer Out	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53101	Principal	\$ 471,547	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53201	Interest	\$ 138,061	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
61101	Building Structure Improvements	\$ 50,000	\$ 51,500	\$ 53,045	\$ 54,636	\$ 56,275	\$ 57,963	\$ 59,702	\$ 61,493	\$ 63,338	\$ 65,238
61102	Capital Outlay Machinery and Equipment	\$ 273,000	\$ 1,500,000	\$ 1,500,000	\$ 1,545,000	\$ 1,591,350	\$ 1,639,091	\$ 1,688,264	\$ 1,738,912	\$ 1,791,079	\$ 1,844,811
	Capital Outlay - Equipment Replacement	\$ 2,454,275	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capital Outlay - Vehicles	\$ 198,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
61106	Motor Vehicles	\$ 30,000	\$ 30,900	\$ 31,827	\$ 32,782	\$ 33,765	\$ 34,778	\$ 35,821	\$ 36,896	\$ 38,003	\$ 39,143
64101	Contingency	\$ 500,000	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883	\$ 17,389	\$ 17,911	\$ 18,448	\$ 19,001
64200	Unavailable Budget Appropriation	\$ 793,042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Irrigation & Drain District	\$ 16,311,326	\$ 12,955,533	\$ 13,389,640	\$ 13,796,847	\$ 14,216,468	\$ 14,648,876	\$ 15,094,469	\$ 15,553,641	\$ 16,026,810	\$ 16,514,406

LAKE HAVASU CITY, AZ
WATER SYSTEM
CAPITAL IMPROVEMENT PLAN - CURRENT \$

Line	Description	Input Capital Costs									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
WATER SYSTEM											
1	CIP Engineering Design (From Budget)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	CIP Engineering Constr Mgmt (From Budget)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	CIP Construction (From Budget)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Projects											
4	Exploratory Well Drilling & Backup Water Supply	\$ 3,828,910	\$ 359,865	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	2022 Water Main Replacement	\$ -	\$ 128,500	\$ 1,406,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	2023 Water Main Replacement	\$ -	\$ -	\$ 128,500	\$ 1,406,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7	Booster Station 5 A Upgrades	\$ -	\$ 155,000	\$ 620,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Booster Station 3C Improvements	\$ -	\$ -	\$ 775,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Central Wellfield Cost Summary											
9	Second HCW Testing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Maintenance/Testing/Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ -
11	Well Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 269,700	\$ 269,700
12	Well Head	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 310,000	\$ 310,000
13	Collection Pipeline	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 505,300	\$ 505,300
Water Treatment Plant											
14	Bypass Piping/Metering	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Buildings/Enclosures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Chlorine System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 310,000	\$ -	\$ -
17	Filters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reservoirs											
18	Tank 4C (2x0.13 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	Booster Station 4 Improvements	\$ -	\$ -	\$ 620,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Tank 3D (0.5 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Tank 4D (0.5 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,550,000	\$ -	\$ -
22	Tank 5D (0.5 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,550,000	\$ -
23	Tank 2C (replace 1.0 MG with 1.5 MG New)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Tank 3C (replace 1.0 MG with 1.5 MG New)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	Tank 2A (replace 1.0 MG with 1.5 MG New)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tank Rehabilitation											
26	Tank C-3-20 Improvements	\$ -	\$ -	\$ -	\$ 660,000	\$ 3,990,000	\$ -	\$ -	\$ -	\$ -	\$ -
27	Tank N-2A-07 Improvements	\$ 111,634	\$ 3,450,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	Tank Rehabilitation As Needed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
Tank/Pump Stations											
29	Section 5A Upgrade (With Fire Flow)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
30	Station 3C (3x250 gpm)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	Station 4 (2x25 gpm, 2x1,000 gpm)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	Tank 4C Improvements	\$ -	\$ -	\$ 806,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
33	Water Treatment Plant Improvements	\$ -	\$ -	\$ -	\$ 1,782,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34	Station 4D (IBD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,162,500	\$ -	\$ -
35	Station 5D (IBD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,162,500	\$ -
36	Rehabilitation (As Needed)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
Tank/Pipeline Capacity/Reliability											
37	Tank C-2-18 Replacement & Upsize	\$ 60,000	\$ 690,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Tank N-4A-11 Improvements	\$ 1,261,634	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	Island Water Line: McCulloch Blvd North to Kickapoo	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,953,000
40	Tank C-3-19 Replacement & Upsize	\$ -	\$ 60,000	\$ 690,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	Tank S-1C-24 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42	Tank S-1C-24 Replacement	\$ 1,150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43	New Transmission Main in Palo Verde Blvd. South From PS 3A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,333,000	\$ -	\$ -
44	New Transmission Main in Palo Verde Blvd. South From PS 3A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 781,200	\$ -	\$ -
45	New Transmission Main From PS 4A to Tank 5A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,091,200	\$ -
46	New Transmission Main From PS 5A to Proposed Tank 6A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 130,200
47	New Transmission Main From PS 5A to Proposed Tank 6A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 173,600
Pipeline Replacements											
48	Replacement (AC and PVC Schedule 40 Pipe)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,535,000	\$ 1,535,000	\$ 1,535,000

LAKE HAVASU CITY, AZ
 WATER SYSTEM
 CAPITAL IMPROVEMENT PLAN - CURRENT \$

Line	Description	Input Capital Costs									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Pressure Reducing Stations										
49	PRV Upgrades	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	Pressure Zone Connections/Reliability	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51	SCADA Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52	Well Rehab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000	\$ 75,000	\$ 75,000
53	Remote Metering (AMR) (AMI)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
54	Additional Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,000,000	\$ 7,000,000	\$ -	\$ -	\$ -
55	Total Water System Improvements	\$ 6,412,178	\$ 4,843,365	\$ 5,046,000	\$ 3,849,000	\$ 3,990,000	\$ 7,000,000	\$ 7,000,000	\$ 10,996,700	\$ 10,498,700	\$ 8,951,800

LAKE HAVASU CITY, AZ
WATER SYSTEM
CAPITAL IMPROVEMENT PLAN - INFLATED \$

Line	Description	Projected for Fiscal Year Ending June 30										
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
WATER SYSTEM												
1	CIP Engineering Design (From Budget)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	CIP Engineering Constr Mgmt (From Budget)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	CIP Construction (From Budget)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Projects												
4	Exploratory Well Drilling & Backup Water Supply	\$ 3,828,910	\$ 369,889	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	2022 Water Main Replacement	\$ -	\$ 132,079	\$ 1,485,950	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	2023 Water Main Replacement	\$ -	\$ -	\$ 135,759	\$ 1,527,343	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7	Booster Station 5 A Upgrades	\$ -	\$ 159,318	\$ 655,022	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Booster Station 3C Improvements	\$ -	\$ -	\$ 818,778	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Central Wellfield Cost Summary												
9	Second HCW Testing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Maintenance/Testing/Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 303,016	\$ -	\$ -	\$ -
11	Well Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 336,000	\$ 345,359	\$ -
12	Well Head	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 386,207	\$ 396,965	\$ -
13	Collection Pipeline	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 629,517	\$ 647,053	\$ -
Water Treatment Plant												
14	Bypass Piping/Metering	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Buildings/Enclosures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Chlorine System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 375,740	\$ -	\$ -	\$ -
17	Filters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reservoirs												
18	Tank 4C (2x0.13 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	Booster Station 4 Improvements	\$ -	\$ -	\$ 655,022	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Tank 3D (0.5 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Tank 4D (0.5 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,878,700	\$ -	\$ -
22	Tank 5D (0.5 MG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,931,033	\$ -	\$ -
23	Tank 2C (replace 1.0 MG with 1.5 MG New)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Tank 3C (replace 1.0 MG with 1.5 MG New)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	Tank 2A (replace 1.0 MG with 1.5 MG New)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tank Rehabilitation												
26	Tank C-3-20 Improvements	\$ -	\$ -	\$ -	\$ 716,705	\$ 4,453,505	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27	Tank N-2A-07 Improvements	\$ 111,634	\$ 3,546,103	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	Tank Rehabilitation As Needed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,818,097	\$ 1,868,742	\$ 1,920,797	\$ -
Tank/Pump Stations												
29	Section 5A Upgrade (With Fire Flow)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
30	Station 3C (3x250 gpm)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	Station 4 (2x25 gpm, 2x1,000 gpm)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	Tank 4C Improvements	\$ -	\$ -	\$ 851,529	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
33	Water Treatment Plant Improvements	\$ -	\$ -	\$ -	\$ 1,935,648	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34	Station 4D (IBD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,409,025	\$ -	\$ -	\$ -
35	Station 5D (IBD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,448,275	\$ -	\$ -
36	Rehabilitation (As Needed)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,818,097	\$ 1,868,742	\$ 1,920,797	\$ -
Tank/Pipeline Capacity/Reliability												
37	Tank C-2-18 Replacement & Upsize	\$ 60,000	\$ 709,221	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Tank N-4A-11 Improvements	\$ 1,261,634	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	Island Water Line: McCulloch Blvd North to Kickapoo	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,500,878	\$ -
40	Tank C-3-19 Replacement & Upsize	\$ -	\$ 61,671	\$ 728,977	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	Tank S-1C-24 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42	Tank S-1C-24 Replacement	\$ 1,150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43	New Transmission Main in Palo Verde Blvd. South From PS 3A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,615,682	\$ -	\$ -	\$ -
44	New Transmission Main in Palo Verde Blvd. South From PS 3A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 946,865	\$ -	\$ -	\$ -
45	New Transmission Main From PS 4A to Tank 5A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,359,447	\$ -	\$ -
46	New Transmission Main From PS 5A to Proposed Tank 6A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 166,725	\$ -
47	New Transmission Main From PS 5A to Proposed Tank 6A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 222,300	\$ -
Pipeline Replacements												
48	Replacement (AC and PVC Schedule 40 Pipe)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,860,519	\$ 1,912,346	\$ 1,965,616	\$ -
Pressure Reducing Stations												
49	PRV Upgrades	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	Pressure Zone Connections/Reliability	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51	SCADA Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52	Well Rehab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90,905	\$ 93,437	\$ 96,040	\$ 98,715

