

**Arapahoe County Water and Wastewater Authority
(ACWWA)
2023 Operating and Capital Improvement Budget**

December 14, 2022

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

2023 Operating and Capital Improvement Budget

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BUDGET MESSAGE



ACWWA Administrative Building

1. Budget Message

December 14, 2022

Board of Directors
Arapahoe County Water and Wastewater Authority

Your management team is pleased to present the Arapahoe County Water and Wastewater Authority (ACWWA) 2023 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 2023.

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 2023. 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 120 taps for the year.

The 2023 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 2023 budget furthers the Board's priorities as follows:

1. Improve Water Quality

- a. ACWWA has been working to further develop renewable water sources such as the ACWWA Flow Project. Using the ACWWA Flow water supply benefits the overall water quality in the ACWWA system. The 2023 budget provides funding for several critical components of the project:
 - i. ACWWA will continue to acquire the necessary property interests and develop the required agreements to fully utilize this water supply.
 - ii. The continued adjudication of water rights for municipal use. ACWWA has adjudicated approximately 63% of the ACWWA Flow Project water rights. The 2023 budget provides funding for additional adjudication.
 - iii. The purchase of 500 acre-feet of firming storage in the South Platte Basin.
 - iv. Treatment and delivery of approximately 2000 acre-feet of ACWWA Flow water.
- b. In 2021, ACWWA funded year four of the four-year expansion of East Cherry Creek Valley Water and Sanitation District's (ECCV) Northern RO Plant, which treats ACWWA Flow water. The result of this project increased ACWWA's ownership capacity in the plant from 2.25 MGD to 5.25 MGD.
- c. ACWWA will further refine its water quality model to better manage water supplies and improve water quality in 2023. There is funding in the 2023 budget for updates to both the water and wastewater master plans.
- d. The JWPP began operating as a blended RO/microfiltration plant on May 20, 2020. The 2023 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 2023 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.
 - c. The implementation of the new billing software will greatly enhance the overall customer experience and allow for improved functionality, enhanced notifications and streamlined processes.
- 3. Development Review
 - a. Over the past several years, staff has evaluated ACWWA’s process for new development review, and has streamlined some functions. In 2023, staff will continue to assess development-related policies and procedures and modify as needed to become more effective.
 - b. 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 2023, 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 2023 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 2023 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.
- 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 2023, 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 2023 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 2022. 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 4,500
Average census	31,000

Lone Tree Creek Water Reuse Facility	
Average Daily Wastewater Flow	2.5 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)	99.7
Water Pipeline (in miles)	225
Number of Water Storage Tanks	3
Number of Fire Hydrants	2,007
Number of Valves	8,417
Number of Meters	5,076
Number of Water Supply Wells	26
Number of Booster Stations	3
Number of Lift Stations	3
Number of Manholes	3,175
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 (AWSD 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 AWSD'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. Mr. Tinkey is retired from CH2M Hill.
- **Geri G. Santos-Rach's** conflict form has been filed; she has no conflicts to report and notes that she has contributed to the campaigns of Arapahoe County Commissioners who have served or are currently serving on the ACWWA Board.
- **Nancy Sharpe's** conflict form has been filed; she is a member of the Arapahoe County Board of County Commissioners, the Centennial Airport Authority Board, an alternative on the SEMSWA Board, and the Urban Drainage and Flood Control Authority Board.
- **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.
- **Brad Cromer's** conflict form has been filed; he has no conflicts to report and notes that he has previously made campaign contributions to Arapahoe County Commissioner Nancy Sharpe.
- **Tom Wood's** conflict form has been filed; he purchased some of ACWWA's 2018 bonds.

- **Perry Deed's** conflict form has been filed and there are no conflicts noted.
- **Derek Killebrew's** conflict form has been filed and there are no conflicts noted.

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.

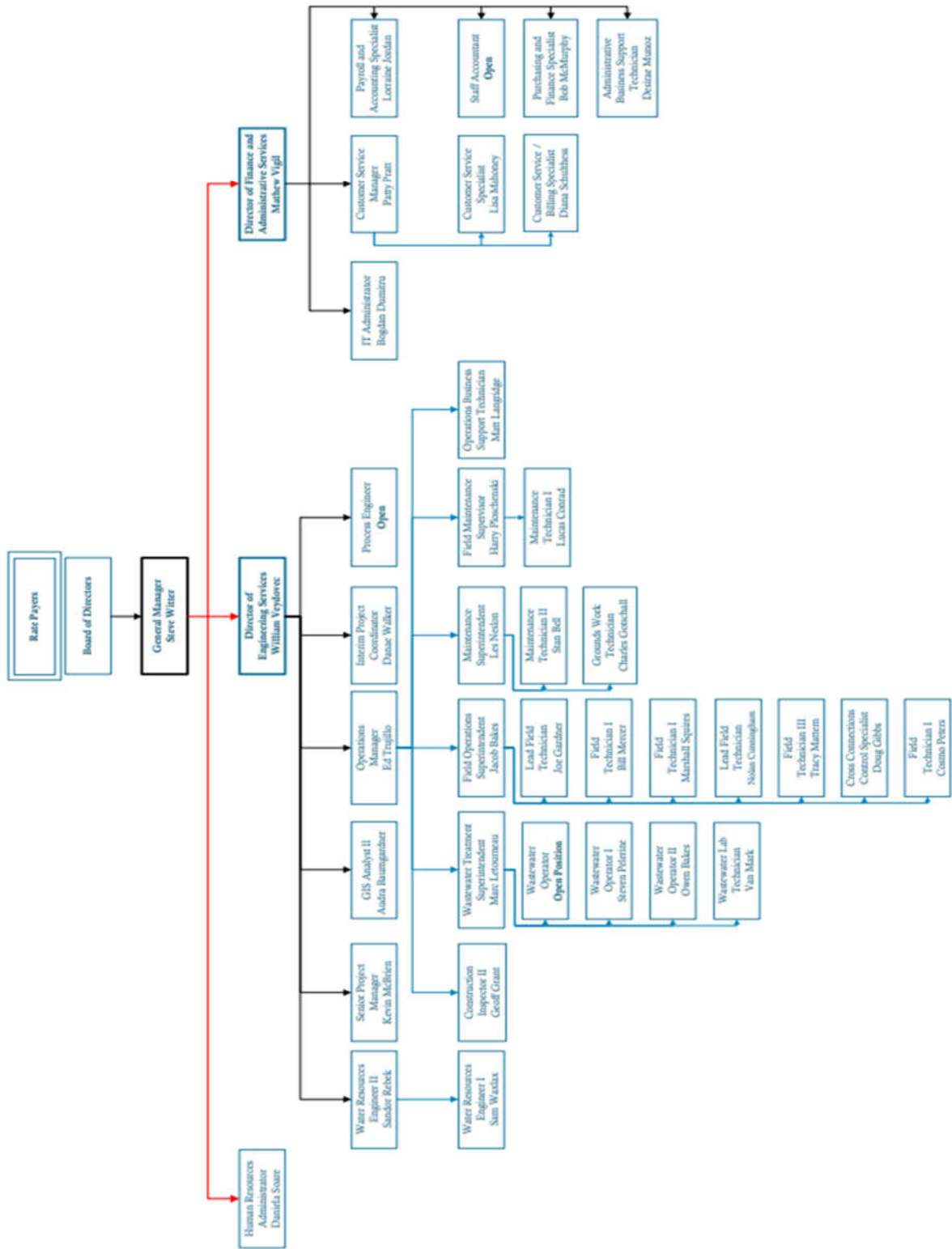
ACWWA is currently budgeting 40 positions and 1 intern position. Management does not anticipate adding new full-time employees for 2023.



Pictured above are the BNR's and Clarifier's at the LTCRF

4.4 Organization Chart

Arapahoe County Water & Wastewater Authority
Organization Chart



4.5 **Our Mission**

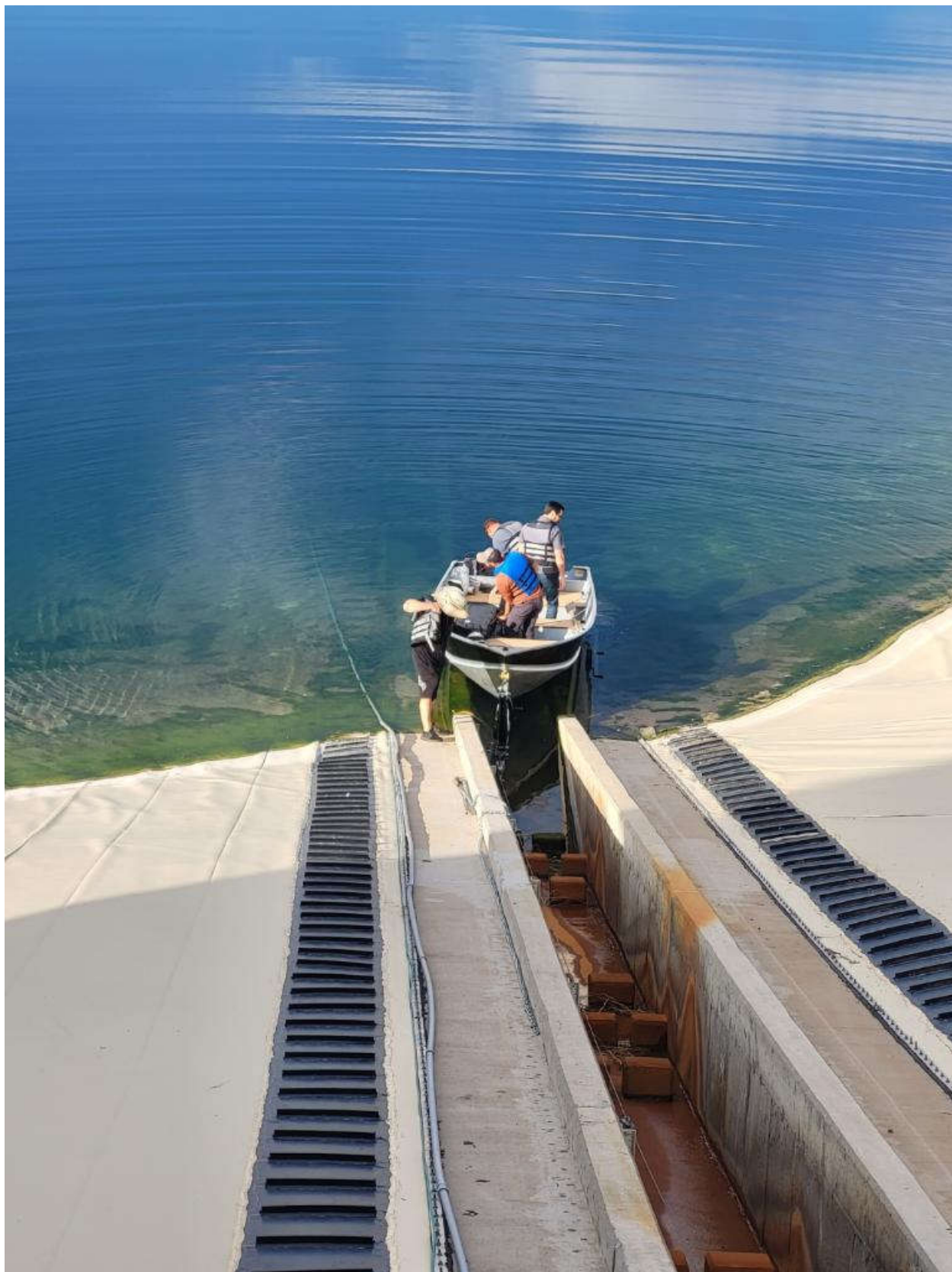
To provide sustainable water and wastewater services by optimizing our resources to ensure quality and value while protecting the environment.

