



**Arapahoe County Water and Wastewater Authority
(ACWWA)
2024 Operating and Capital Improvement Budget**

December 13, 2023

**Arapahoe County Water and Wastewater Authority
(ACWWA)**

2024 Operating and Capital Improvement Budget

Table of Contents

1.	Budget Message	2
1.1	Board of Directors' Priorities	3
2.	Summary of Operations	7
3.	Description and History	8
3.1	Description.....	8
3.2	History	8
4.	Organizational Structure	9
4.1	Authority Powers.....	9
4.2	Governing Board	9
4.3	ACWWA's Management Team and Staff.....	10
4.4	Organization Chart	11
4.5	Our Mission	12
4.6	Our Vision	12
4.7	Our Values	12
5.	ACWWA's Service Area.....	14
5.1	Demographic and Economic Activity Information.....	14
5.2	Population.....	14
5.3	Income	15
5.4	Employment.....	16
5.5	Major Employers	18
5.6	Building Activity	19
5.7	Foreclosure Activity	19
5.8	Service Area Map.....	20
6.	Water Supply	20
6.1	The ACWWA Flow Project.....	21
7.	Accomplishments.....	22
8.	Budget Process and Timeline.....	24
8.1	Budget Preparation	24
8.2	Budget Calendar	24
8.3	Annual Budget Statutory Requirements.....	24
8.4	Budget Amendments	25
8.5	Lapse of Appropriations	25
8.6	Budget Transfers.....	25
8.7	Filing of the Budget.....	25
8.8	Financial Structure.....	26
8.9	Budgetary Control	26
8.10	Contacting ACWWA's Finance Department.....	26

9.	Executive Summary	28
9.1	Significant Budgetary Items and Trends	28
9.2	Operating Budget.....	29
9.3	Non-operating Budget	34
9.4	Long-range Financial Plan	35
9.5	Sources and Uses of Funds (Budgeted)	36
10.	2024 Capital Improvements Program	37
11.	Departmental Information.....	52
12.	Board Summary Forecasted 2024 Combined Operations.....	56
13.	Board Summary Forecasted 2024 Budget Water Operations	57
14.	Board Summary Forecasted 2024 Sewer Operations	58
15.	Budget Notes.....	59
16.	Budgeted 2024 Capital Outlay.....	62
17.	Schedule of Debt Service Requirements to Maturity	64
18.	Glossary of Terms and Acronyms	65
FPP.1.	APPENDIX.....	70
FPP.2.	Financial Policies and Procedures	71
	Budget Resolution 2023-04	80

BUDGET MESSAGE

ACWWA Administrative Building



1. Budget Message

December 13, 2023

Board of Directors

Arapahoe County Water and Wastewater Authority

Your management team is pleased to present the Arapahoe County Water and Wastewater Authority (ACWWA) 2024 Proposed Budget. The purpose of this budget is to provide citizens, investors, and other interested parties with reliable financial information about ACWWA. This budget represents our best effort to predict revenues and expenditures for the year 2024.

ACWWA's budget is one of the most important documents prepared by ACWWA. Through the process of planning and preparing the budget, ACWWA evaluates and updates its strategic plans and goals for the coming. The process also provides direction for management and staff.

It is important to note that, while the adoption of this budget focuses on identifying and estimating the spending of financial resources, it is also a policy-setting document. It makes determinations on the use of ACWWA's facilities, the use of staff time, and drives management decisions for 2024. As ACWWA's policy makers, you play a critical role in making decisions regarding ACWWA's future.

ACWWA's service area has reached approximately 82% of build-out, and still has a number of land parcels available for development. The service area experienced has continued to experience steady growth in development over the past five years; however, rising costs of building materials, and disruption in the supply chain, and general economic uncertainty may result in decreased development over the next several years. The budget for tap sales reflects this more conservative outlook at 100 taps for the year.

The 2024 Budget is designed to meet the goals of ACWWA's mission and vision statements including the objective of providing the highest quality service to our customers at the lowest reasonable cost. This budget provides for planning and development of additional water resources, as well as the operation and maintenance of existing production, distribution, collections and treatment facilities to support the economic growth of ACWWA. This budget is organized and structured to meet external and internal managerial needs. The budget also incorporates the direction for ACWWA as established by the Board's priorities.

1.1 Board of Directors' Priorities

The Board of Directors has developed a series of Strategic Priorities to assist staff in the development of this budget. These priorities are:

- Improve Water Quality
- Improve Customer Service/Relations
- Expansion/Growth of Service Area
- Expense Management.

The 2024 budget furthers the Board's priorities as follows:

1. Improve Water Quality

- a. ACWWA meets and exceeds all State requirements when it comes to potable water quality. However, ACWWA strives to further improve water quality to improve the aesthetic qualities of our drinking water supply. Some of our efforts have been:
 - i. Utilizing more water supply from our ACWWA Flow Project. This water gets treated in a blended Reverse Osmosis/ UV process that provide a high quality water supply.
 - ii. Reducing/eliminating the direct use of chlorinated alluvial well water into our potable drinking system. While this supply meets all regulations, by combining it and treating it at a water treatment plant, it further improves its quality.
 - iii. We continue to adjudicate water rights that can be treated to a high level. We have now adjudicated over 80% of our ACWWA Flow Project water rights. The 2024 budget provides funding for several critical components of the project:
 - iv. We maintain our water supply wells. The 2024 budget supports the redrilling of a key well for ACWWA.
 - v. Treatment and delivery of approximately 2000 acre-feet of ACWWA Flow water.
- b. The JWPP (ACWWA's Water Treatment Plant) began operating as a blended RO/microfiltration plant on May 20, 2020. The 2024 budget includes funding for the contract with Jacobs to operate the plant, as well as capital funding for right-sizing pumps, SCADA system upgrades, and other equipment as needed.

2. Improve Customer Service/Relations

- a. ACWWA will continue to focus on customer service in 2024 to ensure that customer issues are addressed promptly and effectively, that we reach out to the community with information, and that we listen to our ratepayers. In addition, it is anticipated the implementation of the new billing software will greatly improve the customer experience.
- b. Staff will continue to enhance ACWWA's website to ensure we are able to provide timely, useful, and accurate information to our ratepayers.

3. Expansion/Growth of Service Area

- a. ACWWA assesses any potential expansion to its service area carefully to ensure it does not have any negative impacts to its current customer base.
- b. Over the past several years, staff has evaluated ACWWA's process for new development review, and has streamlined some functions. In 2024, staff will continue to assess development-related policies and procedures and modify as needed to become more effective.
- c. Staff will continue to reach out to the development community as part of a continuous improvement effort for the processing of new applications for water and wastewater services.

4. Expense Management

- a. ACWWA is in a state of continuous improvement and constantly reviews processes, policies and procedures to ensure they meet ACWWA's needs in the most cost-effective manner.
- b. In 2024, ACWWA will continue its preventative maintenance program, which provides for scheduled maintenance of equipment to minimize the risk of failure. Preventative maintenance helps manage costs by reducing the chance of expensive line and system breaks that can interrupt service to ACWWA's rate payers. ACWWA will be implementing asset management software with predictive capabilities that can help staff track asset life to estimate when infrastructure and equipment will need to be replaced.
- c. Ensuring system reliability through the maintenance and management of ACWWA's infrastructure is essential to avoiding significant service interruptions. In 2024 ACWWA will continue to develop its Asset Management program which will provide increased efficiency in the management of its assets, thus reducing reactive costs..

The 2024 budget is shaped by ACWWA's mission and reflects the Board's priorities. The operating budget was developed to ensure that enough funds are available to pay for anticipated costs. The non-operating budget includes only those projects that are necessary to meet the challenges of ensuring an adequate supply of water and the effective treatment of wastewater. The budget document reflects the progressive nature of ACWWA and promotes accountability, prudence, and fiscal conservatism.


ACWWA's Board and management strive to be proactive in anticipating future developments that will affect ACWWA's operating environment. Issues and trends that will impact ACWWA in the coming years include:

- Drought, current conditions are dry and how the snow pack develops this winter will impact the yields of ACWWA's water rights. Current snowpack is below average (at the time of this writing). This will be continued to be monitored.
- Greater federal and state regulation of water and wastewater operations;
- Increased pressure on water supplies in Colorado and the West, resulting in the need to manage current water supplies and for greater regional cooperation;
- Capital costs required for additional treatment and delivery capacity for the ACWWA Flow project;
- Higher future costs because of increased regulation and more demand for water coupled with decreasing supplies;
- An aging workforce and record low state unemployment levels which is creating a shortage of skilled workers in the utilities sector as well as other sectors;
- Aging water and wastewater infrastructure that is being addressed with ACWWA's asset management program to optimize the life of the systems;
- Economic uncertainty due to tariffs, fluctuating interest rates, Supply Chain/COVID-19 impacts and global markets may cause a slowdown in development in ACWWA's service area, resulting in a decrease in funds available for capital projects.

As we move into 2024, we will continue with our commitment to provide the highest quality water and wastewater services for our customers while keeping rates as low as possible. Staff will focus on maintaining and developing internal processes to most efficiently manage ACWWA's finances and continue to be accountable to the Board of Directors and ACWWA's rate payers.

We would like to thank the Board of Directors for their leadership and foresight in adopting policies and priorities to guide the development of ACWWA's 2024 Budget. We would also like to extend our gratitude to the ACWWA employees, who through their hard work and dedication have enabled ACWWA to meet its goals and objectives for 2023. The preparation of this document would not have been possible without the support and input from all departments.

Respectfully submitted,



Steve Witter, P.E.
General Manager



Mathew Vigil, CPA
Director of Finance and Administration

INTRODUCTION



Pictured above is an aerial view of the LoneTree Creek Water Reuse Facility and the ACWWA administration building (upper left).

2. Summary of Operations

Form of Government	Authority
Government Code Section	Colorado Revised Statutes §29-1-204.2
Date of Organization	November 1989
Fiscal Year End	December 31

Number of FTEs authorized	40
Number of Accounts	Approximately 5,000
Average census	31,000

Lone Tree Creek Water Reuse Facility	
Average Daily Wastewater Flow	2.6 million gallons
Total Capacity	3.6 million gallons
ACWWA's Capacity	2.5 million gallons
Inverness' Capacity	1.1 million gallons

Sewer Collection Pipeline (in miles)	82.7
Potable Water Pipeline (in miles)	196.6
RAW Water Mains (in miles)	23.2
Reg 84 Water Mains (in miles)	10.9
Number of Water Storage Tanks	3
Number of Fire Hydrants	1,833
Number of Valves	8,200
Number of Meters	5,241
Number of Water Supply Wells	26
Number of Booster Stations	3
Number of Lift Stations	3
Number of Manholes	3,275
Number of Interceptors	7
Number of Water Tap Equivalents	9,721

3. Description and History

3.1 Description

ACWWA represents a cooperative effort among public entities to provide water and wastewater service. ACWWA is a political subdivision formed pursuant to an intergovernmental agreement (IGA) between Arapahoe County and the Arapahoe Water and Sanitation District (AWS D or the District). ACWWA was formed in 1988 for the purpose of developing water resources, systems and facilities, and wastewater treatment and disposal systems and facilities in whole or in part for the benefit of the customers, county inhabitants, and others.

3.2 History

Effective January 1, 1989, the IGA granted ACWWA all responsibility for and control over AWS D's operating system, related operating assets, tap fees, contributions, revenues and expenses. The agreement provided for a lease of the District's property, plant and equipment. The lease was set to expire on either December 1, 2011, or upon the dissolution of the District or ACWWA, whichever came first. Pursuant to an IGA dated July 7, 1995, the District and ACWWA entered into a plan to dissolve the District. The voters of the District approved the plan and the Arapahoe County District Court signed the Order of Dissolution March 4, 2000, officially dissolving the District. All property, assets and water rights were turned over to ACWWA and any prior agreements between the two entities are subordinate to the July 7, 1995 Agreement.

On February 6, 2002, ACWWA entered into an IGA with the Arapahoe County Water and Wastewater Public Improvement District ("the PID"). The PID was organized in 2001, pursuant to the provisions of Title 30, Article 20, Part 5, and Colorado Revised Statutes (CRS) for the purpose of constructing certain public improvements to serve customers both in and out of its jurisdiction boundaries. The IGA was amended and restated, in part, to have the PID replace the District as a party to the IGA. The PID retains ACWWA as an independent contractor to serve as its management agency. In consideration for ACWWA's commitment to provide management services, the PID agreed to issue general obligation bonds and certify a mill levy on property within the PID at a level sufficient to make the annual debt service payments as identified in the PID's annual capital plan.

ACWWA's core mission is to provide for water and wastewater service within its service area. ACWWA complies with several regulatory programs designed to protect the region's water resources, including the Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) which are examples of forces that will continue to challenge the municipal water and wastewater industry in the near future. Other regulatory compliance requirements, increasing customer awareness, aging infrastructure, and a growing scarcity of high-quality water sources will require greater creativity and innovation.

4. Organizational Structure

4.1 Authority Powers

ACWWA is a political subdivision and a public corporation of the State of Colorado, separate from the Members of the Establishing Contract. The rights, powers, privileges, authorities, functions, and duties of ACWWA are established by the laws of the State of Colorado, particularly C.R.S. §29-1-204.2, which provides ACWWA the power to enter into contracts; to sue and be sued; to hire employees and agents; to incur debts, liabilities, or obligations; to issue revenue obligations or refund outstanding indebtedness; to acquire, hold, lease, or dispose of real and personal property utilized only for the purposes of water treatment, distribution, and wastewater disposal; to develop water resources, systems, or facilities or drainage facilities for the benefit of the inhabitants of the Members or others; to condemn non-public utility property for use as rights-of-way; and to fix, maintain, and revise fees, rates, and charges for functions, services, or facilities provided by ACWWA. ACWWA does not have the power to tax.

4.2 Governing Board

There are eight authorized positions for the Board of Directors of ACWWA. These board positions are appointed at the discretion of the Arapahoe County Commissioners. Two of the five County Commissioners currently serve on the ACWWA's Board of Directors.

ACWWA's Board sets policy and direction for ACWWA. These eight individuals serve for a term of three years and appointments are made as vacancies occur. The Board elects its own officers, including a President, Vice-president, Secretary, and Treasurer.

ACWWA's Board of Directors and any reported conflicts of interest are as follows:

- **Doyle Tinkey's** conflict form has been filed; he owns a home in the ACWWA service area.
- **Geri G. Santos-Rach's** conflict form has been filed; she has no conflicts to report.
- **Jessica Campbell-Swanson's** conflict form has been filed; she is a member of the Arapahoe County Board of County Commissioners (the County detention facility, coroner's and sheriff's offices, and courthouse are in the ACWWA service area); member of the Centennial Airport Authority; and Southeast Metro Stormwater Authority (SEMSWA).
- **Jeff Baker's** conflict form has been filed; he is a member of the Arapahoe County Board of County Commissioners, serves on the SEMSWA Board, and lives in a neighboring water district that partners with ACWWA on projects. conflict form has been filed; he is a member of the Arapahoe County Board of County Commissioners, the Southeast Metro Stormwater Authority (SEMSWA), and the Centennial Airport Board of Commissioners.
- **Brad Cromer's** conflict form has been filed and there are no conflicts noted.
- **Tom Wood's** conflict form has been filed; he reports he owns a small number of shares of ACWWA bonds that were recently issued.

- **Perry Deed's** conflict form has been filed; he has no conflicts to report.
- **Derek Killebrew's** conflict form has been filed; he has no conflicts to report.

4.3 ACWWA's Management Team and Staff

Steven F. Witter, PE, is ACWWA's General Manager. The General Manager is the chief executive officer and administrative head of ACWWA and is responsible for carrying out policies set by the Governing Board and leading ACWWA toward the successful accomplishment of its mission. Mathew Vigil, CPA is ACWWA's Director of Finance and Administration, Bill Veydovec, PE is ACWWA's Director of Engineering and Ed Trujillo, Manager of Operations and Maintenance. This group comprises ACWWA's Management Team.

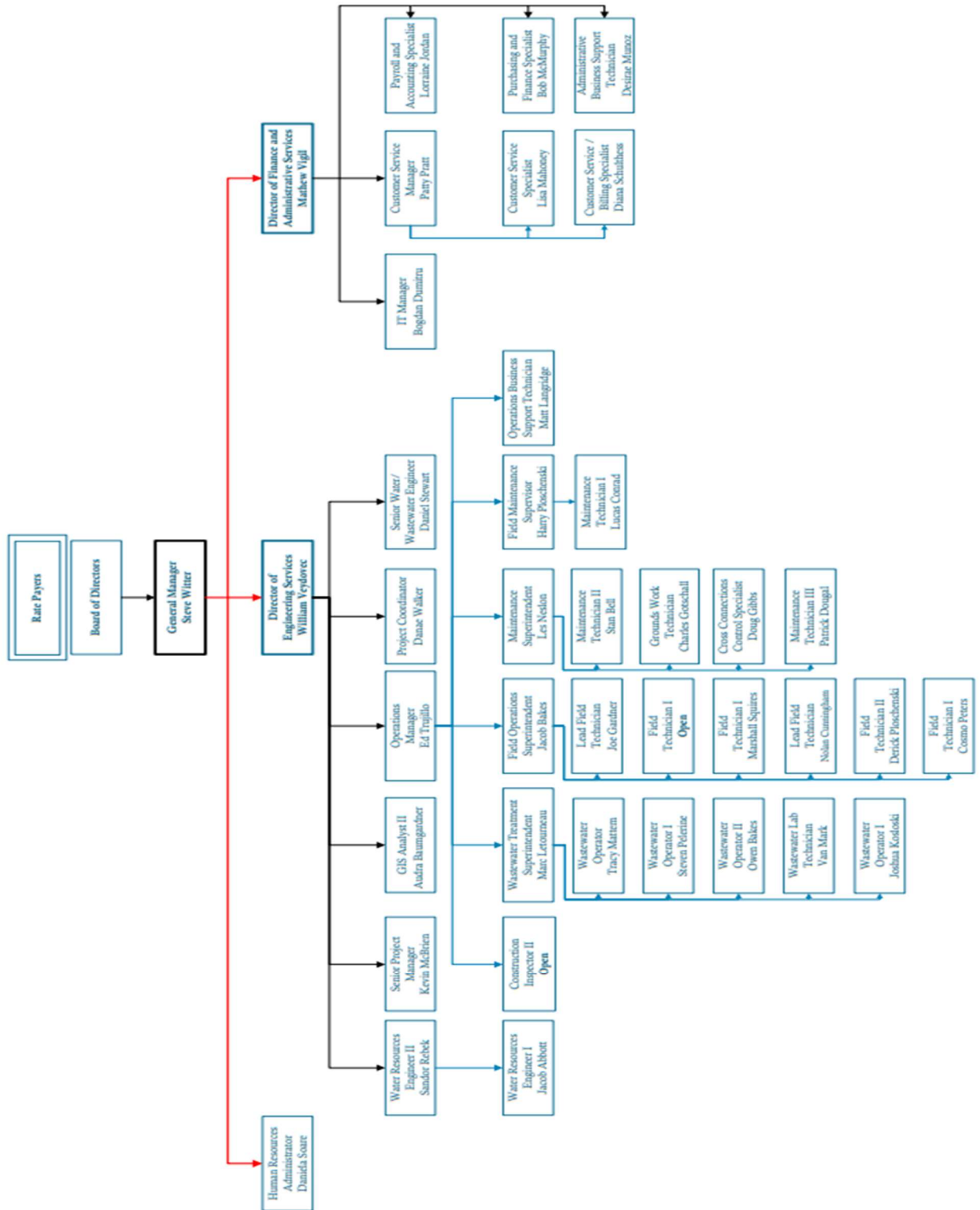
ACWWA is currently budgeting 40 positions and 1 intern position. Management does not anticipate adding new full-time employees for 2024.