LAKE HAVASU CITY, AZ
 WATER SYSTEM
 CAPITAL IMPROVEMENT PLAN - INFLATED \$

Line	Description	Projected for Fiscal Year Ending June 30										
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
53	Remote Metering (AMR) (AM)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54	Additional Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,030,809	\$ 8,254,515	\$ -	\$ -	\$ -	\$ -
55	Total Water System Improvements	\$ 6,412,178	\$ 4,978,282	\$ 5,331,038	\$ 4,179,696	\$ 4,453,505	\$ 8,030,809	\$ 8,254,515	\$ 12,116,646	\$ 11,833,745	\$ 10,182,531	\$ 98,715

LAKE HAVASU CITY, AZ
 WATER SYSTEM
 DEBT SERVICE

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
WATER DEBT SERVICE											
	<u>Water Debt Service</u>										
	Refunding Bonds Series 1993	\$ 11,325	\$ 10,663	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	WIFA 2007 Drinking Water	\$ 401,203	\$ 401,203	\$ 401,203	\$ 401,203	\$ 401,203	\$ 401,203	\$ 401,203	\$ -	\$ -	\$ -
	WIFA 2010 SR Water	\$ 212,109	\$ 212,109	\$ 212,109	\$ 212,109	\$ 212,109	\$ 212,109	\$ 212,109	\$ 212,109	\$ 212,109	\$ 212,109
	New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Water Debt Service	\$ 624,637	\$ 623,975	\$ 613,312	\$ 613,312	\$ 613,312	\$ 613,312	\$ 613,312	\$ 212,109	\$ 212,109	\$ 212,109

		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Res	Accounts	31,028	31,228	31,428	31,628	31,828	32,028	32,228	32,428	32,628	32,828	33,028
	New Accounts per Year ⁽¹⁾		200	200	200	200	200	200	200	200	200	200
Growth in Customers and Flow:			0.64%	0.64%	0.64%	0.63%	0.63%	0.62%	0.62%	0.62%	0.61%	0.61%
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
All Other	Accounts	4,362	4,416	4,470	4,524	4,578	4,632	4,686	4,740	4,794	4,848	4,902
	New Accounts per Year ⁽²⁾		54	54	54	54	54	54	54	54	54	54
Growth in Customers and Flow:			1.24%	1.22%	1.21%	1.19%	1.18%	1.17%	1.15%	1.14%	1.13%	1.11%
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Accounts	Accounts	35,390	35,644	35,898	36,152	36,406	36,660	36,914	37,168	37,422	37,676	37,930
	New Accounts per Year		254	254	254	254	254	254	254	254	254	254
Total Growth in Customers and Flow:			0.72%	0.71%	0.71%	0.70%	0.70%	0.69%	0.69%	0.68%	0.68%	0.67%

(1) Per City email Oct 28, 2020

(2) 5,013 lots at buildout, 3,883 lots in 2020, assumes equal annual development

APPENDIX B

Sewer Financial Plan

LAKE HAVASU CITY, AZ
SEWER SYSTEM
PROJECTED OPERATING RESULTS - SEWER

Line	Description	Unaudited 2020	Budget 2021	Fiscal Year Ending June 30,								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
REVENUES												
Operating Revenues												
1	Sewer Sales (Sewer Charges and Effluent Sales)	\$ 22,978,761	\$ 21,022,500	\$ 23,946,410	\$ 24,909,936	\$ 25,864,385	\$ 26,854,037	\$ 27,613,289	\$ 28,300,829	\$ 29,097,528	\$ 29,914,933	\$ 30,753,552
Other Operating Revenues												
2	Treatment Capacity Fee	698,307	690,000	614,000	614,000	614,000	508,000	508,000	508,000	508,000	508,000	508,000
3	Miscellaneous Revenues	432,195	65,500	65,500	65,500	65,500	65,500	65,500	65,500	65,500	65,500	65,500
Other Non-Operating Revenues												
4	Interest	627,270	275,024	138,685	74,030	56,714	46,454	42,602	46,874	54,231	56,780	54,906
5	Total Revenues	\$ 24,736,534	\$ 22,053,024	\$ 24,764,595	\$ 25,663,466	\$ 26,600,599	\$ 27,473,991	\$ 28,229,391	\$ 28,921,203	\$ 29,725,259	\$ 30,545,212	\$ 31,381,958
Current Expenses												
6	Wastewater	\$ 6,258,566	\$ 8,844,080	\$ 7,515,595	\$ 7,871,528	\$ 8,110,719	\$ 8,357,192	\$ 8,609,702	\$ 8,869,879	\$ 9,137,950	\$ 9,414,155	\$ 9,698,741
7	Capital Outlay	685,938	2,718,000	2,030,900	2,031,827	2,032,782	2,033,765	2,034,778	2,035,821	2,036,896	2,038,003	2,039,143
8	Transfers Out	1,708,536	1,972,060	2,031,222	2,092,159	2,154,924	2,219,572	2,286,159	2,354,744	2,425,386	2,498,148	2,573,092
9	Total Current Expenses	\$ 8,653,039	\$ 13,534,140	\$ 11,577,717	\$ 11,995,514	\$ 12,298,425	\$ 12,610,529	\$ 12,930,639	\$ 13,260,444	\$ 13,600,232	\$ 13,950,306	\$ 14,310,976
10	Income Available for Debt Service	\$ 16,083,494	\$ 8,518,884	\$ 13,186,878	\$ 13,667,952	\$ 14,302,174	\$ 14,863,463	\$ 15,298,752	\$ 15,660,759	\$ 16,125,027	\$ 16,594,906	\$ 17,070,982
DEBT SERVICE												
Parity Indebtedness												
11	2015 WfA	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999
12	GO Wastewater Revenue Refunding Bonds, Series 2015 (A)	5,181,325	5,182,325	5,182,575	5,181,825	5,184,825	5,181,575	5,181,650	5,183,450	5,185,450	5,180,450	5,182,700
13	Senior Lien Wastewater Revenue Bonds, Series 2015 (B)	4,656,850	4,656,850	4,656,850	4,656,850	4,656,850	4,656,850	4,656,850	4,656,850	4,656,850	4,656,850	4,656,850
14	Total Parity Indebtedness	\$ 13,719,174	\$ 13,720,174	\$ 13,720,424	\$ 13,719,674	\$ 13,722,674	\$ 13,719,424	\$ 13,719,499	\$ 13,721,299	\$ 13,723,299	\$ 13,718,299	\$ 13,720,549
New Debt												
15	Sewer System Improvements - Rural Dev. Loan	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Sewer System Improvements - SRF Loan	-	-	-	-	-	-	-	-	-	-	-
17	Sewer System Improvements - Installation Debt	-	-	-	-	-	-	-	-	-	-	-
18	Sewer System Improvements - Revenue Bond	-	-	-	-	-	-	-	-	-	-	-
19	Total New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Total Indebtedness	\$ 13,719,174	\$ 13,720,174	\$ 13,720,424	\$ 13,719,674	\$ 13,722,674	\$ 13,719,424	\$ 13,719,499	\$ 13,721,299	\$ 13,723,299	\$ 13,718,299	\$ 13,720,549
21	Net Results of Operations	\$ 2,364,320	\$ (5,201,290)	\$ (533,546)	\$ (51,722)	\$ 579,500	\$ 1,144,038	\$ 1,579,252	\$ 1,939,460	\$ 2,401,727	\$ 2,876,607	\$ 3,350,432
DEBT SERVICE COVERAGE												
Income Available for Debt Service												
22	From Operations	\$ 16,083,494	\$ 8,518,884	\$ 13,186,878	\$ 13,667,952	\$ 14,302,174	\$ 14,863,463	\$ 15,298,752	\$ 15,660,759	\$ 16,125,027	\$ 16,594,906	\$ 17,070,982
23	Plus: 0.00% of Operating Reserves Included Towards DSC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Total Income Available for Debt Service	\$ 16,083,494	\$ 8,518,884	\$ 13,186,878	\$ 13,667,952	\$ 14,302,174	\$ 14,863,463	\$ 15,298,752	\$ 15,660,759	\$ 16,125,027	\$ 16,594,906	\$ 17,070,982
Debt Service Coverage - Parity Indebtedness												
Excluding Operating Reserves												
	Calculated	1.17	0.62	0.96	1.00	1.04	1.08	1.12	1.14	1.18	1.21	1.24
	Targeted	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
	Required	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Including Operating Reserves												
	Rate Stabilization Reserve	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000
	Calculated	1.50	0.95	1.29	1.32	1.37	1.41	1.44	1.47	1.50	1.54	1.57
	Targeted	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
	Required	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Debt Service Coverage - Total Indebtedness												
Excluding Operating Reserves												
25	Calculated	1.17	0.62	0.96	1.00	1.04	1.08	1.12	1.14	1.18	1.21	1.24
26	Targeted	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
27	Required	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Including Operating Reserves												
	Calculated	1.17	0.62	0.96	1.00	1.04	1.08	1.12	1.14	1.18	1.21	1.24
	Targeted	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
	Required	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
28	Net Inflow(Outflow)	\$ 2,364,320	\$ (5,201,290)	\$ (533,546)	\$ (51,722)	\$ 579,500	\$ 1,144,038	\$ 1,579,252	\$ 1,939,460	\$ 2,401,727	\$ 2,876,607	\$ 3,350,432
RESERVE FUND BALANCE ACTIVITY												
Projected Operating Results - Sewer												
29	Beginning Fund Balance	\$ 19,103,503	\$ 19,103,503	\$ 8,633,431	\$ 6,172,654	\$ 5,170,093	\$ 4,120,717	\$ 4,399,726	\$ 4,975,127	\$ 5,870,981	\$ 5,484,959	\$ 5,496,163
30	Deposit/(Withdrawal) from Operations	2,364,320	(5,201,290)	(533,546)	(51,722)	579,500	1,144,038	1,579,252	1,939,460	2,401,727	2,876,607	3,350,432
31	Capital Projects from Capital Improvement Plan	(918,515)	(5,268,782)	(1,927,230)	(950,839)	(1,628,876)	(865,029)	(1,003,851)	(1,043,607)	(2,787,749)	(2,865,404)	(2,945,223)
32	Ending Fund Balance	\$ 20,549,308	\$ 8,633,431	\$ 6,172,654	\$ 5,170,093	\$ 4,120,717	\$ 4,399,726	\$ 4,975,127	\$ 5,870,981	\$ 5,484,959	\$ 5,496,163	\$ 5,901,372
33	Targeted Fund Balance	\$ 3,452,563	\$ 3,439,016	\$ 3,475,198	\$ 3,576,058	\$ 3,682,720	\$ 3,763,888	\$ 3,948,196	\$ 4,071,882	\$ 4,192,692	\$ 4,309,956	\$ 4,426,088
34	Variance	\$ 17,096,744	\$ 5,194,415	\$ 2,697,456	\$ 1,594,035	\$ 437,997	\$ 635,838	\$ 1,026,931	\$ 1,799,099	\$ 1,292,267	\$ 1,186,207	\$ 1,475,285
35	Days Cash on Hand	867	233	195	157	122	127	140	162	147	144	151
36	Targeted Days Cash on Hand	90	90	90	90	90	90	90	90	90	90	90

