

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

**2022 Operating and Capital Improvement Budget**

December 8, 2021

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

**2022 Operating and Capital Improvement Budget**

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## BUDGET MESSAGE



## 1. Budget Message

December 8, 2021

Board of Directors  
Arapahoe County Water and Wastewater Authority

Your management team is pleased to present the Arapahoe County Water and Wastewater Authority (ACWWA) 2022 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 2022.

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 2022. 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 2022 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 2022 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 2022 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 2022 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 2022. There is funding in the 2022 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 2022 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 2022 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 2022, 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 2022, 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 also be conducting evaluations of 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 2022 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 2022 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 2022, 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.

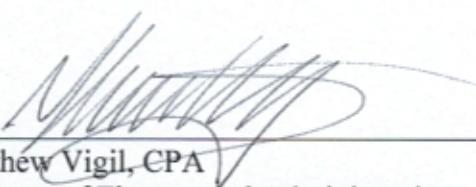
We would like to thank the Board of Directors for their leadership and foresight in adopting policies and priorities to guide the development of ACWWA's 2022 Budget. We would also like to extend our gratitude to the ACWWA employees, who through their hard work and dedication have enabled ACWWA to meet its goals and objectives for 2021. The preparation of this document would not have been possible without the support and input from all departments.

Respectfully submitted,



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Steve Witter, P.E.  
General Manager



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Mathew Vigil, CPA  
Director of Finance and Administration

## INTRODUCTION



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



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Arapahoe County Water & Wastewater Authority  
Colorado**

For the Fiscal Year Beginning

**January 01, 2021**

*Christopher P. Monell*

Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented an award of Distinguished Presentation to Arapahoe County Water and Wastewater Authority, Colorado for its annual budget for the fiscal year beginning January 1, 2021.

In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, and as a communications device.

The award is valid for a period of one year only. We believe that our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

## 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	41
Number of Accounts	Approximately 4,000
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 seven 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 seven 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

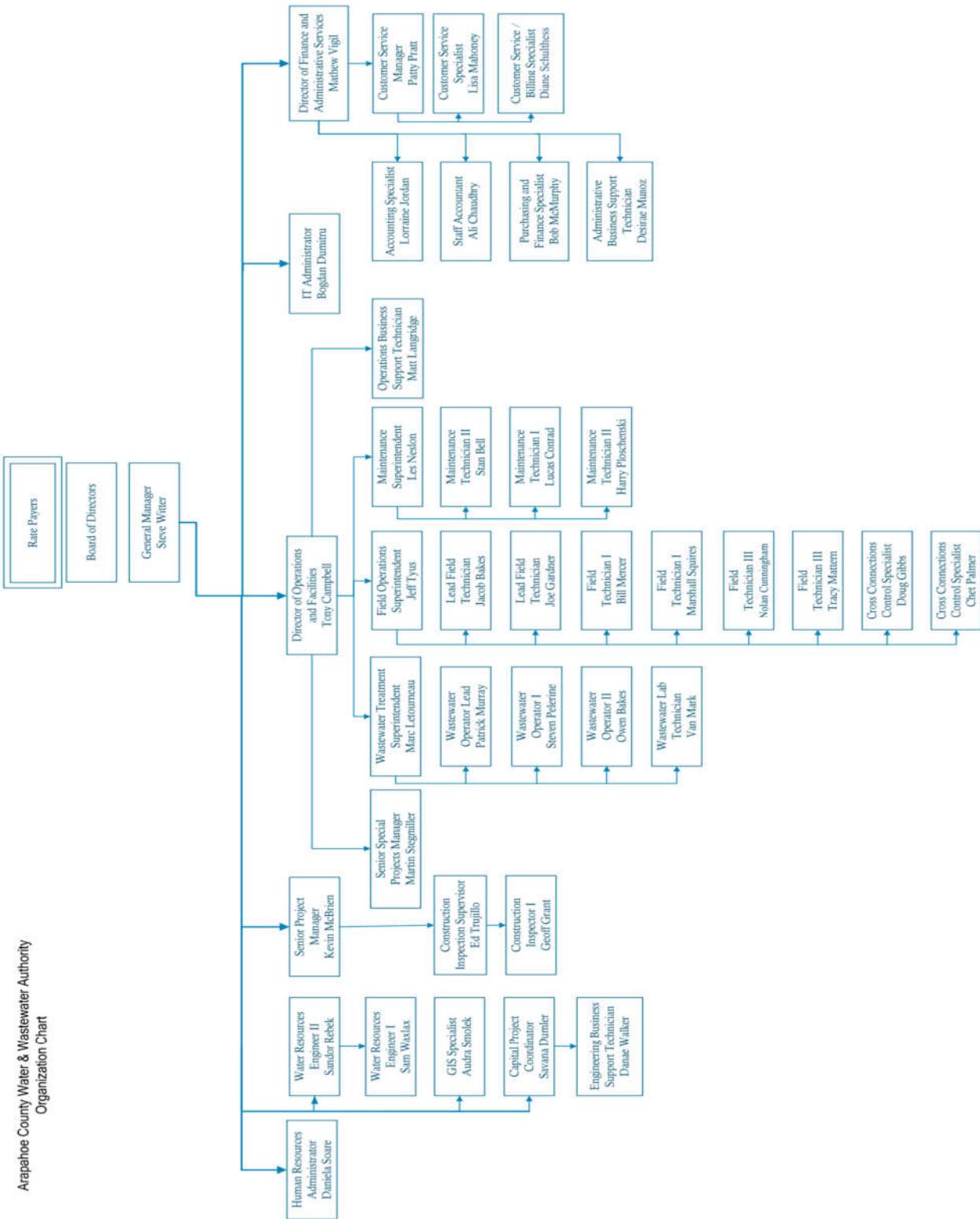
Steven F. Witter, PE, is ACWWA's General Manager. The General Manager is the chief executive officer and administrative head of ACWWA and is responsible for carrying out policies set by the Governing Board and leading ACWWA toward the successful accomplishment of its mission. Mathew Vigil, CPA is ACWWA's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

ACWWA is currently budgeting 41 positions and 1 intern position. Management does not anticipate adding new full-time employees for 2022.



Pictured above is the 4M gallon tank located at Elkhorn (under tennis court).

## 4.4 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.



Above is the re-use pump gallery at the Lone Tree Creek Water Reuse Facility

## 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-Aurora CBSA") and the State. The Denver-Aurora CBSA is comprised of six metropolitan counties and four bordering counties: Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson, and Park. Between 2011 and 2020, the population of Arapahoe County increased 11.4%, and the populations of the Denver-Aurora CBSA and the State increased 12.1% and 10.1%, respectively.

Year	Arapahoe County	Percent Change	Denver-			Percent Change
			Aurora CBSA	Percent Change	Colorado	
1990	391,511	33.3	1,650,486	13.8	3,294,394	14.0
2000 <sup>(1)</sup>	487,967	24.6	2,196,957	33.1	4,301,261	30.6
2011	574,819	17.2	2,556,278	15.8	5,050,332	16.9
2012	585,940	1.9	2,604,570	1.9	5,124,143	1.5
2013	596,499	1.8%	2,651,779	1.8%	5,195,972	1.4%
2014	608,262	2.0	2,702,127	2.0	5,272,662	1.5
2015	618,832	1.7	2,755,692	1.7	5,352,288	1.5
2016	630,599	1.9	2,814,601	1.9	5,453,996	1.9
2017	638,513	1.3	2,858,657	1.3	5,542,211	1.6
2018	644,088	0.9	2,893,883	0.9	5,615,732	1.3
2019	651,710	1.2	2,934,712	1.2	5,696,897	1.4
2020	656,822	0.8	2,970,802	0.8	5,763,976	1.2

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

Sources: United States Department of Commerce, Bureau of the Census (1970 to 2011) and Colorado State Demography Office (2012 to 2018 estimates, which are 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 <sup>(1)</sup>	Arapahoe County	CBSA	Colorado	United States
2013	\$ 49,692	\$ 52,426	\$ 47,298	\$ 44,851
2014	53,236	56,299	50,700	47,058
2015	54,358	57,525	452,133	48,978
2016	55,001	57,595	52,262	49,870
2017	56,789	61,679	55,335	51,885
2018	60,180	65,424	58,456	54,446

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(1) Figures for Arapahoe County and the Denver-Aurora CBSA updated March 6, 2020. State and national figures updated September 24, 2020. All figures are subject to periodic revisions.

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

Arapahoe County, the Denver-Aurora CBSA, 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 2020, the largest employment sector in Arapahoe County was health care and social assistance (comprising approximately 13.1% 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, 2020, total average employment in the County increased 1.1% as compared to the same period ending December 31, 2019, and total average weekly wages increased 3.2%.