Pictured above is Chamber's Reservoir – Summer 2023

4.4 Organization Chart

Arapahoe County Water & Wastewater Authority
Organization Chart



4.5 **Our Mission**

To provide sustainable water and wastewater services by optimizing our resources to ensure quality and value while protecting the environment.

4.6 **Our Vision**

To be a leading water/wastewater utility by providing exceptional service for current customers and future generations.

4.7 **Our Values**

- **Professionalism:** It's how we conduct our business! We value treating our customers with respect and being prepared to effectively address customer issues in the office and in the field. Our interactions, our appearance and our actions all should be examples of our dedication to our mission and vision.
- **Reliability:** We understand our customers rely on us to provide them with water and wastewater services and efficient customer service. ACWWA staff strives, through proper planning and execution, to provide these services to our customers day in and day out.
- **Integrity:** ACWWA's expectation for its customers and employees is to always behave in an upright and honest manner. ACWWA strives to develop and maintain trust with its customers through honest and transparent actions
- **Accountability:** ACWWA conducts a vital service to our community and strives to execute its mission and vision on a daily basis. ACWWA is accountable to its customers and to the State of Colorado to meet all necessary regulations. ACWWA strives to be transparent in what it does, through open meetings, an informative website, newsletters and customer service.
- **Efficiency:** Through proper planning and execution of ACWWA's mission, vision and values, ACWWA strives to perform its responsibilities in the most efficient and beneficial manner to our customers. ACWWA is focused on utilizing our resources optimally to deliver value to our customers.



BNR Walkway at the LTCRF

5. ACWWA's Service Area

5.1 Demographic and Economic Activity Information

Included in this section is historical and demographic and economic information relevant to the Denver metropolitan area, Arapahoe County and ACWWA's budget.

5.2 Population

The following table provides a history of the populations of Arapahoe County, the Denver-Aurora Core Based Statistical Area (the "Denver PMSA") and the State. The Denver-Aurora PMSA is comprised of six metropolitan counties: Adams, Arapahoe, Broomfield, Denver, Douglas, and Jefferson. Between 2010 and 2022, the population of Arapahoe County increased 14%, and the populations of the Denver-Aurora PMSA and the State increased 16.9% and 15.7%, respectively.

Year	Arapahoe County	Percent Change	Denver PMSA	Percent Change	Colorado	Percent Change
1990	391,511	33.3	1,650,486	13.8	3,294,394	14.0
2000	490,722	25.3	2,144,968	30.0	4,338,785	31.7
2010	575,067	17.2	2,554,106	19.1	5,047,005	16.3
2011	586,147	1.9	2,600,806	1.8	5,119,188	1.4
2012	596,529	1.8	2,646,393	1.8	5,188,703	1.4
2013	608,322	2.0	2,694,842	1.8	5,263,512	1.4
2014	618,665	1.7	2,746,356	1.9	5,342,996	1.5
2015	630,411	1.9	2,803,288	2.1	5,442,196	1.9
2016	638,071	1.2	2,845,074	1.5	5,529,161	1.6
2017	643,293	0.8	2,877,961	1.2	5,600,169	1.3
2018	650,347	1.1	2,915,881	1.3	5,677,250	1.4
2019	653,751	0.5	2,944,333	1.0	5,735,934	1.0
2020	655,207	0.2	2,969,922	0.9	5,784,865	0.9
2021	656,557	0.2	2,977,833	0.3	5,811,297	0.5
2022	655,808	-0.1	2,985,871	0.3	5,839,926	0.5

(1) Population of the Denver-PMSA adjusted by Colorado State Demography Office to reflect the 2001 creation of the City and County of Broomfield.

Sources: Colorado State Demography Office (subject to periodic revision).

5.3 Income

The following table sets forth the annual per capita personal income levels for the residents of

Per Capita Personal Income

<u>Year⁽¹⁾</u>	<u>Arapahoe County</u>	<u>Denver PMSA</u>	<u>Colorado</u>	<u>United States</u>
2011	\$ 48,044	\$ 47,633	\$ 43,732	\$ 42,747
2012	49,325	49,749	45,490	44,548
2013	49,269	51,706	47,082	44,798
2014	52,522	55,328	50,244	46,887
2015	54,025	55,702	51,394	48,725
2016	55,378	55,105	51,306	49,613
2017	55,996	58,947	54,171	51,550
2018	61,250	63,534	57,794	53,786
2019	64,485	67,568	61,258	56,250
2020	69,132	71,515	64,852	59,765
2021	72,518	79,438	71,923	64,430
2022	76,304	84,788	75,722	65,470

(1) Figures updated through 2022.

All figures are subject to periodic revisions.

Source: United States Department of Commerce, Bureau of Economic Analysis.

Arapahoe County, the Denver-Aurora PMSA, the State and the nation.

5.4 Employment

The following table sets forth the number of individuals employed within selected Arapahoe County industries which are covered by unemployment insurance. In 2022, the largest employment sector in Arapahoe County was health care and social assistance (comprising approximately 14.3% of the county's work force), followed, in order, by retail trade, professional and technical services, finance and insurance, and administrative and waste services. For the twelve-month period ended December 31, 2022, total average employment in the County remained relatively unchanged as compared to the same period ending December 31, 2021.

Average Number of Employees within Selected Industries – Arapahoe County

<u>Industry</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Accommodation and Food Services	26,942	26,939	26,951	26,962	25,837
Administrative and Waste Services	27,411	27,622	27,921	27,924	23,286
Agriculture, Forestry, Fishing, Hunting	119	124	185	185	135
Arts, Entertainment and Recreation	6,106	6,331	6,171	6,458	5,911
Construction	21,769	22,805	22,870	23,065	23,586
Educational Services	22,632	22,399	22,640	22,594	23,431
Finance and Insurance	29,159	28,891	27,624	25,656	24,404
Government	13,079	13,373	14,293	13,668	14,132
Health Care and Social Assistance	42,754	43,572	44,248	44,886	47,792
Information	18,136	18,203	18,849	19,169	17,624
Management of Companies/Enterprises	8,661	8,743	9,059	9,059	8,472
Manufacturing	7,891	8,209	8,415	8,415	9,083
Mining	675	683	625	625	429
Non-classifiable	13	30	30	31	9,609
Other Services	9,316	9,528	9,835	9,835	21
Professional and Technical Services	31,878	33,178	34,607	34,707	39,721
Real Estate, Rental and Leasing	6,381	6,681	6,598	6,696	7,044
Retail Trade	34,774	33,916	33,381	33,461	32,025
Transportation and Warehousing	5,138	5,554	5,282	6,096	6,875
Utilities	256	267	202	293	277
Wholesale Trade	15,032	14,741	14,986	14,986	14,609
Total All Industries ⁽¹⁾	<u>328,120</u>	<u>331,789</u>	<u>334,772</u>	<u>334,771</u>	<u>334,303</u>

(1) Figures may not equal totals when added due to the rounding of averages or the inclusion in the total figure of employees that were not disclosed in individual classifications.

Source: State of Colorado, Department of Labor and Employment, Labor Market Information, Quarterly Census of Employment and Wages (QCEW).

The following table presents information on employment within Arapahoe County, the Denver-Aurora PMSA, the State and the nation, for the period indicated. The annual unemployment figures indicate average rates for the entire year and do not reflect monthly or seasonal trends.

<u>Year</u>	<u>Arapahoe County⁽¹⁾</u>		<u>Denver-Aurora PMSA⁽¹⁾</u>		<u>Colorado⁽¹⁾</u>		<u>United State</u>
	<u>Labor</u>	<u>Percent</u>	<u>Labor</u>	<u>Percent</u>	<u>Labor</u>	<u>Percent</u>	<u>Percent</u>
	<u>Force</u>	<u>Unemployed</u>	<u>Force</u>	<u>Unemployed</u>	<u>Force</u>	<u>Unemployed</u>	<u>Unemployed</u>
2015	334,380	3.7%	1,514,908	3.0%	2,843,689	3.2%	5.0%
2016	340,623	3.1	1,544,387	2.5	2,907,097	2.6	4.7
2017	347,523	2.7	1,591,613	2.6	2,996,791	2.7	4.1
2018	356,525	3.2	1,630,679	2.9	3,074,076	3	3.9
2019	361,796	2.4	1,663,981	2.5	3,126,290	2.6	3.6
2020	359,977	6.9	1,652,656	6.5	3,105,599	6.4	6.7
2021	367,171	4.1	1,709,330	3.9	3,184,836	3.9	3.9
2022	374,024	2.5	1,720,339	2.5	3,202,346	2.5	3.5
<u>Month of September</u>							
2023	378,283	3.2%	1,741,184	3.3%	3,255,124	3.3%	3.80%

(1) Figures for Arapahoe County, the Denver-Aurora PMSA and the State are not seasonally adjusted.

Source: State of Colorado, Department of Labor and Employment, Labor Market Information and United States Department of Labor, Bureau of Labor Statistics.

5.5 Major Employers

The following table provides a brief description of the largest private employers located within Arapahoe County. No independent investigation of the stability or financial condition of the employers listed hereafter has been conducted and, therefore, no representation can be made that such employers will continue to maintain their status as major employers in the area.

Top Ten Private Employers in Arapahoe County

Name of Employer	Product or Service	Number of Local Employees (1)
Comcast	Telecommunications	5,910
HealthONE	Healthcare	4,210
Charter Communications	Telecommunications	3,770
UnitedHealthcare	Insurance	3,620
DISH Network	Satellite TV & Equipment	3,510
Empower Retirement	Insurance & Retirement Savings Services	3,000
Centura Health	Healthcare	2,890
Raytheon Company	Aerospace Systems & Software	2,560
Lumen Technologies	Telecommunications	2,400
Kaiser Permanente	Healthcare	2,240

(1) Figures revised September 2023.

(2) HealthONE includes Medical Center of Aurora, Spalding Rehabilitation Center and Swedish Medical Center.

(3) Centura Health includes Centura Health Corporate Headquarters and Littleton Adventist Hospital.

Source: Development Research Partners as posted by Metro Denver Economic Development Corporation.

5.6 Building Activity

The following table provides a history of building permits issued for new construction in Arapahoe County for the years indicated.

Building Permits Issued in Arapahoe County

<u>Year</u>	<u>Single Family</u>		<u>Multi-Family</u> ⁽¹⁾		<u>Commercial/Industrial</u> ⁽²⁾	
	<u>Permits</u>	<u>Value</u>	<u>Permits</u>	<u>Value</u>	<u>Permits</u>	<u>Value</u>
2019	4,911	217,163,083	-	-	160	102,625,471
2020	4,310	230,000,985	1	4,340	464	110,976,992
2021	3,475	208,653,781	3	1,085,849	297	167,287,158
2022	3,277	133,107,266	-	-	389	128,395,425
2023 ⁽³⁾	5,455	136,576,984	48	28,881,923	265	143,278,790

(1) Includes apartments, condominiums and townhomes.

(2) Includes commercial remodel, addition, new structure or tenant finish.

(3) Figures are for January 1 through October 31, 2023.

Source: Arapahoe County Public Works and Development Department, Building Division.

5.7 Foreclosure Activity

The following table presents historical information on foreclosure filings. Such information represents the number of foreclosures filed, but does not take into account the number of foreclosures which were filed and subsequently redeemed or withdrawn.

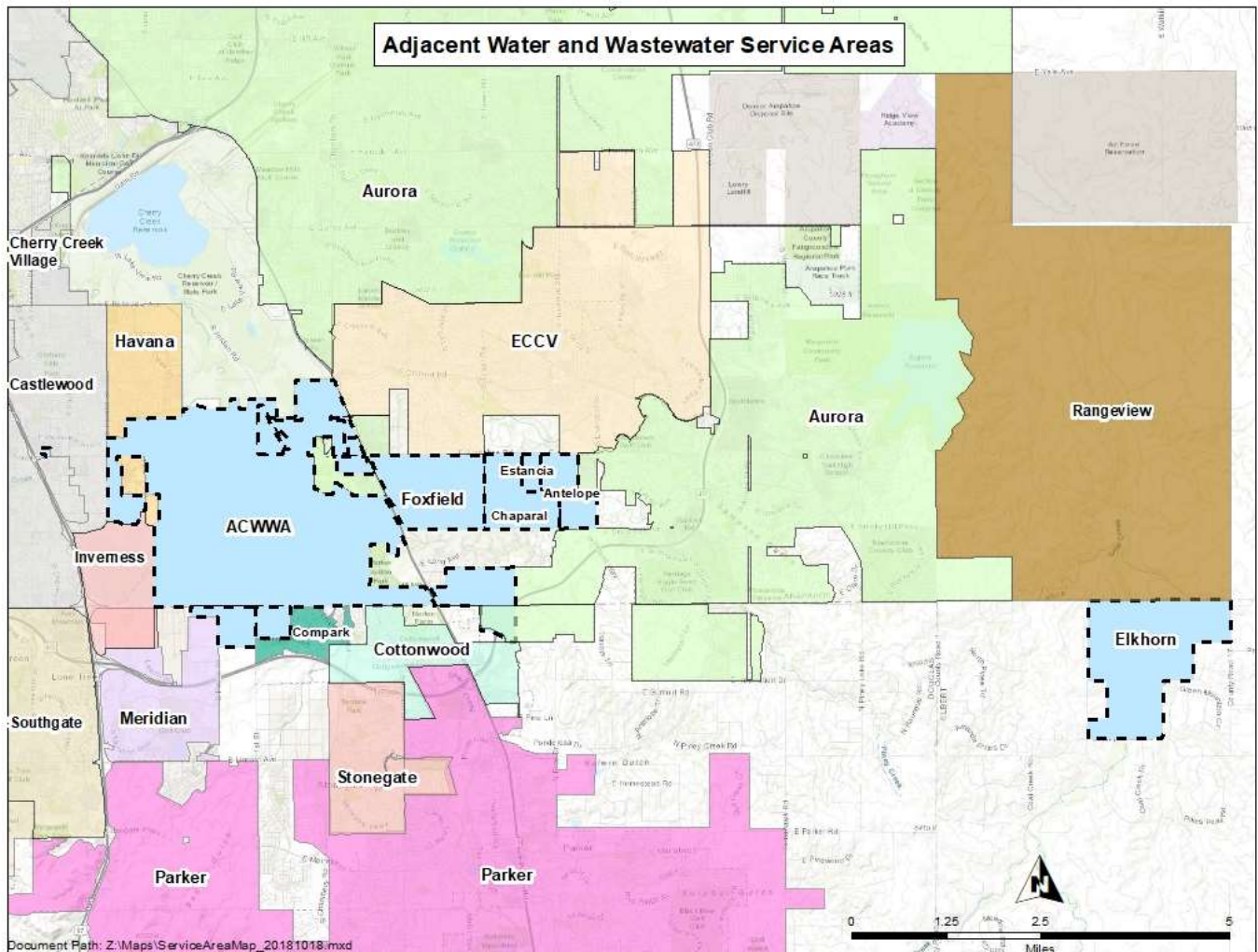
History of Foreclosures – Arapahoe County

<u>Year</u>	<u>Number of Foreclosures Filed</u>	<u>Percent Change</u>
2015	858	-
2016	731	-14.8%
2017	706	-3.4%
2018	638	-9.6%
2019	638	0.0%
2020	217	-66.0%
2021	103	-52.5%
2022 ⁽¹⁾	550	434.0%

(1) Figures are for January 1 through December 2022.

Sources: the Arapahoe County Office of the Public Trustee

5.8 Service Area Map



6. Water Supply

At full build-out of the current service area, ACWWA estimates that demand will be approximately 7,000 acre-feet per year. In 2010, ACWWA began developing the ACWWA Flow Project, and has purchased water rights with an estimated average yield of 4,400 acre-feet. ACWWA has a diversified water rights/supply portfolio that includes non-tributary groundwater from the Denver Basin Aquifer, senior water rights on Cherry Creek and tributary surface water rights in the South Platte Basin. ACWWA also utilizes augmentation plans to allow ACWWA the ability to maximize the use of its water supplies.

ACWWA further optimizes its water supply by operating a non-potable irrigation system and a reuse irrigation system. The non-potable irrigation system will include the use of Chambers Reservoir, a 1,400-acre-foot reservoir located at the southwest corner of Chambers Road and E-470. Reservoir construction has been completed and filling has commenced. It is anticipated that the reservoir will be operational as part of the non-potable system beginning in Summer 2024.

6.1 The ACWWA Flow Project

In the early 2000's, ACWWA's leadership recognized that additional water supply would be needed for ACWWA's future. The new water supply would address the increased water demand from growth, but also provide for current customers who were being served in part by non-tributary groundwater wells. Due to the heavy use of non-tributary groundwater wells in the Front Range, the production of these wells is anticipated to drop over time and a replacement water source would become necessary.

In 2010, after evaluating multiple options, the ACWWA Board approved a project to develop renewable water supplies. The project, named the "ACWWA Flow Project," includes the purchase and adjudication of 4,400 acre-feet of average yield consumptive use surface water rights from the South Platte Basin. It also includes the necessary infrastructure to store, treat and deliver that water to the ACWWA service area.