LAKE HAVASU CITY, AZ
SEWER SYSTEM
REVENUES

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	REVENUES										
46003	Investment Earnings	\$ 275,024	\$138,685	\$74,030	\$56,714	\$46,454	\$42,602	\$46,874	\$54,231	\$56,780	\$54,906
47101	Miscellaneous Revenues and Fees	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
49201	Sewer Charges	\$ 20,640,000	\$ 23,552,435	\$ 24,515,961	\$ 25,470,410	\$ 26,460,062	\$ 27,219,314	\$ 27,906,854	\$ 28,703,553	\$ 29,520,958	\$ 30,359,577
49202	Effluent Sales	\$ 382,500	\$ 393,975	\$ 393,975	\$ 393,975	\$ 393,975	\$ 393,975	\$ 393,975	\$ 393,975	\$ 393,975	\$ 393,975
49203	Treatment Capacity Fee	\$ 690,000	\$ 614,000	\$ 614,000	\$ 614,000	\$ 508,000	\$ 508,000	\$ 508,000	\$ 508,000	\$ 508,000	\$ 508,000
49204	Treatment Cap Loan Int	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
49206	Misc Wastewater	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
	TOTAL REVENUES	\$ 22,053,024	\$ 24,764,595	\$ 25,663,466	\$ 26,600,599	\$ 27,473,991	\$ 28,229,391	\$ 28,921,203	\$ 29,725,259	\$ 30,545,212	\$ 31,381,958

LAKE HAVASU CITY, AZ
SEWER SYSTEM
EXPENSES

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SEWER											
51101	Regular Salary and Wages	\$ 1,745,565	\$ 1,806,660	\$ 1,860,860	\$ 1,916,686	\$ 1,974,187	\$ 2,033,413	\$ 2,094,415	\$ 2,157,247	\$ 2,221,964	\$ 2,288,623
	Additional Salaries & Benefits	\$ -	\$ -	\$ 127,526	\$ 131,352	\$ 135,293	\$ 139,351	\$ 143,532	\$ 147,838	\$ 152,273	\$ 156,841
51102	Regular Overtime	\$ 57,000	\$ 58,995	\$ 60,765	\$ 62,588	\$ 64,466	\$ 66,400	\$ 68,392	\$ 70,444	\$ 72,557	\$ 74,734
51105	Stand By Pay	\$ 24,000	\$ 24,840	\$ 25,585	\$ 26,353	\$ 27,144	\$ 27,958	\$ 28,797	\$ 29,661	\$ 30,551	\$ 31,468
51116	Recognition Pay	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900
51199	Labor Attrition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51201	Medical and Dental Insurance	\$ 441,599	\$ 457,055	\$ 473,052	\$ 489,609	\$ 506,745	\$ 524,481	\$ 542,838	\$ 561,837	\$ 581,501	\$ 601,854
51203	Workers Compensation	\$ 60,277	\$ 62,387	\$ 64,571	\$ 66,831	\$ 69,170	\$ 71,591	\$ 74,097	\$ 76,690	\$ 79,374	\$ 82,152
51204	Life Insurance	\$ 3,292	\$ 3,407	\$ 3,526	\$ 3,649	\$ 3,777	\$ 3,909	\$ 4,046	\$ 4,188	\$ 4,335	\$ 4,487
51205	Disability Insurance	\$ 9,194	\$ 9,516	\$ 9,849	\$ 10,194	\$ 10,551	\$ 10,920	\$ 11,302	\$ 11,698	\$ 12,107	\$ 12,531
51206	Retiree Medical Insurance	\$ 37,538	\$ 38,852	\$ 40,212	\$ 41,619	\$ 43,076	\$ 44,584	\$ 46,144	\$ 47,759	\$ 49,431	\$ 51,161
51207	Social Security	\$ 112,871	\$ 116,821	\$ 120,326	\$ 123,936	\$ 127,654	\$ 131,484	\$ 135,429	\$ 139,492	\$ 143,677	\$ 147,987
51208	Medicare	\$ 26,739	\$ 27,675	\$ 28,505	\$ 29,360	\$ 30,241	\$ 31,148	\$ 32,082	\$ 33,044	\$ 34,035	\$ 35,056
51209	Arizona State Retirement	\$ 231,450	\$ 239,551	\$ 246,738	\$ 254,140	\$ 261,764	\$ 269,617	\$ 277,706	\$ 286,037	\$ 294,618	\$ 303,457
51211	AZ State Retirement LTD	\$ 3,907	\$ 4,044	\$ 4,165	\$ 4,290	\$ 4,419	\$ 4,552	\$ 4,689	\$ 4,830	\$ 4,975	\$ 5,124
51213	Retirement Health Savings Plan	\$ 10,000	\$ 10,350	\$ 10,661	\$ 10,981	\$ 11,310	\$ 11,649	\$ 11,998	\$ 12,358	\$ 12,729	\$ 13,111
51215	Compensated Absences	\$ 25,137	\$ 26,017	\$ 26,798	\$ 27,602	\$ 28,430	\$ 29,283	\$ 30,161	\$ 31,066	\$ 31,998	\$ 32,958
51216	OPEB	\$ 60,300	\$ 62,411	\$ 64,283	\$ 66,211	\$ 68,197	\$ 70,243	\$ 72,350	\$ 74,521	\$ 76,757	\$ 79,060
52101	Water and Sewer	\$ 130,000	\$ 133,900	\$ 137,917	\$ 142,055	\$ 146,317	\$ 149,243	\$ 152,228	\$ 155,273	\$ 158,378	\$ 161,546
52103	Telephone	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883	\$ 17,389	\$ 17,911	\$ 18,448	\$ 19,001	\$ 19,571
52104	Energy Fuels	\$ 12,000	\$ 12,360	\$ 12,731	\$ 13,113	\$ 13,506	\$ 13,911	\$ 14,328	\$ 14,758	\$ 15,201	\$ 15,657
52105	Electricity	\$ 1,250,000	\$ 1,287,500	\$ 1,326,125	\$ 1,365,909	\$ 1,406,886	\$ 1,449,093	\$ 1,492,566	\$ 1,537,343	\$ 1,583,463	\$ 1,630,967
52106	Hydrant Meters	\$ 5,400	\$ 5,562	\$ 5,729	\$ 5,901	\$ 6,078	\$ 6,260	\$ 6,448	\$ 6,641	\$ 6,840	\$ 7,045
52207	Professional Other	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,186	\$ 2,252	\$ 2,320	\$ 2,390	\$ 2,462	\$ 2,536	\$ 2,612
52208	Mail Outsourcing	\$ 67,800	\$ 69,834	\$ 71,929	\$ 74,087	\$ 76,310	\$ 78,599	\$ 80,957	\$ 83,386	\$ 85,888	\$ 88,465
52210	Operating - Planning and Study Services	\$ 50,000	\$ 51,500	\$ 53,045	\$ 54,636	\$ 56,275	\$ 57,963	\$ 59,702	\$ 61,493	\$ 63,338	\$ 65,238
52211	Medical	\$ 500	\$ 515	\$ 530	\$ 546	\$ 562	\$ 579	\$ 596	\$ 614	\$ 632	\$ 651
52213	Janitorial Services	\$ 8,500	\$ 8,755	\$ 9,018	\$ 9,289	\$ 9,568	\$ 9,855	\$ 10,151	\$ 10,456	\$ 10,770	\$ 11,093
52214	Laundry and Dry Cleaning	\$ 14,000	\$ 14,420	\$ 14,853	\$ 15,299	\$ 15,758	\$ 16,231	\$ 16,718	\$ 17,220	\$ 17,737	\$ 18,269
52215	Building and Ground Maintenance	\$ 32,200	\$ 33,166	\$ 34,161	\$ 35,186	\$ 36,242	\$ 37,329	\$ 38,449	\$ 39,602	\$ 40,790	\$ 42,014
52216	Machinery and Equipment	\$ 292,000	\$ 300,760	\$ 309,783	\$ 319,076	\$ 328,648	\$ 338,507	\$ 348,662	\$ 359,122	\$ 369,896	\$ 380,993
52218	Radio Pager Internet or ISP	\$ 3,840	\$ 3,955	\$ 4,074	\$ 4,196	\$ 4,322	\$ 4,452	\$ 4,586	\$ 4,724	\$ 4,866	\$ 5,012
52219	Vehicles	\$ 47,200	\$ 48,616	\$ 50,074	\$ 51,576	\$ 53,123	\$ 54,717	\$ 56,359	\$ 58,050	\$ 59,792	\$ 61,586
52220	Str Rpr Contractual Svcs	\$ 1,000	\$ 1,035	\$ 1,071	\$ 1,108	\$ 1,147	\$ 1,187	\$ 1,229	\$ 1,272	\$ 1,317	\$ 1,363
52221	Wtr Swr System Cont Svcs	\$ 124,000	\$ 127,720	\$ 131,552	\$ 135,499	\$ 139,564	\$ 143,751	\$ 148,064	\$ 152,506	\$ 157,081	\$ 161,793
52222	Water or Sewer Production Contract Services	\$ 76,000	\$ 78,280	\$ 80,628	\$ 83,047	\$ 85,538	\$ 88,104	\$ 90,747	\$ 93,469	\$ 96,273	\$ 99,161
52225	Repair and Maint Other	\$ 91,400	\$ 94,142	\$ 96,966	\$ 99,875	\$ 102,871	\$ 105,957	\$ 109,136	\$ 112,410	\$ 115,782	\$ 119,255
52227	Pavement Repairs	\$ 15,000	\$ 15,525	\$ 16,068	\$ 16,630	\$ 17,212	\$ 17,814	\$ 18,437	\$ 19,082	\$ 19,750	\$ 20,441
52229	Equipment Lease	\$ 8,000	\$ 8,240	\$ 8,487	\$ 8,742	\$ 9,004	\$ 9,274	\$ 9,552	\$ 9,839	\$ 10,134	\$ 10,438
52231	Unemployment Compensation Ins	\$ 900	\$ 927	\$ 955	\$ 984	\$ 1,014	\$ 1,044	\$ 1,075	\$ 1,107	\$ 1,140	\$ 1,174
52232	General Insur and Claims	\$ 229,700	\$ 236,591	\$ 243,689	\$ 251,000	\$ 258,530	\$ 266,286	\$ 274,275	\$ 282,503	\$ 290,978	\$ 299,707