Average Number of Employees within Selected Industries – Arapahoe County

Industry	2016	2017	2018	2019	2020
Accommodation and Food Services	25,461	26,161	26,942	26,939	26,951
Administrative and Waste Services	28,314	26,640	27,411	27,622	27,921
Agriculture, Forestry, Fishing, Hunting	94	94	119	124	185
Arts, Entertainment and Recreation	5,347	5,470	6,106	6,331	5,171
Construction	19,107	20,244	21,769	22,805	22,870
Educational Services	22,760	22,930	22,632	22,399	3,640
Finance and Insurance	27,531	28,516	29,159	28,891	25,624
Government	13,194	13,051	13,079	13,373	37,293
Health Care and Social Assistance	41,116	43,035	42,754	43,572	44,248
Information	17,710	17,675	18,136	18,203	18,849
Management of Companies/Enterprises	8,130	7,280	8,661	8,743	9,059
Manufacturing	8,041	8,148	7,891	8,209	8,415
Mining	925	714	675	683	625
Non-classifiable	22	28	13	30	30
Other Services	8,610	8,959	9,316	9,528	9,835
Professional and Technical Services	30,364	31,529	31,878	33,178	34,607
Real Estate, Rental and Leasing	6,234	6,312	6,381	6,681	6,598
Retail Trade	34,414	34,614	34,774	33,916	33,381
Transportation and Warehousing	4,796	5,069	5,138	5,554	4,282
Utilities	249	260	256	267	202
Wholesale Trade	<u>14,180</u>	<u>14,836</u>	<u>15,032</u>	<u>14,741</u>	<u>14,986</u>
Total All Industries <sup>(1)</sup>	<u>316,597</u>	<u>321,566</u>	<u>328,120</u>	<u>331,789</u>	<u>334,772</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 CBSA, 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.

Year	Arapahoe County <sup>(1)</sup>		Denver-Aurora CBSA <sup>(1)</sup>		Colorado <sup>(1)</sup>		United States
	Labor Force	Percent Unemployed	Labor Force	Percent Unemployed	Labor Force	Percent Unemployed	Percent Unemployed
2014	331,367	4.9%	1,487,827	4.8%	2,802,528	5.0%	6.2%
2015	334,731	3.7	1,507,539	3.7	2,828,876	3.9	5.3
2016	340,924	3.1	1,543,166	3.0	2,896,771	3.2	4.9
2017	350,862	2.7	1,592,620	2.6	2,992,412	2.7	4.4
2018	362,692	3.2	1,646,342	3.2	3,096,358	3.3	3.9
2019	371,171	2.3	1,688,220	2.3	3,174,504	2.5	3.7
<u>Month of August</u>							
2020	370,791	7.5%	1,678,804	7.0%	3,087,775	6.7%	6.9%

(1) Figures for Arapahoe County, the Denver-Aurora CBSA 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 <sup>(1)</sup>
Comcast	Telecommunications	5,230
HealthONE <sup>(2)</sup>	Healthcare	4,010
Charter Communications	Telecommunications	3,500
Centura Health <sup>(3)</sup>	Healthcare	2,810
Empower Retirement	Insurance/Retirement Saving Services	2,660
CenturyLink	Telecommunications	2,560
Raytheon Company	Aerospace Systems and Software	2,500
United Healthcare	Healthcare	2,170
Arrow Electronics	Electronic Component Wholesaler	2,170
Kaiser Permanente	Insurance	2,090

(1) Figures revised June 2021.

(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 <sup>(1)</sup>		Commercial/Industrial <sup>(2)</sup>	
	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 <sup>(3)</sup>	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.

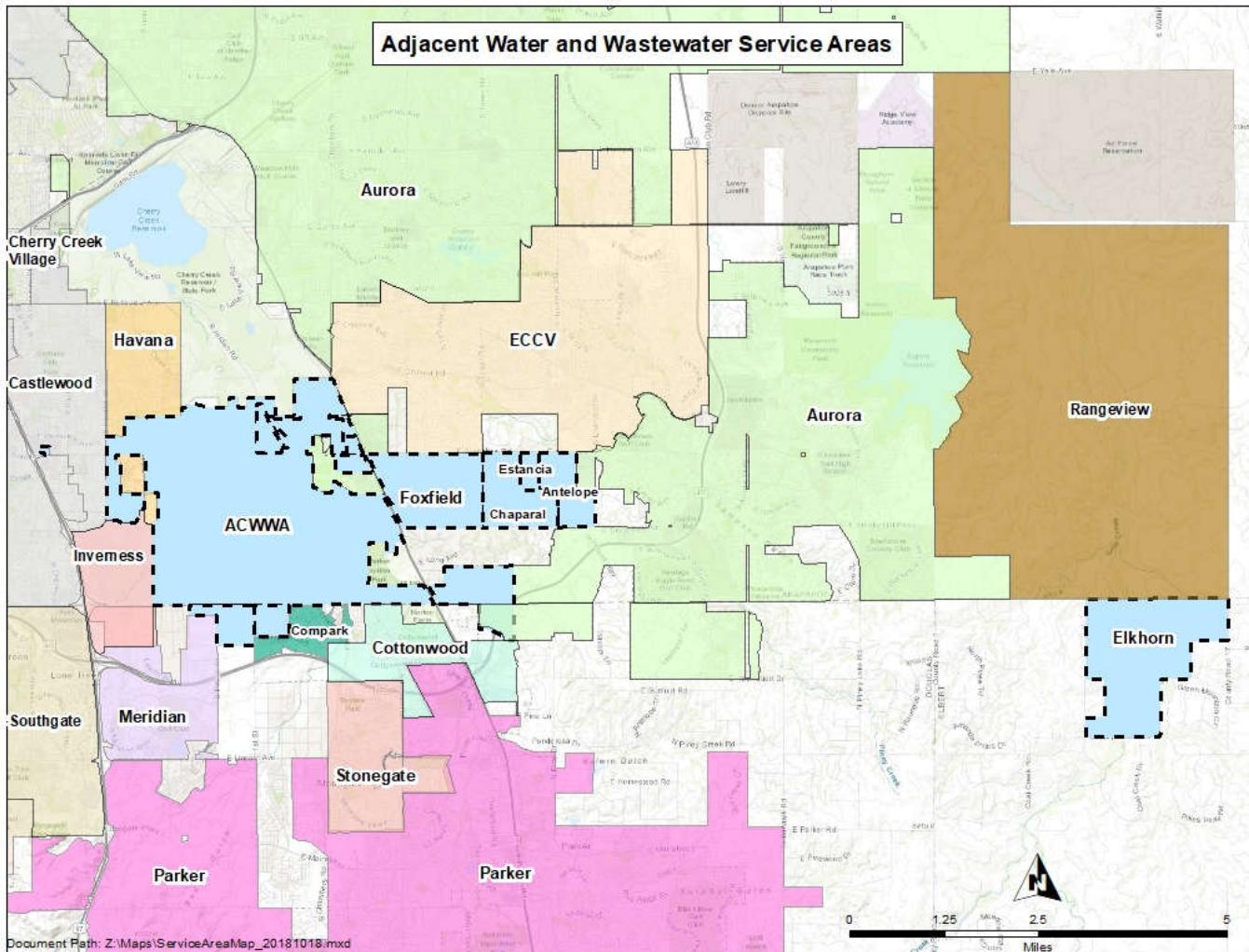
History of Foreclosures – Arapahoe County

Year	Number of Foreclosures Filed	Percent Change
2015	1,314	--
2016	858	(34.7)
2017	731	(14.8)
2018	706	(3.4)
2019	638	(9.6)
2020	638	0.0
2021 <sup>(1)</sup>	173	--

(1) Figures are for January 1 through July 31, 2021.

Sources: Colorado Division of Housing (2014-2020 figures) and the Arapahoe County Office of the Public Trustee (2021 figure).

## 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 2022.

## 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 roughly 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 1,500 acre-feet of water annually, or just over 40% 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 2014.