ACWWA used a portion of the 2010 Series Bonds net proceeds to acquire the ACWWA Flow water rights. Infrastructure for treatment, storage, and delivery of the new water rights must be constructed. Several proposed facilities will require environmental and other permits which have not yet been issued; ACWWA cannot guarantee that such permits will be issued.

The ACWWA Flow water rights are being adjudicated in the District Court in and for Water Division No.1 in Greeley, Colorado (Water Court). ACWWA expects this water to provide a secure water supply to meet its anticipated future demands and will be enhanced by ACWWA's ability to reuse its water supply. However, unlike non-tributary groundwater, surface water rights are impacted by variable hydrologic conditions. It is anticipated that ACWWA's portfolio of non-tributary groundwater and Cherry Creek water rights will provide water in drought years to supplement surface water rights from the ACWWA Flow Project.

In order to be allowed permanent use for a municipal water supply, the water rights must be successfully adjudicated in Water Court. ACWWA began the adjudication of the ACWWA Flow Project water rights in 2010, and that process continues with over 80% of the water rights adjudicated and the remaining in process. ACWWA has also successfully adjudicated an augmentation plan, in addition to the water rights. The ACWWA Flow Project is currently delivering about 2,000 acre-feet of water annually, or just over 60% of ACWWA's current potable water demand and is providing a more diversified water supply as well as improved water quality to ACWWA customers. ACWWA began delivering ACWWA Flow water to its service area in 2013.

In 2024, ACWWA will continue to develop this project and work to adjudicate the remaining water rights. In early 2024, ACWWA will acquire additional capacity in a storage reservoir in the South Platte Basin to increase the effective yield of the water from the Project. In 2018, ACWWA invested in a second deep injection well constructed at the East Cherry Creek Valley Water and Sanitation District (ECCV) Water Treatment Plant and participated in the expansion of the Northern Water Treatment Plant. ACWWA owns capacity in this plant to treat its ACWWA Flow Project water supply.

7. Accomplishments

2023 has been another productive year for ACWWA. ACWWA has been able to accomplish many critical tasks to continue to adhere to our Mission and Vision, even as we work through a pandemic. A few highlights are:

- We finished a number of critical Capital Improvement Projects, one very important project this year was the improvements to the VCC Lift Station – this station was damaged during a flash flooding event several years ago, fixes were made then, but ACWWA wanted to create a more sustainable fix that was accomplished this year
- We completed our Strategic Asset Management Plan this year. This laid out a road map ACWWA can use to develop and implement a sustainable program that will align with ACWWA's mission and vision. This is one of the most important aspects of ACWWA and this plan has provided good support for our future.
- We successfully sampled for Lead and Copper with all results being below actionable CDPHE limits.
- LTCWRF continues to participate in the Colorado Wastewater Collaborative effort. This is a volunteer program headed up by CDPHE that tests for the presence of communicable diseases within our district.
- ACWWA's Chambers Reservoir is over 70% full with the expectation that it will be filled by next spring. This is key to our water supply reliability.
- ACWWA continues to train and prepare for future emergencies. We conducted Table Top sessions to run through scenarios, get our key people trained as well. We handled three major issues in 2023 that could have resulted in customer service outages or other, but due to how we handled them, there were no service interruptions.
- ACWWA staff had no lost time accidents in 2023 for a seventh consecutive year.
- ACWWA Employees achieved 8 new and renewing certifications in its field operations, plant operations and maintenance departments in 2023.



8. Budget Process and Timeline

8.1 Budget Preparation

ACWWA prepares an annual budget to provide a blueprint for operations for the coming year. Copies of the draft and final budget will be made available to all interested parties and opportunities will be provided for public input prior to final adoption. Each year, as part of the budget process, ACWWA's goals and objectives are reviewed and updated as necessary to reflect current challenges as well as changed conditions. Staff also seeks direction from the Board of Directors.

8.2 Budget Calendar

<u>Date</u>	<u>Activity</u>
August 2023	Director of Finance meets with Executive Team and department heads to determine staffing levels, expense budgets, and capital outlay needed for 2023; begin developing budget.
September 2023	Staff presents draft 2023 budget to the Finance Committee on October 6 th and to the full Board on September 7 th . Staff continues to develop the budget.
December 2023	On December 14 th , the Board adopts the budget and holds rate hearing.
January 2024	No later than 30 days following the beginning of the fiscal year of the budget adopted, the budget is filed with the State of Colorado.

8.3 Annual Budget Statutory Requirements

ACWWA's annual budget is prepared and adopted under the provisions of C.R.S. §29-1-113. ACWWA's fiscal year is January 1 through December 31.

On or before October 15 of each year, ACWWA's Director of Finance and Business Operations submits a draft budget to the Governing Board. The budget covers proposed operations and funding requirements for the ensuing fiscal year. On or before December 31 of the current year the Governing Board adopts the budget. ACWWA advertises all required meetings of budget discussions along with the intent to adopt the budget.

A resolution adopting the budget and appropriating the funds is filed with ACWWA's Director of Finance, whose duty it is to disburse monies or issue orders for the payment of monies as required by statute. The final adopted budget for ACWWA is the operating and fiscal guide for the ensuing year.

8.4 Budget Amendments

A budget amendment is defined as any action that increases or decreases total appropriated fund amounts in ACWWA's adopted budget. Budget amendments could be caused by various reasons, such as:

- The availability of more accurate information after the budget is adopted;
- Modified operating requirements;
- Year-end accounting adjustments.

Budget amendments must follow strict statutory guidelines. The intent to amend the budget and the notice of the Governing Board meeting and Public Hearing at which the amendment will be considered and potentially receive approval must be published in a newspaper that has general circulation within the ACWWA service area.

8.5 Lapse of Appropriations

All unexpended appropriations expire at the end of the fiscal year pursuant to C.R.S. §29-1-108 (6).

8.6 Budget Transfers

Budget transfers are defined as any action that changes the budget amount associated with a service, as adopted by the Governing Board. Budget transfers change budget amounts from one line item to another. It is important to note that budget transfers, unlike budget amendments, do not change total overall budget appropriation levels. Budget transfers may be processed by action of the General Manager.

8.7 Filing of the Budget

No later than thirty days following the beginning of the fiscal year of the budget adopted, the governing body shall cause a certified copy of the budget, including the budget message, to be filed with the State of Colorado pursuant to C.R.S. §29-1-113 (1).

8.8 Financial Structure

The State of Colorado and Generally Accepted Accounting Principles govern the use of funds and the budgeting, accounting and auditing associated with this fund structure, as determined by the Governmental Accounting Standards Board.

ACWWA works in concert with Arapahoe County to accomplish water management objectives. The primary authority for the operation of ACWWA is an IGA between Arapahoe County and the PID. ACWWA's budget includes all operations over which ACWWA is financially accountable. ACWWA has one fund, a general fund. There are no component units required for inclusion in ACWWA's budget; however, ACWWA is a component unit of Arapahoe County.

The primary budgetary objective is to provide the highest possible level of service to ACWWA's project participants without impairing ACWWA's sound financial condition. Continual efforts are made to improve productivity, lower costs and enhance service. ACWWA will endeavor to keep current expenditures less than current revenues. Current expenditures are defined as operating expenses, debt payments and capital improvement expenditures.

ACWWA will maintain a budgetary control system to ensure adherence to the budget and will prepare regular reports comparing actual revenues and expenditures to the budgeted amounts. Law and policies limiting revenue sources and expenditures must be explicitly addressed in the budget process. The Governing Board will not establish a goal or policy without also providing the necessary funding to accomplish those goals or policies.

The adopted budget may only be changed through actions by the Governing Board. Staff may make budget change requests to the Governing Board at a regularly scheduled Board meeting. The Governing Board will then consider the requests based on staff's recommendations and approve or deny the requests by a majority vote.

8.9 Budgetary Control

ACWWA's Finance Department prepares interim financial statements with comparison to budget on a monthly basis for review by the Board.

8.10 Contacting ACWWA's Finance Department

This financial report is designed to provide the Board, customers, creditors and investors with a general overview of the Authority's financial condition. Should you have any questions regarding the content of this document, please contact ACWWA at (303) 790-4830.

EXECUTIVE SUMMARY



Exterior of LTCRF BNR's and Walkway

9. Executive Summary

The 2024 Budget for ACWWA includes both operating and non-operating components. It was prepared by ACWWA's Finance Department in accordance with Generally Accepted Accounting Principles (GAAP) and State of Colorado budgetary requirements. We believe the data presented is accurate in all material respects and is presented in a manner designed to fairly set forth the financial position of ACWWA.

ACWWA has one enterprise fund and distinguishes operating revenues and expenditures from non-operating items. Operating revenues and expenditures generally result from providing services and delivering water in connection with the ongoing operations. The principal operating revenues of the Authority are charges to customers for services. Operating expenditures include the cost of providing services, administrative expenses, and depreciation on capital assets. All revenues and expenditures not meeting this definition are reported as non-operating revenues and expenditures.

9.1 Significant Budgetary Items and Trends

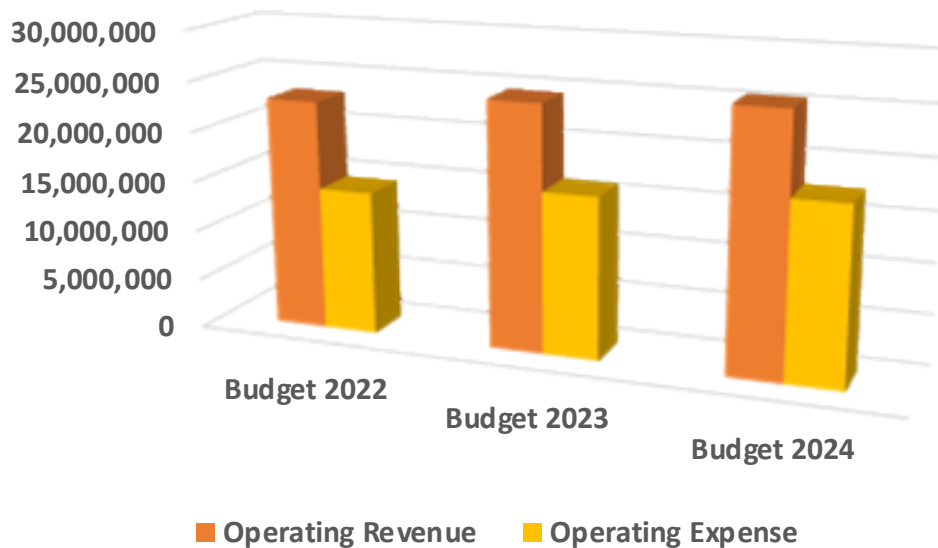
The 2024 budget provides funds for an optimal level of expense needed to operate ACWWA in order to provide effective service to ratepayers, maintain the current infrastructure, and add the necessary capital improvements to ensure future operations. ACWWA conducted a cost of service study in 2022 to ensure that rates are adequate to fund current operations. As the infrastructure ages, continued investment in the system will be needed to keep it functioning at a high level. Key components of the 2024 budget include:

- Water volume rate and water service fee increases of 3%;
- Wastewater volume rate and wastewater service fee increases of 2%;
- Water tap fee increase of 3%; wastewater tap fee increase of 2% for a combined tap fee increase of 2.5%;
- Operating revenue of \$25.6 million;
- Operating expenses of \$17.6 million;
- Non-operating revenue of \$6.1 million, tap and extraterritorial fees of \$4.6 million and investment income of \$1.5 million.
- Non-operating expenditures of \$29.4 million comprised of debt service payments of \$7.8 million and capital spending of \$21.6 million, including over \$9.8 million in capital costs that are being carried over to 2024 from the 2023 budget;
- ACWWA is able to fund necessary capital improvements for the next several years without incurring new debt; however, a bond issue may be necessary in the future to help fund system improvements.

- Of the 40 positions budgeted, there is currently 1 unfilled position authorized to assist ACWWA in the high level of activity is experiencing and may be filled to allow for additional capacity to ensure ACWWA's level of service commitments.

9.2 Operating Budget

Budgeted Operating Revenue and Expense Comparison



Operating Budget 2022 - 2024

Operating Revenue

Operating revenue is projected to be \$25.6 million in 2024, which reflects an increase of \$1.1 million over the 2023 budget, and an increase of \$2.1 million from 2023 estimated operating revenue.

Water Charges

Water charges revenue for 2024 is budgeted to increase \$470,000 or 3.0% over 2023 estimated revenue. Consumption and fee revenue will increase by a 3% rate factor and a 1% account growth factor.

Sewer Charges

Based on 2023 results escalated for account growth and rate increases, wastewater revenue is expected to increase \$615,000, or 2% compared to forecast 2023 revenue. Budgeted 2024 revenue includes a 2% volume increase and a 1% account growth factor.

Fire Lines

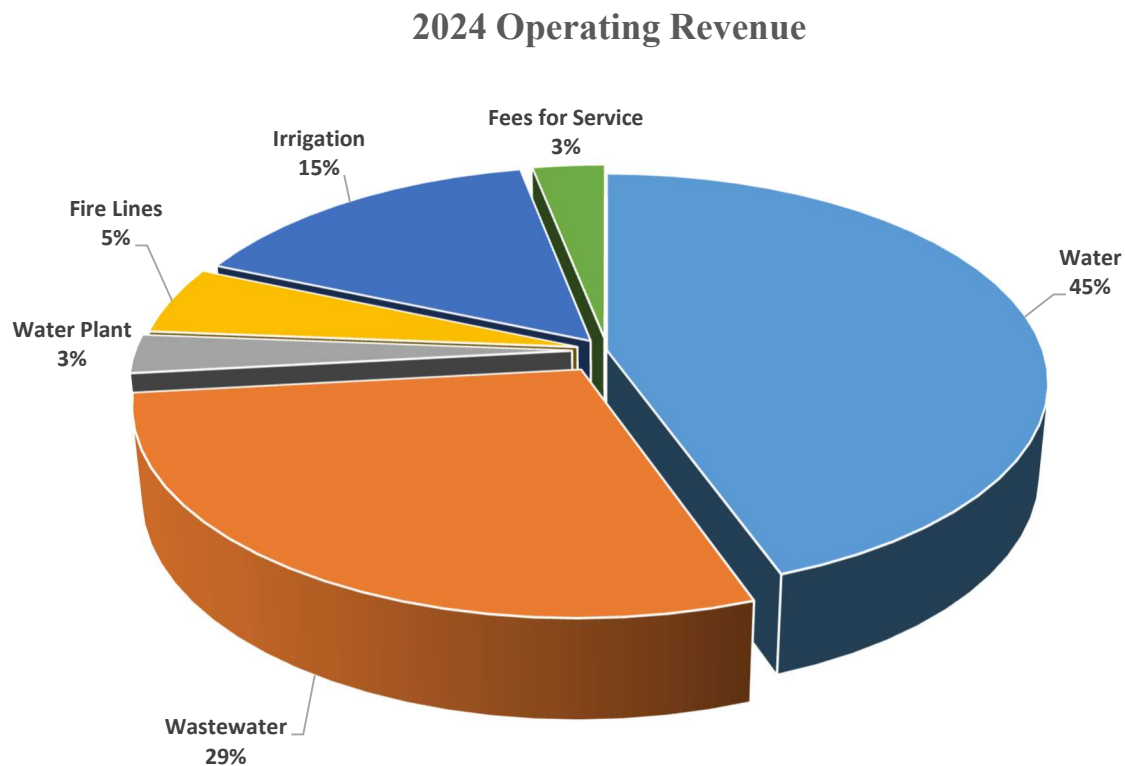
Fire line stand-by revenue is anticipated to increase by a 3% volume increase and a 1% account growth factor.

Irrigation Revenue

Irrigation revenue is expected to be \$1.7 million less than budget for 2023 due to an usually large amount of summer precipitation. The budget for 2024 reflects an increase of \$81,000 from the 2023 budget, and an increase of \$1.8 million from estimated 2023 revenue.

Fees for Service

Fees for service are budgeted to decrease \$3,000 for 2024 in comparison to the 2023 budget as a result of lower anticipated fees.



Operating Expenses

The 2024 operating expense budget reflects a 9.0% overall increase from 2023 budgeted operating expenses. Expenditures of \$17.6 million are budgeted to be \$1.4 million higher than the 2023 budget. Increases in anticipated utility costs is the primary driver the budgeted increase. In addition, costs associated with new repairs and maintenance projects, industrial pre-treatment outsourced services and ACWWA Flow water treatment costs

Salaries and Benefits

The 2024 salaries and benefits budget reflect an increase of 3.9% from the 2023 budget and includes 40 FTEs for the entire year. Compared to 2023 estimated costs of \$4.4 million, salaries and benefits expense in 2024 will be \$848,000 higher due to open positions being filled in 2024 to meet capacity and service level demands, a 4.5% overall salary adjustment and a 5% increase in medical benefit premiums.

Office Expenses

The budget for 2024 office expenses reflects a 1% estimated increase in year-over-year budgeted costs. Included is funding for asset management, compliance and document management software.

Professional Fees

The 2024 budget for professional fees of \$1.35 million is \$280,000, or .26% higher than the 2023 budget. The outsourcing of industrial pre-treatment is the primary driver at an additional \$220,000. The professional fees budget includes legal, general engineering, development, and other consultant support, water rights protection and accounting, audit fees, information technology maintenance and support, new software program implementation, and any other outsourcing needs.

Repairs and Maintenance

The repairs and maintenance budget of \$1.7 million reflects an increase of \$268,000 compared to the 2023 budget. For 2024, sewer camera and jetting will be prioritized. Additionally, staff will continue to focus on fire hydrant repairs, meter replacements and other routine maintenance.

Insurance

General liability, property, and workers' compensation insurance premiums are expected to increase an average of 42% from 2023 levels in 2024. ACWWA anticipates a decrease in its workers' compensation premiums, as the experience rating will decline in 2024 due to consecutive years with no time lost to accidents.

Operational Expenses

Operational expenses are projected to increase \$286,000 from forecasted 2023 expenses, and \$192,000 from 2023 budgeted expenses. This increase is entirely due to an increase in water treatment and additional fees related to the ACWWA Flow project.

Contract Services

This line item is comprised mainly of sludge hauling. Due to increased service fees the 2024 budget anticipates a year over year increase \$57,000 from 2023.