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
52234	Meetings or Training and Travel	\$ 20,300	\$ 20,909	\$ 21,536	\$ 22,182	\$ 22,847	\$ 23,532	\$ 24,238	\$ 24,965	\$ 25,714	\$ 26,485
52236	Printing and Forms	\$ 600	\$ 618	\$ 637	\$ 656	\$ 676	\$ 696	\$ 717	\$ 739	\$ 761	\$ 784
52237	Testing Services	\$ 17,500	\$ 18,025	\$ 18,566	\$ 19,123	\$ 19,697	\$ 20,288	\$ 20,897	\$ 21,524	\$ 22,170	\$ 22,835
52238	Postage & Mailing	\$ 2,350	\$ 2,421	\$ 2,494	\$ 2,569	\$ 2,646	\$ 2,725	\$ 2,807	\$ 2,891	\$ 2,978	\$ 3,067
52241	Subscriptions and Memberships	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,186	\$ 2,252	\$ 2,320	\$ 2,390	\$ 2,462	\$ 2,536	\$ 2,612
52243	Fees	\$ 49,500	\$ 50,985	\$ 52,515	\$ 54,090	\$ 55,713	\$ 57,384	\$ 59,106	\$ 60,879	\$ 62,705	\$ 64,586
52248	Banking Fees	\$ 2,730	\$ 2,812	\$ 2,896	\$ 2,983	\$ 3,072	\$ 3,164	\$ 3,259	\$ 3,357	\$ 3,458	\$ 3,562
52249	Merchant Credit Card Fees	\$ 78,750	\$ 81,113	\$ 83,546	\$ 86,052	\$ 88,634	\$ 91,293	\$ 94,032	\$ 96,853	\$ 99,759	\$ 102,752
52402	Office and Computer Supplies	\$ 3,600	\$ 3,708	\$ 3,819	\$ 3,934	\$ 4,052	\$ 4,174	\$ 4,299	\$ 4,428	\$ 4,561	\$ 4,698
52403	Bldg Maint and Ground Splys	\$ 12,650	\$ 13,030	\$ 13,421	\$ 13,824	\$ 14,239	\$ 14,666	\$ 15,106	\$ 15,559	\$ 16,026	\$ 16,507
52404	Building Improvements	\$ 2,500	\$ 2,575	\$ 2,652	\$ 2,732	\$ 2,814	\$ 2,898	\$ 2,985	\$ 3,075	\$ 3,167	\$ 3,262
52405	Small Tools	\$ 10,500	\$ 10,815	\$ 11,139	\$ 11,473	\$ 11,817	\$ 12,172	\$ 12,537	\$ 12,913	\$ 13,300	\$ 13,699
52406	Shop and Janitorial Splys	\$ 8,600	\$ 8,858	\$ 9,124	\$ 9,398	\$ 9,680	\$ 9,970	\$ 10,269	\$ 10,577	\$ 10,894	\$ 11,221
52407	Vehicle Supplies	\$ 82,000	\$ 84,460	\$ 86,994	\$ 89,604	\$ 92,292	\$ 95,061	\$ 97,913	\$ 100,850	\$ 103,876	\$ 106,992
52408	Furniture and Equipment	\$ 51,500	\$ 53,045	\$ 54,636	\$ 56,275	\$ 57,963	\$ 59,702	\$ 61,493	\$ 63,338	\$ 65,238	\$ 67,195
52410	Street Restoration Supplies	\$ 5,000	\$ 5,175	\$ 5,356	\$ 5,543	\$ 5,737	\$ 5,938	\$ 6,146	\$ 6,361	\$ 6,584	\$ 6,814
52411	Traffic Control Supplies	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,186	\$ 2,252	\$ 2,320	\$ 2,390	\$ 2,462	\$ 2,536	\$ 2,612
52413	Water Sewer System Supplies	\$ 74,800	\$ 77,044	\$ 79,355	\$ 81,736	\$ 84,188	\$ 86,714	\$ 89,315	\$ 91,994	\$ 94,754	\$ 97,597
52414	Chemical Supplies	\$ 713,500	\$ 734,905	\$ 756,952	\$ 779,661	\$ 803,051	\$ 827,143	\$ 851,957	\$ 877,516	\$ 903,841	\$ 930,956
52416	Wastewater Lab Supplies	\$ 33,000	\$ 33,990	\$ 35,010	\$ 36,060	\$ 37,142	\$ 38,256	\$ 39,404	\$ 40,586	\$ 41,804	\$ 43,058
52418	Other OM Supplies	\$ 422,150	\$ 434,815	\$ 447,859	\$ 461,295	\$ 475,134	\$ 489,388	\$ 504,070	\$ 519,192	\$ 534,768	\$ 550,811
52423	Instrumentation and Controls	\$ 238,000	\$ 245,140	\$ 252,494	\$ 260,069	\$ 267,871	\$ 275,907	\$ 284,184	\$ 292,710	\$ 301,491	\$ 310,536
52448	First Aid Supplies	\$ 350	\$ 361	\$ 372	\$ 383	\$ 394	\$ 406	\$ 418	\$ 431	\$ 444	\$ 457
52457	Miscellaneous Supplies	\$ 8,150	\$ 8,395	\$ 8,647	\$ 8,906	\$ 9,173	\$ 9,448	\$ 9,731	\$ 10,023	\$ 10,324	\$ 10,634
52459	Clothing and Uniforms	\$ 7,000	\$ 7,210	\$ 7,426	\$ 7,649	\$ 7,878	\$ 8,114	\$ 8,357	\$ 8,608	\$ 8,866	\$ 9,132
52603	Bad Debt Expense	\$ 40,000	\$ 28,000	\$ 28,840	\$ 29,705	\$ 30,596	\$ 31,514	\$ 32,459	\$ 33,433	\$ 34,436	\$ 35,469
52802	Intercost Transfer Out	\$ 1,972,060	\$ 2,031,222	\$ 2,092,159	\$ 2,154,924	\$ 2,219,572	\$ 2,286,159	\$ 2,354,744	\$ 2,425,386	\$ 2,498,148	\$ 2,573,092
53501	Bond Insurance Expense	\$ 51,235	\$ 52,772	\$ 54,355	\$ 55,986	\$ 57,666	\$ 59,396	\$ 61,178	\$ 63,013	\$ 64,903	\$ 66,850
61102	Capital Outlay Machinery and Equipment	\$ 1,077,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000
	Capital Outlay - Equipment Replacement	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capital Outlay - Vehicles	\$ 111,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
61106	Motor Vehicles	\$ 30,000	\$ 30,900	\$ 31,827	\$ 32,782	\$ 33,765	\$ 34,778	\$ 35,821	\$ 36,896	\$ 38,003	\$ 39,143
64101	Contingency	\$ 1,000,000	\$ 30,000	\$ 30,900	\$ 31,827	\$ 32,782	\$ 33,765	\$ 34,778	\$ 35,821	\$ 36,896	\$ 38,003
64200	Unavailable Budget Appropriation	\$ 577,606	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Sewer	\$ 13,534,140	\$ 11,577,717	\$ 11,995,514	\$ 12,298,425	\$ 12,610,529	\$ 12,930,639	\$ 13,260,444	\$ 13,600,232	\$ 13,950,306	\$ 14,310,976