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.



ACWWA Staff water sampling at Chamber's Reservoir

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 2011 and 2021, the population of Arapahoe County increased 11.9%, and the populations of the Denver-Aurora PMSA and the State increased 14.3% and 13.5%, 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	574,819	17.1	2,502,291	16.7	5,050,332	16.4
2011	585,817	1.9	2,549,059	1.9	5,123,550	1.4
2012	596,228	1.8	2,594,255	1.8	5,194,662	1.4
2013	607,861	2.0	2,642,273	1.9	5,270,884	1.5
2014	618,310	1.7	2,692,972	1.9	5,347,654	1.5
2015	629,965	1.9	2,748,921	2.1	5,446,593	1.9
2016	637,656	1.2	2,789,730	1.5	5,529,629	1.5
2017	642,976	0.8	2,821,327	1.1	5,599,589	1.3
2018	650,167	1.1	2,858,678	1.3	5,676,913	1.4
2019	653,804	0.6	2,886,878	1.0	5,734,913	1.0
2020	654,920	0.2	2,910,157	0.8	5,784,156	0.9
2021	655,581	0.1	2,914,372	0.1	5,814,707	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

Year ⁽¹⁾	Denver			
	Arapahoe County	PMSA	Colorado	United States
2010	\$ 40,991	\$ 43,690	\$ 40,790	\$ 40,683
2011	46,662	47,363	43,658	42,747
2012	48,232	49,680	45,630	44,548
2013	49,548	51,775	47,404	44,798
2014	53,105	55,602	50,797	46,887
2015	54,339	56,675	52,339	48,725
2016	54,879	56,584	52,390	49,613
2017	56,621	60,371	55,251	51,550
2018	61,243	64,114	58,453	53,786
2019	63,741	67,089	62,124	56,250
2020	66,691	69,822	65,358	59,765
2021	-	-	70,706	64,143

(1) Figures for Arapahoe County and the Denver-Aurora PMSA updated March 6, 2020. State and national figures updated through 2021. 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 2021, the largest employment sector in Arapahoe County was health care and social assistance (comprising approximately 13.4% 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, 2021, total average employment in the County remained relatively unchanged as compared to the same period ending December 31, 2020.

Average Number of Employees within Selected Industries – Arapahoe County

<u>Industry</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
Accommodation and Food Services	26,161	26,942	26,939	26,951	26,962
Administrative and Waste Services	26,640	27,411	27,622	27,921	27,924
Agriculture, Forestry, Fishing, Hunting	94	119	124	185	185
Arts, Entertainment and Recreation	5,470	6,106	6,331	6,171	6,458
Construction	20,244	21,769	22,805	22,870	23,065
Educational Services	22,930	22,632	22,399	22,640	22,594
Finance and Insurance	28,516	29,159	28,891	27,624	25,656
Government	13,051	13,079	13,373	14,293	13,668
Health Care and Social Assistance	43,035	42,754	43,572	44,248	44,886
Information	17,675	18,136	18,203	18,849	19,169
Management of Companies/Enterprises	7,280	8,661	8,743	9,059	9,059
Manufacturing	8,148	7,891	8,209	8,415	8,415
Mining	714	675	683	625	625
Non-classifiable	28	13	30	30	31
Other Services	8,959	9,316	9,528	9,835	9,835
Professional and Technical Services	31,529	31,878	33,178	34,607	34,707
Real Estate, Rental and Leasing	6,312	6,381	6,681	6,598	6,696
Retail Trade	34,614	34,774	33,916	33,381	33,461
Transportation and Warehousing	5,069	5,138	5,554	5,282	6,096
Utilities	260	256	267	202	293
Wholesale Trade	14,836	15,032	14,741	14,986	14,986
Total All Industries ⁽¹⁾	<u>321,566</u>	<u>328,120</u>	<u>331,789</u>	<u>334,772</u>	<u>334,771</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.

	Arapahoe County ⁽¹⁾		Denver-Aurora PMSA ⁽¹⁾		Colorado ⁽¹⁾		United States
	Labor	Percent	Labor	Percent	Labor	Percent	Percent
<u>Year</u>	<u>Force</u>	<u>Unemployed</u>	<u>Force</u>	<u>Unemployed</u>	<u>Force</u>	<u>Unemployed</u>	<u>Unemployed</u>
2014	331,140	4.9%	1,484,700	3.9%	2,812,244	4.2%	5.6
2015	334,380	3.7	1,514,908	3.0	2,853,704	3.3	5.0
2016	340,623	3.1	1,544,387	2.5	2,922,961	2.7	4.7
2017	347,523	2.7	1,591,613	2.6	3,003,856	2.7	4.1
2018	356,525	3.2	1,628,737	2.9	3,072,704	3	3.9
2019	361,796	2.3	1,660,263	2.3	3,122,796	2.6	3.6
2020	359,977	6.7	1,653,053	6.6	3,111,186	6.4	6.7
2021	367,171	3.4	1,691,446	3.7	3,170,694	4.2	3.9
<u>Month of August</u>							
2022	370,791	3.4	1,748,200	3.3	3,255,124	3.3%	3.50%

(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	5,590
HealthONE	Healthcare	3,970
Charter Communications	Telecommunications	3,800
Centura Health	Healthcare	2,810
UnitedHealthcare	Insurance	2,770
Empower Retirement	Insurance & Retirement Savings Services	2,680
Raytheon Company	Aerospace Systems & Software	2,510
Lumen Technologies (formerly CenturyLink)	Telecommunications	2,280
Kaiser Permanente	Healthcare	2,240
Arrow Electronics	Electronic Component Wholesaler	1,780

(1) Figures revised September 2022.

(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 unincorporated Arapahoe County for the years indicated.

Building Permits Issued in Unincorporated Arapahoe County

Year	Single Family		Multi-Family ⁽¹⁾		Commercial/Industrial ⁽²⁾	
	Permits	Value	Permits	Value	Permits	Value
2015	265	53,359,420	15	3,498,000	215	71,029,000
2016	346	67,039,979	611	41,700,000	190	66,935,543
2017	265	57,248,257	8	1,615,896	257	67,776,367
2018	255	56,173,719	116	5,345,000	423	79,272,437
2019	182	76,151,030	22	5,250,000	98	146,087,418
2020	454	124,901,867	0	0	43	79,574,866
2021 ⁽³⁾	193	60,407,345	1	4,340	58	68,318,112

(1) Includes apartments, condominiums and townhomes.

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

(3) Figures are for January 1 through September 30, 2021.

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.

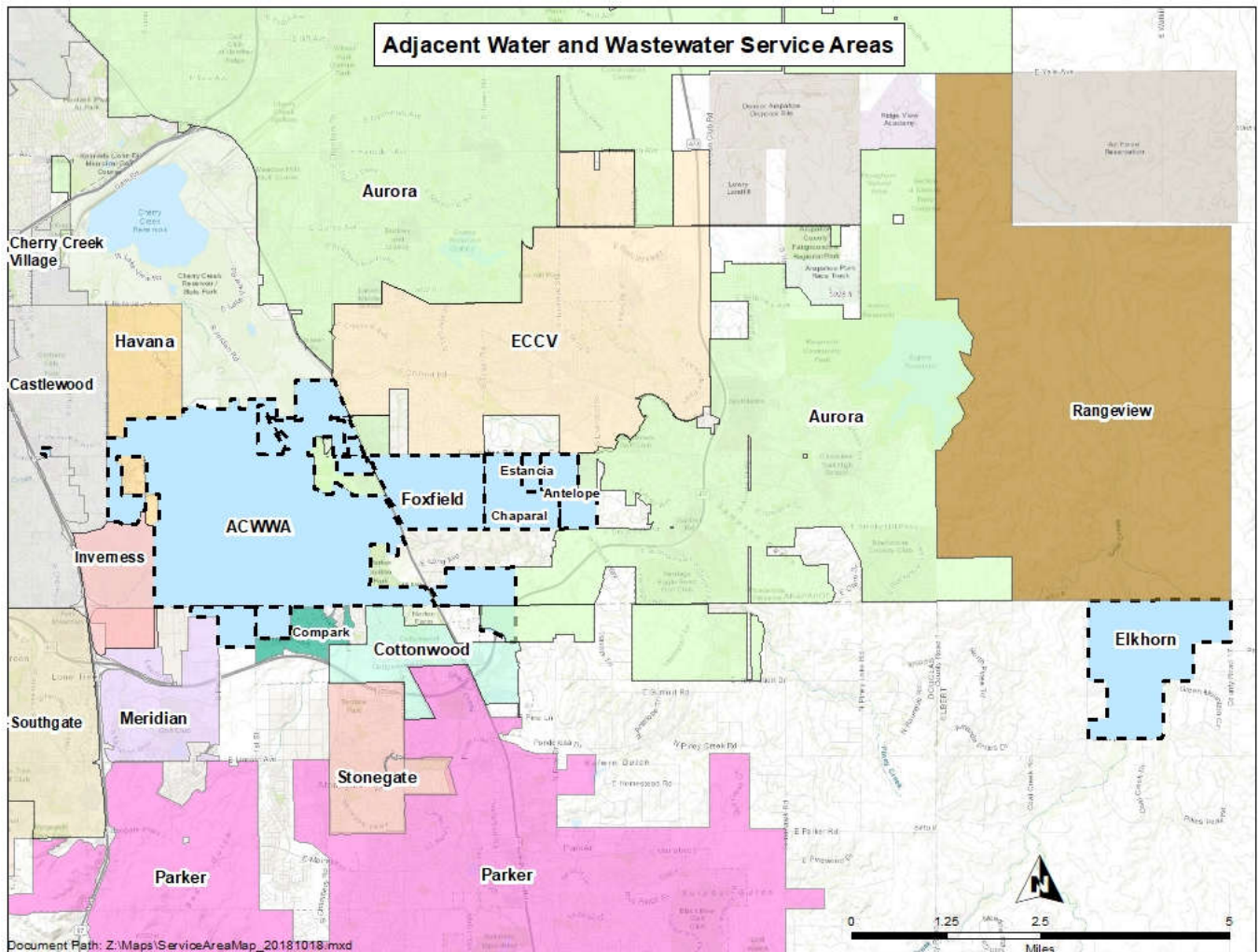
History of Foreclosures – Arapahoe County

Year	Number of Foreclosures Filed	Percent Change
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 October 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 11,000 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 2023.