In 2022, ACWWA will continue to develop this project and work to adjudicate the remaining water rights. In 2021, ACWWA acquired 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

2021 has been a 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've been able to expand our Joint Water Purification Facility to a delivery of 3 MGD with a blended Reverse Osmosis/Microfiltration Treatment. This has allowed up to remove all of our chlorinated alluvial wells from direct access to our potable system. In doing so, along with improved blending scenarios with all of our water sources, we've been able to reduce hardness and Total Dissolved Solids throughout our system.
- 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 2021. Some of the key accomplishments in 2021 were:
  - Inspection and repair of all of our fire hydrants (almost 2000). This ensured they were in working order so they are ready if needed.
  - Developed an improved work order system to allow better tracking of work and our assets.
  - Improved our SCADA system by replacing a number of pieces of critical equipment, again to ensure they are ready to use when needed.
- Cybersecurity is a big topic in the world, ACWWA conducted an Cyber Audit and did multiple steps to ensure it remains protected from attacks. These included upgrades our servers and operating systems. Also included training to all staff.
- We are increasing our efficiencies by installing 870 meter transmitters in 2021, this allows for easier acquisition of meter reads, saving money for our rate payers.
- Competed and submitted successfully to the EPA our Risk and Resilience Assessment and Emergency Response Plan.
- Having successfully sampled for Lead and Copper with results below actionable limits, CDPHE lowered our sample requirements by 50%.
- ACWWA staff had no lost time accidents in 2021 for a sixth consecutive year.

ACWWA Employees achieved 12 new and renewing certifications in its field operations, plant operations and maintenance departments in 2021



**Above is Chamber's Reservoir Fall 2021**

## **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 2021	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 2021	Staff continues to develop the budget.
October 2021	Staff presents draft 2022 budget to the Finance Committee on October 6 <sup>th</sup> and to the full Board on October 13 <sup>th</sup> .
December 2021	On or before December 31, 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



Above is ACWWA staff on-site for the Arapahoe Road valve replacement November 2021.

## **9. Executive Summary**

The 2022 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.

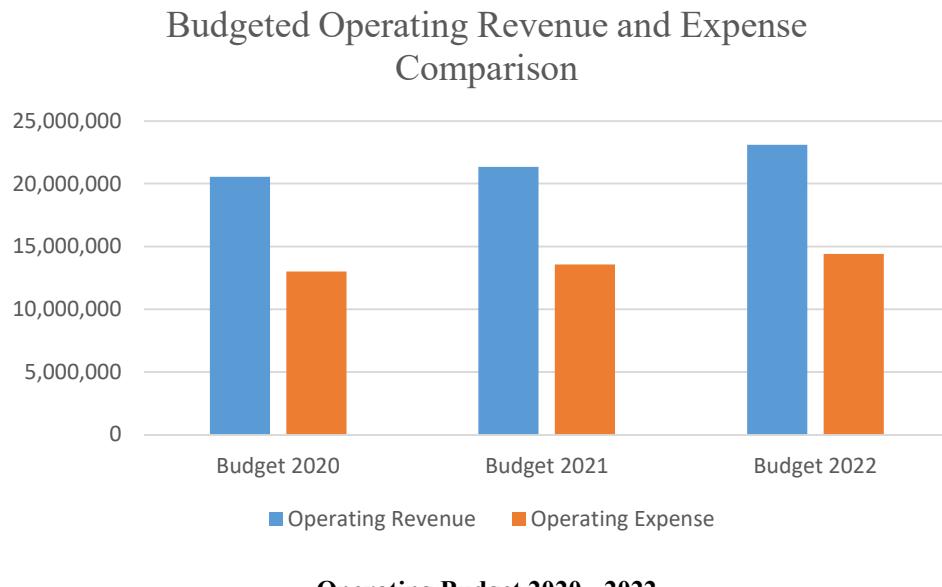
### **9.1 Significant Budgetary Items and Trends**

The 2022 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 2016 to ensure that rates are adequate to fund current operations as well as current and future capital improvements, and the financial model was updated in 2018. As the infrastructure ages, continued investment in the system will be needed to keep it functioning at a high level. Key components of the 2022 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 \$23.1 million;
- Operating expenses of \$14.4 million;
- Non-operating revenue of \$6.7 million, primarily from tap fees;
- Non-operating expenditures of \$20.7 million comprised mainly of debt service payments of \$8.1 million and capital spending of \$12.5 million, including over \$4 million in capital costs that are being carried over to 2022 from the 2021 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 41 positions budgeted, there is currently 1 unfilled position authorized to assist ACWWA in the high level of activity is experiencing and may be filled to allow for additional capacity to ensure ACWWA's level of service commitments.

## 9.2 Operating Budget



### Operating Revenue

Operating revenue is projected to be \$23.1 million in 2022, which reflects an increase of \$1.7 million over the 2021 budget, and an increase of \$578,000 from 2021 estimated operating revenue.

### Water Charges

Water charges revenue for 2022 is budgeted to increase \$314,000 or 2.0% over 2021 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 \$125,000, or 2% compared to forecast 2021 revenue. Budgeted 2021 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 3% in 2021, with no increase to rates.

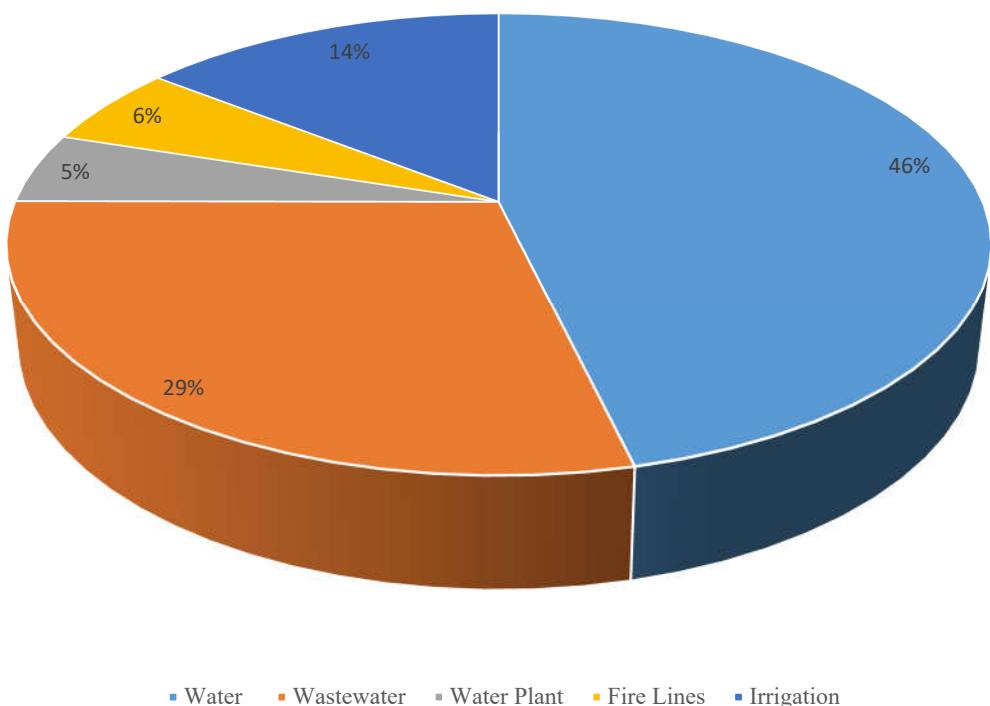
## Irrigation Revenue

Irrigation revenue is expected to be \$446,000 over budget for 2021 mostly due to higher usage during the summer months. The budget for 2022 reflects an increase of \$539,000 from the 2021 budget, and an increase of \$93,000 from estimated 2021 revenue.

## Fees for Service

Fees for service are budgeted to decrease \$30,000 slightly in 2022 in comparison to the 2021 budget as a result of lower tap sales that results in lower meter and inspection fees.

2022 Operating Revenue



## Operating Expenses

The 2022 operating expense budget reflects a 6.0% overall increase from 2021 budgeted operating expenses. Expenditures of \$14.4 million are budgeted to be \$841,000 higher than the 2021 budget. One of the main factors driving the increase are the budgeted cost of operating the JWPP as an RO plant for all of 2022 compared to a portion of 2021. The RO treatment process requires higher levels of labor, power, and chemicals costs than does the current microfiltration treatment option; however, RO results in much higher water quality. 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 2022 office expenses reflects a 10% estimated decrease in year-over-year budgeted costs. Included is funding for asset management, compliance and document management software.

## **Salaries and Benefits**

The 2022 salaries and benefits budget reflect an increase of 6% from the 2021 budget and includes 41 FTEs for the entire year. Compared to 2021 estimated costs of \$4.8 million, salaries and benefits expense in 2021 will be \$271 thousand higher due to an increase in staffing to meet capacity and service level demands, a 4.5% 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 7% from 2021 levels in 2022. ACWWA anticipates a decrease in its workers' compensation premiums, as the experience rating will decline in 2022 due to consecutive years with no time lost to accidents.

## **Professional Fees**

The 2022 budget for professional fees of \$1 million is \$75,000, or 8% lower than the 2021 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. Included in legal is a \$200,000 budgeted amount relating to potential JWPP litigation.

## **Repairs and Maintenance**

The repairs and maintenance budget of \$1.4 million reflects a decrease of \$195,000 thousand compared to the 2021 budget. this time, there are no major R&M projects planned for 2021, although staff will focus on fire hydrant repairs.

