



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

2019 Operating and Capital Improvement Budget

November 14, 2018

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

2019 Operating and Capital Improvement Budget

TABLE OF CONTENTS

BUDGET MESSAGE	1
1. Budget Message.....	2
1.1 Board of Directors' Priorities.....	2
INTRODUCTION	6
2. Summary of Operations.....	9
3. Description and History.....	10
3.1 Description.....	10
3.2 History.....	10
4. Organizational Structure.....	11
4.1 Authority Powers.....	11
4.2 Governing Board.....	11
4.3 ACWWA's Management Team and Staff.....	12
4.4 Organization Chart.....	13
4.5 Our Mission.....	14
4.6 Our Vision.....	14
4.7 Our Values.....	14
5. ACWWA's Service Area.....	15
5.1 Demographic and Economic Activity Information.....	15
5.2 Population.....	15
5.3 Income.....	16
5.4 Employment.....	16
5.5 Major Employers.....	19
5.6 Building Activity.....	20
5.7 Foreclosure Activity.....	20
5.8 Service Area Map.....	21
6. Water Supply.....	21
6.1 The ACWWA Flow Project.....	22
7. Accomplishments.....	23
8. Budget Process and Timeline.....	25
8.1 Budget Preparation.....	25
8.2 Budget Calendar.....	26
8.3 Annual Budget Statutory Requirements.....	26
8.4 Budget Amendments.....	26
8.5 Lapse of Appropriations.....	27
8.6 Budget Transfers.....	27
8.7 Filing of the Budget.....	27

8.8	Financial Structure.....	27
8.9	Budgetary Control.....	28
8.10	Contacting ACWWA’s Finance Department.....	28
EXECUTIVE SUMMARY.....		29
9.	Executive Summary.....	30
9.1	Significant Budgetary Items and Trends.....	30
9.2	Operating Budget.....	31
9.3	Non-operating Budget.....	35
9.4	Long-range Financial Plan.....	36
9.5	Sources and Uses of Funds (Budgeted).....	37
10.	2019 Capital Improvements Program.....	38
11.	Departmental Information.....	45
FINANCIAL SUMMARIES AND NOTES.....		50
12.	Board Summary Forecasted 2019 Combined Operations.....	51
13.	Board Summary Forecasted 2019 Budget Water Operations.....	52
14.	Board Summary Forecasted 2019 Sewer Operations.....	53
15.	Budget Notes.....	54
15.1	Revenue.....	54
15.2	Expenses.....	55
16.	Budgeted 2019 Capital Outlay.....	57
17.	Schedule of Debt Service Requirements to Maturity.....	58
GLOSSARY AND ACRONYMS.....		59
18.	Glossary of Terms and Acronyms.....	60
APPENDIX.....		64
FPP.1. Financial Policies and Procedures.....		65
Budget Resolution 2018-03.....		74

BUDGET MESSAGE



1. Budget Message

November 14, 2018

Board of Directors
Arapahoe County Water and Wastewater Authority

Your management team is pleased to present the Arapahoe County Water and Wastewater Authority (ACWWA) 2019 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 2019.

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 2019. As ACWWA's policy makers, you play a critical role in making decisions regarding ACWWA's future.

ACWWA's service area has reached approximately 78% of build-out, and still has a number of land parcels available for development. The service area experienced a substantial increase in development over the past three years; however, rising interest rates, tariffs on building materials, and general economic uncertainty may result in decreased development over the next several years. The budget for tap sales reflects this more conservative outlook.

The 2019 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 2019 budget furthers the Board's priorities as follows:

1. Improve Water Quality

- a. Together with Cottonwood Water and Sanitation District (CWSD), ACWWA is moving forward with the conversion of the Joint Water Purification Plant (JWPP) to a Reverse Osmosis/microfiltration blend from its current state of microfiltration processing.
- b. 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 2019 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 this water supply.
 - ii. The continued adjudication of water rights for municipal use. ACWWA has adjudicated approximately 48% of the ACWWA Flow Project water rights. The 2019 budget provides funding for additional adjudication.
 - iii. The purchase of 500 acre-feet of firming storage in the South Platte Basin.
 - iv. Phase 2C of the ACWWA Connecting Main pipeline development project will build the extension of the current 24" pipeline from Liverpool and Euclid to Smoky Hill and Liverpool, allowing ACWWA to receive its full 5.25 MGD from the ACWWA Flow Project.
 - v. Treatment and delivery of 1500 acre-feet of ACWWA Flow water.
- c. In 2019, ACWWA will fund year two of the three-year expansion of East Cherry Creek Valley Water and Sanitation District's (ECCV) of the Northern RO plant, which treats ACWWA Flow water.
- d. ACWWA will further refine its water quality model to better manage water supplies and improve water quality in 2019. There is funding in the 2019 budget for updates to both the water and wastewater master plans.

2. Improve Customer Service/Relations

- a. ACWWA will continue to focus on customer service in 2019 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 2018, staff developed programs designed to engage customers, and will continue these efforts in 2019. Additionally, staff attended several HOA meetings in the service area, and plans to attend these meetings on an on-going basis.
- b. Staff will continue to enhance ACWWA's website to ensure we are able to provide timely, useful, and accurate information to our ratepayers.

3. Development Review

- a. Over the past several years, staff has evaluated ACWWA's process for new development review, and has streamlined some functions. In 2019, 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 mode 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 2019, 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 is also in the process of selecting asset management software with predictive capabilities that will help staff track asset life to estimate when infrastructure and equipment will need to be replaced.
- c. Ensuring system reliability through the maintenance of ACWWA's infrastructure is essential to avoiding significant service interruptions. The 2019 budget includes several projects to facilitate reliability:
 - i. Cleaning and video inspection of approximately one-half of the wastewater collection system. This entails the jetting of approximately 300,000 feet of piping, followed by closed-circuit video inspection;
 - ii. Improvements to the Waterbury Lift Station to include replacing valves, grating, electrical and other components;
 - iii. Equipping the third clarifier at the Lonetree Creek Water Reuse Facility, which will allow staff to perform required maintenance on the existing clarifiers; and
 - iv. Deep cleaning and rehabilitation of ACWWA's alluvial wells.

The 2019 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:

- 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 in this sector which is creating a shortage of skilled workers;
- 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, rising interest rates, 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 2019, 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 2019 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 2018. The preparation of this document would not have been possible without the support and input from all departments.

Respectfully submitted,

Steve Witter, P.E.
General Manager

Kate McRae, CPA
Director of Finance and Business Operations

INTRODUCTION





GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**Arapahoe County Water & Wastewater Authority
Colorado**

For the Fiscal Year Beginning

January 1, 2018

Christopher P. Morill

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, 2018.

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	38
Number of Accounts	3,955
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)	113
Water Pipeline (in miles)	243
Number of Water Storage Tanks	3
Number of Fire Hydrants	1,540
Number of Valves	6,995
Number of Meters	5,035
Number of Water Supply Wells	26
Number of Booster Stations	3
Number of Lift Stations	3
Number of Manholes	2,971
Number of Interceptors	7
Number of Water Tap Equivalents	7,719

3. Description and History

3.1 Description

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

3.2 History

Effective January 1, 1989, the IGA granted ACWWA all responsibility for and control over AWS D's operating system, related operating assets, tap fees, contributions, revenues and expenses. The agreement provided for a lease of the District's property, plant and equipment. The lease was set to expire on either December 1, 2010, 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.
- **Kenneth Beard's** conflict form has been filed; he has no conflicts to report.

- **Tom Wood's** conflict form has been filed; he purchased some of ACWWA's 2017 bonds.

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. Kate McRae, CPA, MPA, is ACWWA's Director of Finance and Business Operations, Emily Lowell, PE, serves as ACWWA's Engineering Manager, and Martin Stegmiller is ACWWA's Operations Manager. This group comprises ACWWA's Management Team.