Utilities

The 2024 budget for utilities expense is \$1.8 million, reflecting an increase from 2023 of \$355,000. Significant rate increases experienced in the later part of 2023 are the primary driver.

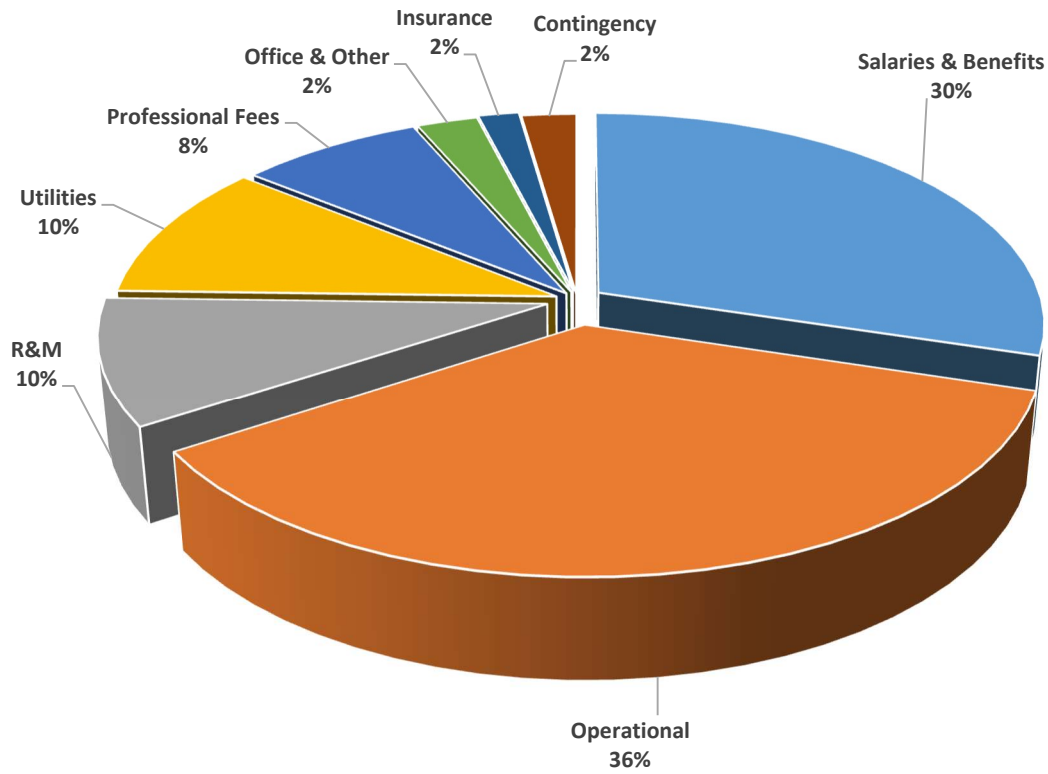
Other Supplies and Expense

There are no increases budgeted in this category.

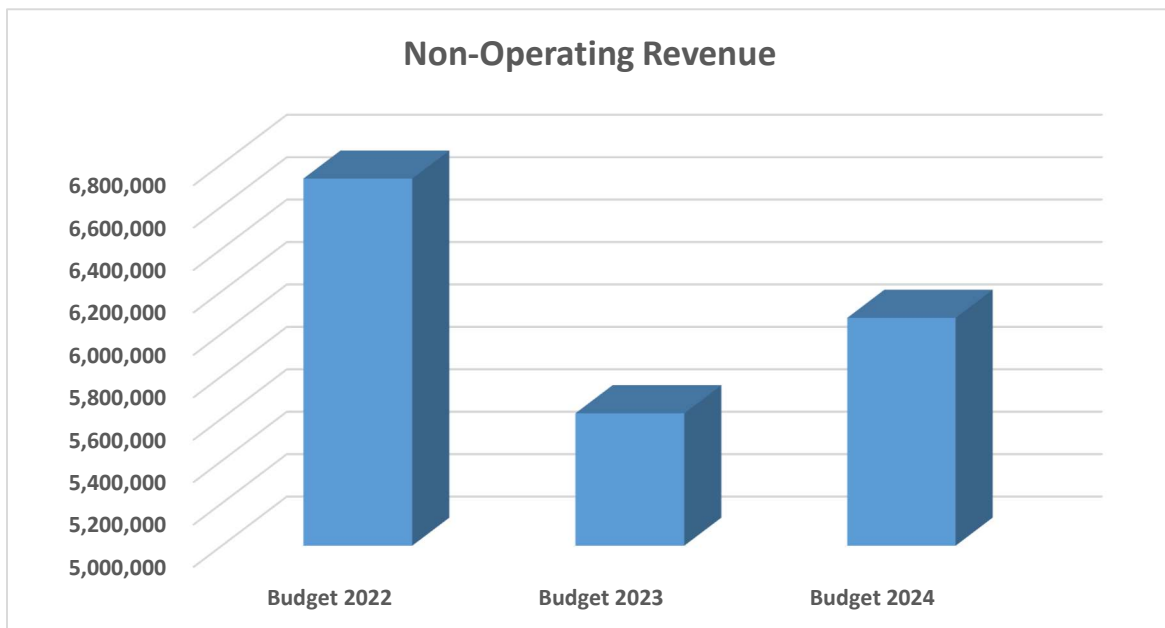
Contingency

A contingency budget of \$400,000 was included to fund unanticipated expenses such as major emergency system repairs. In years past, ACWWA has experienced several major line breaks that have been quite costly to repair, as well as the failure of the Valley Country Club lift station in June 2019. As the water and wastewater systems infrastructure age, line breaks and other issues will become more common, even with a robust preventive maintenance program such as ACWWA's. The contingency line also includes provisions for unexpected legal costs and professional services projects directed by the Board.

2024 Operating Expenses



9.3 Non-operating Budget



Non-operating Revenue:

Non-operating revenue, comprised primarily of tap and water resource fees, is budgeted to increase \$450,000, or 8% from budgeted 2023 revenue due an increase in investment income but is being offset by a decrease in the tap and extraterritorial fees.

Interest Income

In 2018, ACWWA further diversified its portfolio by investing in two pooled investment trust funds designed for local governments, Colotrust (Colorado Local Government Liquid Asset Trust) and CSAFE (Colorado Surplus Asset Fund Trust). In 2024 ACWWA expects to draw down its reserves to pay for necessary capital improvements but due to increased interest rates it is anticipated that the budget for the year will be \$1.5 million or \$1.2 million greater than the 2023 budget.

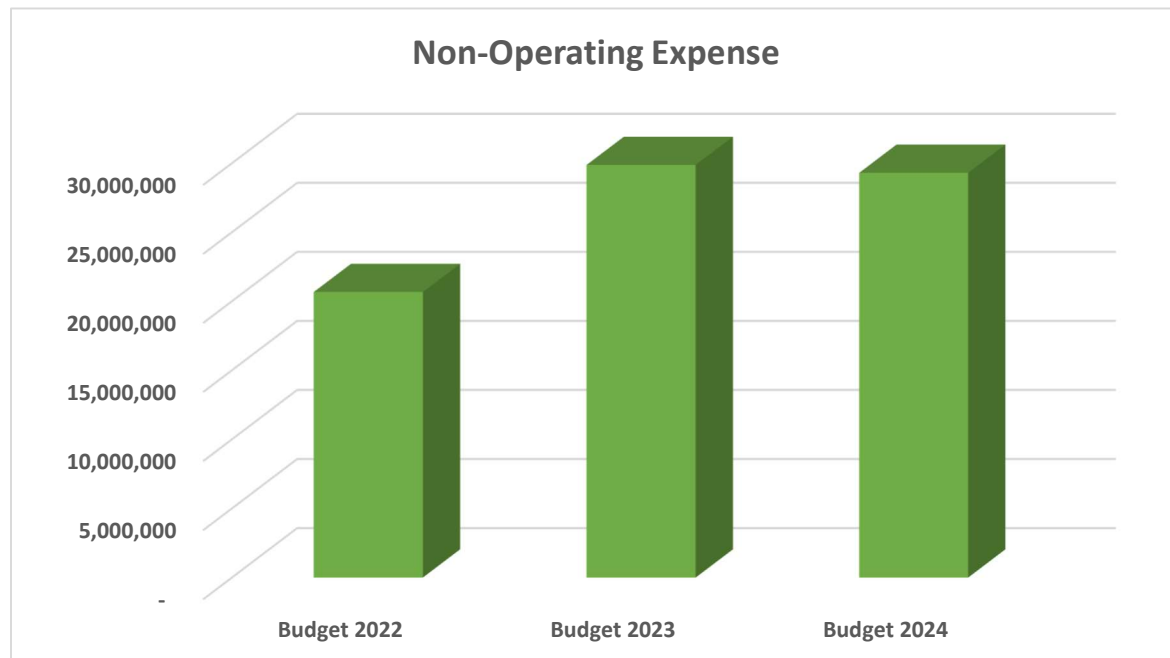
Miscellaneous Revenue

Miscellaneous revenue is comprised of Chapparral water system payments, ditch company distributions, and fire flow revenue. ACWWA receives \$147,136 per year until 2038 from Chapparral Metro District to offset their portion of the water component of the ACWWAPID.

Tap Fees and Contributions

Both water and wastewater tap sales are anticipated to decrease in 2024 from the high levels experienced in prior years. Increases in the costs of building materials and supply interruptions are expected to slow growth in both residential and commercial development. ACWWA has been seeing the decrease in construction activity in its service area through one key indicator, number of construction hydrant meters that are rented out. ACWWA has budgeted for sales of

100.0 tap equivalents (TEs) in 2024. As of the end of 2023, ACWWA currently has approximately 200 taps in process and/or under review.



Non-operating Expenses

Non-operating expenses are budgeted to decrease approximately \$569,000, or 2%, over 2023 budgeted expenditures due to slightly less project expenses. \$9.7 million carryover project costs not completed in 2023 due to staffing constraints and supply chain issues are budgeted for 2024.

Debt Service

Debt service is expected to increase \$5,600.

Capital Outlay

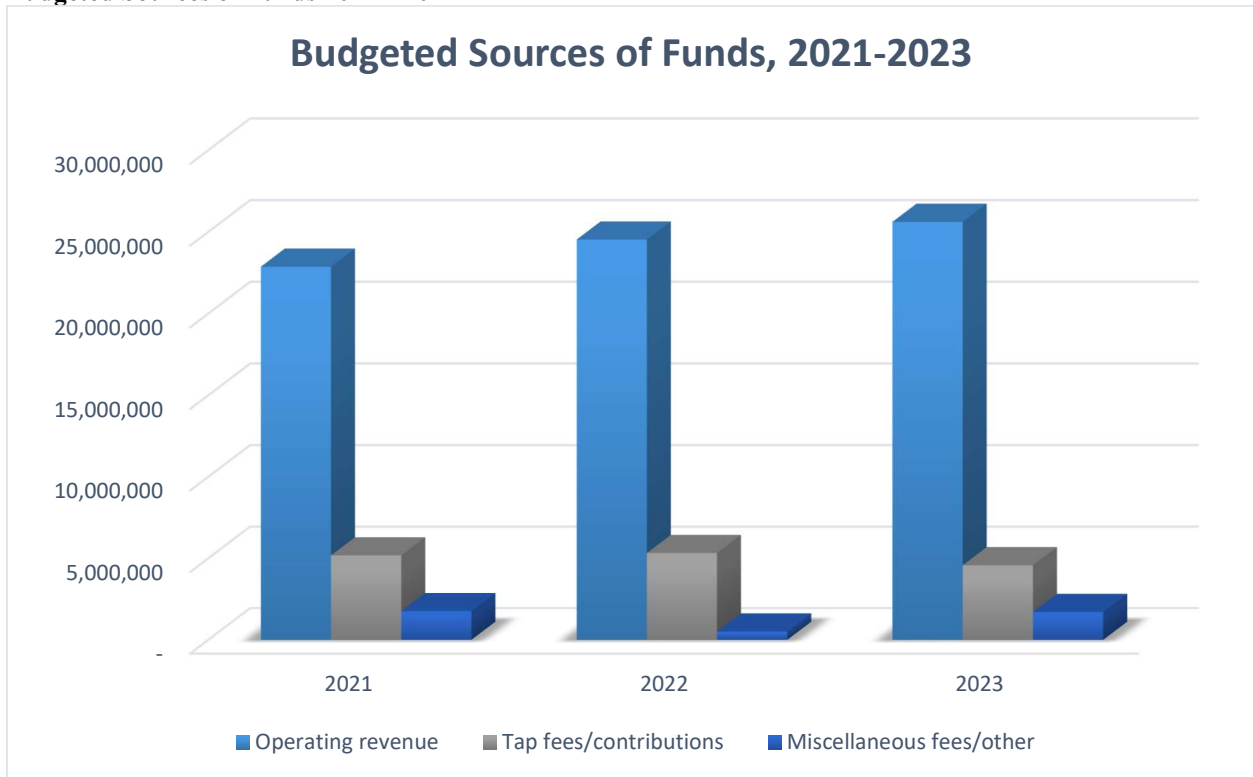
Of the \$21.6 million capital budgeted for 2024, \$9.8 million is carried over from the 2023 capital budget for projects that were approved and budgeted for in prior years but that have not yet been completed. These projects are funded from prior year reserves. A detailed list of 2024 capital projects can be found in §10.

9.4 Long-range Financial Plan

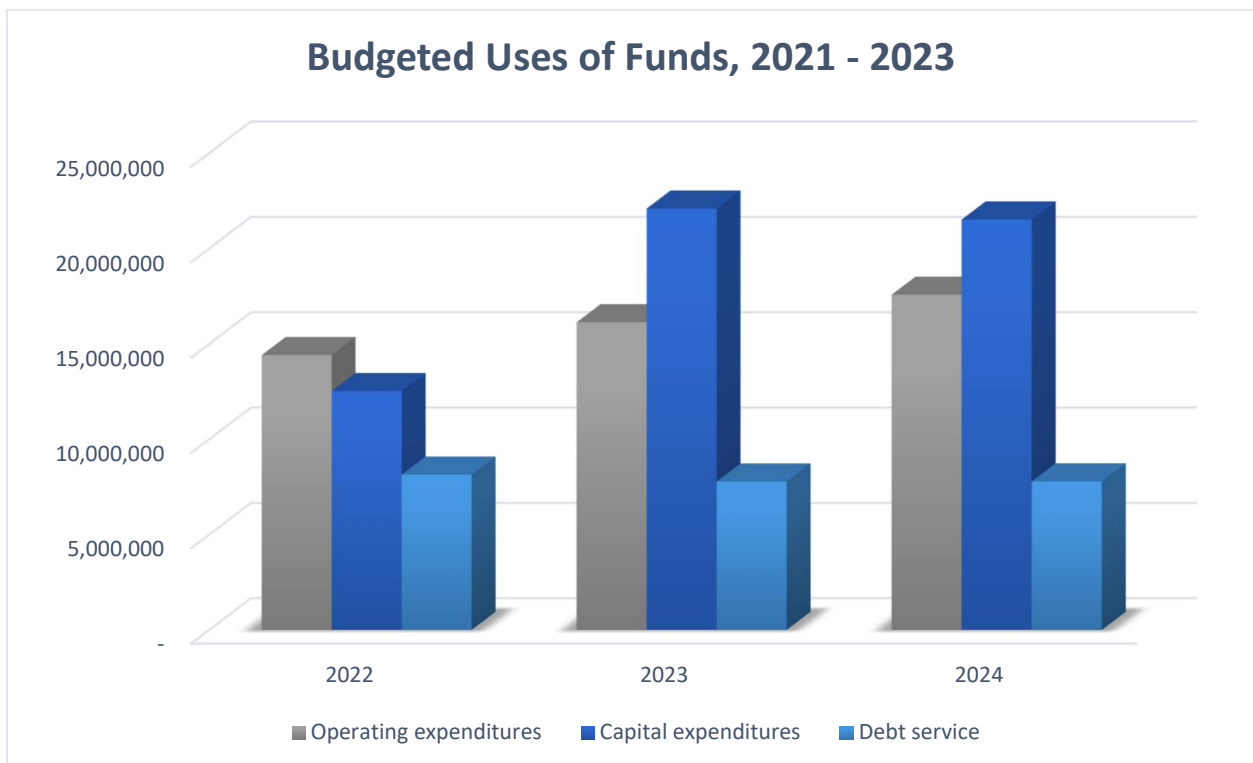
In late 2021, ACWWA engaged Raftellis Engineers to conduct a cost of service study that was finalized in the third quarter of 2022. Based on financial trends through 2021, Raftellis projected that ACWWA would need to raise water and wastewater rates 3%, respectively, each year to fund operations and projected capital needs. ACWWA does not have taxing powers and thus must fund capital projects through a combination of cash provided by rates and fees, and debt financing.

9.5 Sources and Uses of Funds (Budgeted)

Budgeted Sources of Funds 2022 – 2024



Budgeted Uses of Funds 2022 -2024



10. 2024 Capital Improvements Program

ACWWA's Capital Improvements Program (CIP) is a key component of the budget, as it identifies the critical projects required to ensure ACWWA can meet the needs of its customers. The major projects in the 2024 capital improvement budget are listed in this section.

PROJECTS

1-MG Tank Booster Pump Station Renovation

The booster station is a critical part of ACWWA's drinking water distribution system. The pump VFD's are old and obsolete making maintenance and repair difficult. The pump/motors were installed in 1998 and have reached the end of their expected useful life. The control panel/program is extremely dated and in need of updating. The pump station roof is leaking and in need of repair.

ACWWA Flow Renew and Replace

This is the annual contribution to the fund designated for the replacement of Northern Treatment Plant equipment and infrastructure. ACWWA's contribution is 26.25% of \$500,000.

ACWWA Flow Water Rights Adjudication Costs

Continued adjudication efforts are needed to change ACWWA's purchased agricultural water rights for municipal use. Two cases remain for 2024 and beyond.

Administration Building

ACWWA will be completing improvements to the new Tucson building in 2023 and 2024. The annex building project will take longer to implement and could potentially extend into 2025.

Arc Flash Immediate Safety Upgrades

This item provides a budget to address any immediate safety issues identified by Arc Flash studies. An arc flash study will be completed for the LTCWRF early next year.