## **Operational Expenses**

Operational expenses are projected to increase \$338,000 from forecasted 2021 expenses, and \$282,000 from 2021 budgeted expenses. This increase is due to the \$1.2 million contract with Jacobs Engineering to operate the reconfigured JWPP. The agreement includes a performance guarantee, and the cost of this contract is partially offset by decreases in expenses that ACWWA would normally incur to operate the plant, including labor, power, and chemical costs. Increased water treatment costs are also a factor in the year-over-year change.

## **Utilities**

The 2022 budget for utilities expense is \$1.2 million, reflecting a slight increase from 2021. Although some rate increases are expected, power costs for pumping should be in line with 2021 costs as operations will remain unchanged.

## Contract Services

This line item is comprised mainly of sludge hauling, and the 2022 budget anticipates that expenses will increase \$15,000 due to an inflationary increase for 2022.

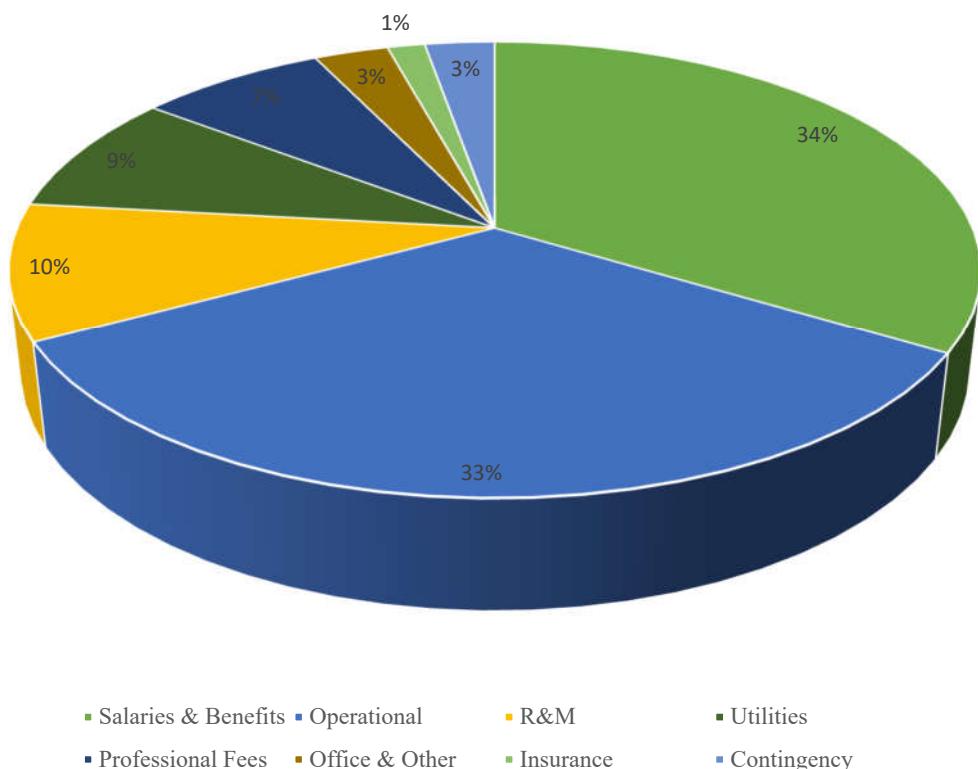
## Other Supplies and Expense

There are no increases budgeted in this category.

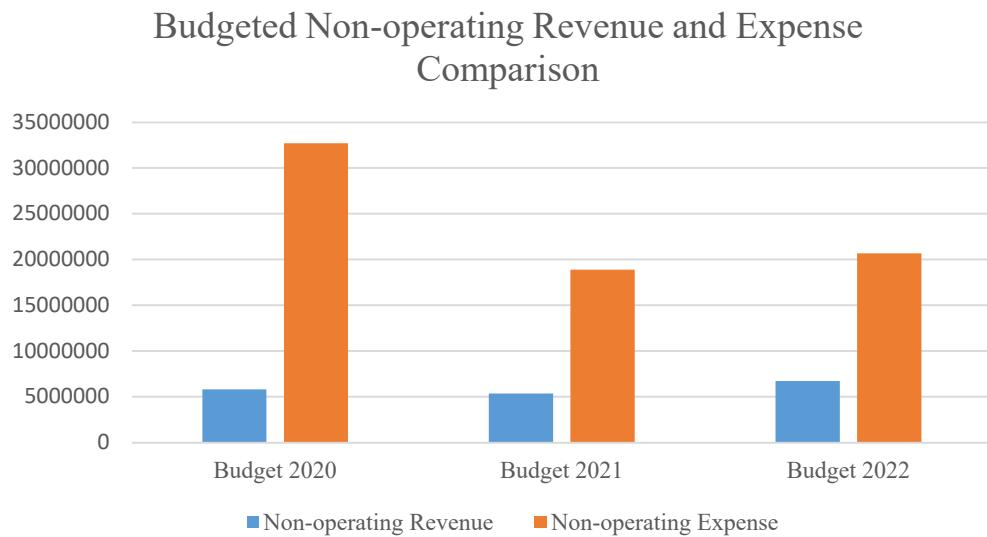
## Contingency

A contingency budget of \$400 thousand 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.

2022 Operating Expenses



### 9.3 Non-operating Budget



#### **Non-operating Revenue:**

Non-operating revenue, comprised primarily of tap and water resource fees, is budgeted to increase \$1.4 million, or 8.0% from budgeted 2021 revenue due to the budgeted inclusion of the CWCB loan proceeds relating to the Chamber's Pump Station.

#### **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). The decreasing interest rates caused 2021 estimated investment income to be less than budget by \$280,000. In 2022 ACWWA expects to draw down its reserves to pay for necessary capital improvements and is budgeting for a decrease of \$250,000 under 2021 budget.

#### **Miscellaneous Revenue**

Miscellaneous revenue through 2020 was largely comprised of the BABS subsidy, which was eliminated with the refunding of the Series 2010 Build America Bonds, which resulted in the loss of the BABS subsidy. The remaining revenue is comprised of Chapparal water system payments, ditch company distributions, and fire flow revenue.

#### **Tap Fees and Contributions**

Both water and wastewater tap sales are anticipated to decrease in 2022 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 2021, ACWWA currently has approximately 228 taps in process and/or under review.

### **Non-operating Expenses**

Non-operating expenses are budgeted to decrease approximately \$1.8 million, or 9%, over 2020 budgeted expenditures because of a \$487,000 increase in debt service payments. The 2021 capital budget reflects an increase of \$1.3 million from 2020.

### **Debt Service**

Debt service is expected to increase \$487,000 primarily due to a one time bond principle increase of \$575,00.

### **Capital Outlay**

Of the \$10.6 million capital budgeted for 2022, \$4.6 million is carried over from the 2021 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 2022 capital projects can be found in §10.

## **9.4 Long-range Financial Plan**

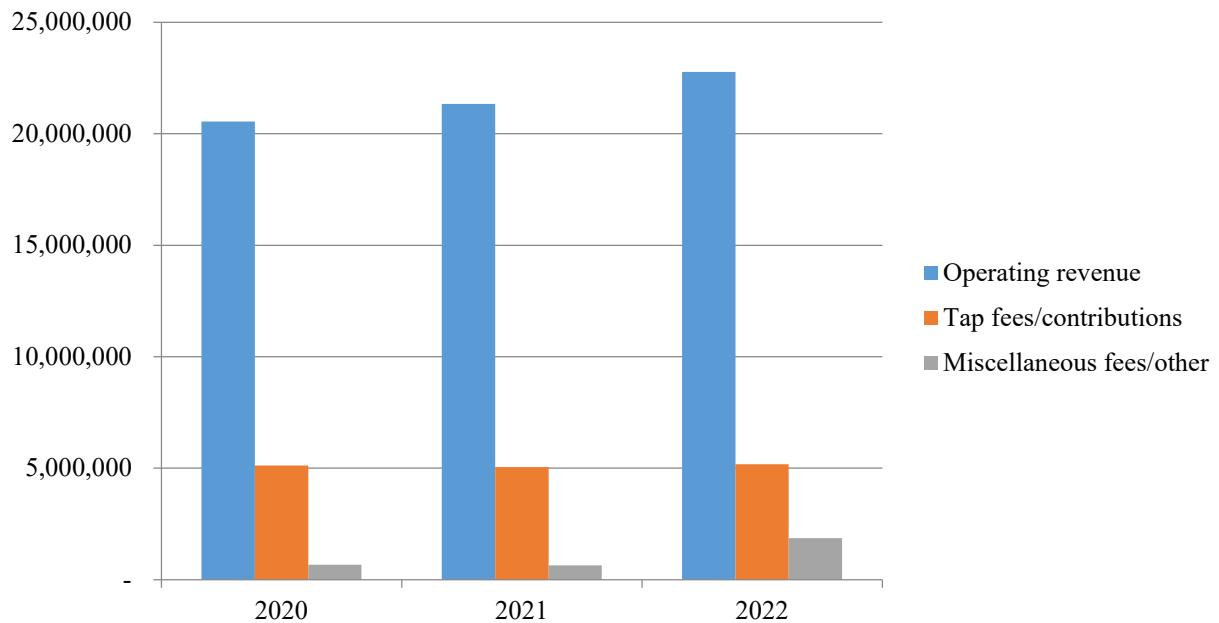
In late 2016, ACWWA engaged Carollo Engineers to conduct a cost of service study that was finalized in the first quarter of 2017. Carollo also developed a financial plan for ACWWA based on the 20-year capital plan. ACWWA retained Carollo to update the financial plan in 2018, as a number of assumptions had changed (e.g., higher tap sales and less precipitation than originally planned for). ACWWA anticipates commissioning a new cost of service study in 2022.