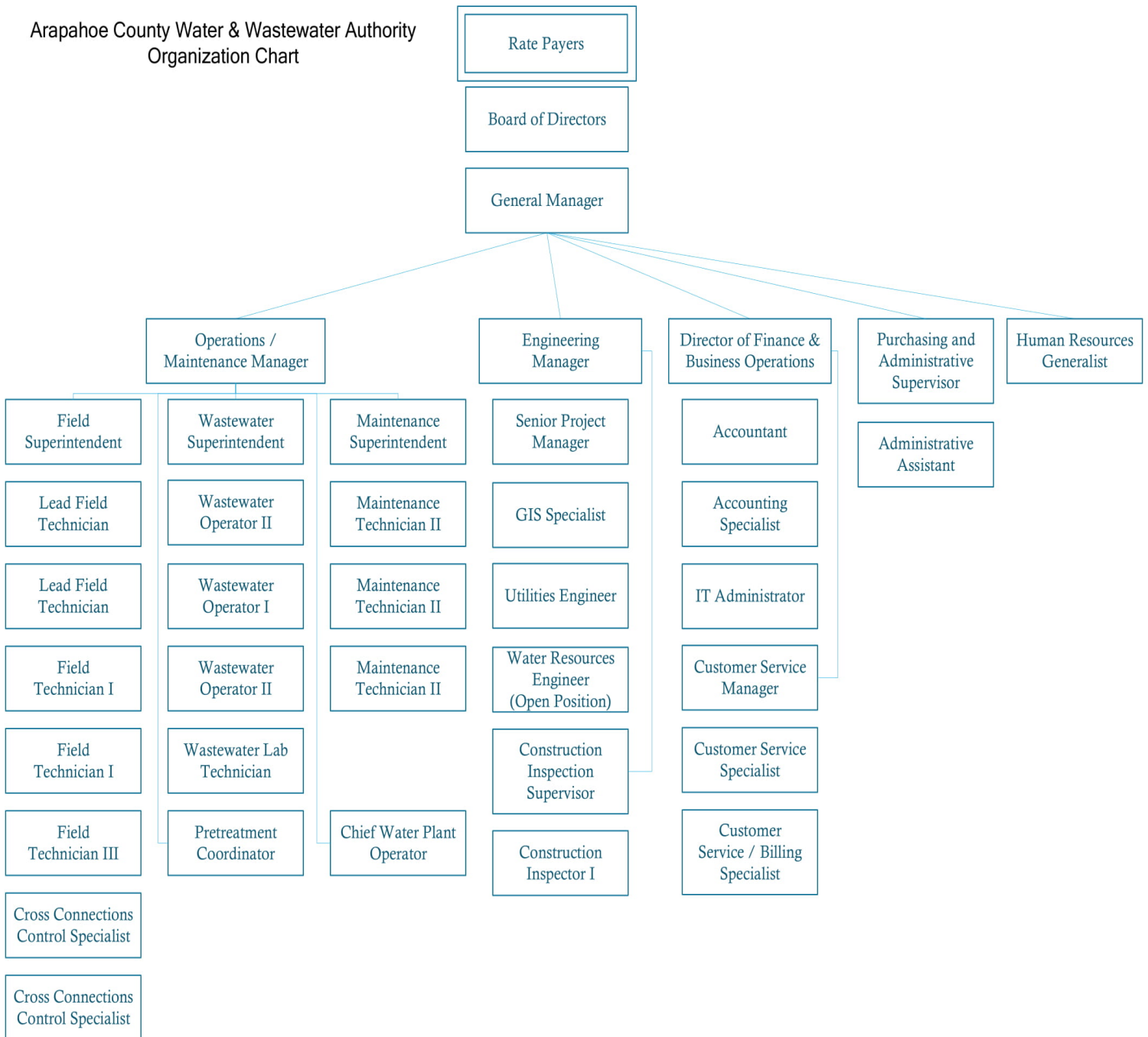
ACWWA currently has 38 budgeted positions, with no additional positions budgeted in 2019. As the JWPP reconverted plant will be initially operated by a contractor, three positions formerly staffing the JWPP will be reallocated to Field Operations, Maintenance and Administration.



Pictured above is the Clean in Place system at the Joint Water Purification Plant (JWPP); to the right is the Pall Microfiltration System currently in use to filter potable water.

4.4 Organization Chart

Arapahoe County Water & Wastewater Authority
Organization Chart



4.5 Our Mission

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

4.6 Our Vision

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

4.7 Our Values

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



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 2010 and 2016, 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- Aurora CBSA	Percent Change	Colorado	Percent Change
1970	162,142	--	1,116,226	--	2,207,259	--
1980	293,621	81.1%	1,450,768	30.0%	2,889,735	30.9%
1990	391,511	33.3	1,650,486	13.8	3,294,394	14.0
2000 ⁽¹⁾	487,967	24.6	2,196,957	33.1	4,301,261	30.6
2010	572,003	17.2	2,543,482	15.8	5,029,196	16.9
2011	585,507	--	2,601,177	--	5,119,538	--
2012	595,776	1.8%	2,647,527	1.8%	5,191,086	1.4%
2013	607,145	1.9	2,697,283	1.9	5,268,413	1.5
2014	617,936	1.8	2,750,964	2.0	5,350,118	1.6
2015	629,066	1.8	2,807,692	2.1	5,448,055	1.8
2016	637,254	1.3	2,852,335	1.6	5,538,180	1.7

(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 2010) and Colorado State Demography Office (2011 to 2016 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 Arapahoe County, the Denver-Aurora CBSA, the State and the nation.

Per Capita Personal Income

Year ⁽¹⁾	Arapahoe County	Denver-Aurora CBSA	Colorado	United States
2012	\$47,603	\$49,302	\$45,120	\$44,283
2013	48,850	51,596	46,869	44,489
2014	52,318	55,082	50,021	46,486
2015	54,158	57,081	51,956	48,429
2016	54,452	56,892	52,097	49,204
2017	n/a	n/a	53,504	50,392

(1) Denver-Aurora CBSA and County figures updated November 16, 2017. State and national figures updated March 22, 2018. All figures are subject to periodic revisions.

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

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 2016, the largest employment sector in Arapahoe County was health care and social assistance (comprising approximately 13.4% of the county's work force), followed, in order, by retail trade, professional and technical services, finance and insurance, and administrative and waste services. For the twelve-month period ended December 31, 2016, total average employment in the County increased 1.6% as compared to the same period ending December 31, 2015, and total average weekly wages increased 2.0%.

Average Number of Employees within Selected Industries – Arapahoe County

Industry	2013	2014	2015	2016	2017
Accommodation and Food Services	22,901	24,151	25,461	26,161	26,942
Administrative and Waste Services	26,993	27,591	28,314	26,640	27,411
Agriculture, Forestry, Fishing, Hunting	102	89	94	94	119
Arts, Entertainment and Recreation	5,038	5,320	5,347	5,470	6,106
Construction	16,112	17,986	19,107	20,244	21,769
Educational Services	21,839	22,230	22,760	22,930	22,632
Finance and Insurance	26,011	25,921	27,531	28,516	29,159
Government	13,193	13,108	13,194	13,051	13,079
Health Care and Social Assistance	36,414	38,291	41,116	43,035	42,754
Information	18,035	18,305	17,710	17,675	18,136
Management of Companies/Enterprises	8,221	8,092	8,130	7,280	8,661
Manufacturing	7,660	7,827	8,041	8,148	7,891
Mining	873	942	925	714	675
Non-classifiable	23	33	22	28	13
Other Services	8,258	8,541	8,610	8,959	9,316
Professional and Technical Services	27,801	29,153	30,364	31,529	31,878
Real Estate, Rental and Leasing	5,701	5,884	6,234	6,312	6,381
Retail Trade	32,189	33,121	34,414	34,614	34,774
Transportation and Warehousing	4,766	4,817	4,796	5,069	5,138
Utilities	239	241	249	260	256
Wholesale Trade	<u>13,636</u>	<u>13,922</u>	<u>14,180</u>	<u>14,836</u>	<u>15,032</u>
Total All Industries ⁽¹⁾	<u>296,004</u>	<u>305,562</u>	<u>316,597</u>	<u>321,566</u>	<u>328,120</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 shows the number of individuals employed within selected Denver-Aurora CBSA industries which are covered by unemployment insurance. In 2016, the largest employment sector in the Denver-Aurora CBSA was health care and social assistance (comprising approximately 12.4% of the metro area's work force), followed in order by retail trade, accommodation and food services, professional and technical services, and educational services. For the twelve-month period ending December 31, 2016, total average employment in the Denver-Aurora CBSA increased by approximately 2.7% as compared to the same twelve-month period ending December 31, 2015.

Average Number of Employees within Selected Industries – Denver-Aurora CBSA

Industry	2013	2014	2015	2016	2017
Accommodation and Food Services	120,092	125,851	131,834	137,017	140,312
Administrative and Waste Services	89,621	93,355	96,178	97,345	98,064
Agriculture, Forestry, Fishing, Hunting	2,047	2,449	2,548	2,844	3,446
Arts, Entertainment and Recreation	24,669	25,713	26,471	27,183	29,046
Construction	70,661	79,242	83,954	89,122	93,612
Educational Services	97,238	100,206	103,588	105,846	107,433
Finance and Insurance	69,639	70,087	73,181	75,472	77,384
Government	69,334	69,484	70,710	71,750	72,552
Health Care and Social Assistance	151,898	159,389	168,378	175,797	176,398
Information	44,959	45,494	46,446	47,513	48,004
Management of Companies/Enterprises	28,342	29,275	30,036	30,096	31,812
Manufacturing	64,146	65,556	68,431	69,390	69,266
Mining	10,586	11,770	11,270	9,119	9,201
Non-Classifiable	172	194	146	144	39
Other Services	39,015	40,976	42,261	43,934	45,566
Professional and Technical Services	115,827	120,525	125,944	130,440	134,382
Real Estate, Rental and Leasing	24,364	25,357	26,777	27,926	28,823
Retail Trade	128,770	132,152	136,082	138,161	138,396
Transportation and Warehousing	52,303	53,916	55,380	57,092	60,767
Utilities	5,613	5,766	5,768	5,769	5,737
Wholesale Trade	<u>65,233</u>	<u>67,695</u>	<u>69,961</u>	<u>71,162</u>	<u>72,372</u>
Total All Industries ⁽¹⁾	<u>1,277,012</u>	<u>1,326,751</u>	<u>1,377,873</u>	<u>1,415,505</u>	<u>1,444,879</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.