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). These water rights are expected to provide water supply for over 17,000 tap equivalents and will be enhanced by ACWWA's ability to reuse its water supply. ACWWA expects this water to provide a secure water supply to meet its anticipated future demands. 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 60% of the water rights adjudicated and many more in process. ACWWA has also successfully adjudicated an augmentation plan, in addition to the water rights. The ACWWA Flow Project is currently delivering about 1,900 acre-feet of water annually, or just over 50% 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 2023, ACWWA will continue to develop this project and work to adjudicate the remaining water rights. In early 2023, 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

2022 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 had no violations from CDPHE! We are committed to a large schedule of compliance testing and all were done as required.
- We finished a number of critical Capital Improvement Projects, but probably no more important than our Biological Nutrient Removal (BNR) and Clarifier Project – this increased the redundancy of our system and was a successful project
- We live Asset Management as we feel it's key to not only providing a high level of service to our customers, but also to provide the most efficient way to manage our assets. We are developing a long term approach to this and made a lot of headway in 2022. Some of the key accomplishments in 2022 were:
 - Inspection and repair of all of our fire hydrants. This ensured they were in working order so they are ready if needed.
 - Inspection of 1,110 sewer manholes.
 - Exercised and inspected 2,500 distribution valves.
- Competed and submitted successfully to the EPA our Risk and Resilience Assessment and Emergency Response Plan.
- We successfully sampled for Lead and Copper with all results being below actionable CDPHE limits.
- The Chambers Reservoir Pump Station Expansion Project was completed which will allow ACWWA to supply water from the Reservoir to the existing raw irrigation system for the 2023 irrigation season.
- New billing, accounting and purchase order systems were all implemented during the year.
- The Chambers Reservoir Pump Station Expansion Project was completed which will allow ACWWA to supply water from the Reservoir to the existing raw irrigation system for the 2023 irrigation season.
- LTCWRF Participated 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 staff had no lost time accidents in 2022 for a seventh consecutive year.

ACWWA Employees achieved 9 new and renewing certifications in its field operations, plant operations and maintenance departments in 2022



Above is the filling of Chambers Reservoir Summer 2022

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 2022	Director of Finance meets with Executive Team and department heads to determine staffing levels, expense budgets, and capital outlay needed for 2022; begin developing budget.
September 2022	Staff presents draft 2022 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 2022	On December 14 th , the Board adopts the budget and holds rate hearing.
January 2022	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



Chamber's Reservoir with Pump Station Fall 2022.

9. Executive Summary

The 2023 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

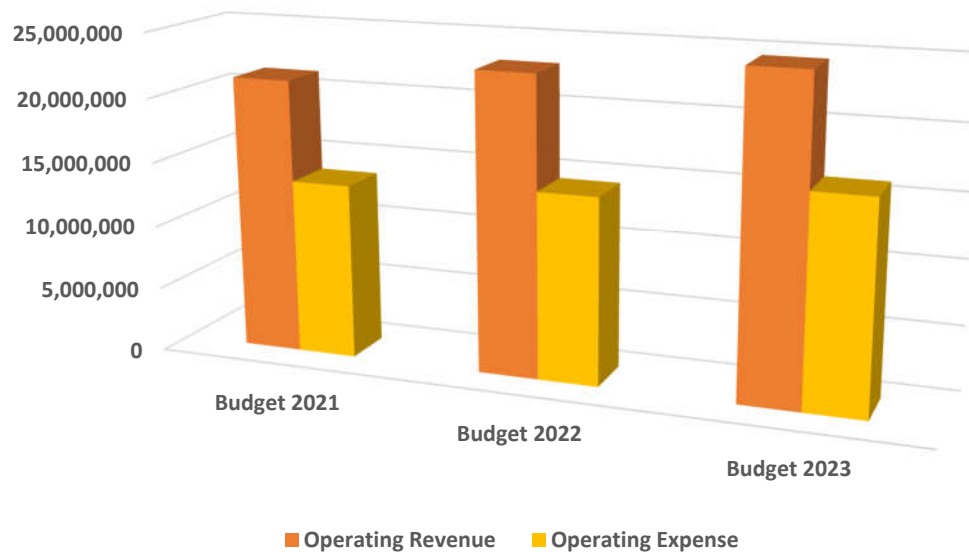
The 2023 budget provides funds for an optimal level of expense needed to operate ACWWA in order to provide effective service to ratepayers, maintain the current infrastructure, and add the necessary capital improvements to ensure future operations. ACWWA conducted a cost of service study in 2022 to ensure 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 2023 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 2.0%;
- Operating revenue of \$24.5 million;
- Operating expenses of \$16.1 million;
- Non-operating revenue of \$5.6 million, primarily from tap fees;
- Non-operating expenditures of \$29.9 million comprised of debt service payments of \$7.8 million and capital spending of \$22.1 million, including over \$6.6 million in capital costs that are being carried over to 2023 from the 2022 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 3 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 2021 - 2023

Operating Revenue

Operating revenue is projected to be \$24.5 million in 2023, which reflects an increase of \$1.4 million over the 2022 budget, and an increase of \$479,000 from 2022 estimated operating revenue.

Water Charges

Water charges revenue for 2023 is budgeted to increase \$422,000 or 3.0% over 2022 estimated revenue. Consumption and fee revenue will increase by a 3% rate factor and a 2% account growth factor.

Sewer Charges

Based on 2022 results escalated for account growth and rate increases, wastewater revenue is expected to increase \$133,000, or 2% compared to forecast 2022 revenue. Budgeted 2023 revenue includes a 2% volume increase and a 2% account growth factor.

Fire Lines

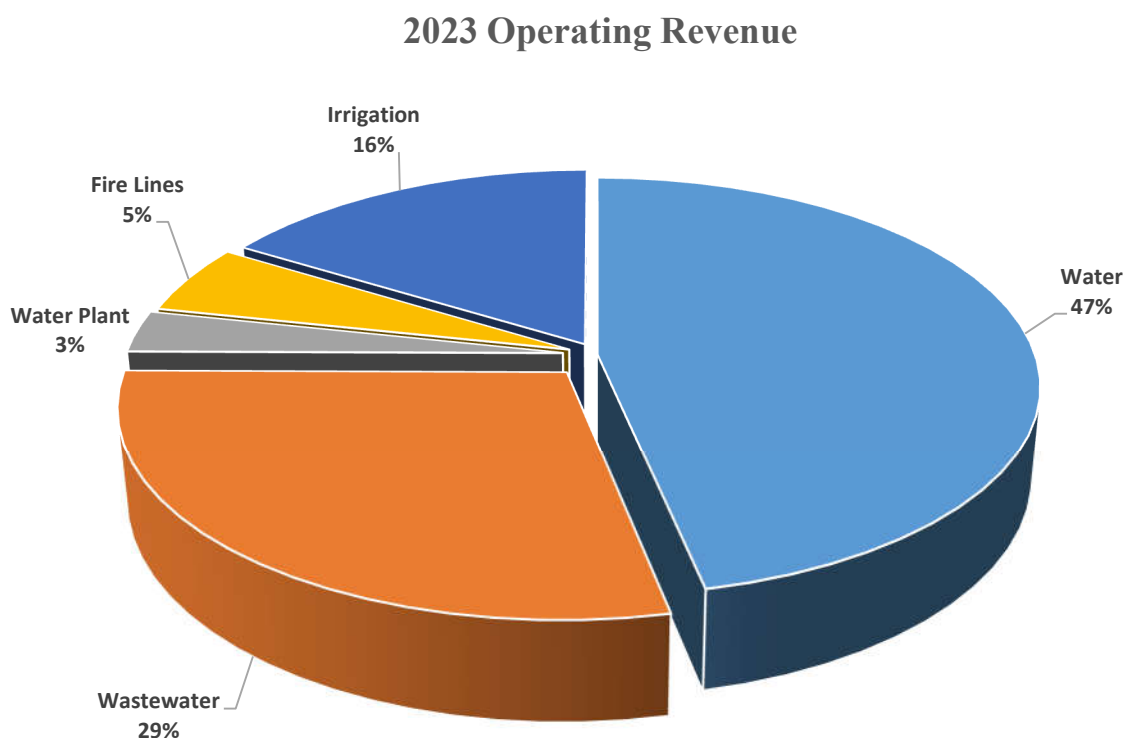
Fire line stand-by revenue is anticipated to increase by an account growth factor of 2% in 2023, with no increase to rates.

Irrigation Revenue

Irrigation revenue is expected to be \$562,000 over budget for 2022 mostly due to higher usage during the summer months. The budget for 2023 reflects an increase of \$675,000 from the 2022 budget, and an increase of \$113,000 from estimated 2022 revenue.

Fees for Service

Fees for service are budgeted to decrease \$90,000 for 2023 in comparison to the 2022 budget as a result of a reduction in the Cottonwood PID equivalency fee, hydrant rental fees and lower meter and inspection fees.



Operating Expenses

The 2023 operating expense budget reflects a 12.0% overall increase from 2022 budgeted operating expenses. Expenditures of \$16.1 million are budgeted to be \$1.7 million higher than the 2022 budget. One of the main factors driving the increase are the budgeted cost of operating the JWPP RO plant. Since May 2019, Jacob's Engineering has been contracted to operate and maintain the JWPP. In late 2022 the operating agreement was extended 10 years and will continue to comprise a significant amount of budgeted operating expenses. Additionally, the costs of treating ACWWA Flow water have increased with the expansion of the ECCV Northern RO plant, and the execution of the Consolidated Infrastructure Agreement with United Water and Sanitation.

Office Expenses

The budget for 2023 office expenses reflects a 3.7% estimated increase in year-over-year budgeted costs. Included is funding for asset management, compliance and document management software.

Salaries and Benefits

The 2023 salaries and benefits budget reflect an increase of 3.7% from the 2022 budget and includes 40 FTEs for the entire year. Compared to 2022 estimated costs of \$4.2 million, salaries and benefits expense in 2023 will be \$783,000 higher due to open positions being filled in 2023 to meet capacity and service level demands, a 5% overall salary adjustment and a 5% increase in medical benefit premiums.

Insurance

General liability, property, and workers' compensation insurance premiums are expected to increase an average of 4% from 2022 levels in 2023. ACWWA anticipates a decrease in its workers' compensation premiums, as the experience rating will decline in 2023 due to consecutive years with no time lost to accidents.

Professional Fees

The 2023 budget for professional fees of \$1.1 million is \$1,000, or .1% lower than the 2022 budget. 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 \$1.4 million reflects an increase of \$35,000 compared to the 2022 budget. At this time, there are no major R&M projects planned for 2022, although staff will focus on fire hydrant repairs, meter replacements and other routine maintenance.

Operational Expenses

Operational expenses are projected to increase \$826,000 from forecasted 2022 expenses, and \$1.2 million from 2022 budgeted expenses. This increase is entirely due to an increase in water treatment and additional fees related to the ACWWA Flow project.

Utilities

The 2023 budget for utilities expense is \$1.5 million, reflecting an increase from 2022 of \$226,000. Significant rate increases experienced in the later part of 2022 are the primary driver.