LAKE HAVASU CITY, AZ
SEWER SYSTEM
CAPITAL IMPROVEMENT PLAN - CURRENT \$

Line	Description	Input Capital Costs									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	SEWER SYSTEM										
31	SS3030 - 8" Ductile Iron Force Main Replacement	\$ -	\$ 1,725,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	SS6 - Chip Drive Lift Station Upgrades	\$ -	\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -
33	SS3 - ITP Effluent Pond Liners	\$ -	\$ -	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34	SS3050 - Influent Pump Station Surge Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	SS2720 - Island Treatment Plant (ITP) Flow Equalization Basin (FEB)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	SS3060 - MTP Odor Control Replacement	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37	SS4 - Mulberry Treatment Plant (MTP) Aeration Basin MCC	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	SS3010 - Mulberry WWTP Tertiary Capacity Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	SS2 - South Intake Influent Screen	\$ -	\$ -	\$ -	\$ -	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ -
40	SS1 - Vadose Well No. 4 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	SS5 - Wastewater Master Plan	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42	SS2970 - Water Conservation & Reuse Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43	CIP Engineering Design (From Budget)	\$ 435,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
44	CIP Construction (From Budget)	\$ 4,333,782	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
45	CIP Professional Services (From Budget)	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
46	Area D - New 12" Gravity Sewer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	Area D - New 8" Force Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
48	Area D - New Lift Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49	Lift Station Rehab/Upgrade Package No. 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	Lift Station Rehab/Upgrade Package No. 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51	SCADA Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -
52	Canterbury to Refuge & NPV to Bombay FM	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53	Vadose Well No. 2 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54	Vadose Well No. 1 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -
55	Vector Trucks	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 475,000	\$ 485,000	\$ -	\$ -	\$ -
56	Force Main Replacement Across Channel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
57	Vardose Well No. 4 Replacement	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
58	McCullouch Sewer Line Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
59	Building Replacements (MTP)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,300,000	\$ 2,300,000	\$ 2,300,000
60	Total Sewer System Improvements	\$ 5,268,782	\$ 1,875,000	\$ 900,000	\$ 1,500,000	\$ 775,000	\$ 875,000	\$ 885,000	\$ 2,300,000	\$ 2,300,000	\$ 2,300,000

LAKE HAVASU CITY, AZ
SEWER SYSTEM
CAPITAL IMPROVEMENT PLAN - INFLATED \$

Line	Description	Projected for Fiscal Year Ending June 30									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	SEWER SYSTEM										
31	SS3030 - 8" Ductile Iron Force Main Replacement	\$ -	\$ 1,773,052	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	SS6 - Chip Drive Lift Station Upgrades	\$ -	\$ -	\$ -	\$ -	\$ 613,892	\$ -	\$ -	\$ -	\$ -	\$ -
33	SS3 - ITP Effluent Pond Liners	\$ -	\$ -	\$ -	\$ 1,628,876	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34	SS3050 - Influent Pump Station Surge Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	SS2720 - Island Treatment Plant (ITP) Flow Equalization Basin (FEB)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	SS3060 - MTP Odor Control Replacement	\$ -	\$ -	\$ 528,244	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37	SS4 - Mulberry Treatment Plant (MTP) Aeration Basin MCC	\$ -	\$ 154,178	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	SS3010 - Mulberry WWTP Tertiary Capacity Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	SS2 - South Intake Influent Screen	\$ -	\$ -	\$ -	\$ -	\$ 251,137	\$ -	\$ -	\$ -	\$ -	\$ -
40	SS1 - Vadose Well No. 4 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	SS5 - Wastewater Master Plan	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42	SS2970 - Water Conservation & Reuse Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43	CIP Engineering Design (From Budget)	\$ 435,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
44	CIP Construction (From Budget)	\$ 4,333,782	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
45	CIP Professional Services (From Budget)	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
46	Area D - New 12" Gravity Sewer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	Area D - New 8" Force Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
48	Area D - New Lift Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49	Lift Station Rehab/Upgrade Package No. 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	Lift Station Rehab/Upgrade Package No. 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51	SCADA Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 458,903	\$ -	\$ -	\$ -	\$ -
52	Canterbury to Refuge & NPV to Bombay FM	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53	Vadose Well No. 2 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54	Vadose Well No. 1 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 471,687	\$ -	\$ -	\$ -
55	Vactor Trucks	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 544,948	\$ 571,920	\$ -	\$ -	\$ -
56	Force Main Replacement Across Channel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
57	Vadose Well No. 4 Replacement	\$ -	\$ -	\$ 422,595	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
58	McCullough Sewer Line Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
59	Building Replacements (MTP)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,787,749	\$ 2,865,404	\$ 2,945,223
60	Total Sewer System Improvements	\$ 5,268,782	\$ 1,927,230	\$ 950,839	\$ 1,628,876	\$ 865,029	\$ 1,003,851	\$ 1,043,607	\$ 2,787,749	\$ 2,865,404	\$ 2,945,223

LAKE HAVASU CITY, AZ
 SEWER SYSTEM
 DEBT SERVICE

Acct	Description	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SEWER DEBT SERVICE											
	<u>Sewer Debt Service</u>										
	2015 WIFA	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999	\$ 3,880,999
	GO Wastewater Revenue Refunding Bonds, Series 2015 (A)	\$ 5,182,325	\$ 5,182,575	\$ 5,181,825	\$ 5,184,825	\$ 5,181,575	\$ 5,181,650	\$ 5,183,450	\$ 5,185,450	\$ 5,180,450	\$ 5,182,700
	Senior Lien Wastewater Revenue Bonds, Series 2015 (B)	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850	\$ 4,656,850
	New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Sewer Debt Service	\$ 13,720,174	\$ 13,720,424	\$ 13,719,674	\$ 13,722,674	\$ 13,719,424	\$ 13,719,499	\$ 13,721,299	\$ 13,723,299	\$ 13,718,299	\$ 13,720,549

		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential	Accounts	25,871	26,071	26,271	26,471	26,671	26,871	27,071	27,271	27,471	27,671	27,871
	New Accounts per Year ⁽¹⁾		200	200	200	200	200	200	200	200	200	200
Growth in Customers and Flow:			0.77%	0.77%	0.76%	0.76%	0.75%	0.74%	0.74%	0.73%	0.73%	0.72%
All Other	Homes	2,499	2,553	2,607	2,661	2,715	2,769	2,823	2,877	2,931	2,985	3,039
	New Accounts per Year ⁽²⁾		54	54	54	54	54	54	54	54	54	54
Growth in Customers and Flow:			2.16%	2.12%	2.07%	2.03%	1.99%	1.95%	1.91%	1.88%	1.84%	1.81%
Outside City	Homes	0	53	106	159	159	159	159	159	159	159	159
	New Accounts per Year ⁽³⁾		53	53	53	0	0	0	0	0	0	0
Growth in Customers and Flow:			0.00%	100.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Accounts	Accounts	28,370	28,677	28,984	29,291	29,545	29,799	30,053	30,307	30,561	30,815	31,069
	New Accounts per Year		307	307	307	254	254	254	254	254	254	254
Total Growth in Customers and Flow:			1.08%	1.07%	1.06%	0.87%	0.86%	0.85%	0.85%	0.84%	0.83%	0.82%

(1) Per City email Oct 28, 2020

(2) 5,013 lots at buildout, 3,883 lots in 2020, assumes equal annual development

(3) Per November 4th email from City, approximately 160 lots. Willdan assumed it would be built over 3 years

APPENDIX C

Water Cost of Service and Rate Design

LAKE HAVASU CITY, AZ
Development of Rate Revenue Requirement

Line No:		Test Year for Rate Revenue Requirement	
		FY 2022	
1	Total Operating Revenue Requirement	\$	18,766,755
	Less:		
	<u>Other Operating Revenues</u>		
2	IDD Property Tax Current	\$	5,684,000
3	Mohave County Flood Control	\$	-
4	Direct Operating Non Categorical Federal Grants	\$	-
5	Interest Earnings	\$	50,712
6	Investment Earnings	\$	410,292
7	Miscellaneous Revenues and Fees	\$	1,500
8	Non Taxable Water Sales	\$	5,580
9	Meter Fees	\$	675,000
10	Turn On Fees	\$	150,000
11	Backflow Prevention Prmts	\$	2,500
12	Horizon Six Fees	\$	4,500
13	Cross Connection Monitorg	\$	114,000
14	Fireline Base Fee	\$	31,500
15	Late Fee Penalties	\$	99,200
16	Misc Water	\$	24,000
	Increase/(Decrease) in Revenues		0
	Total Other Operating Revenues	\$	7,252,784
17	Total Rate Revenue Requirement	\$	11,513,971

LAKE HAVASU CITY, AZ
Allocation of Test Year Costs to Water Function

Test Year for Rate Revenue Requirement		
Line No:	Expense Group	FY 2022
1	Treatment	\$7,558,060
2	Transmission & Distribution	2,195,475
3	Customer Service	122,879
4	Admin	170,595
5	Source of Supply	25,565
6	Transfers	2,882,959
7	Debt	623,975
8	CIP	4,978,282
9	Total	\$ 18,557,789