Labor Force and Employment

	<u>Arapahoe County⁽¹⁾</u>		<u>Denver-Aurora CBSA⁽¹⁾</u>		<u>Colorado⁽¹⁾</u>		<u>United States</u>
<u>Year</u>	<u>Labor Force</u>	<u>Percent Unemployed</u>	<u>Labor Force</u>	<u>Percent Unemployed</u>	<u>Labor Force</u>	<u>Percent Unemployed</u>	<u>Percent Unemployed</u>
2013	326,280	6.6%	1,463,915	6.6%	2,767,153	6.9%	7.4%
2014	330,982	4.9	1,486,178	4.8	2,799,491	5.0	6.2
2015	334,230	3.7	1,505,317	3.7	2,824,759	3.9	5.3
2016	340,486	3.1	1,541,280	3.1	2,893,268	3.3	4.9
2017	351,417	2.8	1,590,441	2.7	2,992,307	2.8	4.4
<u>Month of June</u>							
2017	353,548	2.9%	1,600,027	2.8%	3,004,021	2.9%	4.4%
2018	366,248	2.9	1,657,807	2.9	3,115,806	3.0	4.0

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

Sources: 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

<u>Name of Employer</u>	<u>Product or Service</u>	<u>Number of Local Employees⁽¹⁾</u>
Comcast	Telecommunications	5,110
HealthONE ⁽²⁾	Healthcare	3,920
CenturyLink	Telecommunications	3,260
Great-West Financial	Insurance/Retirement Savings Services	2,620
Raytheon Company	Aerospace Systems and Software	2,500
Kaiser Permanente	Healthcare	2,210
Arrow Electronics	Electronic Component Wholesaler	1,970
United Healthcare	Insurance	1,670
Centura Health ⁽³⁾	Healthcare	1,570
The Boeing Company	Aerospace and Defense Systems	1,400

(1) Figures as of May 2018.

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

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

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

5.6 Building Activity

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

Building Permits Issued in Unincorporated Arapahoe County

Year	Single Family		Multi-Family ⁽¹⁾		Commercial/Industrial ⁽²⁾	
	Permits	Value	Permits	Value	Permits	Value
2013	249	\$47,085,131	247	\$32,955,609	210	\$35,518,235
2014	265	53,359,420	15	3,498,000	215	71,029,000
2015	346	67,039,979	611	41,700,000	190	66,935,543
2016	265	57,248,257	8	1,615,896	257	67,776,367
2017	255	56,173,719	116	5,345,000	423	79,272,437
2018 ⁽³⁾	182	54,355,793	22	5,250,000	98	102,844,129

(1) Includes apartments, condominiums and townhomes.

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

(3) Figures are for January 1 through March 31, 2018.

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.

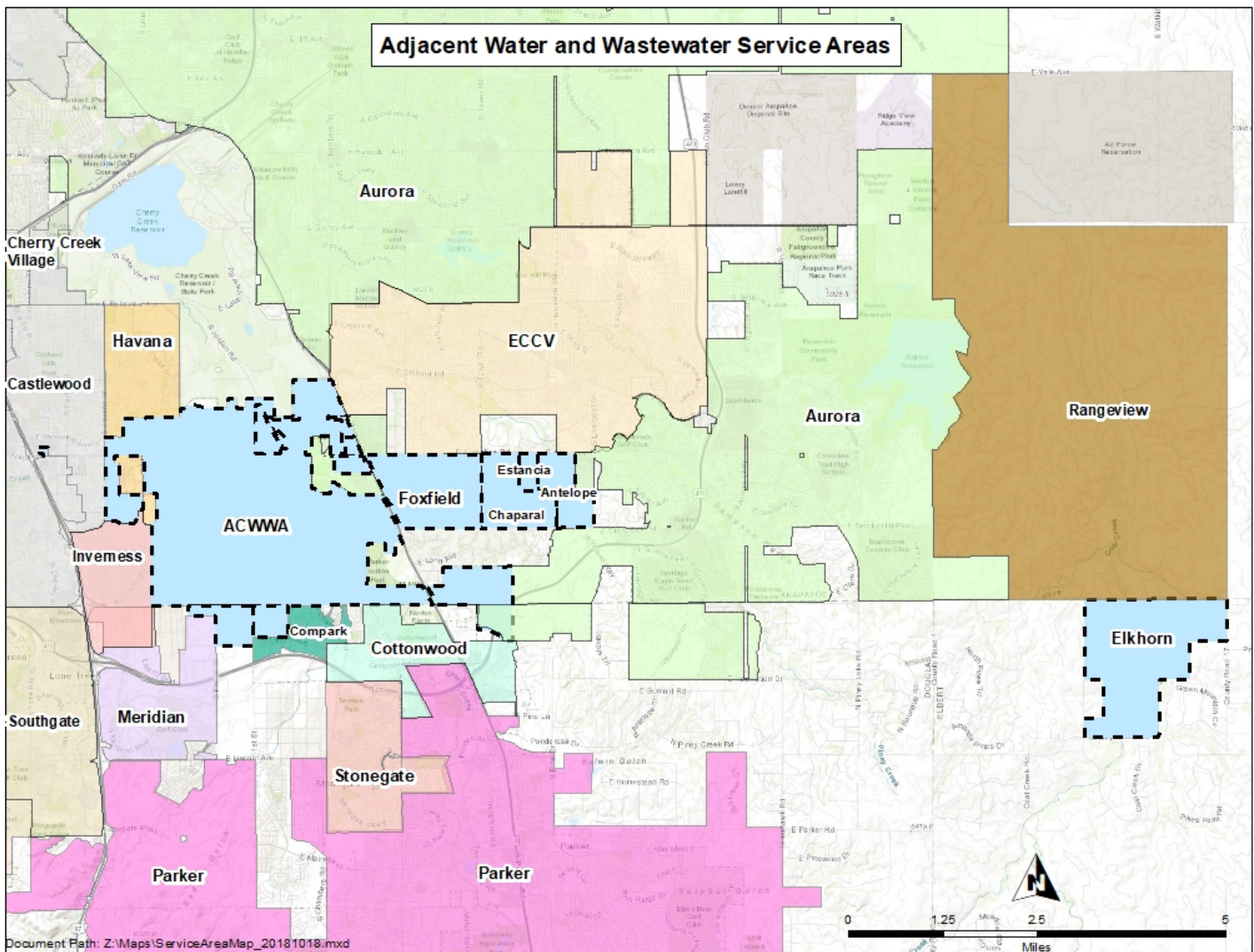
History of Foreclosures – Arapahoe County

Year	Number of Foreclosures Filed	Percent Change
2013	1,700	--
2014	1,314	(22.7)%
2015	858	(34.7)
2016	731	(14.8)
2017	706	(3.4)
2018 ⁽¹⁾	393	--

(1) Figures are for January 1 through July 31, 2018.

Sources: Colorado Division of Housing (2013-2017 figures) and the Arapahoe County Office of the Public Trustee (2018 figure).

Service Area Map



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 2009, 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; however, some issues need to be resolved before filling and placing in service as part of the non-potable system.

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 2009, 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 2009 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 2009, and that process continues with nearly 50% of the water rights adjudicated, and many more in process. In addition to the water rights, ACWWA has also successfully adjudicated an augmentation plan. The ACWWA Flow Project is currently delivering about 1,500 acre-feet of water annually, or about one-third of ACWWA's current potable water demand, and is providing a more diversified water supply as well as improved water quality to ACWWA customers. ACWWA began delivering ACWWA Flow water to its service area in 2013.

In 2019, ACWWA will continue to develop this project, and has budgeted to acquire capacity in a storage reservoir in the South Platte Basin to increase the effective yield of the water from the Project. ACWWA has also invested in a deep injection well constructed at the East Cherry Creek Valley Water and Sanitation District (ECCV) Water Treatment Plant, and is a participant 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

2018 was a productive year for ACWWA. Key accomplishments include:

Water Quality Improvements:

- Conducted enhanced main cleaning of a total of 22,000 feet of 10”, 12” and 16” pipe. This added to the pipeline cleaned in 2016 and 2017, for a three-year total of over 158,000 feet of pipe cleaned, or more than 30 miles of ACWWA’s 160 miles of distribution system piping. The 2018 cleaning continues to help ACWWA with its water quality by removing sediment in the pipes that had accumulated over time; and
- Passed two sanitary surveys conducted by the Colorado Department of Public Health and Environment – one survey for the Elkhorn Ranch subdivision water system, and one survey for the Lonetree Creek Water Reuse Facility. The purpose of a sanitary survey is to ensure that a utility’s facilities are in proper working condition. Inspectors review records related to equipment, operations, staffing, maintenance, and monitoring compliance. No deficiencies were found during the surveys, and ACWWA received positive comments from the inspectors.

Managing Internal Expenses/Financial Planning

- Reduced ACWWA expenses related to retirement contributions from 2017 to 2018 by 2.4%, in addition to a 4% reduction in ACWWA expenses from 2015 to 2017;

Cash Management

- Through active cash forecasting and daily monitoring of cash balances, increased ACWWA’s investment income from \$42,800 in 2016 to an estimated \$680,000 in 2018.

Improving Customer Service/Relations

- Instituted a program for public tours of ACWWA systems, conducting several tours of ACWWA’s Lone Tree Creek Water Reuse Facility; and
- Attended and presented at several Homeowners Association Meetings in 2018.

Safety

- There were no lost time accidents in 2018.

Employee Certifications

- ACWWA employees achieved 14 new and renewing certifications in 2018.

Vulnerability Assessment

- Staff worked with the Arapahoe County Sheriff's office during 2016 and 2017 to assess the vulnerability of ACWWA facilities and services. During 2018, staff continued to assess infrastructure to ensure ACWWA's water supply is protected, and established processes to handle critical issues. Staff conducted table-top exercises and developed standard operating procedures for various types of incidents to ensure that ACWWA will be able to handle such incidents should they occur, and keep customers informed.