Contract Services

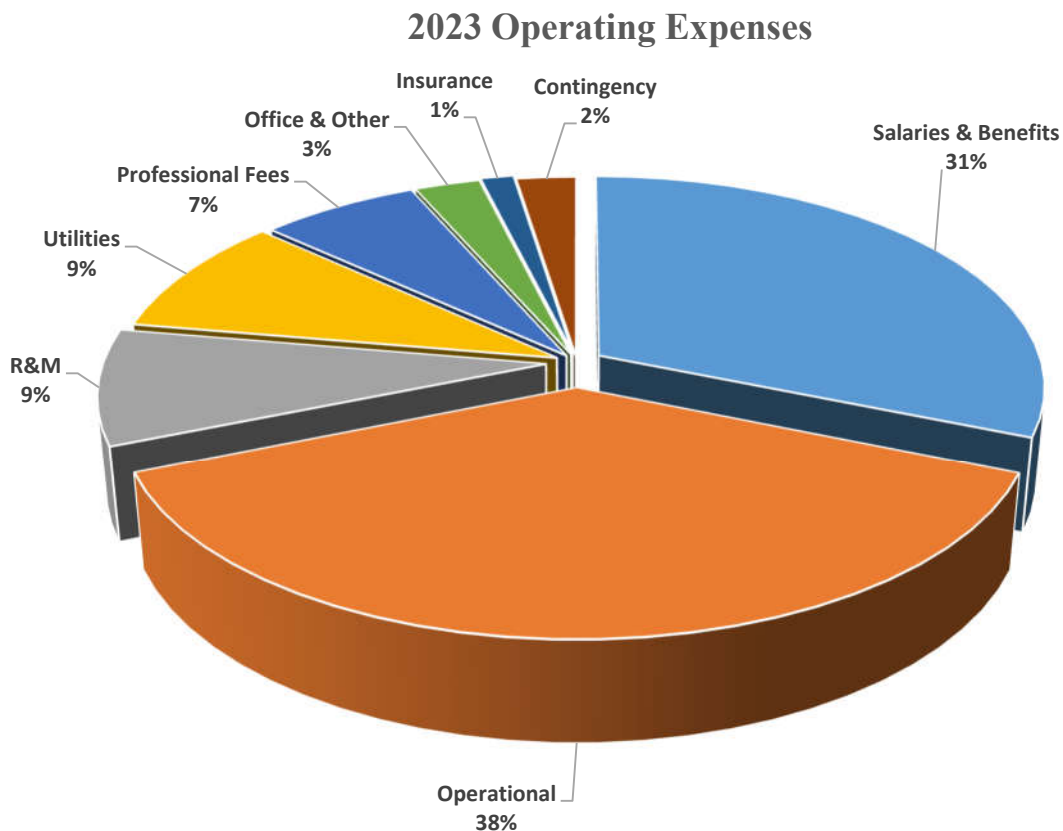
This line item is comprised mainly of sludge hauling. Due to increased service fees the 2023 budget anticipates a year over year increase \$51,000 from 2022.

Other Supplies and Expense

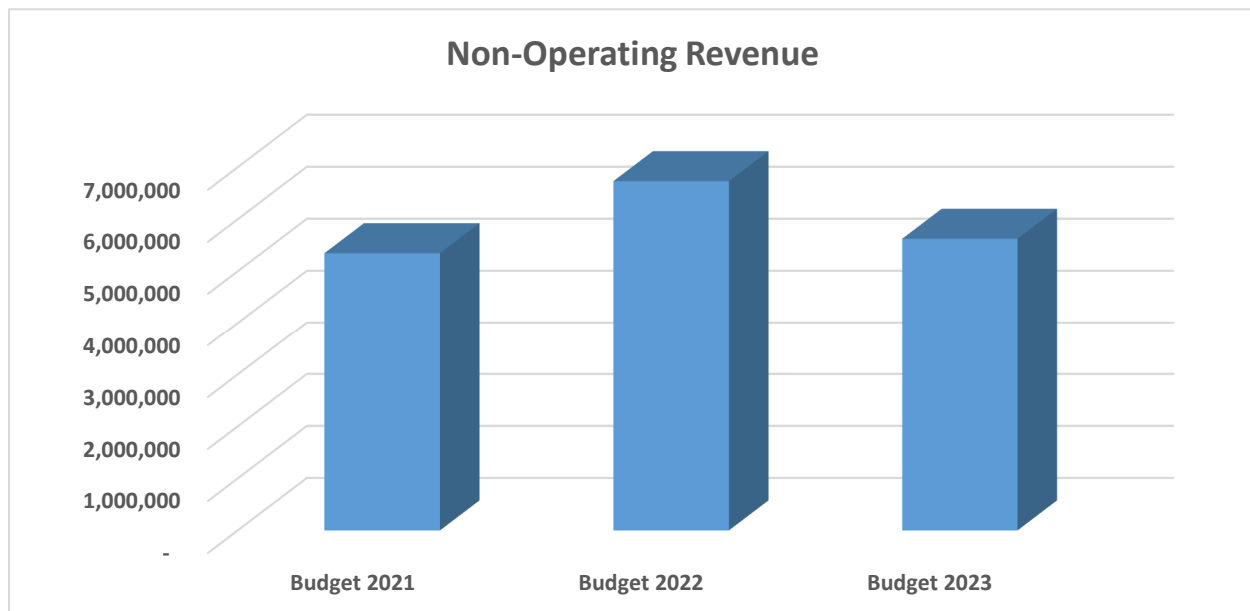
There are no increases budgeted in this category.

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.



9.3 Non-operating Budget



Non-operating Revenue:

Non-operating revenue, comprised primarily of tap and water resource fees, is budgeted to decrease \$1.1 million, or 6.4% from budgeted 2022 revenue due to the 2022 budgeted inclusion of the CWCBC loan proceeds relating to the Chamber's Pump Station no longer budgeted in 2023.

Interest Income

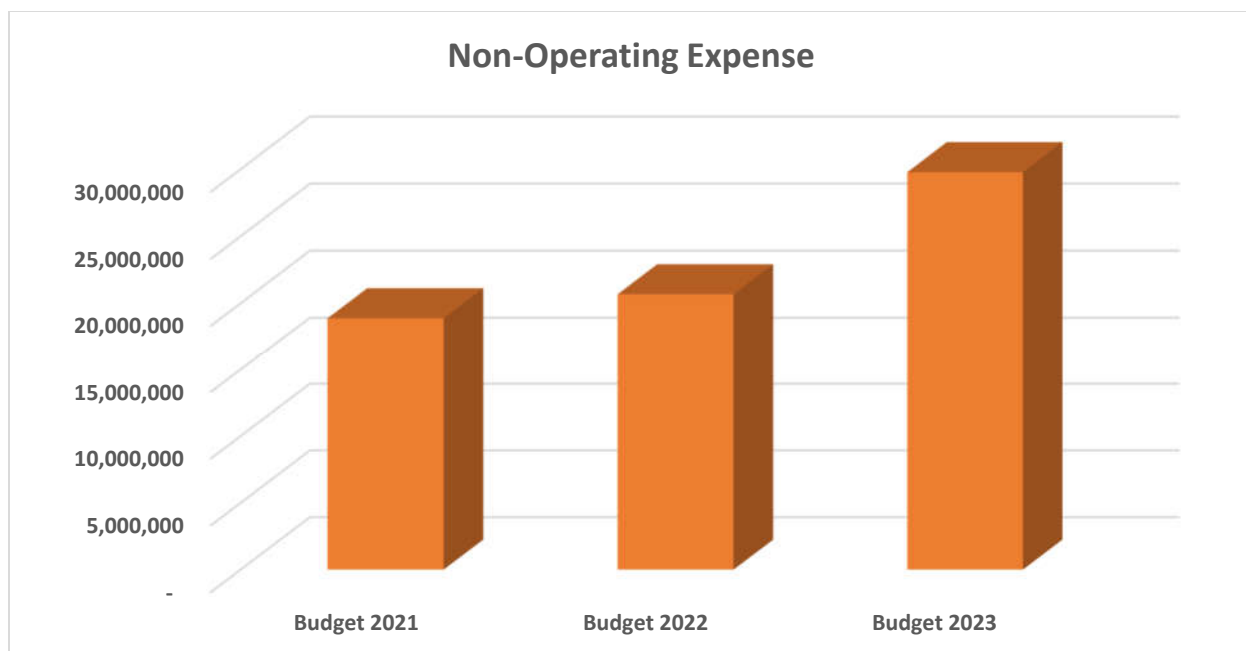
In 2018, ACWWA further diversified its portfolio by investing in two pooled investment trust funds designed for local governments, Colotrust (Colorado Local Government Liquid Asset Trust) and CSAFE (Colorado Surplus Asset Fund Trust). In 2023 ACWWA expects to draw down its reserves to pay for necessary capital improvements but due to increased interest rates it is anticipated that the budget for the year will be \$300,000 or \$250,000 greater than the 2022 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 2023 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 120.0 tap equivalents (TEs) in 2022. As of the end of 2022, ACWWA currently has approximately 265 taps in process and/or under review.



Non-operating Expenses

Non-operating expenses are budgeted to increase approximately \$9.2 million, or 45%, over 2022 budgeted expenditures because of \$3 million of additional project expenses, \$6.6 million carryover project costs not completed in 2022 due to supply chain issues but is partially offset by the \$359,000 decrease in debt service payments.

Debt Service

Debt service is expected to decrease \$359,000 primarily due to a one time bond principle increase of \$575,000 in 2022 that resulted in the payoff of the Series 2012 Bonds.

Capital Outlay

Of the \$22.1 million capital budgeted for 2023, \$6.6 million is carried over from the 2022 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 2023 capital projects can be found in §10.

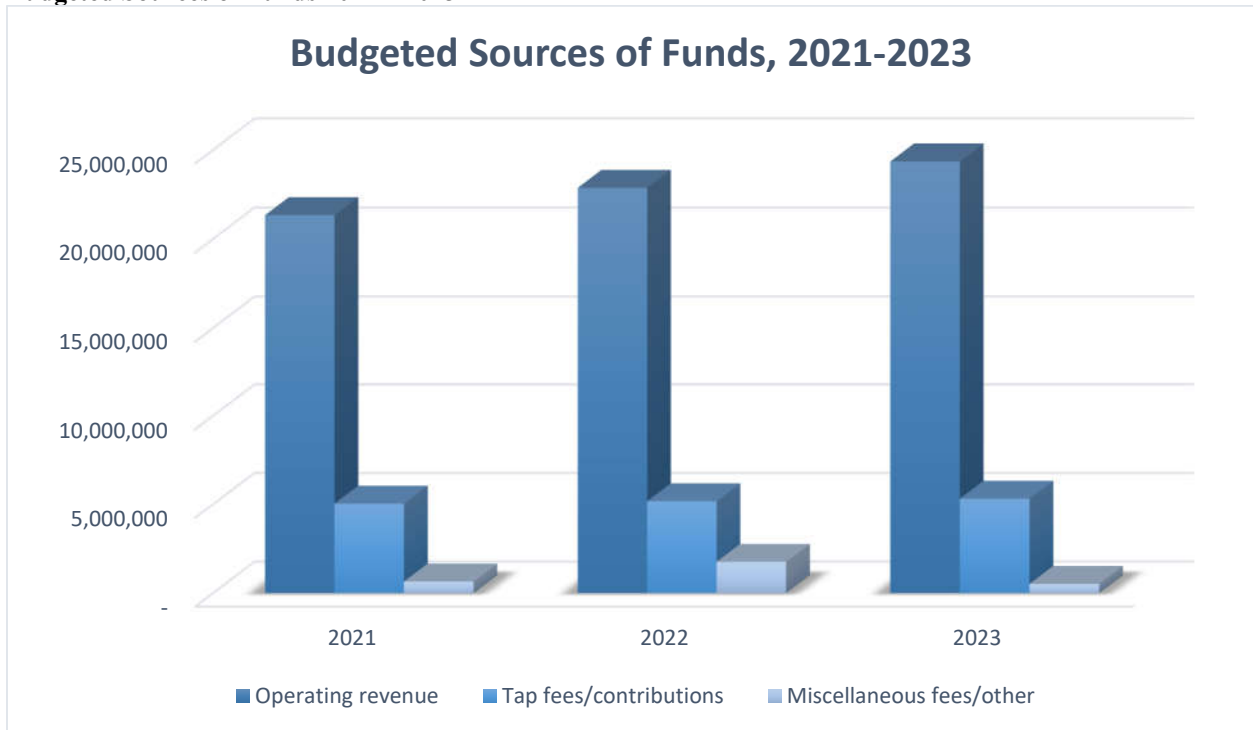
9.4 Long-range Financial Plan

In late 2022, ACWWA engaged Raftellis Engineers to conduct a cost of service study that was finalized in the third quarter of 2022.