Based on financial trends through mid-2016, Carollo projected that ACWWA would need to raise water and wastewater rates 3% and 2%, 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)

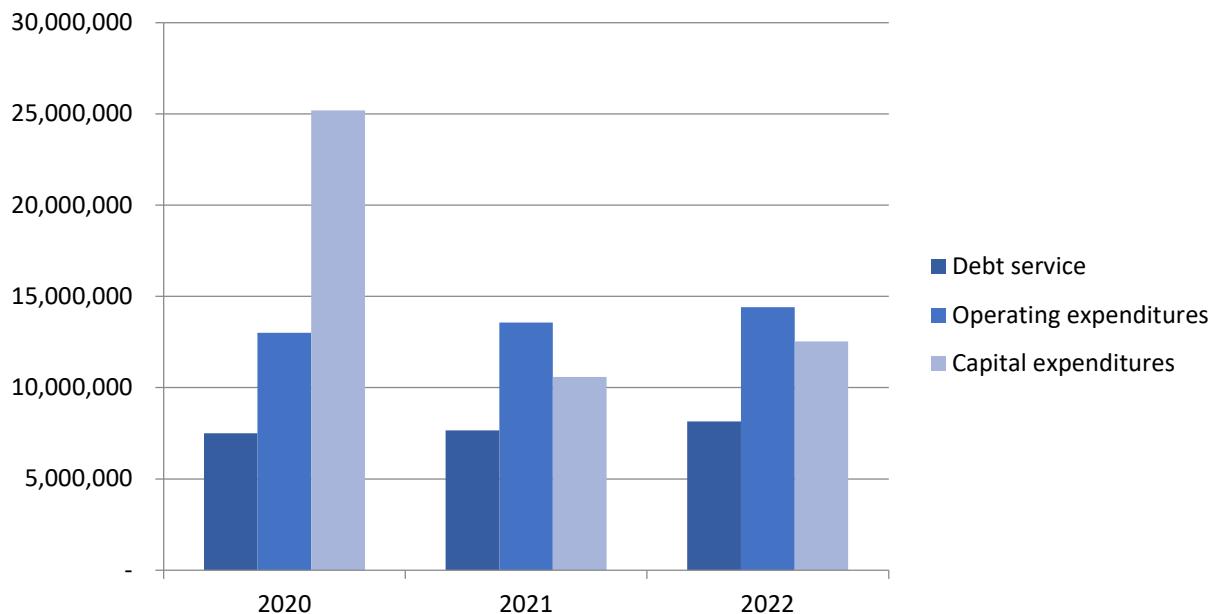
### Budgeted Sources of Funds 2020 – 2022

#### Budgeted Sources of Funds, 2020-2022



### Budgeted Uses of Funds 2020 -2022

#### Budgeted Uses of Funds, 2020 - 2022



## **10. 2022 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 2022 capital improvement budget are listed in this section.

### **PROJECTS**

#### **ACWWA Flow Adjudication Costs**

This includes the anticipated 2022 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 2022 is \$1,250,000.

#### **JWPP New VFDs for Finished Water Pumps**

In 2021 new finish water pumps were installed at the JWPP to provide a more efficient flow to ACWWA customers. The VFDs for these pumps are outdated and need replacing. \$200,000 has been budgeted to purchase and install new VFDs in 2022.

#### **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 building to the influent line into headworks. \$100,000 is being budget for 2022 for design of a solution.

#### **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, there is \$75,000 budgeted for this upgrade in 2022.

## **Asset Management**

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 \$100,000 is budgeted in 2022 as the first phase of this long-term program, which will consist of condition assessments of ACWWA's existing assets.

## **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 is being budgeted for 2022 to determine the best location, purchase and install this PRV.

## **Integrated Master Plan - Water and Wastewater Master Plans**

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, to include the collection system, the pumping and transfer system, and the wastewater treatment plant system and expansion. \$60,000 is being budgeted in 2022 to complete this project.

## **Chamber SCADA Improvements**

Chambers reservoir is currently being filled, and before being brought online, it will require additional operating monitoring. A fiber loop connecting all piezometers to SCADA and the ACWWA home office needs to be installed. Additional control logic will also be required, which will include ability to reset pumps, and VFD's via SCADA, remote monitoring of all piezometers and a live security camera feed also communicated via SCADA. \$75,000 is being budget in 2022 to make these improvements.

## **LTCWRF PLC's**

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 is being budgeted for 2022 to complete these upgrades.

## **Redundant Pipeline**

ACWWA is currently evaluating the need for 3 redundant pipelines with the intention of selecting one for design in 2022 and construction in 2023. All three pipeline are to be completed over the next 5 years. Staff is awaiting the masterplan to determine priority of the redundant lines. The estimated cost of design the first-priority redundant line is \$250,000, which is being budgeted in 2022. Construction of this line will occur in 2023 with an estimated budget of \$2,000,000 and the design of the second-priority line will occur in 2023 with a budget of \$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 budgeted for 2021 and is expected to be completed in early 2024. The construction of a new administration building is expected to occur starting in early 2023 and carrying over into 2024. The total estimated cost of the building is \$3,600,000. \$500,000 of this amount has been budgeted for 2022 to complete the design and start permitting, the remainder to be budgeted in 2023.

## **Water Meters for New Developments**

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 is purchased by ACWWA. \$50,000 has been budgeted in 2022 for this project.

## **ACWWA Water Meter Transmitter Upgrade Project**

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 2022 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.

## **Water Meter Replacement Program**

ACWWA revenue comes mainly from 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 2022 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.

## **AWT Filter Study**

The filters in the advanced water treatment (AWT) building at LTCWRF have been operating inefficiently due to issues with the underdrain system. In the next few years, the AWT building will be undergoing expansion and additional filters added. Before this happens, a study needs to be conducted to determine if the current configuration should be modified. \$60,000 has been budgeted for 2022 to complete a study on the existing filters to determine if this is the optimal design or if any modifications need to be made.

## **Well Site PLC's Upgrades**

Several of ACWWA's well sites have outdated Programmable Logic Controllers (PLC's). Unreliability and inability to procure replacement parts due to obsolete hardware and software is challenging. \$80,000 is being budgeted for 2022 to complete upgrades of the PLC systems at the critical well sites.

## **Elkhorn Additional Well**

Water supply during the hot summer months has been low for the Elkhorn development, resulting 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 new well. \$1,000,000 for the construction of the additional well in 2022.

## **Peoria Lift Station Rehabilitation**

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 is being budgeted for 2022 for the construction to complete the needed renovations, construction will continue into 2023 and any unused budget will carryforward.

## **LTCWRF TE Pumps**

The TE pump provides the majority of the Reg 84 pumping to our service area. The flow rate provided by the current pump of 500 gpm worked until the demand in the Reg 84 system increased, due to the addition of Family Sports. The new 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 is being budgeted in 2022 to analysis, purchase and install a new TE pump.

## **New Microfiltration Filters at the JWPP**

The JWPP has three microfiltration (MF) skids in operations. These MF skids were installed 12 years ago and were used for brine treatment. The filters have an estimated life of 10 years under normal operating conditions. \$700,000 is being budgeted in 2022 to replace the three skids.

## **Critical Customers Loop Design**

There are several facilities in the ACWWA service area where the uninterrupted supply of water is critical to their operations. A study that will be completed in early 2022 will identify those facilities, analyze the risk to water outages at those facilities, and propose improvements to minimize those risks. \$250,000 is being budgeted for 2022 to design a service loop to ensure these critical customers can maintain water supply during a potential interruption.