Projects

- ACWWA successfully adjudicated and decreed its New Cache la Poudre shares, adding 690 acre-feet to its decreed water rights. ACWWA has now adjudicated approximately 48% of the ACWWA Flow water;
- Started a project at the Joint Water Purification Plant (JWPP) that will improve the treatment level at the plant by using Reverse Osmosis technology in conjunction with microfiltration. Several alternative treatment processes underwent extensive evaluation before final project selection. This project is intended to be operational in mid-2019;
- Initiated a sewer cleaning and surveying project. This cleaning technique uses high-pressure water jetting to remove buildup from the pipeline walls. In 2018, 40 miles of pipe was jetted, with additional cleaning planned for 2019;
- Completed a new water line along Liverpool Road that will deliver water supply from the ACWWA Flow Project;
- Completed the installation and drilling of, and placed in service a new Denver Basin groundwater well in the Elkhorn Ranch Subdivision;
- Substantially updated ACWWA's GIS system and hired a GIS Analyst who has been able to update many of our systems;
- Developed sale agreements for Elkhorn groundwater assets;
- Finalized an IGA with Arapahoe County regarding the operation and maintenance of the Justice Center pre-treatment facility; and
- Continued to negotiate with outside the service area developers for potential service contracts.

• Development

- ACWWA staff reviewed and approved a number of residential and non-residential developments in 2018. These projects resulted in over 266

TEs sold through October and included three large residential developments.

- Modified the development process to reduce costs to the developer as well as for ACWWA. These changes include removing the Letter of Credit/Financial Guarantee requirement, modifying the length of time that a tap application is valid, and adjusting the initial deposit amount for imprest accounts.



Above are the tertiary effluent pumps at the Lone Tree Creek Water Reuse Facility (LTCWRF).

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>
March 2018	Long-term strategic priorities are approved by the Board.
August 2018	Director of Finance meets with Executive Team and department heads to determine staffing levels, expense budgets, and capital outlay needed for 2019; begin developing budget.
September 2018	Staff continues to develop the budget.
October 2018	Staff presents draft 2019 budget to the Finance Committee on October 3 and to the full Board on October 10.
November 2018	Staff presents 2 nd draft of 2019 budget to Board and holds rate hearing.
December 2018	On or before December 31, the Board adopts the budget.
January 2019	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



9. Executive Summary

ACWWA's 2019 budget 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.

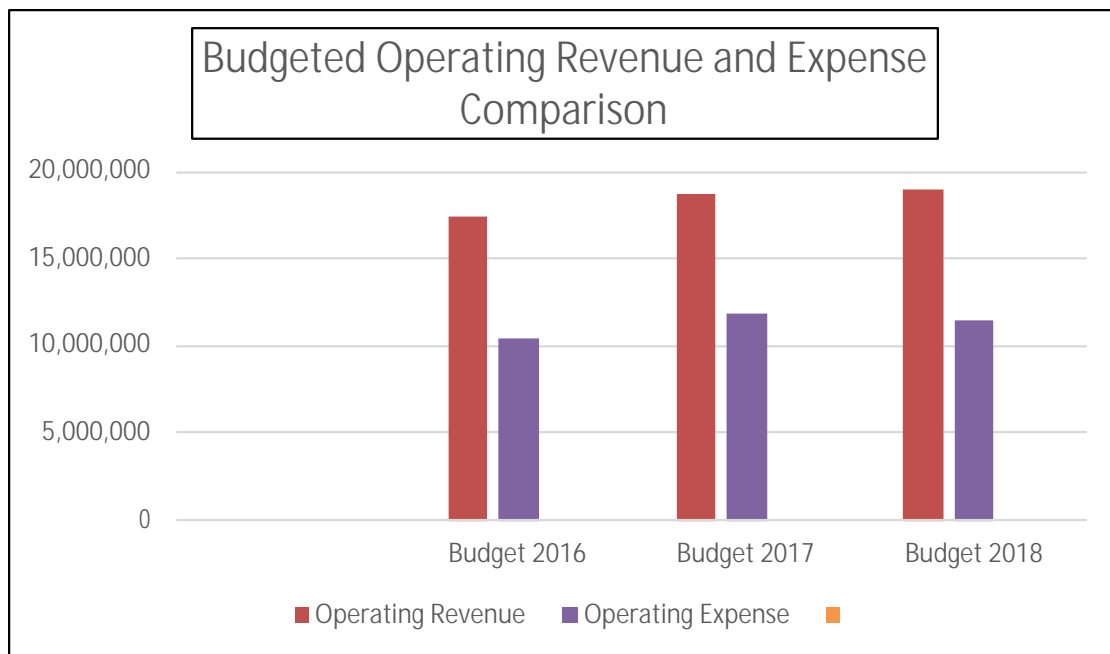
ACWWA has one enterprise fund and distinguishes operating revenues and expenditures from non-operating items. Operating revenues and expenditures generally result from providing services and delivering water in connection with the ongoing operations. The principal operating revenues of the Authority 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 2019 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 2015 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 2017. As the infrastructure ages, continued investment in the system will be needed to keep it functioning at a high level. Key components of the 2019 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 2.8%;
- Operating revenue of \$19.4 million;
- Operating expenses of \$11.9 million;
- Non-operating revenue of \$8.4 million, primarily from tap fees;
- Non-operating expenditures of \$32.2 million comprised mainly of debt service payments of \$10.1 million and capital spending of \$22.1 million, including \$3.7 million in capital costs that are being carried over to 2019 from prior year budgets;
- 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.

9.2 Operating Budget



Operating Budget 2017 - 2019

Operating Revenue

Operating revenue is projected to be \$19.4 million in 2019, which reflects a decrease of \$406 thousand from estimated 2018 revenue. From January through June of 2018, the Arapahoe County area received only 5.89" of precipitation, compared to 7.66" during the same period in 2017 and 8.30" in 2016, which were also very dry years. Additionally, the average daily temperature for the first six months of 2018 was 2.5 degrees Fahrenheit higher than 2016. The heat and lack of moisture in 2018 contributed to irrigation revenue that is projected to be \$565 thousand or 26.0% above budgeted revenue. Thus, assuming that 2019 will have average precipitation, a 3% increase in water rates and fees and a 2% increase in sewer charges, with an expected 2% growth in accounts may be offset by decreases in consumption compared to 2018. At this time, snowpack in Colorado is expected to be higher than normal this winter due to a strong El Nino current, and this effect could carry into spring of 2019, reducing demand for irrigation. For volume-related revenue projections (water charges, irrigation charges, and wastewater charges), 2015 actual results were escalated for account growth and rate increase rather than using 2016 through 2018 revenue as the basis for the budget, as 2015 was an average precipitation year.

Water Charges

Water charges revenue for 2019 is forecasted to increase \$116 thousand or 1.3% from 2018 estimated revenue. Volume revenue will increase by a 3% rate factor and a 2% account growth factor.

Sewer Charges

Based on 2015 results escalated for account growth and rate increases, wastewater revenue is expected to increase \$178 thousand, or 3.1%. Forecast revenue includes a 2% volume increase, and a 2% account growth factor.

Fire Lines

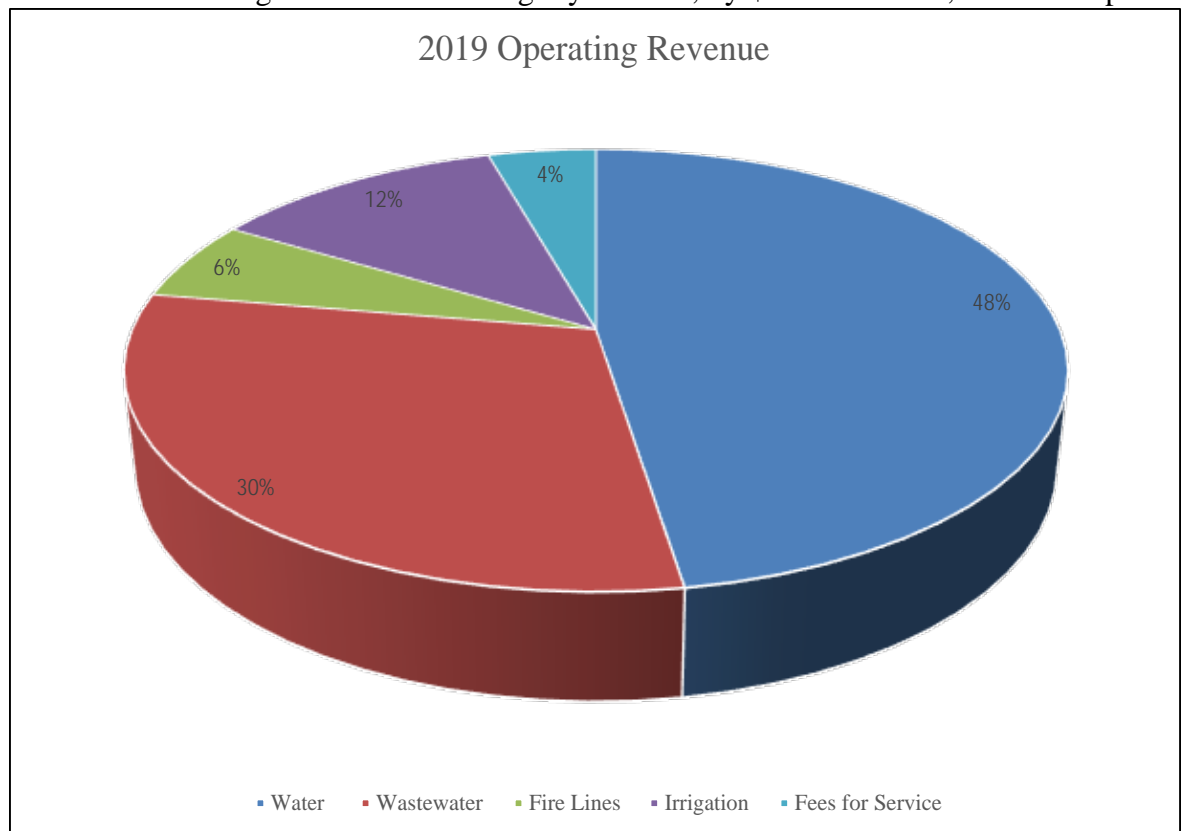
Fire line stand-by revenue is anticipated to increase by an account growth factor of 2% in 2019, with no increase to rates.