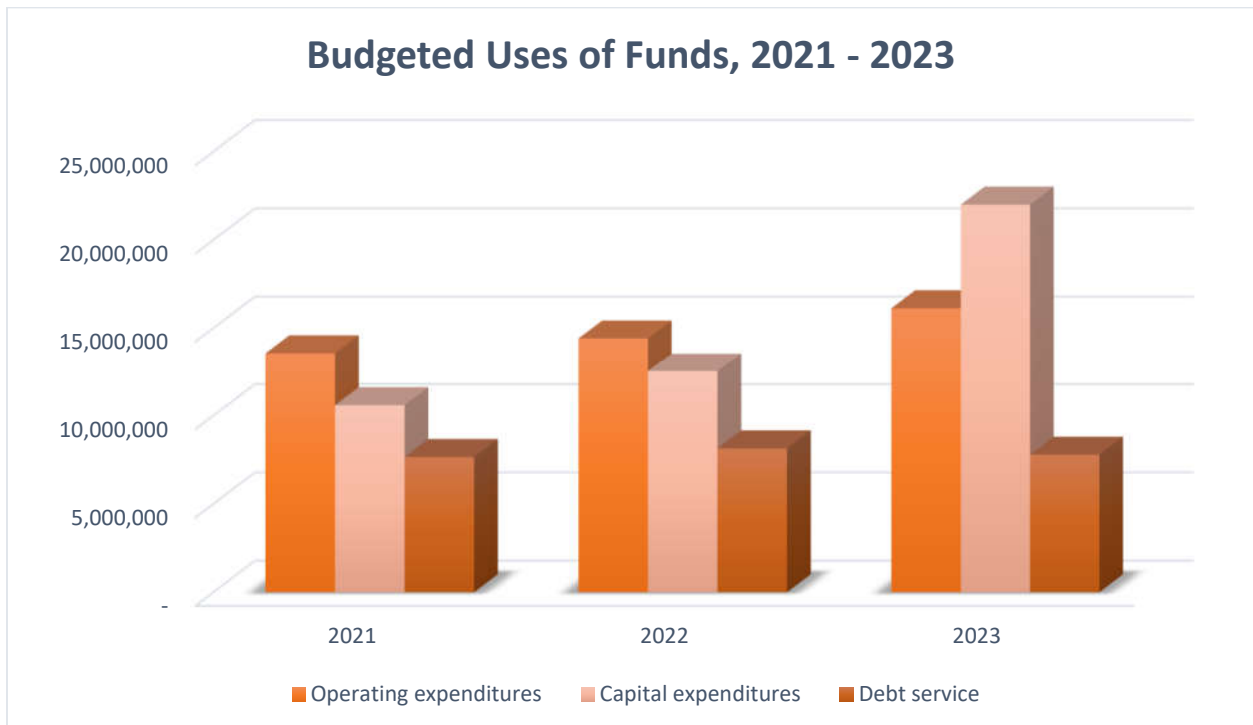
Based on financial trends through 2021, Raftellis projected that ACWWA would need to raise water and wastewater rates 3%, respectively, each year to fund operations and projected capital needs. ACWWA does not have taxing powers and thus must fund capital projects through a combination of cash provided by rates and fees, and debt financing.

9.5 Sources and Uses of Funds (Budgeted)

Budgeted Sources of Funds 2021 – 2023



Budgeted Uses of Funds 2021 -2023



10. 2023 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 2023 capital improvement budget are listed in this section.

PROJECTS

A2 Well VFD Replacement

Capacitors, boards, along with other parts fail over time on Well VFD's. We have been made aware the replacement parts for this drive are now obsolete. This VFD is in the Well building, causing excessive heat that shortens the life expectancy of the VFD components. During this project, the new VFD would be installed outside the building like the rest of ACWWA's Wells. A2's VFD is currently the only obsolete VFD of all the Well Sites.

ACWWA Flow PFAS Study

PFAS Study for inflows to the ECCV Water Treatment Plant in cooperation with ECCV. ACWWA Portion = 26% of \$500k

ACWWA Flow Renew and Replace

In November 2019 ACWWA executed the Consolidated Infrastructure Agreement (CIA) with United Water and Sanitation District (United) and East Cherry Creek Water and Sanitation District (ECCV). This agreement established ownership, operations, and maintenance responsibilities for the various components of the ACWWA Flow system. One of the responsibilities of ACWWA is to fund the upgrade, renewal, and replacement of ACWWA's portion of these facilities. \$200,000 is budgeted in 2023 for this requirement.

ACWWA Flow Water Rights Adjudication Costs

This includes the anticipated 2023 adjudication costs for the ACWWA Flow project. These are the legal and engineering support fees needed to complete the applications for the change of water rights from agricultural use to municipal use.

If the change cases are not pursued at the current pace, ACWWA could lose some of its water rights yield due to a changing political landscape and the nature of water court. Additionally, ACWWA has multiple consultants working on the design, modeling, and development of the overall ACWWA Flow project. These efforts are to create an operational model to ensure the delivery of the 4,400 acre-feet of average yield from ACWWA's water rights and will help with the project water delivery. The estimated cost for ACWWA Flow water rights adjudication for 2023 is \$1,250,000.

Administration Building

The ACWWA Administration Building is coming to the end of its useful life. The needs analysis and design of a new administration building was originally budgeted for 2021. The planning and design of a new Administration Building has been put on hold. Current efforts are focused on identifying and purchasing an existing building. \$5,125,000 has been budgeted for 2023 to purchase and renovate a building to serve as ACWWA's new Administration Building.

Alluvial Well Treatment

ACWWA's Race-1 well has not been used in ACWWA's supply since 2018. This is due to the interactions it has with the other alluvial wells that supply the JWPP. Race-1 is a relatively high-producing well, 1,000+ gpm, and ACWWA must find a way to utilize it. Some form of wellhead treatment may unlock this well for either the JWPP supply or the non-potable irrigation supply. Previous evaluations were conducted on the well to determine the cause of the elevated levels of dissolved oxygen ("DO"), but an obvious culprit was never discovered. A study with Carollo is underway to determine what interactions may occur in the non-potable system, which has excessive amounts of iron and manganese, and what alternatives exist to mitigate the potential negative interactions, i.e. precipitation in pipes, clogging of sprinklers, etc. ACWWA/Cottonwood have been conditionally approved for use of \$800,000 of ARPA funds for this project.

Arc Flash and Electrical Systems Study

ACWWA's power system includes inherent risks, specifically electrical shock and arc flash, anytime employees are interacting with electrical equipment while energized. Interacting with electrical equipment includes operation of fully enclosed electrical gear as well as any exposure to energized equipment or circuiting, including daily operations activities and intermittent energized testing, maintenance, and troubleshooting. To meet current workplace safety standards, ACWWA needs to complete an Arc Flash Study to properly identify hazards and remedies and confirm that operations staff is provided with proper training and personal protective equipment.

Arc Flash Immediate Safety Upgrades

This budget will be used to address high priority safety upgrades identified by the Arc Flash and Electrical Systems Study.

Asset Management (Condition Assessments)

A long-term goal of ACWWA is to be able to monitor and assess the condition of all ACWWA's assets to determine the time and cost of their replacement for long term budgeting. In 2021 an asset management program plan was developed and \$110,000 is budgeted in 2023 as the first phase of this long-term program, which will consist of initial condition assessments of some of ACWWA's existing assets.

Chambers SCADA Improvements

Chambers reservoir is being filled and before being brought online, it will require additional operating monitoring. A fiber loop connecting all piezometers to SCADA is being studied to eliminate the need for staff to manually in the field download data from each of the piezometers. Additional control logic will also be required, which will include the ability to reset pumps and VFD's, remote monitoring of pump station operations and all piezometers, and a live security camera feed, all communicated via SCADA back to ACWWA's operations and engineering staff.

Current Admin Maintenance

The ACWWA Administration Building requires ongoing improvements and \$10,000 has been set aside for these projects for 2023.

Electrical and Control Systems Master Plan

ACWWA facility electrical and control systems are located at multiple sites and are made up of a variety of electrical, control, automation, and telemetry assets. Several of these assets are at or nearing the end of their useful life. On-site condition assessments at 18 ACWWA's most critical sites will be completed and recommend improvement projects will be identified. Project improvements will include prioritization based on site criticality, equipment condition/age, and Operations and Maintenance input.

Elkhorn Well A3 and Pipeline Construction

The design for the well, well vault, and ancillary facilities will be completed in 2022 including all permitting and construction documents.

The drilling for the new A3 well in Elkhorn Ranch is scheduled for 1st Quarter of 2023. Additional construction of the controls, electrical service, and the onsite chlorination and metering facilities is proposed to be installed after the completion and testing of the water quality from well A3. The equipping of the well with a new pump will be bid and awarded in 2023. Probable completion in late 2023 for the entire well and facilities to be able to supply to the Elkhorn Ranch potable water system in 2024. Based on the selected location minimal pipeline work is required.

Expansion of the DI-2 Well Injection Pumping System

Design in 2023 by ECCV with construction expected in 2024. The original Deep Injection well No. 2 at the northern water treatment plant project was completed in 2016. The initial construction of the DI-2 well brine injection system included the installation of two high pressure pumps. This design included the expansion to be able to double the injection pressures for the brine by the addition of a second set of pumps. This project is planned for the 2023 design. Total costs have been estimated as slightly over \$6.1 M, with ACWWA's share of this system to total approximately \$2.4M.

Foxfield to 4 MG Tank Redundancy Line Design

This water line was designed in 2016 and the design is 95% complete. The current water master planning effort has identified this proposed water line as a critical redundancy pipeline to allow continued delivery of water from the ACWWA flow connection and the 4 MG tank to the ACWWA service area west of Waco Street in case of a failure of a portion of the 24" transmission line in Arapahoe Road. In 2023, the 95% design will be reviewed and updated to include locating all underground utilities (both new and those identified in 2016) per the new SUE requirements and update any necessary easements for construction. Once the updated design work is complete, a new construction cost estimate will be prepared with construction anticipated to occur in 2024. ACWWA has been conditionally approved for use of \$500,000 of ARPA funds for this project.