Chambers Reservoir Piezometer Automation Construction

Chambers reservoir is currently being filled. A fiber loop connecting all piezometers to SCADA and back to ACWWA's home office will improve operation and monitoring. Additional control logic will also be required, which will include the ability to reset pumps and VFD's via SCADA, remote monitoring of all piezometers, and a live security camera feed also communicated via SCADA.

Chaparral 4-MG Tank - Landscape Improvements

As part of the overall appearance and facility upkeep project, landscaping and irrigation are the focus of this improvement. Per original IGA with Chaparral Metro District CMD, ACWWA is responsible for the landscaping and maintenance of the overall site appearance including the paving (12-14 years old), which requires an evaluation and updating. ACWWA will lead this project to determine the options available.

Chaparral 4-MG Tank - Tennis Court Resurfacing

As part of the IGA with Chaparral Metro District (CMD) ACWWA is to replace/resurface the existing tennis court surface. Fixes to the post-tensioned cables on the tank lid were completed in 2016 and the court surface was replaced in 2016. It was recommended that the surface be replaced/repared every 7 years. This budget is for the surface repair/replacement only.

Distribution Redundancy: Cherry Creek Crossing Redundancy Line

This project will provide redundancy in ACWWA's drinking water distribution system. Redundancy will reduce the risk of being unable to maintain adequate pressure to the middle pressure zone due to a break or requirement to close the water line on Broncos Parkway.

ECCV - DI-2 Phase 2: Expansion of the Well Injection Pumping System (Design and Construction)

This is an ECCV project that ACWWA will fund at 42.3% of the cost. ECCV's construction cost estimate is \$9.7M (ACWWA's share = $0.423 * \$9.7M = \$4.31M$).

ECCV - Northern Pipeline Inspection Program

This is an annual ECCV project that ACWWA will share part of the cost. ACWWA has 5.25 mgd of capacity out of the total capacity of 48 mgd. ECCV's proposed budget is \$50,000 per year for 5 years to complete the pipeline inspection.

ECCV - NWTP Access Manway and Sand Port (Install During 2024 Shutdown)

This is an ECCV led project that ACWWA will share part of the cost. The intent of the project would be to improve maintenance of one of the pipelines at ECCV's water treatment plant.

ECCV - NWTP Cartridge Filter Fix (Design)

This is an ECCV led project that ACWWA will share part of the cost. The intent of the project is to replace existing cartridge filters with cartridge filters with improved operation at ECCV's water treatment plant.

ECCV - NWTP Chemical Ladders

This is an ECCV led project that ACWWA will share part of the cost. The intent of the project is to improve operator safety at ECCV's water treatment plant.

ECCV - NWTP Generator (1/4 WTP and DI-1)

This is an ECCV led project that ACWWA will share part of the cost. The intent of the project would be to improve the resiliency and reliability of ECCV's water treatment plant.

ECCV - NWTP RO Pilot

This is an ECCV led project that ACWWA will share part of the cost. The intent of the project would be to improve the operation of the RO membranes at ECCV's water treatment plant.

ECCV - Off-Spec Pond (Design and Construction) (Second Pond for Redundancy)

This is an ECCV led project that ACWWA will share part of the cost. ECCV plans to construct a second "off-spec" pond for redundancy. The pond is used to store "off spec" water that does not meet water quality goals. It has recently been used to store brine due to DI-2 being offline. Stored water in the pond is injected using DI-1 or DI-2.

ECCV - PFAS Lab Equipment

This is an ECCV led project that ACWWA will share part of the cost. Purchase and installation of a mass spectrometer will allow in-house PFAS testing. Long-term, this purchase is expected to save money. One year of private lab PFAS testing for the pilot testing would cost approximately \$120k.

ECCV - PFAS Removal Pilot Study

This is an ECCV led project that ACWWA will share part of the cost. The goal of the pilot study is to identify treatment options to remove PFAS from the RO plant supply water.

ECCV - Well P-14 Generator

This is an ECCV led project that ACWWA will share part of the cost.

Elkhorn Well and Pipeline Construction

This project is the second phase of the Elkhorn well project. The well was drilled in 2023. This part of the project entails the design of the well vault and disinfection systems and the bringing in of power for the well and communication system. This portion of the project is being designed by RESPEC Engineering.

Fire Flow Study - Airport

The same fire flow demands have been assumed at the airport for 12+ years. ACWWA would like to engage the Airport Authority and South Metro to either confirm or modify the fire flow demands.

Inverness Drinking Water Emergency Interconnect

This project would construct an emergency interconnect between ACWWA's drinking water distribution system and Inverness' drinking water distribution system. This project would reduce water supply risk and increase resilience of ACWWA's water supply system.

JWPP Brine Disposal Study

The JWPP currently discharges up to 0.5 MGD of brine to LTCWRF, which is a temporary solution and is not intended to become a permanent one. Projects to determine alternatives to continued brine discharge to LTCWRF will be completed and funded from the Jacobs settlement fund.

JWPP Landscaping

A review of the existing landscaping at the JWPP should be performed every 2 to 4 years to determine replacements or improvements to the existing landscaping. Improved landscaping will maintain a good exterior image for the facility. Normal maintenance is included with the O&M contract with Jacobs for the plant. An appearance plan is also something that is to be followed by Jacobs and overseen by both ACWWA and CWSD.

JWPP New Alluvial Well or Well Treatment for Race / DDs

The JWPP currently has 4 high-producing wells supplying the treatment process. One of ACWWA's wells, Race-1, has undesirable interactions with the Cottonwood wells, effectively eliminating it from production during the summer months. This means that there is no supply redundancy during the peak demand summer months. A new well or treatment for the existing wells is needed.

JWPP New MF Control Panel

With the replacement of the existing PALL MF units, by H2O Innovations, a new control system has been requested and has been delivered. Coordination with JWPP operating staff for the timing of the installation and switch over will be in the 4th quarter of 2023. The Project cost is approximately \$125K for all.

JWPP Paving Repairs

As part of the overall appearance and facility upkeep project, the paving (12-14 years old) requires evaluation and updating. ACWWA will lead this project to determine the options available.

JWPP PFAS Study

Upcoming EPA regulation of PFAS will require potential modifications to the treatment process to meet those requirements. This study will look at treatment options along with Capital and O&M costs.

JWPP Replace Finished Water Pumps #2 and #3

Finished water pumps #1 and #4 have been replaced along with controls and instrumentation. FWPS #3 & #4 also require replacement as they were sized for the initial JWPP finished water volumes and rates. These two pumps require engineering and specification to replace the existing 400 HP pumps with a more moderate pump that is sized for the current JWPP operational output.

JWPP SCADA Update

The JWPP is controlled and operated through a SCADA system, which is currently running on Windows Vista. Vista is outdated and lacks IT support and security maintenance. The software requires upgrading to meet the requirements and needs of both standardization and industry standards for a class A industrial water plant. \$270k for equipment and \$60k for Jacobs implementation.

JWPP Well Fiber Replacement

The existing fiber optic lines used to communicate between the JWPP and the alluvial supply wells have reached the end of their life and is in need of replacement. In lieu of replacing the fiber, Jacobs is recommending replacement with a CISCO radio system.

Lead Service Line Study

The CDPHE has requested that every public water system perform a lead service line assessment by October 2024. ACWWA staff is currently working on this inventory. This line item provides budget for additional assistance to complete the inventory if necessary.

Lone Tree Replacement Emergency Generator

One of the backup generators at the LTCWRF is reaching the end of its useful life. The generator will be evaluated and replaced if necessary.

LTCWRF Asphalt Paving Engineering Investigation

Significant asphalt paving separation needs to be addressed to eliminate water intrusion, which will further damage the asphalt and potentially the underlying utilities. Similar asphalt separation is seen at the JWPP. 2024 geotechnical study, 2025 repairs.

LTCWRF AWT Filter Media Pilot Study

The existing filter media / underdrains require routine chemical cleaning to maintain throughput. The results of this study will determine if an alternative underdrain / filter media can eliminate or reduce the chemical cleans while maintaining the excellent treatment performance of the filters. The results of the study will inform the design of additional filter units.

LTCWRF AWT Filter Modification or Expansion

This project will modify the AWT filters based on the results of the filter media pilot study. The hydraulic capacity of the filters is currently the primary hydraulic capacity limiting process at the LTCWRF.

LTCWRF BNR Reactor No. 1 Diffuser Replacement Project

The air diffusers currently in Train 1 have been exposed to weather while waiting for the opportunity to clean out the solids. Ice and snow have caused some of the headers to split, shatter, or buckle leaving the air system in BNR 1 non-functional. This project will replace the diffusers, returning the treatment capacity of the BNR.

LTCWRF Digester Blower System Replacement

The existing blower system that supplies the digester aeration system is at the end of its design life. Currently, the blowers are well past their listed useful life and could fail anytime. Additionally, the pipes connecting the blowers to the aerobic digesters have significant leaks reducing energy efficiency and exacerbating concerns about failure.

LTCWRF Hydrogen Sulfide Damage Repairs

The Parshall Flume is the main flow measurement device used in the LTCWRF for measuring all influent flow into the facility. The concrete structure the flume is located in is showing deterioration due to hydrogen sulfide gas. Due to the requirement of bypassing pumping, a permanent sewer bypass may be installed as part of this project.

LTCWRF Misc. Electrical and I&C Improvements

This budget item covers several related projects that were identified as part of the LTCWRF electrical and SCADA masterplan. Network Segregation Analysis (\$50,000), Switch-gear replacement design (\$100,000), E and IC as-built drawings and field labeling (\$100,000), Removal of unused and decommissioned electrical and I&C gear (\$50,000).

LTCWRF Single Point of Failure Analysis

This analysis would identify potential single points of failure for the LTCWRF. This type of analysis often uncovers potential failure scenarios not previously considered. This project will likely be completed in conjunction with Phase II of the LTCWRF master plan.

LTCWRF TE Pump

The TE pump provides the majority of the Reg 84 pumping to our service area. The flow rate provided by the current pump of 500 gpm worked until the demand in the Reg 84 system increased, due to the addition of Family Sports. The new current demand now is outside of the pump curve causing a large TE pump to be called to run at times. The large pump has too much capacity and runs out of its curve, which is very inefficient. Installing a medium sized pump would allow for a wider range of flows with more efficiency and minimize water hammering.

LTCWRF Wastewater Master Plan (Phase I - Planning Basis)

This plan will inform the future capital and operational needs of the LTCWRF to meet future inflow rates and volumes while meeting ever increasing and stricter water quality discharge regulations. These potential future regulations include regulations on Nitrogen, PFAS, TENORM, and other contaminants proposed to be regulated by the EPA, as well as the future treatment of reject water from the JWPP. The funding for 2023 will add funding to the 2022 budgeted amount for this project to address these additional water quality and treatment issues.

LTCWRF Wastewater Master Plan (Phase II - Upgrade and Expansion Alternatives Development and Evaluation)

The LTCWRF has exceeded 80% hydraulic capacity for several months. The discharge permit requires that planning for expansion now begin. Phase I master planning was started in 2023 with Phase 2 starting in 2024.

New Generator Denmark Well

This project would improve the reliability of ACWWA's drinking water supply. This project was identified in the 2023 Kennedy Jenks Master Plan recommendations.

New Water Storage Tank Study

Currently only the 1-MG tank is serving the low zone. A tank study is needed to determine if a second tank would improve the reliability of supplying water to the low zone during peak demand periods, typically occurring during the summer irrigation season.

Orchards Collection Line Sag

This project will investigate options to address a collection line sag in the Cherry Creek sewer crossing that serves the Orchards neighborhood.

Peoria Lift Station Rehab

The Peoria Lift Station needed significant rehabilitation and upgrades. The project has been bid and awarded to Glacier Construction. The project schedule will be extended due to electrical gear supply chain delays.

Permanent, Reliable Flow Monitoring in Collection System

Installing reliable and accurate flow monitoring devices on the different gravity collection lines will help determine accurate flows. This will also help greatly with troubleshooting if a particular basin is receiving infiltration or inflow.

Re-drill Loyd Well

Loyd Well is a key alluvial well for the JWPP raw water supply. In 2022, it was discovered that the well screen had holes and any repairs would likely restrict its output. This project will redrill the Loyd well at a location adjacent to the existing well.

Remote Site Electrical System Study and Condition Assessment

Sister study to the study currently being completed for the LTCWRF. Many of the remote sites have electrical gear that is older than LTCWRF.

Stormwater Concern - Biosolids Trailers - Roof

This project would allow ACWWA to meet its stormwater permit requirements by improving the stormwater management at biosolids trailer storage pads.

System-wide SCADA and Network Master Plan

Project to address system-wide standardization, cybersecurity, reliability and resiliency, remote site communications, identify network/SCADA improvements.

VCC Lift Station Site Improvements

The VCC Lift station has additional improvements that would improve operability and reliability. Improvements include site drainage improvements, cover for the newly installed electrical gear to shield from sun and weather, installation of pumps 1 and 6, consideration installation of immersible motors, improved access to generator (rock or concrete). The plan is to complete a study and design in 2024 Study, with construction commencing in 2025.

PURCHASING

A1 Well Chlorine Monitoring

The A1 Well is the only remaining site that operations does not have continuous chlorine monitoring.

Centrifuge Overhaul 8000 Hr. Recommendation

Completion of maintenance based on manufacturer recommended service interval.

Collection System Manhole Hydrogen Sulfide Damage Repairs

Repair manholes identified with hydrogen sulfide damage. This is supplemental to the R&M budget.

Collection/Distribution Instrumentation and Controls Upgrades

Some instrumentation and controls in the collection and distribution is outdated. Replacing equipment with new upgraded models will improve reliability and reduce risk.

Elkhorn Booster Station Control Panel and PLC Program

Elkhorn Booster currently runs 2 pumps on 1 VFD. This limits redundancy. The E&IC panel is outdated and needs a new program for reliability and compliance assurance.

Flush Pump Replacement Siemens Filter System

This would replace the aging 15-year-old pump, which is original to the plant. This pump provides flush water to the TriCon filters.

LTCWRF BNR Mixers Train 2

The BNR basin at LTCWRF has 8 mixers in the BNR basin, which are critical to the treatment process. The current mixers in the BNR basins have been in operation for 12 years. The manufacturer considers the end of life of these mixers to be 80,000 hours of operations. By the end of 2021, the mixers surpassed the 80,000-hour mark. In 2023, BRN train 2 will be taken offline and those four mixers will be replaced in 2023.

LTCWRF Entry Gate

The current gate entry system is reaching the end of its service life and needs replacement.

LTCWRF VFDs

Many of LTCWRFs VFDs are reaching the end of their design life and need to be replaced prior to failure.

New Chapparral Pump Station PLC Program

Chapparral pump station provides water to the high zone. This station is required to run 24/7. To improve reliability of this station a PLC program rewrite is needed.

Peoria Street Isolation Valve Addition

ACWWA has a long run of water main in Peoria Street between Briarwood and Easter that does not have an isolation valve. The run includes roughly 1,800' of 20" AC pipe and 5 hydrants between the nearest valves. Should a break happen in this run, the entire 1,800' would have to be isolated and all 5 hydrants would not be active for a period of time while the break was fixed. The installation of an isolation valve would allow some hydrants to stay active while the break is fixed. As part of the Master Plan Update Project, Kennedy Jenks was given a list of critical customers to evaluate. The Centennial Medical Center is located in this area. While service to the center would not be interrupted by a break in the 20" main, fire hydrants surrounding both the center and neighboring buildings would be impacted.

Rebuild Parts for Surge Pump

Maintaining assets by replacing worn parts instead of purchasing new pumps.

Total Coliform Sampling Stations

Providing total coliform sampling stations will ensure that operations staff can efficiently collect representative water samples to meet regulatory requirements.

TriCon Adsorption Clarifier Grating Replacement

Fiberglass grating will become weak overtime. Replacing the grating ensures we don't lose adsorption media, which would render the filter unit out of service.

TriCon Influent Valve Replacements

TriCon units have experienced influent flow failures due to a leaking seal on a valve shaft. This project would replace aging equipment (15 years old).

Water Meters - Replace Existing Walking Read Meters

This project will eliminate walking meter routes thus freeing up approximately 3 business days per month. It will also give ACWWA the ability to read and monitor meters from the office.

Water Meters - Replacement

With ACWWA's aging meters, it is important to continuously replace faulty meters to ensure accurate billing and maximum revenue.

CARRYOVER PROJECTS

Administration Building (Carryover)

ACWWA will be completing improvements to the new Tucson building in 2023 and 2024. The annex building project will take longer to implement and could potentially extend into 2025.

\$1,200,000 of the \$5,125,000 budgeted in 2023 is being carried forward.

Arc Flash Immediate Safety Upgrades (Carryover)

This item provides a budget to address any immediate safety issues identified by Arc Flash studies. An arc flash study will be completed for the LTCWRF early next year.

\$110,000 of the \$110,000 budgeted in 2023 is being carried forward.

Chaparral 4-MG Tank - Landscape Improvements (Carryover)

As part of the overall appearance and facility upkeep project, landscaping and irrigation are the focus of this improvement. Per original IGA with Chaparral Metro District CMD, ACWWA is responsible for the landscaping and maintenance of the overall site appearance including the paving (12-14 years old), which requires an evaluation and updating. ACWWA will lead this project to determine the options available.

\$200,000 of the \$200,000 budgeted in 2023 is being carried forward to 2024.

Distribution Redundancy: Cherry Creek Crossing Redundancy Line (Carryover)

This project will provide redundancy in ACWWA's drinking water distribution system. Redundancy will reduce the risk of being unable to maintain adequate pressure to the middle pressure zone due to a break or requirement to close the water line on Broncos Parkway.

\$150,000 of the \$150,000 budgeted in 2023 is being carried forward to 2024.

Elkhorn Well and Pipeline Construction (Carryover)

This project is the second phase of the Elkhorn well project. The well was drilled in 2023. This part of the project entails the design of the well vault and disinfection systems and the bringing in of power for the well and communication system. This portion of the project is being designed by RESPEC Engineering.

\$1,127,500 of the \$2,650,000 budgeted in 2023 is being carried forward to 2024.

Fire Flow Study - Airport (Carryover)

The same fire flow demands have been assumed at the airport for 12+ years. ACWWA would like to engage the Airport Authority and South Metro to confirm to either confirm or modify the demands.

\$55,000 of the \$55,000 budgeted in 2023 is being carried forward to 2024.