## **Resurfacing LTCWRF Parking Lot**

The asphalt roads located at the LTCWRF were installed in 2007 – 2008. Since install, many cracks and potholes have developed. In the past cracks have been sealed, but the seals have quickly peeled off. \$5,000 is being budgeted in 2022 for an evaluation for the condition of asphalt and \$200,000 is being budgeted for 2023, 2024 and 2025 to make the needed repairs over the three years.

## **Chambers Reservoir Access Road Relocation**

Chambers Reservoir site access is currently off of 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 is being budgeted for 2022 to design and replace the access road.

## **18-inch Asbestos Concrete Assessment**

ACWWA's current 18-inch Asbestos Concrete water main was one of the first installed assets. Its roll is critical in supplying drinking water from the high zone, running East and West under Arapahoe road. There's also multiple "Critical" customers that rely on this main to keep a steady flow of potable water to their facilities, therefore, its imperative this distribution line remains well maintained and in optimal operating condition. A condition assessment will assure 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.

## **Lawn Irrigation Return Flow (LIRF) Study**

A significant portion of ACWWA's water supply is used for irrigation around business parks, single family residences, multifamily residences, parks, and golf courses. Some of this water is consumed by lawn grass or evaporates, but the unconsumed portion returns to the stream as surface runoff or ground water return flow. ACWWA has been quantifying and utilizing these return flows from irrigation to replace out-of-priority depletions since the late 1980's. As a condition of using these return flows, the State requires an analysis to be conducted every 5 years to update the factors that are used in ACWWA's augmentation plan accounting. The previous study was completed in 2017. \$40,000 is budgeted in 2022 to perform the necessary analysis and produce the final report which will be submitted to the State.

## **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 is being budgeted in 2022 to install Course Air.

## **Current Administration Building Improvements**

The ACWWA Administration Building requires ongoing improvements and \$5,000 has been set aside for these projects for 2022.

### **PURCHASING**

#### **LTCWRF Redundant Centrifuge**

The centrifuge at the LTCWRF is a vital component in ACWWA's sludge handling system. Failure of the centrifuge would not allow ACWWA to dewater the sludge produced at the facility, causing operational problems and additional costs for hauling of ACWWA's sludge waste. A redundant centrifuge is needed to avoid these issues. The centrifuge cost \$300,000 and \$150,000 was budgeted in 2021 and an additional \$150,000 will be budgeted for 2022 so purchasing can occur in 2022.

#### **Replacing BNR Mixers**

The BNR at LTCWRF has four mixers in the basin of each train, the mixers are critical to the treatment process. The current mixers in the BNR basins have been in operations for 12 years. The manufacturer considers the end of life of these mixers to be 80,000 hours of operations. The mixers have surpassed the 80,000-hour mark. In 2022, BNR train 1 will be taken offline for maintenance, during the maintenance the four mixers will be replaced. The budgeted amount for the purchasing and installation of the four mixers is \$50,000. An additional \$50,000 will be budgeted for 2023 when the BNR train 2 will be taken offline, and those four mixers will be replaced.

#### **BNR Probe Replacement**

The BNR basins at LTCWRF currently has 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 has been budgeted for 2022 to replace and install the new YSI probes. The old probe will be used as a back-up.

#### **LTCWRF VFD Replacement**

There are several pieces of critical equipment at the LTCWRF that require VFDs. Several of these VFDs are aging and are approaching their end of life. This project is to proactively replace some of the aging VFDs to minimize the risk of treatment and operational disruptions from a failed VFD. Several VFDs were replaced in 2021 and an additional 3 will be replaced in 2022. The estimated cost for this project in 2022 is \$100,000 and should have no impact on operating costs.

#### **HVAC Dewatering Building Upgrade**

The upper level of the dewatering building at LTCWRF contains the VFD of the centrifuge and the SCADA system for all LTCWRF. The electrical room gets hot during the summer months and the heat shuts down the VFD's. \$50,000 is budgeted for 2022 to evaluate and upgrade the HVAC to help cool the electrical room in order to prevent overheating and shutdowns.

## **New Field Operations Vehicle**

ACWWA has several company vehicles, and they are typically replaced every 10 years. The current field operations vehicle is 12 years old and has over 102,000 miles. A new vehicle will need to be purchased for the department. \$25,000 is being budgeted for the purchase in 2022. Vehicle will be purchased thru the State of Colorado State Bid Process.

## **Upgrade LTCWRF Entry 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 the access and security of the plant. \$35,000 is being budgeted for 2022 to make the necessary improvements.

## **\*\*Headworks Roof Repair**

The roof at the headworks building at LTCWRF is a membrane roofs, which consist of the rubber membrane that is glued/sealed to the decking that is attached to the main roof. The membrane has detached from the decking and balloons up in high winds leaving the surface of the roof exposed. Leaks have developed and worsened the condition. \$75,000 is being budget for the roof repaired in 2022, which will be done by a contractor.

## **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 will be budgeted for the purchase in 2022.

## **Traffic Safety Light for Vehicles**

ACWWAs Field Operations staff in often required to work on/next to the road while working on water lines, valves, and manholes. In order to keep personal safe and improve traffic safety work, ACWWA will be purchasing 3 additional LED truck hitch lights and two arrow traffic lights. \$10,000 will be budgeted for 2022 to purchase 3 of these lights.

## **LTCWRF Rotary Screw Compressor Rebuild Kit**

The advanced water treatment (AWT) TriCon filters at LTCWRF operate in an automatic mode using air-controlled modulating valves. Two Rotary Screw air compressors supply air to the 83 valves. The rotary screw compressors purchased in 2015 replaced the 2 large shop compressors and it has worked exceptionally well. Based on manufacture recommendations, the compressor is due for an Air Intake End rebuild. \$7,000 will be budgeted for 2022 to purchase and rebuild the air intake end.

## **Computer Replacement/Software Upgrades**

ACWWA is budgeting \$17,000 in 2022 for ongoing replacement of staffs outdated computers and upgrading software as needed.

### **CARRYOVER PROJECTS**

#### **South Chambers and Fairplay Critical Valve Replacement**

Two critical valves were scheduled to be replaced in 2021, one at Arapahoe and Revere and one at South Chambers and Fairplay. The valve at Revere and Arapahoe was able to be replaced in 2021 but due to long lead times in 2021 the valve at South Chambers and Fairplay will have to be carried over into 2022. The amount being carried over is \$40,000 and will cover the cost to purchase and replace this valve.

#### **VCC Lift Station Electrical and Controls and Redundancy Improvements**

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. \$500,000 of the amount budgeted in 2020 and was carried forward into 2021. In 2021 VCC started a design-build and will carry into 2022. \$465,000 will be carried forward to 2022 to complete the project.

#### **Peoria Lift Station Design**

In early 2021 a facility assessment was completed to establish the needed renovations. Design of the needed rehabilitation started in mid-2021 and will need to continue into the first quarter of 2022. Once design is complete bidding and construction will occur in 2022. An estimated budget of \$220,000 will be carried over to complete the design.

#### **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 budgeted in 2021 for \$100,000 and will be carried over to 2022.

#### **Master Plan Additional Scope for Critical Customers Evaluation**

There are several facilities in the ACWWA service area where the uninterrupted supply of water is critical to their operations. This study will identify those facilities, analyze the risk to water outages at those facilities, and propose improvements to minimize those risks. \$50,000 was budgeted in 2021 and \$40,000 will be carryforward to 2022 to complete this project.

### **Chambers Reservoir 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 2022. \$1,000,000 will carryforward to complete the pumpstation.

### **4 MG Tank Site – Irrigation, landscape, and Resurfacing**

The 4 MG tank site needs maintain and landscaping each year per our agreement with Chaparral. Also, a part of the agreement, tennis courts on top of the tank must be resurfaced by ACWWA as it wears out. \$200,000 was budgeted in 2021 and will be carried over to 2022 to perform regular maintenance and potential resurface the court if needed.

### **ACWWA Flow Project – South Platte Storage project:**

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 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 from 2020 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.

### **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 was budgeted in 2021 for this requirement and is being carried forward to 2022.

## 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 2022, 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 2022, the wastewater department plans to assist in the design of a 3<sup>rd</sup> 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 26.0 FTEs in 2022 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, and completing Phases I and 2 of the Chambers Reservoir reconstruction project;
- Maintaining debt service coverage ratio at 1.5:1;
- Maximizing investment earnings through effective cash flow management; and
- Implementation of new billing and accounting software.

**ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY**  
**APPROVED POSITIONS 2020 - 2022**

<b>REGULAR EMPLOYEES (FTE)</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
	<b>BUDGET</b>	<b>BUDGET</b>	<b>BUDGET</b>
<b>ADMINISTRATION</b>			
General Manager	1.0	1.0	1.0
Director of Administrative Services	1.0	1.0	-
Finance Manager	1.0	-	1.0
Engineering Manager	1.0	1.0	1.0
Senior Project Manager	1.0	1.0	1.0
Operations/Maintenance 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	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
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
GIS Specialist	1.0	1.0	1.0
<b>WATER OPERATIONS</b>			
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
<b>WASTEWATER OPERATIONS</b>			
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
<b>Totals</b>	<b>40.0</b>	<b>40.0</b>	<b>40.0</b>

## FINANCIAL SUMMARIES AND NOTES



Above is the installation of the Chamber's Liner in 2021

## 12. Board Summary Forecasted 2021 Combined Operations

**ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY**  
**BOARD SUMMARY**  
**2022 BUDGET AS PROPOSED**  
**WITH 2020 ACTUAL AND 2021 ESTIMATED**  
**For the Years Ending December 31,**

	ACTUAL 2020	BUDGET 2021	ACTUAL 9/30/2021	ESTIMATED 2021	BUDGET 2022
<b>BEGINNING FUNDS AVAILABLE</b>	<b>\$ 42,656,595</b>	<b>\$ 15,165,790</b>	<b>\$ (37,089,344)</b>	<b>\$ 37,089,344</b>	<b>\$ 42,745,337</b>
<b>REVENUES</b>					
<b>Operating Revenues</b>					
Water revenue	14,680,735	13,767,748	11,507,210	14,411,256	14,725,352
Sewer revenue	6,137,308	6,541,835	4,724,445	6,259,417	6,384,605
Fees for services	598,859	799,813	833,167	1,169,989	670,085
Water plant revenue	570,353	-	-	570,353	1,092,615
Other revenue	275,153	230,321	70,351	94,471	211,076
Settlement revenue	390,000	-	-	-	-
<b>Total operating revenues</b>	<b>22,652,408</b>	<b>21,339,717</b>	<b>17,135,173</b>	<b>22,505,486</b>	<b>23,083,733</b>
<b>Non-Operating Revenues</b>					
Tap and extraterritorial fees	5,256,894	5,046,834	6,383,633	6,459,283	5,180,989
Net investment income	258,034	300,000	15,642	21,996	50,000
Loan proceeds	2,228,827	-	271,173	271,173	1,500,000
Proceeds from sale of water rights	-	-	4,500,000	4,500,000	-
<b>Total non-operating revenues</b>	<b>7,743,755</b>	<b>5,346,834</b>	<b>11,170,448</b>	<b>11,252,452</b>	<b>6,730,989</b>
<b>Total revenues</b>	<b>30,396,163</b>	<b>26,686,551</b>	<b>28,305,621</b>	<b>33,757,937</b>	<b>29,814,722</b>
<b>Total funds available</b>	<b>73,052,758</b>	<b>41,852,341</b>	<b>(8,783,723)</b>	<b>70,847,281</b>	<b>72,560,059</b>
<b>EXPENDITURES</b>					
<b>Operating Expenses</b>					
Salaries and benefits	4,203,848	4,578,142	3,112,279	4,298,788	4,849,927
Office expense	282,458	456,478	176,973	334,816	410,210
Professional services	592,773	997,150	433,718	622,761	1,072,376
Repairs and maintenance	1,112,733	1,193,522	541,651	1,030,119	1,388,341
Insurance	172,153	182,439	150,573	200,740	214,897
Operational	4,044,753	4,372,526	3,049,595	4,316,983	4,655,195
Contractual services	149,919	157,235	127,681	161,805	170,625
Utilities	1,061,457	1,224,194	872,572	1,202,636	1,238,715
Other supplies and expense	11,345	13,200	7,369	21,554	15,200
Contingency	-	400,000	-	-	400,000
<b>Total operating expenses</b>	<b>11,631,439</b>	<b>13,574,886</b>	<b>8,472,411</b>	<b>12,190,200</b>	<b>14,415,485</b>
<b>Non-Operating Expenses</b>					
Interest and fiscal charges	7,502,399	7,655,334	3,044,634	7,565,632	8,142,232
<b>Total non-operating expenses</b>	<b>7,502,399</b>	<b>7,655,334</b>	<b>3,044,634</b>	<b>7,565,632</b>	<b>8,142,232</b>
<b>Capital expenditures</b>					
Capital projects	16,829,576	11,228,000	4,635,426	8,228,000	12,529,000
<b>Total capital expenditures</b>	<b>16,829,576</b>	<b>11,228,000</b>	<b>4,635,426</b>	<b>8,346,112</b>	<b>12,529,000</b>
<b>Total expenditures requiring appropriation</b>	<b>35,963,414</b>	<b>32,458,220</b>	<b>16,152,471</b>	<b>28,101,944</b>	<b>35,086,717</b>
<b>ENDING FUNDS AVAILABLE</b>	<b>\$ 37,089,344</b>	<b>\$ 9,394,121</b>	<b>\$ (24,936,194)</b>	<b>\$ 42,745,337</b>	<b>\$ 37,473,342</b>

## 13. Board Summary Forecasted 2022 Budget Water Operations

**ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY**  
**WATER OPERATIONS**  
**2022 BUDGET AS PROPOSED**  
**WITH 2020 ACTUAL AND 2021 ESTIMATED**  
**For the Years Ending December 31,**

ACTUAL 2020	BUDGET 2021	ACTUAL 9/30/2021	ESTIMATED 2021	BUDGET 2022
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### REVENUES

#### Operating Revenues

Water revenue	\$ 14,680,735	\$ 13,767,748	\$ 11,507,210	\$ 14,411,256	\$ 14,725,352
Fees for services	262,239	399,643	464,905	661,491	308,018
Water plant revenue	570,353	-	-	570,353	1,092,615
Other revenue	662,021	227,225	67,795	91,087	207,753
Settlement revenue	390,000	-	-	-	-
<b>Total operating revenues</b>	<b>16,565,348</b>	<b>14,394,616</b>	<b>12,039,910</b>	<b>15,734,187</b>	<b>16,333,738</b>

#### Non-Operating Revenues

Tap and extraterritorial fees	4,035,200	3,868,662	4,456,592	4,597,242	3,977,222
Net investment income	180,624	210,000	10,949	15,397	35,000
Loan proceeds	2,228,827	-	271,173	271,173	1,500,000
Proceeds from sale of water rights	-	-	4,500,000	4,500,000	-
<b>Total non-operating revenues</b>	<b>6,444,651</b>	<b>4,078,662</b>	<b>9,238,714</b>	<b>9,383,812</b>	<b>5,512,222</b>

#### Total revenues

<b>23,009,999</b>	<b>18,473,278</b>	<b>21,278,624</b>	<b>25,117,999</b>	<b>21,845,960</b>
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### EXPENDITURES

#### Operating Expenses

Salaries and benefits	2,400,854	2,638,712	1,754,215	2,422,903	2,807,775
Office expense	180,092	321,922	124,360	215,875	265,692
Professional services	466,552	821,271	363,555	512,683	932,694
Repairs and maintenance	667,816	578,745	329,453	598,354	642,980
Insurance	127,967	150,809	114,678	152,888	163,663
Operational	3,655,154	3,933,974	2,753,529	3,859,853	4,140,721
Contractual services	44,617	9,150	25,774	28,185	30,849
Utilities	523,450	636,712	434,509	619,910	638,508
Other supplies and expense	7,942	9,240	13,807	18,718	10,640
Contingency	-	280,000	-	-	280,000
<b>Total operating expenses</b>	<b>8,074,444</b>	<b>9,380,535</b>	<b>5,913,880</b>	<b>8,429,368</b>	<b>9,913,521</b>

#### Non-Operating Expenses

Interest and fiscal charges	6,916,549	7,107,423	2,657,433	7,044,632	7,616,819
<b>Total non-operating expenses</b>	<b>6,916,549</b>	<b>7,107,423</b>	<b>2,657,433</b>	<b>7,044,632</b>	<b>7,616,819</b>

#### Capital expenditures

Capital projects	16,829,576	16,829,576	16,829,576	16,829,576	16,829,576
<b>Total capital expenditures</b>	<b>16,829,576</b>	<b>16,829,576</b>	<b>16,829,576</b>	<b>16,829,576</b>	<b>16,829,576</b>

#### Total expenditures requiring appropriation

<b>31,820,569</b>	<b>33,317,534</b>	<b>25,400,889</b>	<b>32,303,576</b>	<b>34,359,916</b>
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#### Change In Net Position

<b>\$ (8,810,570)</b>	<b>\$ (14,844,256)</b>	<b>\$ (4,122,265)</b>	<b>\$ (7,185,578)</b>	<b>\$ (12,513,956)</b>
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## 14. Board Summary Forecasted 2022 Sewer Operations

**ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY**  
**WASTEWATER OPERATIONS**  
**2022 BUDGET AS PROPOSED**  
**WITH 2020 ACTUAL AND 2021 ESTIMATED**  
**For the Years Ending December 31,**

ACTUAL 2020	BUDGET 2021	ACTUAL 9/30/2021	ESTIMATED 2021	BUDGET 2022
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### REVENUES

#### Operating Revenues

Sewer revenue	\$ 6,137,308	\$ 6,541,835	\$ 4,724,445	\$ 6,259,417	\$ 6,384,605
Fees for services	336,620	400,170	368,262	508,498	362,067
Other revenue	3,132	3,096	2,556	3,384	3,323
<b>Total operating revenues</b>	<b>6,477,060</b>	<b>6,945,101</b>	<b>5,095,263</b>	<b>6,771,299</b>	<b>6,749,995</b>

#### Non-Operating Revenues

Tap and extraterritorial fees	1,221,694	1,178,172	1,927,041	1,862,041	1,203,767
Net investment income	77,410	90,000	4,693	6,599	15,000
<b>Total non-operating revenues</b>	<b>1,299,104</b>	<b>1,268,172</b>	<b>1,931,734</b>	<b>1,868,640</b>	<b>1,218,767</b>

#### Total revenues

<b>Total revenues</b>	<b>7,776,164</b>	<b>8,213,273</b>	<b>7,026,997</b>	<b>8,639,939</b>	<b>7,968,762</b>
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### EXPENDITURES

#### Operating Expenses

Salaries and benefits	1,802,994	1,939,430	1,358,064	1,875,885	2,042,152
Office expense	102,366	134,556	52,613	118,941	144,518
Professional services	126,221	175,879	70,163	110,079	139,682
Repairs and maintenance	444,917	614,777	212,198	431,765	745,361
Insurance	44,186	31,630	35,895	47,852	51,234
Operational	389,599	438,552	296,067	457,129	514,474
Contractual services	105,302	148,085	101,907	133,620	139,777
Utilities	538,007	587,482	438,063	582,726	600,207
Other supplies and expense	3,403	3,960	1,791	2,836	4,560
Contingency	-	120,000	-	-	120,000
<b>Total operating expenses</b>	<b>3,556,995</b>	<b>4,194,351</b>	<b>2,566,762</b>	<b>3,760,832</b>	<b>4,501,964</b>

#### Non-Operating Expenses

Interest and fiscal charges	585,850	547,911	387,201	521,000	525,413
<b>Total non-operating expenses</b>	<b>585,850</b>	<b>547,911</b>	<b>387,201</b>	<b>521,000</b>	<b>525,413</b>

#### Capital expenditures

Capital projects	16,829,576	16,829,576	16,829,576	16,829,576	16,829,576
<b>Total capital expenditures</b>	<b>16,829,576</b>	<b>16,829,576</b>	<b>16,829,576</b>	<b>16,829,576</b>	<b>16,829,576</b>

#### Total expenditures requiring appropriation

<b>20,972,421</b>	<b>21,571,838</b>	<b>19,783,538</b>	<b>21,111,408</b>	<b>21,856,953</b>
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#### Change In Net Position

<b>\$ (13,196,257)</b>	<b>\$ (13,358,565)</b>	<b>\$ (12,756,541)</b>	<b>\$ (12,471,469)</b>	<b>\$ (13,888,191)</b>
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## **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 2022, 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 2022 Capital Outlay

### 2022 Projects

18-inch Asbestos Concrete Assessment	\$50,000
ACWWA Flow Water Rights Adjudication costs	1,250,000
Administration Building	500,000
Asset Management (Condition Assessments)	100,000
Chambers Reservoir Access Road Relocation	200,000
Critical Customer Service Loop Design	250,000
Current Administration Building Improvements	5,000
Elkhorn Well and Pipeline Construction	1,000,000
Elkhorn Well and Pipeline Design	80,000
JWPP Finish Water Pump VFDs	200,000
LTCWRF In Plant Sewer System	100,000
LTCWRF TE Pump	150,000
LTCWRF VFD Replacement	100,000
Meter Replacement Project	250,000
New Digester Aeration System at LTCWRF	125,000
New Microfiltration Filters at the JWPP	700,000
Non-Potable PRV	150,000
Peoria Lift Station Rehabilitation	1,100,000
Redundancy Line Design	250,000
Upgrade JWPP SCADA	75,000
Upgrade LTCWRF PLCs (Process Logic Controller)	80,000
Wastewater Master Plan	60,000
Water Meter New Development	50,000
Water Meter Transmitters	200,000
Well Site PLC's Upgrades	80,000
<b>Total 2022 Projects</b>	

### 2022 Studies

AWT Filter Study	60,000
Lawn Irrigation Return Flow (LIRF) Study	40,000
Resurfacing LTCWRF Asphalt	5,000
<b>Total 2022 Studies</b>	

### 2022 Purchasing

BNR Probe Replacement	\$25,000
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Chambers SCADA improvements.	\$75,000
HVAC Dewatering Building Upgrade	\$50,000
LTCWRF Redundant Surge Pump	\$20,000
LTCWRF Rotary Screw Compressor Rebuild Kit	\$7,000
New Vehicle for Field Operations	\$25,000
Traffic Safety Light	\$10,000
Repair Headworks Roof	\$75,000
Replace BNR Mixers	\$50,000
Upgrade LTCWRF Entry Gate	\$35,000
Computer Replacements/Software Upgrades	\$17,000
<b>Total 2022 New Purchases</b>	

#### Carryover Projects

Chambers Pumpstation and Piping	\$1,000,000
High-zone conversion - re-balance supply distribution	\$100,000
Master Plan Additional Scope for Critical Customers Evaluation	\$40,000
Water Masterplan	\$20,000
Peoria Design	\$220,000
Redundant 3 <sup>rd</sup> BNR and Clarifier	\$250,000
SCADA Improvements	\$40,000
South Chambers & Fairplay 24" Critical Valve	\$40,000
LTCWRF Redundant Centrifuge (\$150k Carry forward)	\$300,000
ACWWA Flow Renew and Replace	\$200,000
South Platte Storage	\$1,900,000

Reactive/Contingency	\$1,000,000
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<b>Carryover Project Cost</b>	<b>\$4,625 ,000</b>
<b>2022 New Project Cost</b>	<b>\$8,749,000</b>
<b>Total</b>	<b>\$13,374,000</b>



## 17. Schedule of Debt Service Requirements to Maturity

### ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

#### SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY

#### December 31, 2022

Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Total	
2022	\$ 1,150,000	\$ 24,840	\$ 465,000	\$ 540,350	\$ 705,000	\$ 448,050	\$ 1,835,000	\$ 2,898,200	\$ 4,155,000	\$ 3,911,440	\$ 8,066,440				
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				
<b>Total</b>	\$ 1,150,000	\$ 24,840	\$ 13,625,000	\$ 3,904,150	\$ 12,280,000	\$ 3,113,350	\$ 68,100,000	\$ 33,493,250	\$ 95,155,000	\$ 40,535,590	\$ 135,690,590				

## **GLOSSARY AND ACRONYMS**



## 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 projected 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, reports, 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
- CWS – 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



## **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 defendable 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 2016, which is the basis for 2022 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 2022.

### **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, 2017 by the Series 2017 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, 2018, 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, 2020 in the amount of \$71,485,000.

A summary of outstanding debt is as follows:

- Taxable Water and Wastewater Revenue Direct Pay Build America Bonds, Series 2020 Bonds, original amount \$71,485,000; amount outstanding January 1, 2022 - \$68,100,000.
- Water and Wastewater Revenue Bonds, Series 2013 Bonds, original amount \$5,525,000; amount outstanding January 1, 2021 - \$1,150,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2017 Bonds, original amount \$16,475,000; amount outstanding January 1, 2021 - \$13,625,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2018 Bonds, original amount \$12,720,000; amount outstanding January 1, 2021 - \$12,280,000.

#### **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 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.



## **Budget Resolution 2022-03**

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 2021, AND ENDING ON THE LAST DAY OF DECEMBER 2021.

WHEREAS, the proposed 2022 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 8, 2021 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: 2022 Budget Revenues. That the estimated revenues for each fund set out in the budget are accepted and approved.

Section 2: 2022 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, 2021, ending fund balance of the Operating Fund, the exact amount to be determined as part of the audit of the December 31, 2021 financial statements, is designated as a general reserve for future contingencies.

Section 4: Adoption of Budget for 2022. 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 2022.

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 8th day of December 2021.

Dale Litz  
President

ATTEST:

Ken Parke  
Secretary