JWPP PFAS Study

The EPA is developing a maximum contaminant level (MCL) for several per- and polyfluoroalkyl substances (PFAS) chemicals. The PFAS chemicals currently of concern for ACWWA are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been detected in ACWWA's potable water at concentrations between 2.2 – 3.8 ppt (parts per trillion, ug/L). PFAS is present in water received from the JWPP and water received from ECCV via the Himalaya Vault. In June 2022, the EPA revised the interim lifetime health advisory levels for PFOA and PFOS to 0.004 ppt and 0.02 ppt respectively. The EPA will be releasing a draft MCL for both chemicals in December 2022, with a final MCL expected in Dec. 2023. Based on current concentrations detected in ACWWA's potable water, the CDPHE has required ACWWA to issue a public notice to customers. ACWWA is also required to provide quarterly updates to customers and the CDPHE in 2023 as long as measured levels of PFOA and PFOS exceed 2 ppt. Quarterly updates are to include recent sampling results and discussion of efforts to reduce PFAS chemicals in ACWWA's potable water. The proposed study is part of ACWWA's efforts to reduce PFAS in our potable water as well as prepare for the upcoming MCLs for PFAS chemicals.

LTCWRF Air Diffusers for BNR Train #1

The air diffusers and headers in BNR1 have been damaged leaving the air system in BNR 1 non-functional. Repairs are necessary to return BNR 1 to service.

LTCWRF Asphalt Resurfacing

The asphalt roads located at the LTCWRF were installed in 2007 – 2008. Since the installation, many cracks and potholes have developed. In the past cracks have been sealed, but the seals have quickly peeled off. The asphalt around Building 1A has developed large holes, about 5', on the side of the trailer, and pose an immediate safety concern.

LTCWRF Autosampler

The ISCO Autosamplers are located at the LTCWRF's Influent and Effluent points. Permit requires samples on a 24-hour basis that are then composited to provide a 24-hour flow paced composite sample for each. The Autosamplers have been in service since pre-2005 and are outdated and past their useful life.

LTCWRF AWT Filter Media Pilot Study

The existing AWT filters have had a long history of issues dealing with fouling and underperformance. Before moving forward with needed replacements and filter expansions, a study is needed to determine the best path forward for filter design and filter media.

LTCWRF BNR Train 2 Slide Gate Replacement

The Slide Gate located at the end of BNR train 2 is no longer sealed, causing flow to enter clarifier 2 even with the gate shut.

LTCWRF Digester Aeration system

The existing Digester tank aeration system is made up of a shear-tube aeration system. This system transfers oxygen to the waste sludge by delivering air to diffusers that are located beneath stainless steel tubes. The existing system is original to LTCWRF and is past its useful life. The system has developed many leaks and is not effective at providing the necessary mixing and oxygen.

LTCWRF Digester Blower System

The existing blower system that supplies the digester aeration system is extremely dated and in need of a replacement. Currently, the blowers are well past their listed useful life and could fail anytime. Additionally, the pipes that connect the blowers to the aerobic digesters have significant leaks reducing energy efficiency and exacerbating concerns about failure. Of the current three-blower-system, one was replaced about 13 years ago and the other two about 11 years ago. The airlines connecting the blowers to the aerobic digesters were installed sometime around 2000 and have been leaking ever since they first started up.

LTCWRF Emergency Pond Flow Meter Vault

The old flow meter that measures flow pumped from the emergency pond to either headworks or the BNR malfunctioned and was no longer in working condition. A new meter has been purchased to replace it, but when the old meter was removed, the tension on the buried pipe caused the two ends to move together, not leaving enough space for the new meter to be installed.

Instead of replacing it in the existing location, it is requested that a new vault be installed in a better location that would allow better access and preserve the integrity of the pond liner.

LTCWRF Headworks Influent Pump Rebuild

The LTCWRF influent pump station is one of the most critical assets at the facility. All wastewater is pumped through these pumps and sent onto primary treatment. This project will rebuild the influent pumps before they fail and cannot be repaired.

LTCWRF Parshall Flume

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 in is showing deterioration due to H₂S gases. Due to the requirement of bypassing pumping, a piping bypass will be considered as part of this project.

LTCWRF PLC - UPS Replacement and Auto Power Transfer Programming

An Uninterrupted Power Supply (UPS) provides temporary power to PLCs and provides surge protection to the PLC's. The UPS power supplies in Lone Tree's PLC cabinets need to be replaced and the programming updated to allow the utility power to bypass the UPS upon a UPS failure. Currently there are 7 PLC's that will not function if the UPS battery backup dies. This was apparent when we had the power failure in June, as some of our PLC's would not switch back on, even after power was restored. The PLC had to be set to manually bypass the dead UPS.

LTCWRF PLCs (Process Logic Controller)

LTCWRF operators need to improve 2 of their most critical PLC's in LTC. The critical process control in LTC is made possible by these PLC's and communication to SCADA and pump controls by 4-20 mA controls. The old PLC's are out of date, parts are hard to acquire and UPS's are inefficient or nonexistent.

The LTCWRF has multiple PLC (Process Logic Controller) that are OEM to the 2008 plant expansion. Multiple improvements have been attempted over the years and multiple past failures are justification that replacement of all major components is necessary to assure uninterrupted communication.

LTCWRF has one other "older" PLC (CP-1000TriCon Filters). ACWWA has been in discussion with Browns Hill, and they have stated that this PLC is currently still able to receive parts so the priority for replacing it is low.

LTCWRF Turbidity Meter Replacement

The current Turbidity meter is 14 years old and is past its useful life. This is a regulatory sample point for distributing Reg 84 water to our customers.

LTCWRF Wastewater Master Plan

This plan will inform the future capital and operational needs of the LTCWRF to meet future inflow rates and volumes while meet ever increasing and stricter water quality discharge regulations including possible future regulations for 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.

Peoria Lift Station Rehab Construction

In 2021, a facility assessment was completed to establish the needed renovations on Peoria Lift Station. One of the most important elements of the renovation is the replacement of the existing submersible sewage pumps. The replacement of the pumps is the trigger for the preparation of the CDPHE Site Application Permit submittal. It has been determined that no site application permit modification is required. The project was bid on and awarded and currently has a proposed budget of \$1.5M total for the needed repairs and replacements. This project will take until the end of 2023.

ACWWA has been conditionally approved for use of \$500,000 of ARPA funds for this project.

Peoria Valve Replacement

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.

ACWWA has been conditionally approved for use of \$100,000 of ARPA funds for this and the next project.

South Chamber and Grassland Valve

The 2009 ACWWA Flow IGA between ACWWA, ECCV, and United identified 500 acre-feet of additional South Platte storage that ACWWA would have the option to purchase to increase the amount of yield from the Project's water rights portfolio. The price was set at \$1.9 million. ACWWA plans to exercise the option in January 2023.

ACWWA has been conditionally approved for use of \$100,000 of ARPA funds for this and the previous project.

VCC Rehab

Staff researched the VCC Lift Station to determine how to effectively operate it while mitigating the risk of future flooding. It was concluded that the sluice gates need to be replaced and the electrical system needs upgrading due to age as well as being relocated above ground due to safety concerns. Since then, Kennedy Jenks was contracted and completed the design of the project with construction by Weifield beginning in November 2022. Construction is expected to be completed Jan/Feb 2023 with final project documentation and closeout by the end of March 2023.

ACWWA has been conditionally approved for use of \$500,000 of ARPA funds for this project.

VCC Valve Controller and Valve Replacement

The VCC flow control valve regulates pressure to an old distribution line feeding VCC's ponds and meters the flow to ensure the correct amount is supplied per our IGA. The current valve is unable to control the flow rate for delivery of Regulation 84 water to VCC

Water Meter Replacement

ACWWA revenue comes mainly from the sale of water to its customers and those sales are made through ACWWA installed water meters. Some of these meters have been in service for over 20 years and need to be replaced to ensure proper operation. \$250,000 has been budgeted in 2023 to purchase and replace meters, and perform any additional work required on the meter vaults. This will be an ongoing project and will require additional funding each year.

Water Meter Transmitters

ACWWA is in the process of replacing the current touch-read water meters that collect monthly water meter readings with radio-read (drive by) meter data transmitters. The installation of the new transmitters will improve data reliability, reduce the manpower needed to read meters, and enhance safety by reducing the risk of accidents. \$200,000 is budgeted in 2023 to purchase and install transmitters. This project will reduce the man-hours needed to read meters but will not materially affect operating costs as time saved will be channeled to other activities.

PURCHASING

LTCWRF Thickener Feed Pump

The pump currently used to feed the gravity thickener was an original pump when the BNR Plant was built. This makes the pump over 14 years old. The pump needs to be replaced to ensure the thickening process can continue. The old pump will be pulled and sent in for a rebuild and will be a shelf spare.

Vehicle Tools Addition

Proposed changes in maintenance staff assignments require outfitting of an additional vehicle with the tools needed to perform the required maintenance operation of that vehicle's operator.

Water Meter New Development

Water meters are installed at each new development that comes online in ACWWA's service area. These meters are ultimately reimbursed by the developer but initially are purchased by ACWWA. \$50,000 has been budgeted in 2023 for this project.

CARRYOVER PROJECTS

18" Waterline Condition Assessment (AC Pipe)

ACWWA's current 18-inch Asbestos Concrete water main was one of the first installed assets. Its role is critical in supplying drinking water from the high zone, running East and West under Arapahoe road. There are also multiple "Critical" customers that rely on this main to keep a steady flow of potable water to their facilities, therefore, it is imperative that this distribution line remains well maintained and in optimal operating condition. A condition assessment will ensure that ACWWA staff is staying proactive in monitoring the overall condition of this main to mitigate any unforeseen future failures. ACWWA has budgeted \$50,000 for this assessment to be completed in 2022. This budget will be carried over into 2023.

Chambers Reservoir Access Road Relocation

Chambers Reservoir site access is currently off Chambers Road. A new development project being constructed to the north and west of the Reservoir site will construct a new access road travelling along the north property boundary west from Chambers Road. This design will force the relocation of the access drive to the new road – Belford Avenue – and the site access will be relocated to the west of the existing pump station building. \$200,000 was budgeted for 2022 to design and replace the access road. This budget will be carried over in 2023.

Chambers Pump Station and Piping

Chamber Reservoir Pump Station needs improvements and additional so that the pump station can provide irrigation water to ACWWA's raw water irrigation system once Chambers Reservoir is filled to the level necessary to meet the raw water irrigation system demands. The construction of the pump station was started in 2021 and will carry over into 2023. \$20,000 will be carried forward to complete the pumpstation.

Elkhorn Well and Pipeline Construction

Water supply during the hot summer months has been low for the Elkhorn development, which has resulted in watering restrictions. The design and construction of a new Arapahoe Well is likely the best solution for long term water sustainability for the Elkhorn Subdivision. \$80,000 was budgeted for 2022 for the investigation and design of new well. \$1,000,000 was budgeted for the construction of the additional well in 2022. This will be carried over to 2023.