JWPP New Alluvial Well or Well Treatment for Race / DDs (Carryover)

The JWPP currently has 4 high-producing wells supplying the treatment process. One of ACWWA's wells, Race-1, has undesirable interactions with the Cottonwood wells, effectively eliminating it from production during the summer months. This means that there is no supply redundancy during the peak demand summer months. A new well or treatment for the existing wells is needed.

\$100,000 of the \$100,000 budgeted in 2023 is being carried forward to 2024.

JWPP New MF Control Panel (Carryover)

With the replacement of the existing PALL MF units, by H2O Innovations, a new control system has been requested and has been delivered. Coordination with JWPP operating staff for the timing of the installation and switch over will be in the 4th quarter of 2023. The Project cost is approximately \$125,000 for all.

\$80,000 of the \$80,000 budgeted in 2023 is being carried forward to 2024.

JWPP PFAS Study (Carryover)

Upcoming EPA regulation of PFAS will require potential modifications to the treatment process to meet those requirements. This study will look at treatment options along with Capital and O&M costs.

\$85,000 of the \$165,000 budgeted in 2023 is being carried forward to 2024.

JWPP SCADA Update (Carryover)

The JWPP is controlled and operated through a SCADA system, which is currently running on Windows Vista. Vista is outdated and lacks IT support and security maintenance. The software requires upgrading to meet the requirements and needs of both standardization and industry standards for a class A industrial water plant. \$270,000 for equipment and \$60,000 for Jacobs implementation.

\$75,000 of the \$75,000 budgeted in 2023 is being carried forward to 2024.

LTCWRF AWT Filter Media Pilot Study (Carryover)

The existing filter media / underdrains require routine chemical cleaning to maintain throughput. The results of this study will determine if an alternative underdrain / filter media can eliminate or reduce the chemical cleans while maintaining the excellent treatment performance of the filters. The results of the study will inform the design of additional filter units.

\$275,000 of the \$80,000 budgeted in 2023 is being carried forward to 2024.

LTCWRF BNR Reactor No. 1 Diffuser Replacement Project (Carryover)

The air diffusers currently in Train 1 have been exposed to weather while waiting for the opportunity to clean out the solids. Ice and snow have caused some of the headers to split, shatter, or buckle leaving the air system in BNR 1 non-functional. This project will replace the diffusers, returning the treatment capacity of the BNR.

\$200,000 of the \$272,800 budgeted in 2023 is being carried forward to 2024.

LTCWRF Digester Blower System Replacement (Carryover)

The existing blower system that supplies the digester aeration system is at the end of its design life. Currently, the blowers are well past their listed useful life and could fail anytime. Additionally, the pipes connecting the blowers to the aerobic digesters have significant leaks reducing energy efficiency and exacerbating concerns about failure.

\$800,000 of the \$1,100,000 budgeted in 2023 is being carried forward to 2024.

LTCWRF Entry Gate (Carryover)

The current gate entry system is reaching the end of its service life and needs replacement.

\$35,000 of the \$35,000 budgeted in 2023 is being carried forward to 2024.

LTCWRF Hydrogen Sulfide Damage Repairs (Carryover)

The Parshall Flume is the main flow measurement device used in the LTCWRF for measuring all influent flow into the facility. The concrete structure the flume is located in is showing deterioration due to hydrogen sulfide gas. Due to the requirement of bypassing pumping, a permanent sewer bypass may be installed as part of this project.

\$132,000 of the \$132,000 budgeted in 2023 is being carried forward to 2024.

LTCWRF TE Pump (Carryover)

The TE pump provides the majority of the Reg 84 pumping to our service area. The flow rate provided by the current pump of 500 gpm worked until the demand in the Reg 84 system increased, due to the addition of Family Sports. The new current demand now is outside of the pump curve causing a large TE pump to be called to run at times. The large pump has too much capacity and runs out of its curve, which is very inefficient. Installing a medium sized pump would allow for a wider range of flows with more efficiency and minimize water hammering.

\$150,000 of the \$150,000 budgeted in 2023 is being carried forward to 2024.

LTCWRF VFDs (Carryover)

Aging equipment (15 years old) - Replacement program needs to be developed.

\$105,000 of the \$105,000 budgeted in 2023 is being carried forward to 2024.

LTCWRF Wastewater Master Plan (Phase I - Planning Basis) (Carryover)

This plan will inform the future capital and operational needs of the LTCWRF to meet future inflow rates and volumes while meeting ever increasing and stricter water quality discharge regulations. These potential future regulations include regulations on Nitrogen, PFAS, TENORM, and other contaminants proposed to be regulated by the EPA, as well as the future treatment of reject water from the JWPP. The funding for 2023 will add funding to the 2022 budgeted amount for this project to address these additional water quality and treatment issues.

\$65,000 of the \$165,000 budgeted in 2023 is being carried forward to 2024.

Peoria Lift Station Rehab (Carryover)

The Peoria Lift Station needed significant rehabilitation and upgrades. The project has been bid and awarded to Glacier Construction. The project schedule will be extended due to electrical gear supply chain delays.

\$1,700,000 of the \$1,700,000 budgeted in 2023 is being carried forward to 2024.

Peoria Street Isolation Valve Addition (Carryover)

ACWWA has a long run of water main in Peoria Street between Briarwood and Easter that does not have an isolation valve. The run includes roughly 1,800' of 20" AC pipe and 5 hydrants between the nearest valves. Should a break happen in this run, the entire 1,800' would have to be isolated and all 5 hydrants would not be active for a period of time while the break was fixed. The installation of an isolation valve would allow some hydrants to stay active while the break is fixed. As part of the Master Plan Update Project, Kennedy Jenks was given a list of critical customers to evaluate. The Centennial Medical Center is located in this area. While service to the center would not be interrupted by a break in the 20" main, fire hydrants surrounding both the center and neighboring buildings would be impacted.

\$55,000 of the \$55,000 budgeted in 2023 is being carried forward to 2024.

Remote Site Electrical System Study and Condition Assessment (Carryover)

Sister study to the study currently being completed for the LTCWRF. Many of the remote sites have electrical gear that is older than LTCWRF.

\$440,000 of the \$440,000 budgeted in 2023 is being carried forward to 2024.

Water Meters - Replacement (Carryover)

With ACWWA's aging meters, it is important to continuously replace faulty meters to ensure accurate billing and maximum revenue.

\$250,000 of the \$250,000 budgeted in 2023 is being carried forward to 2024.

11. Departmental Information

ACWWA's activities are divided among three primary departments.

Water operations includes 10.0 direct FTEs who are responsible for:

- operations and maintenance of the water distribution system which consists of wells, pumps, piping, valves, storage tanks, Chambers Reservoir and meter vaults;
- water treatment and compliance testing to meet the standards of the Safe Drinking Water Act;
- flushing and special projects;
- reading and inspecting meters, including construction hydrant meters;
- utility locates
- operations and maintenance of the collections system, including lift stations, sewer lines, and pretreatment; and
- responding to customer service questions and issues.

Goals and Objectives: For 2024, the water operations department plans to focus on enhancing its valve exercising program, with a goal of 100/month and 1200/year. Valving on transmission lines gives the operators the ability to divert flows and allow vital maintenance to be performed. Water operations will also be involved in improving ACWWA's SCADA (Supervisory Control and Data Acquisition) system and in developing and implementing an emergency preparedness program.

Wastewater operations includes 6.0 direct FTEs who perform the following:

- operations and maintenance of the Lone Tree Creek Water Reuse Facility, which treats wastewater to comply with federal and state regulations prior to discharge in Cherry Creek Reservoir;
- laboratory testing to ensure compliance with all regulations;
- operations and maintenance of the non-potable water system.

Goals and Objectives: The department will continue to be involved in SCADA improvements and in developing and implementing an emergency preparedness program.

Administration: includes 24.0 FTEs in 2024 who are responsible for the following:

- the general management of ACWWA, including implementation of board policies;
- financial management including financial reporting, budgeting, cash collections, and disbursements;
- customer service and billing activities;
- procurement activities;
- information technology and website administration;
- engineering services and activities, including capital projects management, water resources management, and GIS coordination;
- development services;
- operations management including the overall management of the water and wastewater systems and maintenance operations;
- inspections and construction management; and
- maintenance of the plants, buildings, and equipment.

Goals and Objectives: ACWWA Administration has multiple goals, including:

- Conducting an analysis of the current SCADA state and developing a strategic plan;
- Enhancing ACWWA's emergency preparedness plan;
- Maintaining debt service coverage ratio at 1.5:1;
- Maximizing investment earnings through effective cash flow management

**ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
APPROVED POSITIONS 2022 - 2024**

REGULAR EMPLOYEES (FTE)	2022 BUDGET	2023 BUDGET	2024 BUDGET
ADMINISTRATION			
General Manager	1.0	1.0	1.0
Director of Finance and Administrative Services	1.0	1.0	1.0
Engineering Manager	1.0	-	-
Director of Engineering Services	-	1.0	1.0
Senior Project Manager	1.0	1.0	1.0
Operations Manager	1.0	1.0	1.0
Special Projects Manager	1.0	1.0	1.0
Customer Service Manager	1.0	1.0	1.0
Maintenance Superintendent	1.0	1.0	1.0
Purchasing and Administrative Specialist	1.0	1.0	1.0
Water Resources Engineer	1.0	1.0	1.0
Water Resources Engineer II	-	1.0	1.0
Utilities Engineer	1.0	-	-
Construction Inspection Supervisor	1.0	-	-
IT Administrator	1.0	1.0	-
IT Manager	-	-	1.0
Human Resources Generalist	1.0	1.0	1.0
Accountant	1.0	1.0	-
Administrative Assistant	1.0	1.0	1.0
Administrative Assistant	1.0	1.0	-
Accounting Specialist	1.0	1.0	1.0
Customer Service/Billing Specialist	1.0	1.0	1.0
Customer Service Specialist	1.0	1.0	1.0
Operations Business Support Technician	1.0	1.0	1.0
Project Coordinator	-	-	1.0
Maintenance Technician II	1.0	1.0	1.0
Maintenance Technician II	1.0	1.0	1.0
Maintenance Technician II	1.0	1.0	1.0
Maintenance Technician III	-	-	1.0
Construction Inspector I	1.0	1.0	-
Construction Inspector II	-	1.0	1.0
GIS Specialist	1.0	1.0	1.0
WATER OPERATIONS			
Field Superintendent	1.0	1.0	1.0
Lead Field Technician	1.0	1.0	1.0
Lead Field Technician	1.0	1.0	1.0
Field Technician I	1.0	1.0	1.0
Field Technician I	1.0	1.0	1.0
Field Technician I	1.0	1.0	1.0
Field Technician III	1.0	1.0	1.0
Cross-connection/Backflow Control Specialist	1.0	1.0	1.0
Cross-connection/Backflow Control Specialist	1.0	1.0	1.0
WASTEWATER OPERATIONS			
Wastewater Plant Superintendent	1.0	1.0	1.0
Wastewater Plant Operator I	1.0	1.0	1.0
Wastewater Plant Operator I	-	-	1.0
Wastewater Plant Operator II	1.0	1.0	1.0
Wastewater Plant Operator II	1.0	1.0	1.0
Wastewater Lab Technician	1.0	1.0	1.0
Totals	<u>40.0</u>	<u>40.0</u>	<u>40.0</u>

FINANCIAL SUMMARIES AND NOTES



Above is the VCC Lift Station

12. Board Summary Forecasted 2024 Combined Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

BOARD SUMMARY

2024 BUDGET AS PROPOSED

WITH 2022 ACTUAL AND 2023 ESTIMATED

For the Years Ending December 31,

	ACTUAL 2022	BUDGET 2023	ESTIMATED 2023	BUDGET 2024
BEGINNING FUNDS AVAILABLE	\$ 36,024,437	\$ 52,759,762	\$ 52,759,762	\$ 56,745,240
REVENUES				
Operating Revenues				
Water revenue	15,587,682	16,214,658	14,048,193	16,684,917
Sewer revenue	6,737,636	6,762,748	7,233,201	7,377,866
Fees for services	336,620	580,281	1,188,158	577,397
Water plant revenue	597,335	761,976	761,968	761,968
Other revenue	234,536	213,000	232,360	213,000
Settlement revenue	232,089	-	-	-
Total operating revenues	23,725,898	24,532,663	23,463,880	25,615,148
Non-Operating Revenues				
Tap and extraterritorial fees	6,215,470	5,324,381	8,604,170	4,574,340
Net investment income	725,339	300,000	2,600,000	1,500,000
Loan proceeds	271,173	-	1,500,000	-
Grant Revenue	-	-	500,000	-
Total non-operating revenues	7,211,982	5,624,381	13,204,170	6,074,340
Total revenues	30,937,880	30,157,043	36,668,050	31,689,488
Total funds available	70,847,281	82,916,806	89,427,812	88,434,727
EXPENDITURES				
Operating Expenses				
Salaries and benefits	4,314,498	5,028,919	4,375,713	5,223,856
Office expense	289,686	425,369	383,935	429,753
Professional services	943,312	1,071,234	1,090,844	1,351,234
Repairs and maintenance	1,216,666	1,423,183	1,611,679	1,690,720
Insurance	212,253	222,860	266,635	317,246
Operational	5,032,513	5,862,690	5,769,098	6,055,085
Contractual services	217,135	221,516	271,200	278,888
Utilities	1,334,764	1,464,720	1,312,309	1,819,599
Other supplies and expense	11,018	15,200	17,669	15,200
Contingency	-	400,000	-	400,000
Total operating expenses	13,571,845	16,135,691	15,099,081	17,581,580
Non-Operating Expenses				
Interest and fiscal charges	8,113,940	7,783,492	7,583,492	7,789,092
Total non-operating expenses	8,113,940	7,783,492	7,583,492	7,789,092
Capital expenditures				
Capital projects	6,005,589	22,093,735	10,000,000	21,594,112
Total capital expenditures	6,005,589	22,093,735	10,000,000	21,594,112
Total expenditures requiring appropriation	27,691,374	46,012,918	32,682,573	46,964,784
ENDING FUNDS AVAILABLE	\$ 42,855,527	\$ 36,903,888	\$ 56,745,240	\$ 41,469,943

13. Board Summary Forecasted 2024 Budget Water Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

WATER OPERATIONS

2024 BUDGET AS PROPOSED

WITH 2022 ACTUAL AND 2023 ESTIMATED

For the Years Ending December 31,

	ACTUAL 2022	BUDGET 2023	ESTIMATED 2023	BUDGET 2024
REVENUES				
Operating Revenues				
Water revenue	\$ 15,587,682	\$ 16,214,658	\$ 14,048,193	\$ 16,684,917
Fees for services	64,110	299,239	726,696	296,298
Water plant revenue	597,335	761,976	761,968	761,968
Other revenue	234,536	213,000	232,360	213,000
Settlement revenue	232,089	-	-	-
Total operating revenues	16,715,752	17,488,873	15,769,217	17,956,183
Non-Operating Revenues				
Tap and extraterritorial fees	5,123,410	4,096,539	6,075,729	3,530,674
Net investment income	507,737	183,000	1,820,000	1,050,000
Loan proceeds	271,173	-	1,500,000	-
Grant Revenue	-	-	500,000	-
Total non-operating revenues	5,902,320	4,279,539	9,895,729	4,580,674
Total revenues	22,618,072	21,768,412	25,664,946	22,536,858
EXPENDITURES				
Operating Expenses				
Salaries and benefits	2,447,011	2,933,032	2,448,739	2,983,516
Office expense	182,800	286,030	257,186	287,144
Professional services	765,570	693,870	880,285	966,584
Repairs and maintenance	757,080	580,455	792,595	782,372
Insurance	174,509	172,854	219,011	261,337
Operational	4,599,573	4,083,493	5,211,053	5,458,180
Contractual services	35,517	-	41,200	42,700
Utilities	659,665	637,811	584,866	817,941
Other supplies and expense	7,713	9,504	12,368	10,640
Contingency	-	288,000	-	280,000
Total operating expenses	9,629,438	9,685,049	10,447,304	11,890,414
Non-Operating Expenses				
Interest and fiscal charges	7,597,015	7,069,484	6,810,054	7,706,354
Total non-operating expenses	7,597,015	7,069,484	6,810,054	7,706,354
Capital expenditures				
Capital projects	5,289,599	7,907,500	1,500,000	14,801,112
Total capital expenditures	5,289,599	7,907,500	1,500,000	14,801,112
Total expenditures requiring appropriation	22,516,052	24,662,033	18,757,358	34,397,880
Change In Net Position	\$ 102,020	\$ (2,893,622)	\$ 6,907,587	\$ (11,861,022)

14. Board Summary Forecasted 2024 Sewer Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

WASTEWATER OPERATIONS

2024 BUDGET AS PROPOSED

WITH 2022 ACTUAL AND 2023 ESTIMATED

For the Years Ending December 31,

	ACTUAL 2022	BUDGET 2023	ESTIMATED 2023	BUDGET 2024
REVENUES				
Operating Revenues				
Sewer revenue	\$ 6,737,636	\$ 6,762,748	\$ 7,233,201	\$ 7,377,866
Fees for services	272,510	281,041	461,462	281,098
Total operating revenues	7,010,146	7,043,790	7,694,663	7,658,964
Non-Operating Revenues				
Tap and extraterritorial fees	1,092,060	1,227,842	2,528,441	1,043,666
Net investment income	217,602	117,000	780,000	450,000
Total non-operating revenues	1,309,662	1,344,842	3,308,441	1,493,666
Total revenues	8,319,808	8,388,632	11,003,104	9,152,630
EXPENDITURES				
Operating Expenses				
Salaries and benefits	1,867,487	2,095,887	1,926,974	2,240,340
Office expense	106,886	139,339	126,749	142,420
Professional services	177,742	377,364	210,558	384,650
Repairs and maintenance	459,586	842,728	819,084	908,348
Insurance	37,744	50,006	47,624	55,909
Operational	432,940	1,779,197	558,045	596,904
Contractual services	181,618	221,516	230,000	236,188
Utilities	675,099	826,909	727,443	1,001,658
Other supplies and expense	3,305	5,696	5,300	4,560
Contingency	-	112,000	-	120,000
Total operating expenses	3,942,407	6,450,641	4,651,776	5,690,977
Non-Operating Expenses				
Interest and fiscal charges	516,925	714,008	773,438	82,738
Total non-operating expenses	516,925	714,008	773,438	82,738
Capital expenditures				
Capital projects	715,990	14,186,235	8,500,000	6,793,000
Total capital expenditures	715,990	14,186,235	8,500,000	6,793,000
Total expenditures requiring appropriation	5,175,322	21,350,884	13,925,214	12,566,715
Change In Net Position	\$ 3,144,486	\$ (12,962,252)	\$ (2,922,110)	\$ (3,414,085)

15. Budget Notes

15.1 Revenue

15.1.1 Water Charges

This item includes charges for providing water to residential and commercial customers, a water investment fee, hydrant meter water, and water service fees.