Irrigation Revenue

As noted above, 2018's irrigation season was abnormally dry, resulting in revenue that is estimated to be \$565 thousand, or 26.0% above budget for the year. The budget for 2019 is based on an average-precipitation year (2015), and reflects a decrease of \$455 thousand, or 16.6% from 2018 projected irrigation revenue.

Fees for Service

Fees for service are budgeted to decrease slightly in 2019, by \$67.8 thousand, as lower tap sales



will result in lower meter and inspection fees.

Operating Expenses

The 2019 operating expense budget reflects a 4.3% overall increase from 2018 budgeted operating expenses. Expenditures of \$11.9 million are budgeted to be \$1.1 million higher than estimated 2018 expenses of \$10.8 million. One of the main factors driving the increase is the anticipated cost of operating the JWPP as an RO plant for much of 2019. 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.

Office Expenses

The budget for 2019 office expenses reflects a 3.1% estimated increase in year-over-year budgeted costs, and includes funding for GIS, asset management, compliance and document management software.

Salaries and Benefits

The 2019 salaries and benefits budget reflect an increase of 4.1% from the 2018 budget and includes 38 FTEs for the entire year. Compared to 2018 estimated costs of \$3.8 million, salaries and benefits expense in 2019 will be \$305 thousand higher due to full staffing and increases in line items including a 4.0% overall salary adjustment and a 6.0% increase in medical benefit premiums. The net change in salaries expense between 2019 and 2018 is 1.1%, as several positions that were vacated in 2018 were recategorized to more accurately reflect the skill sets and experience required for those positions.

Insurance

General liability, property, and workers' compensation insurance premiums are expected to increase an average of 5% from 2018 levels in 2019. ACWWA should see a decrease in its workers' compensation premiums, as the experience rating will decline in 2019 due to consecutive years with no time lost to accidents.

Legal Fees

Legal fees are projected to decrease 5.1% compared to 2018 estimated costs. ACWWA anticipates a decrease in 2019 litigation expense as pending matters have been or will shortly be resolved. The 2019 budget of \$295 thousand is \$60 thousand, or 16.9%, less than the 2018 legal fee budget.

Professional Fees

The 2019 budget for professional fees of \$847 thousand is \$140 thousand, or 19.8% higher than the 2018 budget. Compared to 2018 estimated fees, 2019 expenses reflect an increase of \$101 thousand. The professional fees budget includes general engineering, development, and other consultant support, water rights protection and accounting, audit fees, information technology maintenance and support, new software program implementation, and specific projects such as ARC Flash and VFD reliability studies, and groundwater monitoring at Chambers Reservoir.

Repairs and Maintenance

The repairs and maintenance budget of \$1.2 million reflects a decrease of \$74 thousand over 2018 estimated expenses and includes \$200 thousand for additional sewer line cleaning and inspection, as well as normal repair and maintenance activities and line break repairs. The 2019 budget is \$292 thousand less than the 2018 budget, partly due to no scheduled enhanced water main cleaning (ice pigging) for 2019.

Operational Expenses

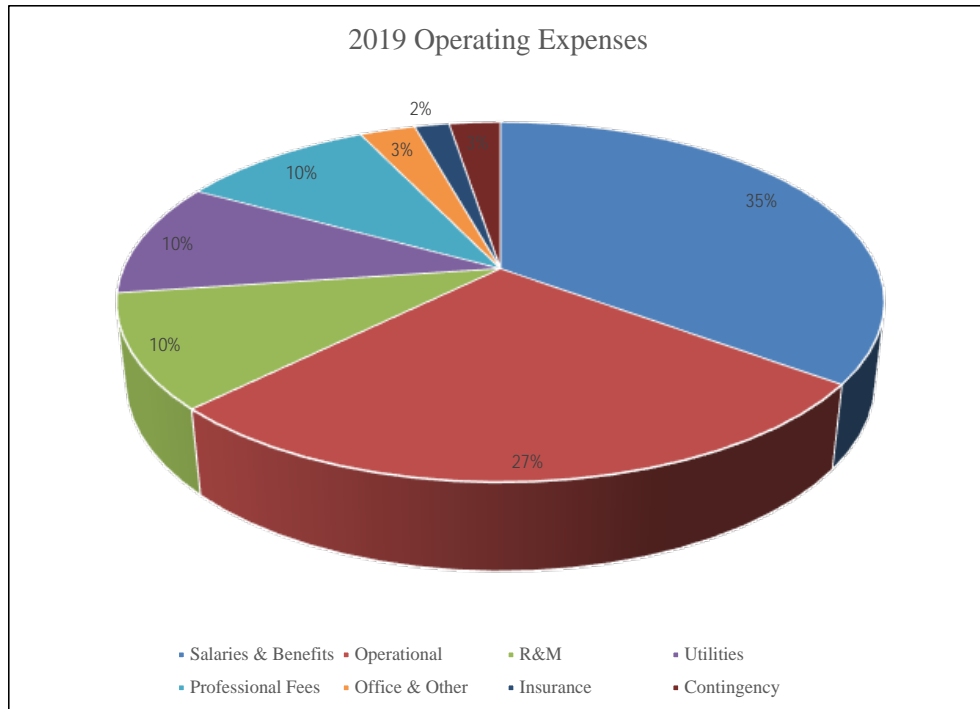
Operational expenses are projected to increase \$732 thousand from forecasted 2018 expenses, and \$784 thousand from 2018 budgeted expenses. This increase is due to the \$1.2 million contract with Jacobs Engineering to operate the reconfigured JWPP. The agreement includes a performance guarantee, and 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.

Other Supplies and Expense

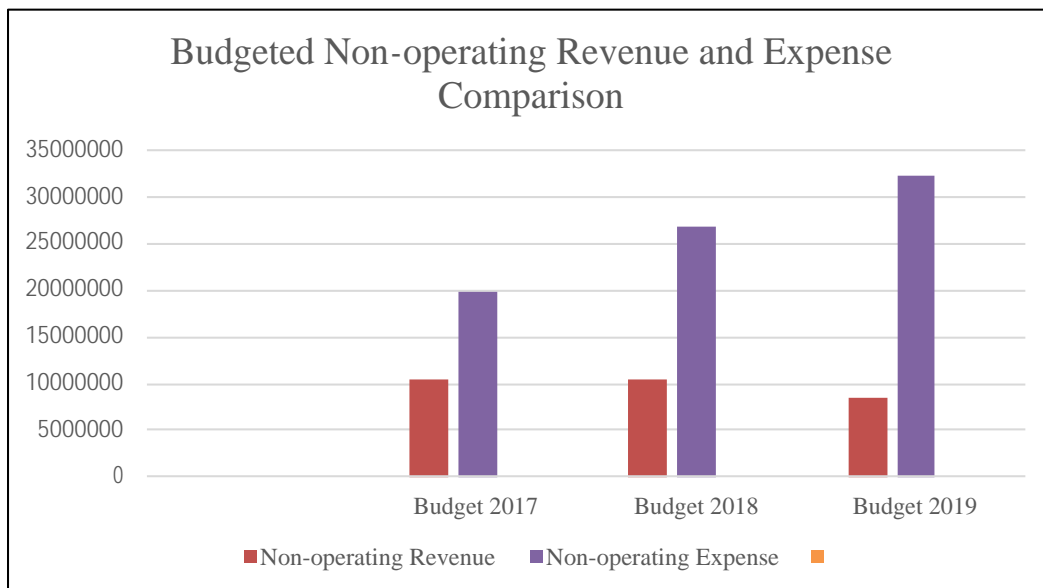
There are no increases budgeted in this category.

Contingency

A contingency budget of \$300 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 the water and wastewater systems infrastructure age, line breaks and other issues will become more common, even with a robust preventive maintenance program such as ACWWA's. The contingency line also includes provisions for unexpected legal costs and professional services projects directed by the Board.



9.3 Non-operating Budget



Non-operating Revenue:

Non-operating revenue, comprised primarily of tap and water resource fees, is budgeted to decrease \$6.1 million, or 42.1% from estimated 2018 revenue. The 2019 budget reflects a 27.8% decrease from the 2018 budget, as development in ACWWA's service area is expected to taper off.

Interest Income

In 2017, 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 change in investment vehicles, combined with rising interest rates, caused 2018 estimated investment income to exceed budget by \$385 thousand. In 2019 ACWWA expects to draw down its reserves to pay for necessary capital improvements and is budgeting for a decrease of \$205 thousand over 2018 forecast revenue.

Miscellaneous Revenue

The Build America Bonds (BABS) interest subsidy is the main component of miscellaneous revenue and is calculated as a percentage of interest expense. The interest expense on the 2009 bonds is lower in 2019, resulting in a slightly smaller subsidy.