LAKE HAVASU CITY, AZ
Allocation of Water Costs Test Year FY 2022

Allocation to Base Extra Capacity - Water

Line No:	Water Costs	Extra Capacity			Meters & Services	Billing & Collection	Total
		Base	Max Day	Max Hour			
1	Treatment	\$7,558,060	\$4,156,933	\$3,401,127	\$0	\$0	\$7,558,060
2	Transmission & Distribution	2,195,475	455,727	768,416	971,331	-	2,195,475
3	Customer Service	122,879	-	-	-	61,440	122,879
4	Admin	170,595	85,298	-	-	42,649	170,595
5	Source of Supply	25,565	25,565	-	-	-	25,565
6	Transfers	2,882,959	2,162,219	-	-	720,740	2,882,959
7	Debt	623,975	467,981	-	-	155,994	623,975
8	CIP	4,978,282	3,982,625	-	-	995,656	4,978,282
9	Non-Rate Revenue & Fund Balance	(7,043,818)	(3,743,722)	(2,266,947)	(528,105)	(448,452)	(7,043,818)
10	Total	\$ 11,513,971	\$ 7,592,626	\$ 1,902,597	\$ 443,226	\$ 1,528,026	\$ 11,513,971
11	Fixed Charge Component						
12	Flow Charge Component		\$ 7,592,626	\$ 1,902,597	\$ 443,226	\$ 47,496	\$ 9,938,449
13	Total		\$ 7,592,626	\$ 1,902,597	\$ 443,226	\$ 47,496	\$ 11,513,971

Allocation to Customer Class - Water - Annual Basis

Line No:	Customer Class	Total Annual Flow	Average Daily Flow	Maximum Day			Maximum Hour			Total Costs
				Base	Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	
14	Residential Inside	2,911,157	7,976		334%	26,674	18,698	600%	47,839	39,863
15	Multi-Family Inside	413,140	1,132		292%	3,310	2,178	524%	5,936	4,804
16	Commercial Inside	324,495	889		340%	3,027	2,138	611%	5,429	4,540
17	Restaurant/Hotel Inside	122,252	335		307%	1,028	693	550%	1,843	1,508
18	Schools Inside	21,002	58		441%	254	196	791%	455	398
19	Industrial Inside	51,207	140		389%	546	406	698%	979	839
20	Hydrant Inside (Irrigation)	30,316	83		378%	314	231	678%	563	480
21	Irrigation Inside (Residential)	474,935	1,301		448%	5,823	4,522	803%	10,444	9,143
22	Irrigation Inside (Other)	88,183	242	\$ 209,888	448%	1,081	840	803%	1,939	1,698
23	Irrigation Inside (RV Parks)	5,196	14	\$ 5,196	448%	64	49	803%	114	100
24	Residential Outside	56,988	156		334%	522	366	600%	936	780
25	Commercial Outside	12,258	34		340%	114	81	611%	205	171
26	Restaurant/Hotel Outside	12	0		307%	0	0	550%	0	0
27	Industrial Outside	31	0		389%	0	0	698%	1	1
28	Hydrant Outside (Irrigation)	-	-		0%	-	-	0%	-	-
29	Irrigation Outside (Other)	16,939	46	\$ 16,939	448%	208	161	803%	372	326
30	Irrigation Outside (RV Parks)	-	-		0%	-	-	0%	-	-
31	Irrigation Outside (Residential)	30,327	83	\$ 30,327	448%	372	289	803%	667	584
32	Total	4,558,438	12,489			43,337	30,848		77,723	65,235
33	Allocated Costs			\$ 7,592,626		\$ 1,902,597			\$ 443,226	\$ 9,938,449
34	Billing Units			4,558,438		30,848			65,235	
35	Rate			\$ 1.67		\$ 61.68			\$ 6.79	

Line No:	Customer Class	Total Annual Flow	Base Costs Allocated to Customer Class	Max Day Costs Allocated to Customer Class		Max Hour Costs Allocated to Customer Class		Meters & Services	Billing & Collection	Total Base Extra Capacity Costs Allocated to Customer Class
				Extra Capacity	Extra Capacity	Extra Capacity	Extra Capacity			
34	Residential Inside	2,911,157	\$ 4,848,882	18,698	\$ 1,153,224	39,863	\$ 270,842	\$ 1,310,499	\$ 40,735	\$ 7,624,182
35	Multi-Family Inside	413,140	688,134	2,178	134,325	4,804	32,641	74,006	2,300	931,407
36	Commercial Inside	324,495	540,486	2,138	131,864	4,540	30,845	42,899	1,333	747,427
37	Restaurant/Hotel Inside	122,252	203,625	693	42,728	1,508	10,248	5,397	168	262,165
38	Schools Inside	21,002	34,982	196	12,110	398	2,703	1,006	31	50,832
39	Industrial Inside	51,207	85,292	406	25,016	839	5,699	383	12	116,402
40	Hydrant Inside (Irrigation)	30,316	50,496	231	14,251	480	3,263	0	0	68,009
41	Irrigation Inside (Residential)	474,935	791,061	4,522	278,908	9,143	62,119	55,239	1,717	1,189,043
42	Irrigation Inside (Other)	88,183	146,879	840	51,786	1,698	11,534	14,482	450	225,130
43	Irrigation Inside (RV Parks)	5,196	8,654	49	3,051	100	680	287	9	12,681
44	Residential Outside	56,988	94,921	366	22,575	780	5,302	20,126	626	143,550
45	Commercial Outside	12,258	20,417	81	4,981	171	1,165	1,245	39	27,847
46	Restaurant/Hotel Outside	12	20	0	4	0	1	159	5	190
47	Industrial Outside	31	51	0	15	1	3	255	8	333
48	Hydrant Outside (Irrigation)	-	0	-	0	0	0	0	0	0
49	Irrigation Outside (Other)	16,939	28,214	161	9,948	326	2,216	750	23	41,151
50	Irrigation Outside (RV Parks)	-	0	-	0	0	0	0	0	0
51	Irrigation Outside (Residential)	30,327	50,513	289	17,809	584	3,967	1,293	40	73,622
52	Total	4,558,438	\$ 7,592,626	30,848	\$ 1,902,597	65,235	\$ 443,226	\$ 1,528,026	\$ 47,496	\$ 11,513,971

LAKE HAVASU CITY, AZ
Calculation of Fixed Charge Rates/ Revenue - Water FY 2022

Line No:		
1	Total Water Revenue Target	\$ 11,513,971
2	Percent from Fixed Charge	30%
3	Total Fixed Charge Revenue Requirement - Water	\$ 3,454,191
4	Total Equivalent Billed Meters	382,981
5	Monthly Water Fixed Charge per Equivalent Meter	\$ 9.02

Water Fixed Charge - By Meter Size

	Meter Size	Meter Equivalency	Monthly Water Fixed Charge
8	0.75	1.00	\$ 9.02
9	1	1.67	\$ 15.06
10	1.5	3.33	\$ 30.03
11	2	5.33	\$ 48.07
12	3	10.66	\$ 96.14
13	4	16.67	\$ 150.32
14	6	33.33	\$ 300.61
15	8	53.33	\$ 480.99

Water
Inside

Meter Size	Billing Basis-->	Class -->										Total	Calculation of Equivalent Meters / Units - Inside			
		Residential	Multi-Family	Commercial	Restaurant/Hotel	Schools	Industrial	Irrigation Residential	Irr Other	Irrigation RV	Bills		Equiv. Factor	Inside / Outside Factor	Equivalent Meters	
0.75		323,808	10,308	5,556	384	48	12	13,344	2,544	72	356,076	356,076	1.00	1.00	356,076	
1		2,700	4,140	2,628	264	60	12	300	540	-	10,644	10,644	1.67	1.00	17,775	
1.5		24	264	204	60	12	-	-	36	-	600	600	3.33	1.00	1,998	
2		12	84	24	24	12	12	-	12	-	180	180	5.33	1.00	959	
3		-	-	-	-	-	-	-	-	-	-	-	10.66	1.00	-	
4		-	-	-	12	-	-	-	-	-	12	12	16.67	1.00	200	
6		-	-	-	-	-	-	-	-	-	-	-	33.33	1.00	-	
8		-	-	-	-	-	-	-	-	-	-	-	53.33	1.00	-	
10		-	-	-	-	-	-	-	-	-	-	-	76.67	1.00	-	
12		-	-	-	-	-	-	-	-	-	-	-	143.33	1.00	-	
16		-	-	-	-	-	-	-	-	-	-	-	267.97	1.00	-	
Total Monthly Customers		27,212	1,233	701	62	11	3	1,137	261	6	367,512	367,512			377,009	

Water
Outside

Meter Size	Billing Basis-->	Class -->										Total	Calculation of Equivalent Meters / Units - Outside			
		Residential	Multi-Family	Commercial	Restaurant/Hotel	Schools	Industrial	Irrigation Residential	Irr Other	Irrigation RV	Bills		Equiv. Factor	Inside / Outside Factor	Equivalent Meters	
0.75		4,884	-	24	-	-	-	324	108	-	5,340	5,340	1.00	1.00	5,340	
1		96	-	72	-	-	-	-	24	-	192	192	1.67	1.00	321	
1.5		-	-	12	12	-	-	-	12	-	36	36	3.33	1.00	120	
2		-	-	24	-	-	12	-	-	-	36	36	5.33	1.00	192	
3		-	-	-	-	-	-	-	-	-	-	-	10.66	1.00	-	
4		-	-	-	-	-	-	-	-	-	-	-	16.67	1.00	-	
6		-	-	-	-	-	-	-	-	-	-	-	33.33	1.00	-	
8		-	-	-	-	-	-	-	-	-	-	-	53.33	1.00	-	
12		-	-	-	-	-	-	-	-	-	-	-	143.33	1.00	-	
16		-	-	-	-	-	-	-	-	-	-	-	267.97	1.00	-	
Total Monthly Customers		415	-	11	1	-	1	27	12	-	5,604	5,604			5,972	