15.1.2 Sewer Charges

Sewer charges include the rates charged to wastewater customers for collecting wastewater, moving it to the LTCWRF, and treating it.

15.1.3 Fire Lines

This item includes the charge to maintain enough water in the system for fire protection standby systems (i.e., sprinkler systems) at all times.

15.1.4 Irrigation

Irrigation includes irrigation water charges for those customers who have separate irrigation meters.

15.1.5 Fees for Services

Fees includes items such as the PID equivalency fee paid by Cottonwood, labor service call fees, hydrant meter rentals, meter inspections, radio read meter fees, and miscellaneous revenue.

15.1.6 RO Plant Revenue

This item reflects the budgeted expense reimbursement to be received from ACWWA's partner in the Joint Water Purification Plant (JWPP). The offsetting expenses are budgeted under the Operational expense category.

15.1.7 Interest Income

Interest income is the amount earned by ACWWA on funds held with Bank of Oklahoma (BOK), and in Colotrust and CSAFE investments.

15.1.8 Miscellaneous Revenue

This item is primarily comprised of water system payments from Chaparral, ditch company distributions, and revenue from fire flow testing.

15.1.9 Tap Fees and Contributions

Fees/contributions include fees for water and sewer tap sales in ACWWA service area, water tap sales in Elkhorn, and sewer taps sales in the Cottonwood district. This also includes the extraterritorial fees charged to Elkhorn Ranch customers.

Tap sales are estimated to be 100 in 2024, with Cottonwood wastewater tap sales projected at 11 SFE.

15.2 Expenses

15.2.1 Office Expenses

Office expense includes items such as office supplies and equipment, postage, association dues, unemployment insurance, training and education, and dues and subscriptions.

15.2.2 Salaries and Benefits Expenses

This item includes salaries, health benefits, retirement contributions, tuition reimbursement, service awards and payroll taxes.

15.2.3 Insurance Expenses

This includes insurance for ACWWA's property, plant and equipment as well as workers' compensation insurance.

15.2.4 Legal Fees

Legal fees expense comprises amounts paid to ACWWA's retained counsel, employment counsel, and for water rights protection legal services.

15.2.5 Professional Fees

These are fees paid to outside consultants to perform work that ACWWA does not have either staff with the technical expertise or the capacity to do the work. The primary driver of professional services is engineering fees for the various ACWWA projects. Audit fees are also included here.

15.2.6 Repairs and Maintenance

Repairs and Maintenance includes equipment rental, buildings and equipment maintenance, landscaping, and vehicle expense – fuel, license and registrations, tires, repairs and maintenance. The highest cost items are repairs and maintenance to the water and wastewater systems – line break repairs, valves, meter repair, pumps, etc. As the systems age, it is normal for repairs and maintenance costs to increase.

15.2.7 Operational

This item includes the cost of water from ECCV, the JWPP expenses allocated to ACWWA's partner in the plant, treatment chemicals, safety expenses, ditch assessments, and staff uniforms.

15.2.8 Utilities

This item includes water, sewer, electricity, gas, telephone, and internet service.

15.2.9 Contract Services

This is the cost for hauling sludge from the wastewater treatment plant.

15.2.10 Bad Debt

This is an estimate for writing off uncollectible accounts.

15.2.11 Other Supplies and Expenses

This line includes Board of Directors expense.

15.2.12 General Contingency

This item provides for unanticipated expenses. While every effort is made to accurately predict costs for the upcoming budget year, it is possible that major water or sewer line breaks or costly equipment failures could occur, and these will be covered by contingency funds.

15.2.13 Debt Service

This line includes principal and interest payments on outstanding bond issues.

15.2.14 Capital Outlay

This item includes budgeted capital projects and equipment.

16. Budgeted 2024 Capital Outlay

2024 New Project Costs	
ACWWA Flow Water Rights Adjudication Costs	\$ 1,250,000
ACWWA Flow Renew and Replace	500,000
Inverness Drinking Water Emergency Interconnect	440,000
Chambers Reservoir Piezometer Automation Construction	342,100
Re-drill Loyd Well	330,000
Orchards Collection Line Sag	275,000
Water Meters - Replace Existing Walking Read Meters	220,000
New Generator Denmark Well	169,384
1-MG Tank Booster Pump Station Renovation	150,000
VCC Lift Station Site Improvements	150,000
System-wide SCADA and Network Master Plan	137,500
Elkhorn Booster Station Control Panel and PLC Program	110,000
Lead Service Line Study	110,000
Collection System Manhole Hydrogen Sulfide Damage Repairs	110,000
Total Coliform Sampling Stations	110,000
New Water Storage Tank Study	82,500
Permanent, Reliable Flow Monitoring in Collection System	75,000
A1 Well Chlorine Monitoring	55,000
New Chapparal Pump Station PLC Program	55,000
Collection/Distribution Instrumentation and Controls Upgrades	50,000
Chaparral 4-MG Tank - Tennis Court Resurfacing	33,000
JWPP Brine Disposal Study	550,000
JWPP Replace Finished Water Pumps #2 and #3	440,000
JWPP Well Fiber Replacement	132,000
JWPP Paving Repairs	110,000
JWPP Landscaping	22,000
ECCV - DI-2 Phase 2: Expansion of the Well Injection Pumping System	1,504,470
ECCV - Off-spec Pond (design and construction) (second pond for re	697,950
ECCV - PFAS Removal Pilot Study	577,500
ECCV - PFAS Lab Equipment	144,375
ECCV - NWTP RO Pilot	57,750
ECCV - Northern Pipeline Inspection Program	57,750
ECCV - NWTP Access Manway and Sand Port (install during 2024 s	34,650
ECCV - NWTP Cartridge Filter Fix (Design)	28,875
ECCV - NWTP Generator (1/4 WTP and DI-1)	23,265
ECCV - NWTP Chemical Ladders	17,325
ECCV - Well P-14 Generator	7,218

2024 New Project Costs (Continued)	
LTCWRF AWT Filter Modification or Expansion	500,000
LTCWRF Misc. Electrical and I&C Improvements	330,000
LTCWRF Wastewater Master Plan (Phase II - Upgrade and Expansion)	242,000
Centrifuge Overhaul 8000 Hr. Recommendation	110,000
Lone Tree Replacement Emergency Generator	100,000
LTCWRF Single Point of Failure Analysis	55,000
LTCWRF Asphalt Paving Engineering Investigation	55,000
LTCWRF BNR Mixers Train 2	55,000
Stormwater Concern - Biosolids Trailers - Roof	55,000
TriCon Influent Valve Replacements	55,000
Flush Pump Replacement Siemens Filter System	44,000
Rebuild Parts for Surge Pump	38,500
TriCon Adsorption Clarifier Grating Replacement	22,000
Total 2024 New Project Cost	\$ 10,821,112
2024 Carryover Project Costs From 2023	
Peoria Lift Station Rehab	\$ 2,100,000
Distribution Redundancy: Cherry Creek Crossing Redundancy Line	1,500,000
Administration Building	1,200,000
Elkhorn Well and Pipeline Construction	1,127,500
LTCWRF Digester Blower System Replacement	700,000
LTCWRF Hydrogen Sulfide Damage Repairs	550,000
LTCWRF BNR Reactor No. 1 Diffuser Replacement Project	539,000
JWPP SCADA Update	363,000
JWPP New Alluvial Well or Well Treatment for Race / DDs	330,000
Remote Site Electrical System Study and Condition Assessment	220,000
LTCWRF TE Pump	165,000
JWPP New MF Control Panel	140,000
Chaparral 4-MG Tank - Landscape Improvements	110,000
Arc Flash Immediate Safety Upgrades	110,000
LTCWRF VFDs	110,000
LTCWRF AWT Filter Media Pilot Study	100,000
JWPP PFAS Study	85,000
LTCWRF Entry Gate	82,500
Water Meters - Replacement	66,000
LTCWRF Wastewater Master Plan (Phase I - Planning Basis)	65,000
Fire Flow Study - Airport	55,000
Non-Potable PRVs	55,000
Total Carryover Project Cost	\$ 9,773,000
Reactive/Contingency	\$ 1,000,000
Total 2024 CIP	\$ 21,594,112

17. Schedule of Debt Service Requirements to Maturity

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY

December 31, 2024

\$16,475,000 Variable Rate Revenue Refunding Bonds, Series 2016 Dated October 4, 2016 Variable Interest Rate Principal And Interest Due December 1			\$12,720,000 Variable Rate Revenue Refunding Bonds, Series 2017 Dated September 7, 2017 Variable Interest Rate Principal And Interest Due December 1		\$71,485,000 Variable Rate Taxable Water And Wastewater Revenue Refunding Bonds, Series 2019 Dated October 22, 2019 Variable Interest Rate Principal And Interest Due December 1		Total Debt Service Requirements		
Principal	Interest		Principal	Interest	Principal	Interest	Principal	Interest	Total
2024	1,015,000	487,400	900,000	385,450	2,015,000	2,710,450	3,930,000	3,583,300	7,513,300
2025	1,055,000	446,800	915,000	367,450	2,115,000	2,609,700	4,085,000	3,423,950	7,508,950
2026	1,100,000	404,600	950,000	330,850	2,215,000	2,503,950	4,265,000	3,239,400	7,504,400
2027	1,140,000	360,600	1,000,000	292,850	2,325,000	2,393,200	4,465,000	3,046,650	7,511,650
2028	1,190,000	315,000	1,035,000	252,850	2,440,000	2,276,950	4,665,000	2,844,800	7,509,800
2029	1,235,000	267,400	1,085,000	211,450	2,555,000	2,154,950	4,875,000	2,633,800	7,508,800
2030	1,285,000	218,000	1,135,000	168,050	2,680,000	2,027,200	5,100,000	2,413,250	7,513,250
2031	1,335,000	166,600	1,180,000	122,650	2,785,000	1,920,000	5,300,000	2,209,250	7,509,250
2032	1,385,000	113,200	1,235,000	75,450	2,895,000	1,808,600	5,515,000	1,997,250	7,512,250
2033	1,445,000	57,800	1,280,000	38,400	3,000,000	1,692,800	5,725,000	1,789,000	7,514,000
2034	-	-	-	-	5,930,000	1,572,800	5,930,000	1,572,800	7,502,800
2035	-	-	-	-	6,160,000	1,335,600	6,160,000	1,335,600	7,495,600
2036	-	-	-	-	6,395,000	1,089,200	6,395,000	1,089,200	7,484,200
2037	-	-	-	-	6,640,000	833,400	6,640,000	833,400	7,473,400
2038	-	-	-	-	6,895,000	567,800	6,895,000	567,800	7,462,800
2039	-	-	-	-	7,300,000	292,000	7,300,000	292,000	7,592,000
Total	\$ 12,185,000	\$ 2,837,400	\$ 10,715,000	\$ 2,245,450	\$ 64,345,000	\$ 27,788,600	\$ 87,245,000	\$ 32,871,450	\$ 120,116,450

GLOSSARY AND ACRONYMS



Chamber's Reservoir Pumpstation

18. Glossary of Terms and Acronyms

- **Accrual Basis** – The basis of accounting under which revenues are recorded when earned and measurable expenditures are recorded as soon as they result in liabilities for benefits received.
- **ACWWA** – Arapahoe County Water and Wastewater Authority
- **ACWWA Flow Project** – A renewable water source project.
- **Adopted Budget** – ACWWA’s adopted budget is the fiscal year’s financial plan that details the Governing Board approved revenues and expenditures.
- **Alternate Water Supply** – The Alternate Water Supply is a search for new methods to meet current and project demands for water. These may include aquifer storage and recovery, wastewater reuse projects and the acquisition of water through the purchase of water rights.
- **Amendment** – An amendment is a change to an adopted budget. It can increase or decrease a fund total.
- **Appropriation** – An authorization granted by the Governing Board to make expenditures and to incur obligations for specific purposes.
- **Aquifer** – An aquifer is an underground bed or layer of earth, gravel or porous stone that yields water.
- **Aquifer Storage and Recovery** – This is the practice of injecting surplus water into an aquifer through wells and then pumping it out as needed.
- **Assets** – Property owned by ACWWA which has monetary value.
- **Audit** – The examination of documents, records, report, systems of internal control, accounting and financial procedures, and other evidence for the purpose of ascertaining fair presentation of financial statements, determining propriety, legality and accuracy of transactions.
- **Balances budget** - one in which the budget has sufficient projected revenues and available resources to equal anticipated expenditures.
- **Bond** – A written promise, generally under seal, to pay a specified sum of money, called the face value or principal amount, at a fixed time in the future, called the date of maturity, and carrying interest, usually payable periodically.
- **Budget** – A resource allocation plan for the accomplishment of programs related to established objectives and goals within a definite period.
- **Budget Message** – The opening section of the budget, which provides the reader with a general summary, and description of the most important aspects of the budget, changes from the current and previous years, and the views and recommendations of management.

- Capital Improvement Plan (CIP) – A plan for capital expenditures to be incurred each year over a fixed period of years to meet the capital needs of ACWWA.
- Capital Outlay – Expenditures which result in the acquisition of or addition to fixed assets. These generally consist of machinery and equipment, furniture and fixtures costing more than \$5,000 with a useful life of more than one year.
- Capital Project – Expenditures which result in the construction of or major improvements to ACWWA’s buildings and infrastructure; generally, consists of projects costing more than \$5,000 and lasting more than three years.
- Cash Basis – The basis of accounting under which revenues are recorded when received in cash and expenditures are recorded when paid.
- CRS – Colorado Revised Statutes
- CWSD – Cottonwood Water and Sanitation District
- Debt – An obligation resulting from the borrowing of money or from the purchase of goods and services.
- Debt Service – Cash outlays in the form of debt principal payments, periodic interest payments and related services charges for debt incurred in prior periods.
- Deficit – The excess of expenditures over revenues during a fiscal year.
- Department – An organizational unit such as Water or Wastewater.
- Depreciation – The expiration in the service life of an asset generally attributable to wear and tear through use, lapse of time or obsolescence. Depreciation is generally not budgeted; however, it is accounted for on the financial statements.
- Disbursement – A cash payment for goods or services procured by ACWWA.
- Enterprise – An entity that qualifies under the Taxpayer’s Bill of Rights (TABOR) as being a government-owned business authorized to issue its own revenue bonds and receiving fewer than 10 percent of its annual revenue in grants from all Colorado state and local governments combined.
- Enterprise Fund – A fund established to finance and account for the acquisition, operation, and maintenance of governmental facilities and services, which are entirely or predominantly self-supporting, by user charges.
- Expenditure – Under the accrual basis or modified accrual basis, this term designates the cost of goods delivered or services rendered, whether paid or unpaid. This expression is generally used for governmental type funds.
- Expenses – Charges incurred, whether paid or unpaid for operation, maintenance, and interest, and other charges, which are presumed to benefit the current fiscal period. This expression is generally used for proprietary type funds such as enterprises, trust and agencies.
- Fiscal period – A period of time usually consisting of twelve months. At the end of the fiscal period a governmental unit determines its financial position and the results of its operations. ACWWA’s fiscal period is January 1 to December 31.

- FTE – An FTE is a “Full-Time Equivalent” which is equivalent to one full-time employee who works 40 hours per week for 52 weeks, for a total of 2,080 work hours.
- Fund – A self-balancing accounting entity segregated to carry on specific activities or attain certain objectives in accordance with special regulations, restriction or limitation such as Water and Wastewater.
- Fund Balance – Resources remaining from prior years, which are available to be budgeted in the current year.
- FY – Fiscal Year
- Generally Accepted Accounting Principles (GAAP) – Generally Accepted Accounting Principles are uniform minimum standards and guidelines for financial accounting and reporting. Currently, the Financial Accounting Standards Board (FASB), the Governmental Accounting Standards Board (GASB) and the Federal Accounting Standards Advisory are authorized to establish these principles.
- Gross Revenue – All income and revenues directly or indirectly derived from the operation and use of the System, or any part thereof.
- IGA – Intergovernmental Agreement
- IWSD – Inverness Water and Sanitation District
- Internal Controls – A plan of organization under which employee’s duties are so arranged and records and procedures so designed as to make it possible to protect and exercise effective accounting control over assets, liabilities, revenues and expenditures.
- JWPP – Joint Water Purification Plant
- Long Term Debt – Debt that is legally payable from revenues and backed by the credit of ACWWA.
- MGD – Million gallons per day
- Operating Budget – A budget that applies to all other outlays other than capital projects.
- Operation and Maintenance (O&M) Expenses – All reasonable and necessary current expenses paid or accrued for operating, maintaining, and repairing the System.
- Performance Measures – A performance measure is a specific quantitative measure of work performed, outputs and inputs.
- PID – Public Improvement District. Specifically, the Arapahoe County Water and Wastewater Public Improvement District.
- Program – A group of related activities performed by one or more organizational units for the purpose of accomplishing a function for which the government is responsible.

- Pump Stations – A pump station is a manmade structure that uses a pump to transfer water from one location to another.
- Refunding Bonds – Bonds issued solely to retire bonds already outstanding.
- Reserve – An account which records a portion of the fund balance which must be segregated for some specific use and which is, therefore, not available for other expenditures.
- Resolution – A special or temporary order or decision of the Board of Directors acting as a legislative body. A resolution and a motion have the same force and effect.
- Retained Earnings – The cumulative earnings of an operation that generally have been invested in property, plant and equipment or current assets.
- Revenue – Additions to assets, which do not increase any liability, do not represent the recovery of expenditure, and do not represent the cancellation of certain liabilities.
- Revenue Bonds – Bonds whose principal and interest are payable exclusively from earnings of a public enterprise.
- SDWA – Safe Drinking Water Act
- Surplus – The excess of the assets of a fund over its liabilities or its resources over its disbursements.
- System – All water and wastewater facilities and properties, now owned or hereafter acquired, whether situated within or outside of ACWWA’s boundaries.
- TBD – To be determined
- Tap fees – the cost of connecting a home or business to the water and/or wastewater systems.
- Tap equivalent – a mathematical calculation to convert disparate numbers of water and wastewater taps into a single unit of measurement.
- Taxpayer’s Bill of Rights (T.A.B.O.R.) – An amendment to the constitution of Colorado enacted in 1992 that limits the powers of governments in Colorado to levy taxes and incur debt. It also sets forth revenue limits for non-enterprise systems. TABOR is found at Article X, Section 20 of the Colorado Constitution.