Tap Fees and Contributions

Both water and wastewater tap sales are anticipated to decrease in 2019 from the high levels experienced in 2017 and 2018. Rising interest rates combined with increases in the costs of building materials are expected to slow growth in both residential and commercial development. Additionally, the new caps on deductions for mortgage interest and state and local property taxes may also have a negative impact on residential home building. 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 157.7 tap equivalents (TEs) in 2019, compared to projected sales of 312 in 2018. This includes 21.1 TEs for Cottonwood Water and Sanitation District. As of late 2018, there are 512 potential taps under review that are expected to be sold between the 2018 and 2020.

Non-operating Expenses

Non-operating expenses are budgeted to increase approximately \$9.9 million, or 44.4%, over 2018 estimated expenditures because of \$22.1 million in capital spending, including \$3.7 million carried forward from 2018. The 2019 budgeted amount is \$5.5 million higher than the 2018 budget, with all of the increase attributed to capital spending.

Debt Service

Debt service is expected to decrease \$32 thousand, or 0.3% in 2019 with lower interest expense on the outstanding bonds.

Capital Outlay

Of the \$22.1 million capital budgeted for 2019, \$3.7 million is carried over from the 2018 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. The 2019 budget for new capital

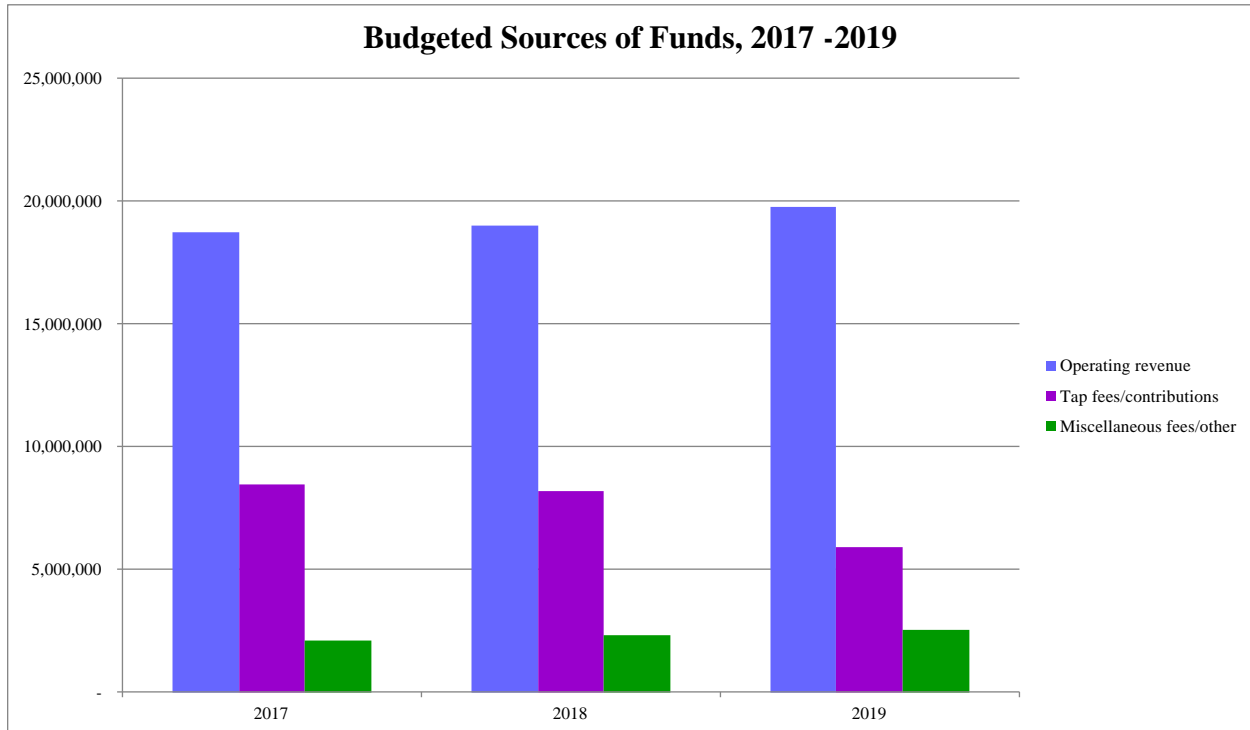
projects is \$18.0 million, and includes \$7.5 million for ACWWA's share of the ECCV Northern Water Treatment Plant expansion, \$3.6 million reconversion of the JWPP, \$1.7 million for the ACWWA Flow connecting pipeline along Liverpool Road, \$1.4 million to equip the third clarifier at the LTCWRF, \$1.2 million for water rights adjudication, and \$600 thousand for a new well in the Elkhorn Ranch subdivision. A detailed list of 2019 capital projects can be found in §10.

9.4 Long-range Financial Plan

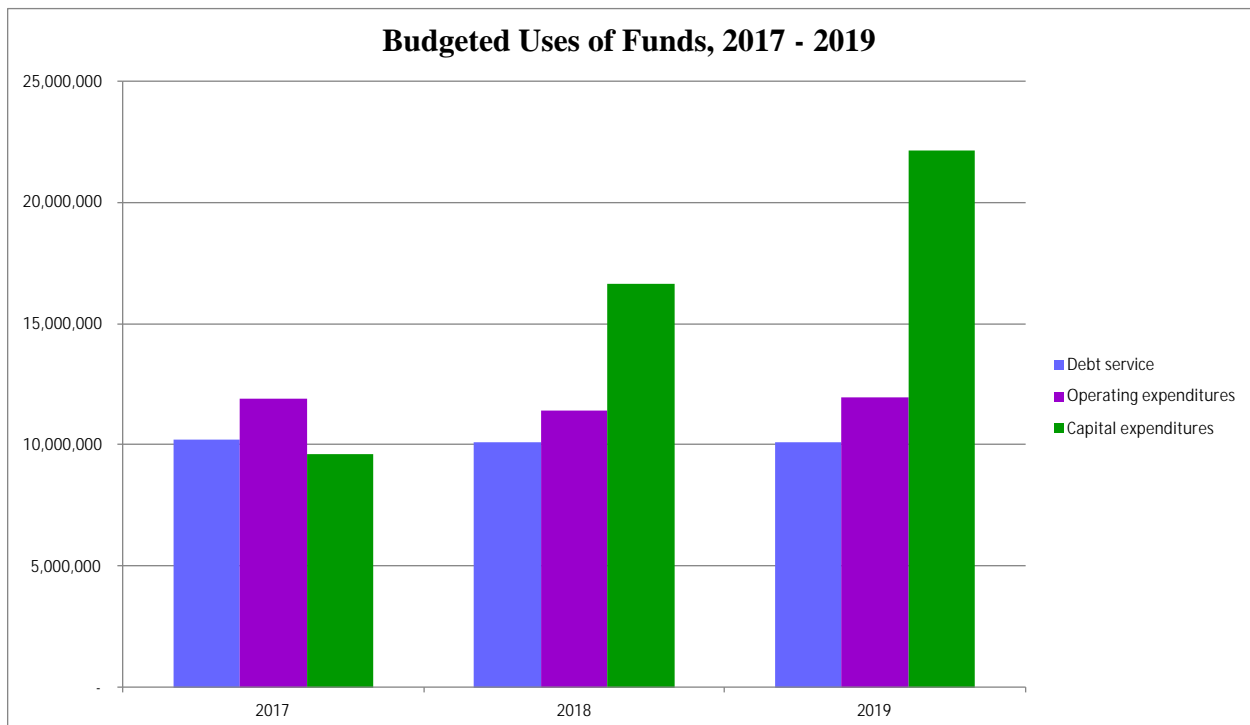
In late 2015, ACWWA engaged Carollo Engineers to conduct a cost of service study that was finalized in the first quarter of 2016. Carollo also developed a financial plan for ACWWA based on the 20-year capital plan. ACWWA retained Carollo to update the financial plan in 2017, as a number of assumptions had changed (e.g., higher tap sales and less precipitation than originally planned for).

Based on financial trends through mid-2015, 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 2017 – 2019



Budgeted Uses of Funds 2017 -2019

10. 2019 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 2019 capital improvement budget are listed in this section.

Projects have been ranked by priority as follows:

Joint Water Purification Plant (JWPP) – RO Renovation Project:

This is a joint project with Cottonwood Water and Sanitation District (CWSD) and ACWWA. The two districts are converting the JWPP water treatment plant to a blended treatment of reverse osmosis and microfiltration. A Biological Treatment System (BTS) has been selected for brine treatment. Included in the 2019 budget is \$3,800,000 (\$200,000 from 2018) for final design and construction. Conversion of the plant to RO is expected to increase operating expenses, as it costs more to run the RO process. The RO-treated water is expected to start at 0.75 million gallons/day (MGD) in May 2019 and be up to full production of 3.0 MGD later in the year. The production of the plant is split between ACWWA (2/3) and CWSD (1/3). The split of design and construction costs between the two entities is not directly proportional to the split of water production due to various factors determined in the agreement negotiation process.

ACWWA Flow Adjudication Costs:

This includes the anticipated 2019 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. The following cases will require effort in 2019:

- Strohauer Recharge Site Augmentation Plan and Exchange
- 70 Ranch Reservoir / Haren Pipeline
- Western Mutual Change Case
- Fort Morgan Change Case
- Exchange Matrix Case

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 2019 is \$1,200,000. The current stage of adjudication has minimal impact on operating expenses.