OPTION A

Development of Proposed FY 2022 Residential Inside Rates

Residential Inside Rates - Cost of Service Component **\$7,624,182**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	323,808	\$2,920,748
1.00	15.06	2,700	40,662
1.50	30.03	24	721
2.00	48.07	12	577
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0
Total Service Charge Revenue			\$2,962,708

Volume Charge Revenue to be Recovered \$4,661,475

Block		% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue	
0	1,000	CF	36.36%	1,058,497	1.00	\$1.00	\$1,058,497
1,001	2,400	CF	39.08%	1,137,680	1.88	1.88	2,134,032
2,401	6,500	CF	19.05%	554,575	1.10	2.06	1,109,956
Over	6,500	CF	5.51%	160,405	1.10	2.27	353,147
Total			100%	2,911,157			\$4,655,632

OPTION A

Development of Proposed FY 2022 Residential Outside Rates

Residential Outside Rates - Cost of Service Component **\$143,550**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	4,884	\$44,054
1.00	15.06	96	1,446
1.50	30.03	0	0
2.00	48.07	0	0
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0
Total Service Charge Revenue			\$45,499

Volume Charge Revenue to be Recovered \$98,050

Block		% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue
0	1,000	CF	22.66%	12,914	1.00	\$12,914
1,001	2,400	CF	19.97%	11,381	1.88	21,347
2,401	6,500	CF	20.69%	11,791	1.10	23,599
Over	6,500	CF	36.69%	20,909	1.10	46,033
Total			100%	56,988		\$103,893

OPTION B

Development of Proposed FY 2022 Residential Inside Rates

Residential Inside Rates - Cost of Service Component **\$7,624,182**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	323,808	\$2,920,748
1.00	15.06	2,700	40,662
1.50	30.03	24	721
2.00	48.07	12	577
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$2,962,708

Volume Charge Revenue to be Recovered \$4,661,475

Block	% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue		
0	500	CF	11.28%	328,379	1.00	\$0.00	\$0
501	4,000	CF	77.26%	2,249,160	1.00	1.74	3,917,663
4,001	10,000	CF	8.34%	242,791	1.05	2.16	508,695
Over	10,000	CF	3.12%	90,828	1.05	2.70	237,879
Total	100%	2,911,157	77.26%				\$4,664,237

OPTION B

Development of Proposed FY 2022 Residential Outside Rates

Residential Outside Rates - Cost of Service Component **\$143,550**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	4,884	\$44,054
1.00	15.06	96	1,446
1.50	30.03	0	0
2.00	48.07	0	0
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$45,499

Volume Charge Revenue to be Recovered \$98,050

Block		% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue	
0	500	CF	7.39%	4,211	1.00	\$0.00	\$0
501	4,000	CF	77.72%	44,291	1.00	1.74	77,148
4,001	10,000	CF	13.68%	7,796	1.24	2.16	16,334
Over	10,000	CF	1.21%	690	1.25	2.70	1,806
Total			100%	56,988	77.72%		\$95,288

Development of Proposed FY 2022 Multi-Family Inside Rates

Multi-Family Inside Rates - Cost of Service Component **\$931,407**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	10,308	\$92,978
1.00	15.06	4,140	62,348
1.50	30.03	264	7,928
2.00	48.07	84	4,038
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$167,292

Volume Charge Revenue to be Recovered \$764,114

Block			% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue
0	2,200	CF	36.02%	148,813	1.00	\$1.47	\$219,485
2,201	20,000	CF	34.35%	141,914	1.25	1.84	261,636
20,001	200,000	CF	25.58%	105,681	1.25	2.30	236,240
Over	200,000	CF	4.05%	16,732	1.25	2.88	46,754
Total			100%	413,140			\$764,114

Development of Proposed FY 2022 Commercial Inside Rates

Commercial Inside Rates - Cost of Service Component **\$1,176,826**

			Service Charge, \$ per Bill	Rate	Bills	Revenue			
			0.75	\$9.02	6,000	\$54,120			
			1.00	15.06	2,964	44,638			
			1.50	30.03	276	8,288			
			2.00	48.07	72	3,461			
			3.00	96.14	0	0			
			4.00	150.32	12	1,804			
			6.00	300.61	0	0			
			8.00	480.99	0	0			
			10.00	691.47	0	0			
Total Service Charge Revenue								\$112,311	
Volume Charge Revenue to be Recovered								\$1,064,515	
			% Volume in	Billed	Cumulative	Volume	Rate		
Block			Block	Volume	Factor	Rate	Revenue		
0	15,000	CF	48.52%	251,798	1.00	\$1.74	\$438,251		
15,001	340,000	CF	43.60%	226,265	1.25	2.18	492,264		
Over	340,000	CF	7.88%	40,894	1.50	3.26	133,453		
Total			100%	518,957			\$1,063,968		

Development of Proposed FY 2022 Commercial Outside Rates

Commercial Outside Rates - Cost of Service Component **\$28,370**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	24	\$216
1.00	15.06	72	1,084
1.50	30.03	24	721
2.00	48.07	36	1,731
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$3,752

Volume Charge Revenue to be Recovered \$24,618

Block		% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue	
0	15,000	CF	29.83%	3,669	1.00	\$1.74	\$6,386
15,001	340,000	CF	70.17%	8,631	1.25	2.18	18,779
Over	340,000	CF	0.00%	0	1.50	3.26	0
Total			100%	12,301			\$25,165

Development of Proposed FY 2022 Irrigation Residential Inside Rates

Irrigation Residential Inside Rates - Cost of Service Component **\$1,189,043**

Service Charge, \$ per Bill	Rate	Bills	Revenue	
0.75	\$9.02	13,344	\$120,363	\$1,112
1.00	15.06	300	4,518	
1.50	30.03	0	0	
2.00	48.07	0	0	
3.00	96.14	0	0	
4.00	150.32	0	0	
6.00	300.61	0	0	
8.00	480.99	0	0	
10.00	691.47	0	0	

Total Service Charge Revenue \$124,881

Volume Charge Revenue to be Recovered \$1,064,162

Block			% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue
0	2,900	CF	52.19%	247,868	1.00	\$1.67	\$402,257
2,901	9,500	CF	37.89%	179,953	1.50	2.51	438,059
Over	9,500	CF	9.92%	47,114	2.00	5.02	229,377
Total			100%	474,935	9.92%		\$1,069,692

Development of Proposed FY 2022 Irrigation Residential Outside Rates

Irrigation Residential Outside Rates - Cost of Service Component **\$73,622**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	324	\$2,922
1.00	15.06	0	0
1.50	30.03	0	0
2.00	48.07	0	0
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$2,922

Volume Charge Revenue to be Recovered \$70,699

Block		% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue	
0	2,900	CF	54.40%	16,498	1.00	\$1.67	\$26,774
2,901	9,500	CF	39.19%	11,885	1.50	2.51	28,932
Over	9,500	CF	6.41%	1,944	2.00	5.02	9,464
Total			100%	30,327	6.41%		\$65,169

Development of Proposed FY 2022 Irr Other Inside Rates

Irr Other Inside Rates - Cost of Service Component **\$225,130**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	2,544	\$22,947
1.00	15.06	540	8,132
1.50	30.03	36	1,081
2.00	48.07	12	577
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$32,737

Volume Charge Revenue to be Recovered \$192,393

Block		% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue	
0	9,000	CF	52.06%	45,908	1.00	\$1.87	\$83,054
9,001	40,000	CF	37.42%	32,998	1.25	2.33	74,623
Over	40,000	CF	10.52%	9,277	1.50	3.50	31,468
Total			100%	88,183			\$189,145

Development of Proposed FY 2022 Irr Other Outside Rates

Irr Other Outside Rates - Cost of Service Component **\$41,151**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	108	\$974
1.00	15.06	24	361
1.50	30.03	12	360
2.00	48.07	0	0
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$1,696

Volume Charge Revenue to be Recovered \$39,455

	Block		% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue
0	9,000	CF	19.64%	3,327	1.00	\$1.87	\$6,019
9,001	40,000	CF	49.55%	8,393	1.25	2.33	18,981
Over	40,000	CF	30.81%	5,219	1.50	3.50	17,703
Total			100%	16,939			\$42,703

Development of Proposed FY 2022 Irrigation RV Inside Rates

Irrigation RV Inside Rates - Cost of Service Component **\$12,681**

Service Charge, \$ per Bill	Rate	Bills	Revenue
0.75	\$9.02	72	\$649
1.00	15.06	0	0
1.50	30.03	0	0
2.00	48.07	0	0
3.00	96.14	0	0
4.00	150.32	0	0
6.00	300.61	0	0
8.00	480.99	0	0
10.00	691.47	0	0

Total Service Charge Revenue \$649

Volume Charge Revenue to be Recovered \$12,031

Block	% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue
0 - 1,750	CF 8.80%	457	1.00	\$1.78	\$815
1,751 - 20,000	CF 64.61%	3,357	1.25	2.23	7,482
20,001 - 60,000	CF 26.59%	1,382	1.25	2.79	3,734
Over 60,000	CF 0.00%	0	1.25	3.48	0
Total	100%	5,196			\$12,031

Development of Proposed FY 2022 Hydrant Inside Rates

Hydrant Inside Rates - Cost of Service Component **\$68,009**

		Service Charge, \$ per Bill	Rate	Bills	Revenue	
		0.75	\$9.02	0	\$0	
		1.00	15.06	0	0	
		1.50	30.03	0	0	
		2.00	48.07	0	0	
		3.00	96.14	0	0	
		4.00	150.32	0	0	
		6.00	300.61	0	0	
		8.00	480.99	0	0	
		10.00	691.47	0	0	
Total Service Charge Revenue						\$0
Volume Charge Revenue to be Recovered						\$68,009
Block	CF	% Volume in Block	Billed Volume	Cumulative Factor	Volume Rate	Rate Revenue
All	CF	100.00%	30,316	1.00	\$2.24	\$68,009
Total		100%	30,316			\$68,009