Elkhorn Well and Pipeline Design

Water supply during the hot summer months has been low for the Elkhorn development, which has resulted in watering restrictions. The design and construction of a new Arapahoe Well is likely the best solution for long term water sustainability for the Elkhorn Subdivision. \$80,000 is being budgeted for 2022 for the investigation and design of a new well. \$30,000 of this budget will be carried over to 2023.

High-Zone Conversion to Re-Balance Supply Distribution

With the JWPP plant coming back online as an RO plant at a higher flow capacity, most of the water supply to the distribution system will be sent to the High-Pressure Zone. There are pump station and PRV modifications that will need to be completed to re-balance the water supply distribution across the pressure zones. This project was first budgeted in 2021 for \$100,000 and will be carried over to 2023.

JWPP SCADA Upgrades

The JWPP is controlled and operated through the 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 industry standards for a class A industrial water plant. \$75,000 was budgeted for this upgrade in 2022. This budget will be carried over to 2023.

BNR Probe Replacement

The BNR basins at LTCWRF currently have probes that measure dissolved oxygen (DO). These probes have been in service since 2012 and have become outdated. The new YSI probes will measure actual parameters such as Nitrate, Nitrite, and Ammonia and will give a better indication of the nitrification/denitrification process occurring in the BNR. \$25,000 was budgeted for 2022 to replace and install the new YSI probes. The old probe will be used as a back-up. This budget will be carried over into 2023.

LTCWRF Gate

The current gate entry system at LTCWRF has failed multiple times when staff are attempting to enter the facility, requiring a phone call to be made to another individual to allow entrance. Car transponders and remote visitor access would improve access and security of the plant. \$35,000 was budgeted for 2022 to make the necessary improvements. This budget will be carried over into 2023.

LTCWRF In Plant Sewer System

The old building at LTCWRF, specifically the lab and A1, sewer lines discharge to the emergency overflow pond instead of to the influent stream or headworks. Meaning all drains and toilets drain to the emergency overflow pond. Health and safety become the most important aspect of this due to vector attraction (attraction of organisms that can land on sewage and then spread diseases such as flies and mosquitoes). A new sewer line needs to be installed connecting these buildings to the influent line into headworks. \$100,000 was budgeted for 2022 for the design of a solution. This budget will be carried over into 2023.

New Digester Aeration System at LTCWRF

The existing Digester tank aeration system is made up of a shear-tube aeration system. This system transfers oxygen to the waste sludge by delivering air to diffusers that are located beneath stainless steel tubes. The existing system is original to LTCWRF and has developed many leaks, thus the decision was made in 2019 to abandon the old PD blower system. \$125,000 was budgeted in 2022 to install Course Air. This budget will be carried over into 2023.

LTCWRF PLC's (Process Logic Controller)

Many of the Programmable Logic Controllers (PLC's) located inside the LTCWRF are OEM and create additional issues when servicing. Unreliability and inability to procure replacement parts due to obsolete hardware and software are the biggest challenges. At this time operations would like to replace the outdated PLC with upgraded CompactLogix hardware, a new non-integrated UPS (ease of maintenance and change out), updated Ignition tags and improvement to the overall data communication speed. \$80,000 was budgeted for 2022 to complete these upgrades. This budget will be carried over into 2023.

LTCWRF Redundant Surge Pump

During the last round of inspections of the pumps at LTCWRF, the filter feed pumps, which are similar to the surge pumps, indicated shaft pitting and significant wear. The surge pumps have been in service as long as the filter feed pumps and pump more contaminated water than the filter feed pump. When the surge pump needs repairs, it will need to come out of service. In order to minimize down time a second redundant pump will be purchased to allow the existing pump to undergo repairs, \$20,000 was budgeted for the purchase in 2022. This budget will be carried over into 2023.

LTCWRF TE Pumps

The TE pump provides most of the Reg 84 pumping to our service area. The flow rate provided by the current pump of 500 gpm worked until the demand for the Reg 84 system increased, due to the addition of Family Sports. The new demand is now 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 outside 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 was budgeted in 2022 for the analysis, purchase, and installation of a new TE pump. This budget will be carried over into 2023.

LTCWRF Wastewater Master Plan

ACWWA began updating the water supply master plan in 2017 and will begin updating the wastewater masterplan in 2022. Periodic updates to the existing master plan are required due to changes in the various wastewater flows and treatment systems in ACWWA's collection and treatment system. The planning effort for the wastewater system includes the collection system, the pumping and transfer system, and the wastewater treatment plant system and expansion. \$60,000 was budgeted in 2022 to complete this project. This budget will be carried over into 2023.

Non-Potable PRV

The non-potable irrigation system serves customers at elevations of up to 5865' and down to about 5670'. Historically, there have been pressure issues at the higher elevations of the system. The Chambers Pump Station Project will address these issues at the higher elevations, but this will lead to unacceptably high pressures at the lower elevation users. A PRV assembly downstream of the junction to the "High Pressure Zone" on the non-potable line in Chambers Rd will alleviate this issue. \$150,000 was budgeted for 2022 to determine the best location, purchase and install this PVR. This budget will be carried over into 2023.

Peoria Lift Station Rehab Construction

In 2021, a facility assessment was completed to establish the needed renovations on Peoria Lift Station. One of the most important elements of the renovation is the replacement of the existing submersible sewage pumps. The replacement of the pumps is the trigger for the preparation of the CDPHE site application permit submittal. \$1,100,000 was budgeted for 2022 for the construction to complete the needed renovations. Construction will continue into 2023 and \$1,000,000 of this budgeted amount will be carried over into 2023.

South Platte Storage

The 2009 IGA between ACWWA, ECCV, and United Water included the provision that ACWWA may purchase the right to store 500 acre-feet known as South Platte Storage. This payment is due to United Water once all documentation is delivered to ACWWA by United so that the storage capacity is ready for use in the United Reservoir. This storage is currently available but improvements to the pump stations used to operate the reservoir are currently under construction and are expected to be completed in 2022.

The costs being carried over into 2023 for the 500 acre-feet of storage in South Platte Storage is \$1,900,000 and the project is not expected to affect operating costs.

VCC Rehab

The VCC Lift Station had a catastrophic failure in 2019 due to a pipe failure and all the electrical and controls equipment was compromised. The lift station has been repaired but requires improvements to the electrical and controls as well as redundancy at the current lift station based on the vulnerability assessment and options analysis that was performed in 2019 after the lift station event. \$1,400,000 will be carried forward into 2023 for this project.

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 2023, 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 5.0 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: In 2023, the wastewater department plans to assist in the design of a 3rd clarifier and BNR unit for the plant. The department will also be involved in SCADA improvements and in developing and implementing an emergency preparedness program.

Administration: includes 25.0 FTEs in 2023 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;
- Initiating key capital improvement projects, including the design of the third clarifier and BNR for the wastewater treatment plant, converting a large water user to Regulation 84 (reclaimed water), improvements to the Waterbury Lift Station;
- 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 2021 - 2023**

REGULAR EMPLOYEES (FTE)	2021 BUDGET	2022 BUDGET	2023 BUDGET
ADMINISTRATION			
General Manager	1.0	1.0	1.0
Director of Administrative Services	1.0	-	-
Director of Finance and Administrative Services	-	1.0	1.0
Engineering Manager	1.0	1.0	-
Director of Engineering Services	-	-	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
Utilities Engineer	1.0	1.0	1.0
Construction Inspection Supervisor	1.0	1.0	-
IT Administrator	1.0	1.0	1.0
Human Resources Generalist	1.0	1.0	1.0
Accountant	1.0	1.0	1.0
Administrative Assistant	1.0	1.0	1.0
Administrative Assistant	1.0	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
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
Construction Inspector I	1.0	1.0	1.0
Construction Inspector II	-	-	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 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	40.0	40.0	40.0

FINANCIAL SUMMARIES AND NOTES



Above is the 1MG Tank repainted in 2022

12. Board Summary Forecasted 2023 Combined Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
BOARD SUMMARY
2023 BUDGET AS PROPOSED
WITH 2021 ACTUAL AND 2022 ESTIMATED
For the Years Ending December 31,

	ACTUAL 2021	BUDGET 2022	ACTUAL 9/30/2022	ESTIMATED 2022	BUDGET 2023
BEGINNING FUNDS AVAILABLE	\$ 36,024,437	\$ 47,292,699	\$ 47,292,699	\$ 47,292,699	\$ 52,759,762
REVENUES					
Operating Revenues					
Water revenue	14,740,124	14,725,352	12,432,306	15,792,565	16,214,658
Sewer revenue	6,335,590	6,384,605	4,887,019	6,630,145	6,762,748
Fees for services	848,897	670,085	490,784	654,378	580,281
Water plant revenue	597,335	1,092,615	-	810,532	761,976
Other revenue	172,065	211,076	71,384	166,453	213,000
Settlement revenue	232,089	-	-	-	-
Total operating revenues	22,926,100	23,083,733	17,881,493	24,054,074	24,532,663
Non-Operating Revenues					
Tap and extraterritorial fees	9,350,933	5,180,989	5,339,140	7,118,853	5,324,381
Net investment income	19,921	50,000	319,211	425,615	300,000
Loan proceeds	271,173	1,500,000	-	1,500,000	-
Proceeds from sale of water rights	-	-	-	-	-
Total non-operating revenues	9,642,027	6,730,989	5,658,351	9,044,468	5,624,381
Total revenues	32,568,127	29,814,722	23,539,844	33,098,542	30,157,043
Total funds available	70,847,281	72,670,249	70,832,543	80,391,241	82,916,806
EXPENDITURES					
Operating Expenses					
Salaries and benefits	4,412,670	4,849,927	3,184,141	4,245,522	5,028,919
Office expense	246,778	410,210	224,500	315,209	425,369
Professional services	728,698	1,072,376	682,079	937,322	1,071,234
Repairs and maintenance	1,197,238	1,388,341	860,002	1,097,969	1,423,183
Insurance	200,810	214,897	212,248	212,248	222,860
Operational	4,010,287	4,655,195	3,165,511	5,035,787	5,862,690
Contractual services	161,805	170,625	162,080	211,615	221,516
Utilities	1,159,732	1,238,715	1,120,517	1,422,059	1,464,720
Other supplies and expense	46,902	15,200	8,638	11,517	15,200
Contingency	-	400,000	-	-	400,000
Total operating expenses	12,164,920	14,415,486	9,619,716	13,489,246	16,135,691
Non-Operating Expenses					
Interest and fiscal charges	7,533,839	8,142,232	1,955,720	8,142,232	7,783,492
Total non-operating expenses	7,533,839	8,142,232	1,955,720	8,142,232	7,783,492
Capital expenditures					
Capital projects	6,005,589	12,529,000	2,698,837	6,000,000	22,093,735
Total capital expenditures	6,005,589	12,529,000	2,698,837	6,000,000	22,093,735
Total expenditures requiring appropriation	25,704,348	35,086,718	14,274,273	27,631,478	46,012,918
ENDING FUNDS AVAILABLE	\$ 42,855,527	\$ 36,723,809	\$ 56,558,270	\$ 52,759,762	\$ 36,903,888