ECCV Northern Project Phase 2 Expansion - 2019 Design and Construction:

The Northern Water Treatment Plant (NWTP) Expansion Phase 2 Project consists of multiple components. The expansion will provide ACWWA with an additional water flow of 3.0 MGD of treated water for distribution to the ACWWA service area. This expansion will bring the total flow to 5.25 MGD. The treatment of the water will be provided at the NWTP facility expansion to provide ACWWA with the 5.25 MGD treated water. The transmission of the water is to be accomplished with the expansion of the north and south booster pump stations design and construction projects.

Booster Pump Stations: This project is to fund ACWWA's portion of the expansion for the existing North and South Booster Pump Stations (BPS) and all ancillary facilities. The existing BPS have a 10 MGD flow capability. The project will provide for expansion of the pumping capacity to 20 MGD from the Northern Water Treatment Plant in Brighton and deliver water to the ECCV storage tank near Smoky Hill Road and E470. Project design and construction began in 2018 and is scheduled for completion in 2019.

Northern Water Treatment Plant: This project is to fund ACWWA's portion of the expansion of the Northern Water Treatment Plant from the existing 10 MGD capacity to 20 MGD treatment capacity. ACWWA's portion of the new 10 MGD is 3.0 MGD, and the costs are proportionally shared for the treatment plant and its amenities. Upon completion of this portion of the project, ACWWA will have the full 5.25 MGD treatment and conveyance capability. Project design started in 2018, and will continue in 2019, with construction slated for 2019 and 2020.

NWTP – Brine Minimization: This project is to fund ACWWA's portion of the new RO brine concentrate minimization portion of the NWTP project. These costs will be for the design of the brine treatment and injection portion of the ECCV Northern Water Treatment Plant.

The estimated costs for design and initial construction in 2019 are \$7,525,000. At this time, there is no impact to operating costs; however, once the Northern Plant expansion is complete and ACWWA is receiving its full complement of 5.25 MGD, water treatment costs will increase.

Elkhorn Ranch Arapahoe Well #2:

The Elkhorn Ranch subdivision has experienced significant growth in the last several years and the new Elkhorn Denver well has not produced as much volume as was anticipated, requiring construction of an additional deep groundwater well. The construction of the new well will increase water supply availability in the Elkhorn Ranch community and lessen the stress on the two other deep groundwater wells in the area.

The estimated construction cost of the new well in 2019 is \$600,000. There will be a small increase in operating costs for the additional chemicals required at the new well site and the power costs to operate the well.

Integrated Master Plan - Water and Wastewater Master Plans:

ACWWA began updating the water supply master plan in 2017. Periodic updates to the existing master plan are required due to changes in the various water supplies and treatment systems in ACWWA's supply and distribution system. The planning effort for the water delivery and treatment system for the potable water supply, the non-potable/irrigation system, and the Regulation 84 (wastewater treatment plant effluent) will be the focus of the water master plan. The second portion of the master plan effort is the wastewater system, to include the collection system, the pumping and transfer system, and the wastewater treatment plant system and expansion.

The estimated cost for the Water and Wastewater Master Plan in 2019 is \$300,000, and it will not impact operating expenses.

Water Development Project – Cherry Creek Project Water Authority (CCPWA):

ACWWA will require additional water supplies to meet future demand, and this project is one that could help develop those needed water supplies. As part of the CCPWA establishing agreement, ACWWA has certain obligations to fund operational and capital costs. ACWWA has budgeted \$100,000 in 2019 for the capital amount needed to support the development of ACWWA's assets in CCPWA. The value of ACWWA's assets in the CCPWA are valued is approximately \$7 million. This project does not impact operating expenses, although there is an operating component to ACWWA's annual contributions.

ACWWA Water Meter 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. ACWWA has budgeted \$60,000 for this, the third year of a multi-year effort to remove and replace the existing 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.

Chambers Reservoir– Reservoir Repair and Relining Project:

ACWWA's Chambers Reservoir requires the design and construction of a repair and lining/underdrain system to improve the holding capacity of the existing reservoir. Designs are currently being evaluated to develop an improved reservoir for ACWWA's long term needs. ACWWA's estimated portion of the reservoir improvements for 2019 is being considered at a cost of \$1,000,000. This project will not impact current operating expenses but will allow ACWWA to use more of its non-potable water supply and conserve potable water supply.

Chambers Reservoir Pump Station:

ACWWA has budgeted \$50,000 to evaluate the start-up of the Chambers Reservoir delivery system and determine if the delivery capabilities for the current non-potable

water distribution are appropriate for the start-up conditions, including pre-design for the jockey pump and controls. The pump station will be evaluated to determine whether it should be modified to utilize a smaller pump for initial pumping and the shoulder season delivery of water from Chambers Reservoir. This project is budgeted at \$50,000 and has no current impact to operating costs.

ACWWA Evaluation of Conversion to Chloramine System for the Potable Water System:

ACWWA has budgeted \$100,000 (with \$75,000 coming from 2018 carryforward) to evaluate the potential conversion to a chloramine-based residual disinfection system for the water distribution system. The potential change to the disinfection process needs to be considered, as ECCV may convert to a chloramine-based system within the next five years. There are considerations for the conversion to a chloramine based residual system, versus the option of maintaining a free chlorine-based system. There is no current impact to operating costs.

ACWWA 1M Gallon Water Storage Tank – Mixing System Installation:

During the repair of the 1 MGAL tank in 2016, the water characteristics were evaluated for chlorine residual as the tank was drained. The results indicated a stratification of the water within the tank, indicating a lack of thorough mixing of the contents. This stratification could cause a delivery of low chlorine residual water to the distribution system, potentially resulting in low residual in the distribution system. A continuous mixing system is being evaluated to determine whether this will prevent stratification and reduce the water age of the delivered water.

The installation of an in-tank mixing system is budgeted at \$40,000. The project is not expected to have an impact on operating expenses.

Family Sports Conversion to Regulation 84 Water:

Family Sports Center is one of the largest potable water users in the ACWWA service area and the water is primarily used to water the facility's golf course. This project is to convert the irrigation system from potable water to reclaimed water. There is an existing preliminary design for the system to convert to reclaimed water; however, the design needs to be finalized and constructed.

The construction cost for converting the irrigation system to reclaimed water is estimated at \$265,000. This project is not expected to impact operating expenses.

JWPP Capital Improvements

There are various costs for the JWPP including the Annual Base Fee for the plant \$103,000 per month (which includes an annual cost of \$48k for Capital Improvement Plan items). Additionally, a new jockey pump needs to be purchased for the discharge at the JWPP for lower flows.

The estimated costs for these is \$208,000. The new smaller pump should result in an immaterial savings in pumping costs.

Generator Natural Gas Conversion

ACWWA is planning to convert its generators from diesel to natural gas. For 2019, \$100,000 has been budgeted to begin this conversion. Natural gas burns cleaner and there are no carbon deposits in the engine or spark plugs, which thus provides a longer engine life. Natural gas is the most dependable fuel and in an emergency situation will provide the best backup power.

SCADA Upgrades for Field

ACWWA is planning to continue improvements to various SCADA systems throughout the distribution system. Some upgrades were made in 2018 and \$100,000 is budgeted in 2019 to continue this effort.

Water System Upgrades

The water distribution system requires upgrades to various components that degrade and/or fail throughout the year. There is \$100,000 budgeted for 2019

Well Rehab and Cleaning

ACWWA has numerous deep groundwater wells as well as alluvial wells which are consistently run throughout the year. Performing deep cleaning over the years on the wells improves their performance and longevity. For 2019, ACWAA has budgeted \$300,000 for well rehab and cleaning.

Wastewater Infiltration Abatement

Over time with the wastewater collection system, root intrusion, pipe offsets, and other problems allow groundwater to seep into the collection pipes and increase the base flow at the wastewater treatment plant, ultimately increasing the cost for treatment. ACWWA has budgeted \$100,000 in 2019 for wastewater infiltration abatement for items such as slip-lining pipes and manholes for targeted areas with high infiltration.

Lift Station - \$10,000 – Wastewater projects

ACWWA has budgeted \$10,000 for work that may be needed at one of the multiple lift stations through the collection system.

Waterbury Lift Station - \$200,000

A full system evaluation was performed at the Waterbury Lift Station to identify system improvements or replacements that need to be made. This includes items such as replacing valves, grating, electrical, pump guides, alarm system for power failure, etc. ACWWA has budgeted \$200,000 for 2019 for the critical system improvements based on the recommendations memo.

Well Site Improvements

Over time the well sites through the ACWWA service area need regular, routine maintenance but periodically the sites need more than routine type maintenance. There is \$50,000 in the 2019 budget for these well site improvements.

Administration Building Improvements

The ACWWA Administration Building requires ongoing improvements and \$5,000 has been set aside for these projects for 2019.

Water System Asset Replacement

The water distribution system runs 24/7/365 and needs to provide continuous service. For 2019, \$400,000 has been budgeted to cover unplanned costs for potable water system components, including items such as major valve repair or replacement, pump repair or replacement, etc.

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 expected to be made available in 2019.

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

ACWWA Connecting Main Project – Phase 2C:

This extension of the existing 24" pipeline will install the remaining pipeline to the area of Liverpool Street and Smoky Hill Road. The pipeline will complete the run up Smoky Hill Road to make the final connection in the ECCV distribution system to obtain ACWWA's full 5.25 MGD of treated water. The timing of this initial section of pipeline was accelerated due to the paving schedule from City of Centennial for Smoky Hill Road. Centennial has a moratorium on altering newly paved roadways for two years after new pavement is placed, and ACWWA will need this water available by 2020 when the treatment plant expansion is finished. The pipeline crossing in this area is a transmission-only pipeline that will help ACWWA increase the physical capacity of this connection to 5.25 MGD and allow ACWWA to deliver its full flow from the project. These improvements are being completed by ECCV, their design engineers and by contractors hired by ECCV, as this is an improvement to the ECCV water distribution system. ACWWA is involved in the design and construction process and is contributing to the overall cost of this system improvement. The 2019 project will be the last section of pipeline to get the full capacity of water from the ECCV NWTP.