APPENDIX D

Sewer Cost of Service and Rate Design

LAKE HAVASU CITY, AZ
Development of Rate Revenue Requirement

Line No:		Test Year for Rate Revenue Requirement	
		FY 2022	
1	Total Operating Revenue Requirement	\$	24,764,595
	Less:		
	<u>Other Operating Revenues</u>		
2	Investment Earnings		138,685
3	Miscellaneous Revenues and Fees		2,000
4	Effluent Sales		393,975
5	Treatment Capacity Fee		614,000
6	Treatment Cap Loan Int		3,500
7	Misc Wastewater		60,000
	Increase/(Decrease) in Revenues		0
	Total Other Operating Revenues	\$	1,212,160
8	Total Rate Revenue Requirement	\$	23,552,435

LAKE HAVASU CITY, AZ
Allocation of Test Year Costs

Line No:	Expense Group	Sewer
1	Collection	\$ 4,560,532
2	Treatment	3,736,916
3	Administration	3,168,117
4	Pump	-
5	Customer Service	112,152
6	Transfers	-
7	Debt	13,720,424
8	CIP	1,927,230
9	Total	\$ 27,225,371

LAKE HAVASU CITY, AZ
Allocation of Sewer Costs FY - 2022

	Sewer Costs	Volume	Capacity	Strength - SS	Strength - BOD	Pretreatment & Inspection	Billing & Collection	Customer Service	Total
Treatment	\$3,736,916	\$1,868,458	\$0	\$934,229	\$934,229	\$0	\$0	\$0	\$3,736,916
Collection	4,560,532	2,280,266	2,280,266	-	-	-	-	-	4,560,532
Administration	3,168,117	1,584,059	1,584,059	-	-	-	-	-	3,168,117
Pump	-	-	-	-	-	-	-	-	-
Customer Service	112,152	-	-	-	-	-	56,076	56,076	-
Transfers	-	-	-	-	-	-	-	-	-
CIP	1,927,230	963,615	963,615	-	-	-	-	-	1,927,230
Debt	13,720,424	6,860,212	6,860,212	-	-	-	-	-	-
Use of Other Funding Sources and/or Addition/(Reduction) in Reserves	(3,672,936)	(1,828,903)	(1,576,832)	(126,036)	(126,036)	-	(7,565)	(7,565)	(3,672,936)
Total	\$ 23,552,435	\$ 11,727,707	\$ 10,111,320	\$ 808,193	\$ 808,193	\$ -	\$ 48,511	\$ 48,511	\$ 9,719,859
Fixed Charge Component							\$	\$	\$
Flow Charge Component		\$ 11,727,707	\$ 10,111,320	\$ 808,193	\$ 808,193	\$ -	\$ 48,511	\$ 48,511	\$ 97,022
Total		\$ 11,727,707	\$ 10,111,320	\$ 808,193	\$ 808,193	\$ -	\$ 48,511	\$ 48,511	\$ 23,552,435

Residential		Multifamily	
Flow	1,319,971	Flow	208,549
Total Volume	1,319,971	Total Volume	208,549
BOD	250	BOD	200
Pounds	2,752,140	Pounds	347,860
Total Volume	1,319,971	Total Volume	208,549
TSS	250	TSS	200
Pounds	2,752,140	Pounds	347,860

	Flow	TSS Factor	TSS Pounds	BOD Factor	BOD Pounds
Bars	1,164	200	1,942	200	3,239
Church	10,489	80	6,998	130	7,588
Carwash	7,814	150	9,775	20	1,631
Retail	29,611	150	37,043	150	46,341
Fitness	2,317	120	2,319	120	2,321
Grocery	20,549	800	137,103	800	914,751
Hospital	33,226	100	27,710	250	57,776
Ice Mfg	2,665	55	1,222	3	31
Dry Cleaner	463	240	927	450	3,478
Laundromat	3,212	110	2,947	150	3,686
Mortuary	362	800	2,415	800	16,115
Social Club	1,880	80	1,254	130	1,360
Professional	32,546	80	21,715	130	23,543
RV Park	25,374	200	42,324	200	70,596
Service Station	14,230	280	33,230	180	49,885
Deli	6,455	600	32,301	1,000	269,389
Hotel w/ Rest	21,954	600	109,858	500	458,107
Hotel w/o Rest	19,432	120	19,448	310	50,280
Restaurant	41,009	600	205,209	1,000	1,711,443
School w/ Cafeteria	9	600	45	1,000	376
School w/ Gym	5,343	100	4,456	130	4,831
School	10,156	100	8,470	130	9,183
Septic Haulers	506	2,200	9,284	4,400	340,689
Industrial	9,398	100	7,838	250	16,342

LAKE HAVASU CITY, AZ

Calculation of Fixed Charge Rates/ Revenue - Sewer FY 2022

Line No:			
1	Total Sewer Revenue Target	\$	23,552,435
2	Percent from Fixed Charge		70%
3	Total Fixed Charge Revenue Requirement - Sewer	\$	16,486,705
4	Total Bills		338,760
5	Monthly Sewer Fixed Charge per Account	\$	48.67

OPTION A

Development of Proposed FY 2022 Residential Rates

Residential - Cost of Service Component **\$16,744,027**

Rate for Residential Accounts with No Use	Fixed Charges			
	\$54.25			
<u>Service Charge, \$ per Bill</u>	<u>Rate</u>	<u>Bills</u>	<u>Revenue</u>	
Dwelling Unit	\$54.25	308,640	\$16,744,027	
Total Service Charge Revenue				----- \$16,744,027

OPTION B

Development of Proposed FY 2022 Residential Rates

Residential - Cost of Service Component **\$16,744,027**

Rate for Residential Accounts with No Use	Fixed Charges				
	\$52.14				
Service Charge, \$ per Bill	Rate	Bills	Revenue		
Dwelling Unit (includes first 500 CF)	\$ 52.14	308,640	\$16,093,747		
Total Service Charge Revenue			\$16,093,747		
Flow Rate Revenue to be Recovered			\$650,280		
Block	% Flow in Block	Billed Flow	Cumulative Factor	Volume Rate	Rate Revenue
All Flows (Capped at 750 cf)	100.00%	369,947	1.00	\$1.76	\$650,280
Total	100%	369,947			\$650,280

Development of Proposed FY 2022 Multifamily Rates (Meter Size Based)

Multifamily Cost of Service						\$2,608,182
Service Charge, \$ per Bill		Rate	Bills	Revenue		
Dwelling Unit		\$48.67	16,956	\$825,249		
Total Service Charge Revenue					----- \$825,249	
Flow Rate Revenue to be Recovered					\$1,782,933	
Block	% Flow in Block	Billed Flow	Cumulative Factor	Volume Rate	Rate Revenue	
All Flows	100.0%	251,050	1.00	\$6.26	\$1,572,659	
Total	100%	251,050			\$1,572,659	

Development of Proposed FY 2022 Commercial Rates

Commercial Cost of Service						\$3,254,789
Service Charge, \$ per Bill		Rate	Bills	Revenue	Revenue	
Accounts		\$48.67	12,708	\$618,498	-----	
Total Service Charge Revenue					\$618,498	
Flow Rate Revenue to be Recovered					\$2,636,291	
Block	% Flow in Block	Billed Flow	Cumulative Factor	Volume Rate	Rate Revenue	
All Flows	100.0%	252,591	1.00	\$10.44	\$2,636,291	
Total		100%	252,591		\$2,636,291	

Development of Proposed FY 2022 RV Rates

RV Cost of Service							\$319,955
	<u>Service Charge, \$ per Bill</u>		<u>Rate</u>	<u>Bills</u>	<u>Revenue</u>		
	Per Space		\$24.34	72	\$1,752		
	Total Service Charge Revenue						\$1,752
	Flow Rate Revenue to be Recovered						\$318,203
	<u>Block</u>	<u>% Flow in Block</u>	<u>Billed Flow</u>	<u>Cumulative Factor</u>	<u>Volume Rate</u>	<u>Rate Revenue</u>	
All Flows		100.00%	34,458	1.00	\$3.13	\$107,929	
	Total	100%	34,458			\$107,929	

Development of Proposed FY 2022 Hotel Rates

Hotel Cost of Service							\$579,021
	<u>Service Charge, \$ per Bill</u>		<u>Rate</u>	<u>Bills</u>	<u>Revenue</u>		
	Per Room		\$17.87	324	\$5,790		
	Total Service Charge Revenue						\$5,790
	Flow Rate Revenue to be Recovered						\$573,230
	<u>Block</u>	<u>% Flow in Block</u>	<u>Billed Flow</u>	<u>Cumulative Factor</u>	<u>Volume Rate</u>	<u>Rate Revenue</u>	
All Flows		100.00%	61,205	1.00	\$9.37	\$573,230	
	Total	100%	61,205			\$573,230	

Development of Proposed FY 2022 Septic Hauler Rates

Septic Hauler Cost of Service							\$46,461
<u>Service Charge, \$ per Bill</u>			<u>Rate</u>	<u>Bills</u>	<u>Revenue</u>		
Accounts			\$0.00	60	\$0		
Total Service Charge Revenue							\$0
Flow Rate Revenue to be Recovered							\$46,461
	<u>Block</u>	<u>% Flow in Block</u>	<u>Billed Flow</u>	<u>Cumulative Factor</u>	<u>Volume Rate</u>	<u>Rate Revenue</u>	
All Flows		100.00%	685	1.00	\$67.87	\$46,461	
Total		100%	685			\$46,461	



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