13. Board Summary Forecasted 2023 Budget Water Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
WATER OPERATIONS
2023 BUDGET AS PROPOSED
WITH 2021 ACTUAL AND 2022 ESTIMATED
For the Years Ending December 31,

	ACTUAL 2021	BUDGET 2022	ACTUAL 9/30/2022	ESTIMATED 2022	BUDGET 2023
REVENUES					
Operating Revenues					
Water revenue	\$ 14,740,124	\$ 14,725,352	\$ 12,432,306	\$ 15,792,565	\$ 16,214,658
Fees for services	556,300	354,733	286,351	381,801	299,239
Water plant revenue	597,335	1,092,615	-	810,532	761,976
Other revenue	172,065	211,076	71,384	166,453	213,000
Settlement revenue	232,089	-	-	-	-
Total operating revenues	16,297,913	16,383,776	12,790,041	17,151,351	17,488,873
Non-Operating Revenues					
Tap and extraterritorial fees	6,879,517	3,977,222	4,363,112	5,817,483	4,096,539
Net investment income	13,945	183,000	223,448	297,931	210,000
Loan proceeds	271,173	1,500,000	-	1,500,000	-
Total non-operating revenues	7,164,635	5,660,222	4,586,560	7,615,414	4,306,539
Total revenues	23,462,548	22,043,998	17,376,601	24,766,765	21,795,412
EXPENDITURES					
Operating Expenses					
Salaries and benefits	2,490,062	2,671,219	1,802,876	2,403,834	2,933,032
Office expense	167,206	329,428	148,836	200,819	286,030
Professional services	613,935	693,870	584,528	791,667	930,484
Repairs and maintenance	721,329	580,455	522,104	643,617	653,835
Insurance	152,936	172,854	174,509	174,509	183,235
Operational	3,595,831	4,083,493	2,826,968	4,542,612	5,331,255
Contractual services	27,456	-	34,454	39,924	42,700
Utilities	597,925	637,811	608,484	739,346	761,527
Other supplies and expense	35,743	9,504	6,047	8,062	10,640
Contingency	-	288,000	-	-	280,000
Total operating expenses	8,402,423	9,466,634	6,708,805	9,544,390	11,412,738
Non-Operating Expenses					
Interest and fiscal charges	6,096,499	7,069,484	1,820,633	7,616,819	6,950,054
Total non-operating expenses	6,096,499	7,069,484	1,820,633	7,616,819	6,950,054
Capital expenditures					
Capital projects	5,289,599	7,907,500	1,991,387	3,491,387	12,798,840
Total capital expenditures	5,289,599	7,907,500	1,991,387	3,491,387	12,798,840
Total expenditures requiring appropriation	19,788,521	24,443,618	10,520,825	20,652,596	31,161,632
Change In Net Position	\$ 3,674,027	\$ (2,399,620)	\$ 6,855,776	\$ 4,114,169	\$ (9,366,220)

14. Board Summary Forecasted 2023 Sewer Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
WASTEWATER OPERATIONS
2023 BUDGET AS PROPOSED
WITH 2021 ACTUAL AND 2022 ESTIMATED
For the Years Ending December 31,

	ACTUAL 2021	BUDGET 2022	ACTUAL 9/30/2022	ESTIMATED 2022	BUDGET 2023
REVENUES					
Operating Revenues					
Sewer revenue	\$ 6,335,590	\$ 6,384,605	\$ 4,887,019	\$ 6,630,145	\$ 6,762,748
Fees for services	292,597	315,352	204,433	272,577	281,041
Total operating revenues	6,628,187	6,699,957	5,091,451	6,902,722	7,043,789
Non-Operating Revenues					
Tap and extraterritorial fees	2,471,416	1,203,767	976,028	1,301,370	1,227,842
Net investment income	5,976	(133,000)	95,763	127,684	90,000
Total non-operating revenues	2,477,392	1,070,767	1,071,791	1,429,054	1,317,842
Total revenues	9,105,579	7,770,724	6,163,242	8,331,776	8,361,631
EXPENDITURES					
Operating Expenses					
Salaries and benefits	1,922,608	2,178,708	1,381,265	1,841,687	2,095,887
Office expense	79,572	80,782	75,664	114,390	139,338
Professional services	114,763	378,506	97,551	145,655	140,750
Repairs and maintenance	475,909	807,886	337,897	454,352	769,348
Insurance	47,874	42,043	37,739	37,739	39,625
Operational	414,456	571,702	338,544	493,174	531,435
Contractual services	134,349	170,625	127,626	171,691	178,816
Utilities	561,807	600,904	512,033	682,713	703,194
Other supplies and expense	11,159	5,696	2,591	3,455	4,560
Contingency	-	112,000	-	-	120,000
Total operating expenses	3,762,497	4,948,852	2,910,911	3,944,855	4,722,952
Non-Operating Expenses					
Interest and fiscal charges	643,986	1,072,748	135,087	525,413	833,438
Total non-operating expenses	643,986	1,072,748	135,087	525,413	833,438
Capital expenditures					
Capital projects	715,990	4,621,500	707,449	2,508,613	9,294,895
Total capital expenditures	715,990	4,621,500	707,449	2,508,613	9,294,895
Total expenditures requiring appropriation	5,122,473	10,643,100	3,753,447	6,978,881	14,851,285
Change In Net Position	\$ 3,983,106	\$ (2,872,376)	\$ 2,409,795	\$ 1,352,895	\$ (6,489,654)

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 120 in 2023, 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 2023 Capital Outlay

2023 New Project Costs	
A2 Well VFD Replacement	\$ 57,640
ACWWA Flow PFAS Study	143,000
ACWWA Flow Renew and Replace	300,000
ACWWA Flow Water Rights Adjudication costs	1,250,000
Administration Building	5,125,000
Alluvial Well Treatment	100,000
Arch Flash and Electrical Systems Study	440,000
Arc Flash Immediate Safety Upgrades	110,000
Asset Management (Condition Assessments)	110,000
Chambers SCADA improvements.	165,000
Current Admin Main	10,000
Electrical and Control Systems Master Plan	83,600
Elkhorn Well and Pipeline Construction	1,650,000
Expansion of the DI-2 well injection pumping system	210,100
FoxField to 4 MG Tank Redundancy Line Design	71,500
JWPP PFAS Study	165,000
LTCWRF Air Diffusers for BNR Train #1	272,800
LTCWRF Asphalt Resurfacing	220,000
LTCWRF Autosampler	44,000
LTCWRF AWT Filter Media Pilot Study	275,000
LTCWRF BNR Train 2 Slide Gate Replacement	11,000
LTCWRF Digester Aeration system	264,000
LTCWRF Digester Blower System	1,100,000
LTCWRF Emergency Pond Flow Meter Vault	77,000
LTCWRF Headworks Influent Pump Rebuild	24,200
LTCWRF Parshall Flume	132,000
LTCWRF PLC - UPS Replacement and Auto Power Transfer Program	23,100
LTCWRF PLCs (Process Logic Controller)	88,000
LTCWRF Thickener Feed Pump	16,500
LTCWRF Turbidity Meter Replacement	66,000
LTCWRF Wastewater Master Plan	105,000
Peoria Lift Station Rehab Construction	700,000
Peoria Valve Replacement	55,000
South Chamber and Grassland Valve	55,000
VCC Rehab	410,995
VCC Valve Controller and Valve Replacement	36,300
Vehicle Tools Addition	15,400
Water Meter New Development	50,000
Water Meter Replacement Project	250,000
Water Meter Transmitters	200,000

2023 Carryover Project Costs From 2022	
18" Waterline Condition Assessment (AC Pipe)	\$ 50,000
Chambers Access Replacement	200,000
Chambers Pump Station and Piping	20,000
Elkhorn Well and Pipeline Construction	1,000,000
Elkhorn Well and Pipeline Design	30,000
High-zone conversion - re-balance supply distribution	100,000
JWPP SCADA	75,000
LTCWRF BNR Probe Replacement	27,500
LTCWRF Gate	35,000
LTCWRF In Plant Sewer System	100,000
LTCWRF New Digester Aeration Analysis	125,000
LTCWRF PLCs (Process Logic Controller)	80,000
LTCWRF Redundant Surge Pump	34,100
LTCWRF TE Pump	150,000
LTCWRF Wastewater Master Plan	60,000
Non-Potable PRVs	150,000
Peoria Lift Station Rehab Construction	1,000,000
South Platte Storage	1,900,000
VCC Rehab	1,400,000
Strategic Asset Management Plan (SAMP)	75,000
Total Carryover Project Cost	\$ 6,611,600
Reactive/Contingency	\$ 1,000,000
Total 2023 CIP	\$ 22,093,735

17. Schedule of Debt Service Requirements to Maturity

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY

December 31, 2023

		\$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
2023	\$	975,000	\$ 526,400	\$ 860,000	\$ 419,850	\$ 1,920,000	\$ 2,806,450	\$ 3,755,000	\$ 3,752,700	\$ 7,507,700
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	\$	13,160,000	\$ 3,363,800	\$ 11,575,000	\$ 2,665,300	\$ 66,265,000	\$ 30,595,050	\$ 91,000,000	\$ 36,624,150	\$ 127,624,150

GLOSSARY AND ACRONYMS



New membranes replaced at the JWPP in 2022

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 2023 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 2023.

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, 2023 - \$13,160,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2017 Bonds, original amount \$12,720,000; amount outstanding January 1, 2023 - \$11,575,000.
- Taxable Water and Wastewater Revenue Direct Pay Build America Bonds, Series 2019 Bonds, original amount \$71,485,000; amount outstanding January 1, 2023 - \$66,265,000.

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 2022-02

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 2023, AND ENDING ON THE LAST DAY OF DECEMBER 2023.

WHEREAS, the proposed 2023 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, 2022 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: 2023 Budget Revenues. That the estimated revenues for each fund set out in the budget are accepted and approved.

Section 2: 2023 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, 2022, ending fund balance of the Operating Fund, the exact amount to be determined as part of the audit of the December 31, 2022 financial statements, is designated as a general reserve for future contingencies.

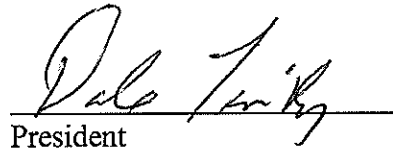
Section 4: Adoption of Budget for 2023. That the budget as submitted and if amended, then as amended, is hereby approved and adopted as the budget of the Arapahoe County Water and Wastewater Authority for calendar year 2023.

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.

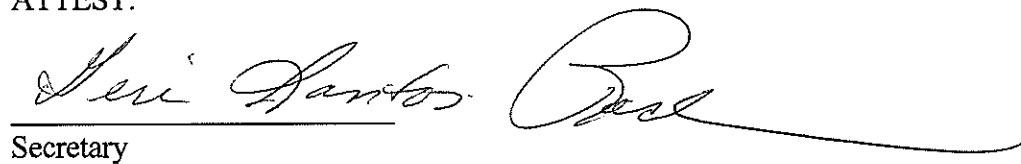
Section 6: Appropriations. That the amounts set forth as expenditures and balances remaining, as specifically allocated in the budget are hereby appropriated from the revenue of each fund, to each fund, for the purposes stated and no other.

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 14th day of December 2022.


President

ATTEST:


Secretary