FPP.1. APPENDIX



BNR's at LTCRF

FPP.2. Financial Policies and Procedures

FPP.2.1 Basis of Budgeting/Accounting

For budgetary reporting purposes, ACWWA uses the modified accrual basis of accounting and budgeting for its one general fund. For financial reporting purposes, ACWWA utilizes the full accrual basis of accounting.

Under the modified accrual basis of accounting, revenues are recognized when they become measurable and available. “Measurable” means the amount of the transaction can be determined and “available” means collectible with the current period or soon enough thereafter to be used to pay liabilities of the current period. Expenditures are recognized in the accounting period in which the liability is incurred. Non-cash expense items such as depreciation expense for fixed assets and accrued compensated absences are excluded from the budget. All annual appropriations lapse at the end of the fiscal year.

ACWWA operates under one fund for budgetary purposes. However, ACWWA’s departments are categorized in service lines – water and wastewater – for budgetary and financial reporting purposes.

The costs of vacation and sick leave benefits (accrued compensated absences) are expended when payments are made to employees. The liability for all accrued and vested vacation and sick pay benefits is recorded on the balance sheet.

FPP.2.2 Revenue Policies

ACWWA estimates revenues conservatively using an objective and analytical approach employing techniques such as reviewing historical trends, current information, and economic indicators to ensure consistency, reliability and reasonableness. ACWWA utilizes a financial model that allows future revenue projections and that can be updated annually to reflect changing conditions. ACWWA’s long-term financial plan assesses long-term financial implications of current and proposed policies and programs. It also serves as a tool to allow staff to deal with financial issues proactively.

- ACWWA shall maintain a diversified and stable revenue base. Existing and potential revenue sources shall be reviewed annually for stability, equity efficiency and capacity to finance future operations.
- An objective, analytical process that recognizes the sensitivity of each revenue source shall be used to estimate revenues.
- Whenever authorized and appropriate, user fees and charges shall be established to recover the full costs of all programs and services.

FPP.2.3 Rates and Charges

Rates and charges are the primary component of ACWWA's revenue. User fees fund the services provided to ACWWA's customers. ACWWA utilizes a cost recovery concept to determine how costs are allocated to classes of customers. The full cost of providing various services is used as the basis for setting rates and fees. The full cost method incorporates both direct and indirect costs, including operations and maintenance, overhead, and charges for the use of capital facilities. Examples of ACWWA's overhead include billing, payroll processing, accounting and administrative services, computer support, office supplies, and other central administrative charges.

ACWWA's Board of Directors established the following guidelines for the user rate and charge setting process:

- Rates and charges are established utilizing a generally accepted cost recovery methodology that is consistent and legally defensible using the following approaches: revenue requirement analysis, cost of service analysis, and rate design analysis. ACWWA conducted a rate study in the third quarter of 2022, which is the basis for 2024 rates.
- Rate design shall be reflective of ACWWA's Board of Directors' rate setting objectives.
- Rates shall be set at a level to collect more reliable revenues through a combination of system access charges and low to medium users' commodity rates to meet ACWWA's revenue requirements.
- Rates and charges will be reviewed and updated annually based on factors such as the impact of inflation, other cost increases, and the adequacy of coverage of costs.
- ACWWA must produce revenues sufficient to pay:
 - a minimum of 1.25 times the Annual Debt Service Requirements as required to meet debt coverage covenants of ACWWA's bonds; and
 - the amounts required to be deposited in any reserve or contingency fund created for the payment and security of obligations.
- ACWWA will adjust rates and charges as the Board deems necessary so that net system revenues from such adjusted rates and charges will be sufficient at all times to meet the requirements.

FPP.2.4 Recognition of Revenues

Revenues are recorded when earned. Customers' meters are read, and bills are prepared monthly based on billing cycles.

FPP.2.5 Expenditure Policy

ACWWA's expenditures reflect the commitment of the Board of Directors and staff to serve present and future customers reliably. The Board and staff believe that prudent expenditure planning and accountability will ensure fiscal stability. Expenditures are projected conservatively using an objective and analytical approach and employing certain techniques such as the review of historical trends, current information, and economic indicators to ensure consistency, reliability, and reasonableness. ACWWA's financial model allows for future projections of capital and operating expenditures.

FPP.2.6 Disbursements

Disbursement of Authority funds must be for a legitimate purpose and within budgetary limits.

Payment for Authority contracts and purchase orders are contingent on evidence of receipt or acceptance of the specific deliverables.

FPP.2.7 Maintenance of Capital Assets

Maintaining a reliable transmission and distribution system and a sustained capital program are not possible without reliable funding sources. Prudent financial planning is critical to an effective capital improvement program. ACWWA uses a combination of debt financing and "pay as you go" to fund the capital improvement program and maintenance of capital assets. The annual capital improvements cost is estimated by staff and is included in the amount to be funded from rates and charges.

Within the resources available each fiscal year, ACWWA will strive to maintain capital assets and infrastructure at a satisfactory level to protect its investment, to minimize future replacement and maintenance costs, and to maintain service levels.

FPP.2.8 Review of Service Policy

These expenditure policies are used by staff to prompt review of services to see if they are being provided as effectively and efficiently as possible. ACWWA's review of service policy is designed to accomplish the following:

- Encourage greater efficiency and effectiveness of the delivery of services by sharing resources and coordinating with other public and private organization through partnerships;
- Where possible, utilize technology and productivity advancements that will help reduce or avoid increasing personnel costs;
- Control personnel costs as a proportion of total budget by the more effective use of resources.

FPP.2.9 Cash Management Policies and Practices

ACWWA's cash management policies strive to:

- maximize ACWWA's cash position;
- accelerate collections and control disbursements to optimize cash availability;
- meet its financial obligations on a timely basis in order to maintain public trust and productive relations with employees, suppliers, and contractors;
- develop monthly cash flow projections to help formulate investment strategies for the most effective use of resources;
- manage funds in a prudent and diligent manner that meets the criteria of legality, safety, liquidity and yield, in that order of importance.

FPP.2.10 Debt Financing

ACWWA will use debt financing when it is judged to be appropriate based on the long-term capital needs of ACWWA, and the capacity to repay the indebtedness has been evaluated in light of all sources and uses of cash.

ACWWA will only incur long-term debt for the financing of capital improvements that are not expected to recur and are long-lived. Conversely, if the capital requirements are recurring, of relatively small scale or are for short-lived improvements, the costs of these improvements will be paid from current revenues.

FPP.2.11 Reserve Funds

ACWWA maintains several reserve funds. In partnership with Inverness Water and Sanitation District (IWSD), maintains a Repair and Replacement Reserve for the Wastewater Treatment Plant of which ACWWA contributes 69.44% and IWSD contributes 30.55%. ACWWA currently contributes \$300,924 to this reserve annually. ACWWA and CWSD maintain a reserve fund for the JWPP to which ACWWA contributes \$12,667 annually. ACWWA is also required by bond covenants to maintain debt service reserves of \$550,000. Additionally, ACWWA established board-designated reserve funds in 2018, including an operating, rate stabilization, and emergency capital reserve funds.

FPP.2.12 Revenue Bonds

ACWWA does not collect taxes and cannot issue General Obligation Bonds. ACWWA may issue Revenue Bonds secured by a pledge of revenues. Revenue Bonds are limited liability obligations that pledge net revenues of ACWWA to debt service. The net revenue pledge is after payment of all operating costs. The financial markets require coverage ratios of the pledged revenue stream and a covenant to levy rates and fees sufficient to produce net income at some level in excess of debt service.

There may be an additional test required to demonstrate that future revenues will be sufficient to maintain debt service coverage levels after additional bonds are issued. ACWWA will strive to exceed the coverage ratio required by the debt covenants. Annual adjustments to ACWWA's rate structure may be necessary to maintain these coverage ratios.

The credit rating of Revenue Bonds is based on the ability of ACWWA's existing rates to provide sufficient net income to pay debt service, as well as the perceived willingness of ACWWA's Board of Directors to raise rates and fees in accordance with its bond covenants. Past performance also plays a role in evaluating the credit quality of Revenue Bonds, as does the diversity of the customer base.

FPP.2.13 Capital Leases

Capital lease and installment sale agreements shall be considered as an alternative to long-term debt. Although these forms of alternative financing are subject to annual appropriation, they shall be treated as long-term debt until maturity.

ACWWA currently has no capital lease obligations.

FPP.2.14 Long-Term Debt

Long-term debt is defined as bonded indebtedness whose maturity is at least ten years from issue date.

When developing funding strategies for projects; ACWWA will first consider revenues unique to such projects, e.g.; water funds for water projects, and wastewater funds for wastewater projects.

Projects will be funded with Revenue Bonds only if no other revenue source can be utilized.

When appropriate, ACWWA will use long-term debt financing to: achieve an equitable allocation of capital costs/charges between current and future system users, to provide more manageable rates in the near and medium term, and to minimize rate volatility.

For growth-related projects, debt financing will be utilized as needed to better match the cost of anticipated facility needs with timing of expected new connections to the system and spread the costs evenly over time.

Every effort will be made to schedule principal and interest payments so as to avoid fluctuations in debt service requirements and related fluctuations in user fees. Because debt financing involves long-term commitments, the projects that are financed through debt financing will only be those that have a useful life at least equal to the debt amortization period. Therefore, debt financing shall be used only for capital expenditures and not for addressing maintenance items.

A rate review will be conducted when appropriate to ensure predictable and affordable changes to utility system rates. ACWWA will maintain rates to confirm that it meets bond coverage requirements. Exceptions to this strategy may be made by the Governing Board for projects that are mandated by judicial or regulatory bodies, or for emergency situations.

FPP.2.15 Short-Term Debt

User fees and tap fees should support needed capital improvements on a pay-as-you-go basis to the greatest extent possible. In the event short-term debt financing is required, lease-purchases, operating leases or other debt instruments may be used as a short-term (less than ten years) method of borrowing. This financing may be used for costs such as the purchase of fleet equipment, the renovation or reconstruction of capital assets, specialized types of equipment purchases, communications, and data transmission systems.

ACWWA may utilize short-term borrowing to serve as a bridge for anticipated revenues, construction financing or future bonding capacity.

All proposals for short-term financing will be evaluated on a case-by-case basis with findings presented to the Board prior to authorizing financing. Examples of issues to be addressed in the case-by-case analysis may include, but not necessarily be limited to the following:

- The extent to which the proposed improvement(s) either (a) extend the useful life of the facility(s) by greater than five years or (b) add to the long-term value of the underlying asset by an amount equal to or in excess of the cost of the improvement. Improvements may be one project or a series of projects, when performed as a package, extend the useful life by the required minimum.
- The extent to which a permanent, ongoing additional maintenance commitment is required in order to maintain the value and utility of the financed improvements during the time period in which the financing is outstanding.
- The extent to which an improvement(s) provides a long-term solution to a problem or effectively arrests deterioration which might lead to structural failure, beyond which the process should not have to be repeated if there is appropriate preventative maintenance.
- The extent to which financing spreads the cost of the improvements between present and future users.

FPP.2.16 Debt Authorizations

All long and short-term debt shall require Board authorization prior to issuance. ACWWA has no plans to issue new debt in 2024.

FPP.2.16.1 Current Debt Outstanding

In 2006, ACWWA issued \$22,940,000 in Revenue Refunding Bonds. The proceeds from the 2006 Series Bonds were used to refund the Water and Wastewater Revenue Variable Rate Refunding and Improvement Bonds, Series 2003A and the Taxable/Tax-Exempt Water and Wastewater Revenue Variable Rate Refunding Bonds, Series 2003B. The 2006 Series Bonds were refunded on October 4, 2016 by the Series 2016 Water and Wastewater Revenue Refunding Bonds in the amount of \$16,475,000 to take advantage of lower interest rates.

In 2007, ACWWA issued \$18,760,000 in Revenue Refunding Bonds. The proceeds from the 2007 Series Bonds were used to refund the Water and Wastewater Revenue Variable Rate Refunding and Improvement Bonds, Series 2003C and to provide \$10 million of new money to be used for capital projects. The 2007 bonds were refunded on September 7, 2017, in the amount of \$12,720,000.

In 2010, ACWWA issued \$91,545,000 in Taxable Water and Wastewater Revenue Direct Pay Build America Bonds and \$5,625,000 in Water and Wastewater Revenue Bonds. The proceeds from the 2010 Series Bonds were used to purchase a renewable water source, infrastructure, and water storage. This project is identified as the ACWWA Flow Project. In 2013, ACWWA refunded the 2010 Series B Bonds. The 2010 Series A bonds were refunded on October 22, 2019 in the amount of \$71,485,000.

A summary of outstanding debt is as follows:

- Water and Wastewater Revenue Refunding Bonds, Series 2016 Bonds, original amount \$16,475,000; amount outstanding January 1, 2024 - \$12,185,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2017 Bonds, original amount \$12,720,000; amount outstanding January 1, 2024 - \$10,715,000.
- Taxable Water and Wastewater Revenue Direct Pay Build America Bonds, Series 2019 Bonds, original amount \$71,485,000; amount outstanding January 1, 2024 - \$64,345,000.

FPP.2.16.2 Debt Limits

ACWWA is not legally restricted as to the amount of debt that can be issued.

FPP.2.17 Balanced Budget

Colorado statutes and ACWWA's financial policies require an annual budget that is balanced. A balanced budget is one in which the budget has sufficient projected revenues and available resources to equal anticipated expenditures. Throughout the budget development process, projected revenue estimates are updated and compared against proposed expenditures.

ACWWA has developed a series of revenue and expenditure assumptions, based on current and projected economic indicator, and historical trends. Expenditure and revenue collection history for the last two years and information supplied by various departments were used to determine revenue sources and uses.

FPP.2.18 ACWWA's Funds

ACWWA describes a fund as a self-balancing accounting entity segregated to carry on specific activities or attain certain objectives in accordance with special regulations, restriction or limitation such as water or wastewater.

FPP.2.18.1 Funds Available

ACWWA describes funds available as resources remaining from prior years, which are available to be budgeted in the current year.

FPP.2.18.2 Restricted Cash Funds

Restricted cash funds are those that are legally set aside for a particular purpose and cannot be used for any other purpose. These are funds whose use is not at the discretion of the Board. ACWWA maintains a debt service reserve fund required by bond covenants, and asset replacement reserves for the LTCWRF and the JWPP. In 2019, ACWWA funded two additional restricted project funds for the ECCV Northern Plant Expansion and the JWPP RO Plant reconversion, and one these funds remain open.

FPP.2.18.3 Designated Cash Funds

Designated cash funds are general use funds that have been set apart by Board action for a specific purpose. These funds can only be used for those purposes. However, these funds are at the discretion of the Board and can be used for any other purpose by an action of the Board. ACWWA maintains designated funds to provide for an operating reserve, a rate stabilization reserve, an emergency capital reserve, an unrestricted debt reserve, and an asset replacement reserve.

FPP.2.18.4 General Use Cash Fund

General use cash funds are funds that are not restricted or designated. ACWWA maintains a general cash fund to provide cash for operations, debt service, and capital improvements.

FPP.2.18.5 Authority Funds Subject to Appropriation

ACWWA operates as an Enterprise Fund. Enterprise Funds are used to account for operations that are financed and operated in a manner similar to private business enterprises, in that the costs of providing goods or services to the general public are financed through user charges.



Clarifier 3 at LTCRF

Budget Resolution 2023-04

A RESOLUTION SUMMARIZING REVENUES AND EXPENDITURES FOR EACH FUND, ADOPTING A BUDGET, AND APPROPRIATING SUMS OF MONEY TO THE VARIOUS FUNDS IN THE AMOUNTS AND FOR THE PURPOSES SET FORTH HEREIN FOR THE ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY, ARAPAHOE COUNTY, COLORADO, FOR THE CALENDAR YEAR BEGINNING ON THE FIRST DAY OF JANUARY 2024, AND ENDING ON THE LAST DAY OF DECEMBER 2024.

WHEREAS, the proposed 2024 budget has been submitted to the Board of Directors of the Arapahoe County Water and Wastewater Authority for its consideration; and

WHEREAS, upon due and proper notice, published in the Aurora Sentinel and the Douglas County News Press in accordance with the law, and said proposed budget was open for inspection by the public at a designated place, a public hearing was held on December 14, 2023 and interested persons were given the opportunity to file or register any objections to said proposed budget; and

WHEREAS, whatever increases may have been made in the expenditures, like increases were added to the revenues so that the budget remains in balance, as required by law,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY, ARAPAHOE COUNTY, COLORADO:

Section 1: 2024 Budget Revenues. That the estimated revenues for each fund set out in the budget are accepted and approved.

Section 2: 2024 Budget Expenditures. That the estimated expenditures for each fund set out in the budget are accepted and approved.

Section 3: Designation of Ending Fund Balances as Reserves. That pursuant to Const. Colo. Article X, Section 20, the December 31, 2023, ending fund balance of the Operating Fund, the exact amount to be determined as part of the audit of the December 31, 2023 financial statements, is designated as a general reserve for future contingencies.

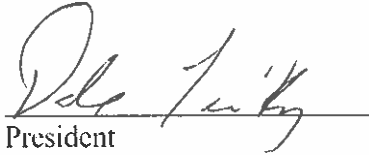
Section 4: Adoption of Budget for 2024. That the budget as submitted and if amended, then as amended, is hereby approved and adopted as the budget of the Arapahoe County Water and Wastewater Authority for calendar year 2024.

Section 5: Fiscal Year Spending Limits. That, being fully informed, the Board finds that the foregoing budget does not result in a violation of any applicable fiscal year spending limitation.

Section 6: Appropriations. That the amounts set forth as expenditures and balances remaining, as specifically allocated in the budget are hereby appropriated from the revenue of each fund, to each fund, for the purposes stated and no other.

Section 7: Discretion: The General Manager may exercise discretion in administration of the Operating Budget to respond to changed circumstances, provided that any modification in excess of \$75,000 receives approval by the Board.

ADOPTED AND APPROVED this 13th day of December 2023.


President

ATTEST:


Secretary