The construction costs are estimated to be \$1,700,000 in 2019, and the project is not expected to impact operating costs.

LTCWRF – Third Clarifier:

The LTCWRF currently has two clarifiers which are required to operate at all times. Adding a third clarifier will provide the redundancy needed to take the existing clarifiers offline to perform routine O&M activities. The 3rd clarifier has already been designed to about an 80%-90% design level, and the money for the 2019 budget is designated for completion of the design drawings and construction.

The construction costs are estimated to be \$1,385,000 in 2019 and will be funded through the LTCWRF reserve. This project is not expected to impact operating costs.

LTCWRF – AWT Filter Unit:

The existing filters have been experiencing fouling, requiring taking filters offline to perform chemical soaks to remove accumulated treatment chemicals. An additional filter will provide the plant redundancy to reduce the potential for discharging unfiltered water. Unfiltered water is not permitted to be pumped into the reuse system and may not meet permitted phosphorus limits for discharging to Lone Tree Creek.

A filter analysis was completed in 2018. A proposed budget amount of \$150,000 is allocated for the filter units to implement system improvements and modifications to bring the performance of the filters back to a sustainable, steady operational state.

2019 Unallocated Projects Budget

The unallocated projects budget amount is based on historical needs for unexpected project costs, as well as for renewal and replacement of capital equipment.

The budget request for unallocated projects is \$400,000.

CAPITAL EQUIPMENT - 2019

Maintenance Department/ Fleet Management:

ACWWA plans to replace four older, higher-mileage vehicles. Additionally, the cooling system in the MCC room for the centrifuge VFDs is inadequate and needs to be replaced. A spare pump and blower are needed, as is major service of the generator sets at the LTCWRF. ACWWA has budgeted \$155,000 in 2019.

LTCWRF – Equipment Replacement:

The Lone Tree Creek Water Reuse Facility has been in operation for ten years, and much of the equipment is nearing the end of its useful life. Plans are to begin replacing critical

items at an estimated cost of \$200,000 in 2019. These purchases can be funded from the LTCWRF Reserve Fund.

11. Departmental Information

ACWWA's activities are divided among three primary departments.

Water operations includes ten direct FTEs who are responsible for:

- operations and maintenance of the water distribution system which consists of wells, pumps, piping, valves, 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 such as the enhanced water main cleaning (ice pigging) that ACWWA undertook in 2016-17 and will continue in 2019;
- reading and inspecting meters, including construction hydrant meters;
- operations and maintenance of the JWPP plant;
- operations and maintenance of the collections system, including lift stations, sewer lines, and pretreatment; and
- responding to customer service questions and issues.

Wastewater operations includes five 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.

Administration: includes 23.0 FTEs in 2019 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.

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
APPROVED POSITIONS 2017 - 2019

REGULAR EMPLOYEES (FTE)	2017 BUDGET	2017 ACTUAL	2018 BUDGET	2018 ACTUAL	2019 PROPOSED
ADMINISTRATION					
General Manager	1.0	1.0	1.0	1.0	1.0
Director of Finance and Business Operations	1.0	1.0	1.0	1.0	1.0
Engineering Manager	-	-	1.0	0.5	1.0
Senior Project Manager	1.0	1.0	1.0	1.0	1.0
Operations/Maintenance Manager	1.0	1.0	1.0	1.0	1.0
Customer Service Manager	1.0	1.0	1.0	1.0	1.0
Development Services Manager	1.0	1.0	-	-	-
Maintenance Superintendent	1.0	1.0	1.0	1.0	1.0
Purchasing and Administrative Supervisor	1.0	1.0	1.0	1.0	1.0
Water Resources Engineer	1.0	1.0	1.0	1.0	1.0
Utilities Engineer	1.0	1.0	1.0	1.0	1.0
Construction Inspection Supervisor	1.0	1.0	1.0	1.0	1.0
IT Administrator	1.0	1.0	1.0	1.0	1.0
Human Resources Generalist	1.0	1.0	1.0	1.0	1.0
Accountant	1.0	1.0	1.0	1.0	1.0
Administrative Assistant	1.0	1.0	1.0	1.0	1.0
Accounting Specialist	1.0	1.0	1.0	1.0	1.0
Customer Service/Billing Specialist	1.0	1.0	1.0	1.0	1.0
Customer Service Specialist	1.0	1.0	1.0	1.0	1.0
Maintenance Technician II	1.0	1.0	1.0	1.0	1.0
Maintenance Technician II	1.0	1.0	1.0	1.0	1.0
Maintenance Technician II	1.0	1.0	1.0	1.0	1.0
Construction Inspector I	1.0	0.6	1.0	1.0	1.0
GIS Specialist	0.8	-	1.0	1.0	1.0
WATER OPERATIONS					
Field Superintendent	1.0	1.0	1.0	1.0	1.0
Chief Water Plant Operator	1.0	1.0	1.0	1.0	1.0
Lead Field Technician	1.0	1.0	1.0	1.0	1.0
Lead Field Technician	1.0	1.0	1.0	1.0	1.0
Field Technician I	1.0	1.0	1.0	1.0	1.0
Field Technician I	1.0	1.0	1.0	1.0	1.0
Field Technician III	1.0	1.0	1.0	1.0	1.0
Cross-connection/Backflow Control Specialist	1.0	1.0	1.0	1.0	1.0
Cross-connection/Backflow Control Specialist	1.0	1.0	1.0	1.0	1.0
WASTEWATER OPERATIONS					
Wastewater Plant Superintendent	1.0	1.0	1.0	1.0	1.0
Wastewater Plant Operator I	1.0	1.0	1.0	1.0	1.0
Wastewater Plant Operator II	1.0	1.0	1.0	1.0	1.0
Wastewater Plant Operator II	1.0	0.4	1.0	1.0	1.0
Wastewater Lab Technician	1.0	1.0	1.0	1.0	1.0
Pretreatment Coordinator	1.0	1.0	1.0	1.0	1.0
Totals	37.8	36.0	38.0	37.5	38.0

Departmental Accomplishments

Water operations:

1. Completed more than 1,500 preventive maintenance tasks on wells, lift stations, storage tanks, and booster pumps.
2. Received a perfect score on a Colorado Department of Public Health and Environment (CDPHE) Sanitary Survey of the Elkhorn water system.
3. Conducted enhanced water main cleaning on over four miles of pipeline.
4. Installed more than 300 new residential meters – a record for ACWWA.
5. Cleaned over 28 miles of wastewater pipeline via sewer jetting.

Wastewater operations:

1. The wastewater treatment plant (WWTP) had no major permit violations in 2018.
2. Experienced no lost time from accidents in 2018.
3. Implemented new process to help maintain filter pressures in a safe operating range
4. Enhanced safety by installing trench drain system to mitigate ice on north side of plant.

Administration – Maintenance:

1. Completed process of retrofitting metal halide fixtures with LED lighting to attain energy savings.
2. Installed new security fencing.
3. Directed repaving and asphalt overlay at the WWTP
4. Installed multiple pieces of major equipment including HVAC units, pond aerators, four Landia mixers at the WWTP, and VFDs for finished water pumps and pall system racks at the JWPP
5. Designed and constructed outdoor employee break area.
6. Fulfilled 990 work orders for the WWTP, with a 98:2 preventive to corrective ratio.
7. Fulfilled 373 work orders for the JWPP, with a 96:4 preventive to corrective ratio.
8. Fulfilled 70 work orders on fleet vehicles, with a 73:17 preventive to corrective ratio.

Administration – Customer Service:

1. Began distributing welcome packets for new residential and commercial customers.
2. Completed the addition of all billing forms as fillable forms to website to streamline processes for customers and staff.
3. Developed standard operating procedures for billing activities.
4. Developed a Summer Art Contest for children in our service area.
5. Streamlined the hydrant meter reading process to ensure reads are provided to billing timely.

Administration – Engineering

1. Hired a GIS analyst and an Engineering Manager.

2. Created and implemented a new water restriction/monitoring program for periods of drought.
3. Developed and implemented a “Slow the Flow” program for customers with high consumption.
4. Worked with large customer to convert them to the non-potable water supply for irrigation.
5. Managed ACWWA Flow infrastructure projects, including the expansion of the Northern Treatment plant along with a new booster pump station, and the completion of the third of four pipeline sections needed to receive the full complement of 5.25 MGD of ACWWA Flow water.
6. Reviewed and analyzed alternative treatment methods for the brine produced by the RO process, selecting a biological treatment system. The JWPP began reconfiguration to the blended RO/microfiltration plant in late 2018, and is expecting to produce finished water in May 2019.
7. Finalized and executed the Consolidated Infrastructure Agreement with ACWWA’s partners in the ACWWA Flow project.

Administration – Finance and IT

1. Increased investment returns over 330% by utilizing pooled investments.
2. Made improvements to the security of ACCWA’s infrastructure, including enhanced lighting at plants and phase II of a new access control system.
3. Completed the SCADA upgrades to the wastewater treatment plant.
4. Reviewed, evaluated, and selected software for GIS applications and compliance reporting.

FINANCIAL SUMMARIES AND NOTES



12. Board Summary Forecasted 2019 Combined Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
BOARD SUMMARY
FORECASTED 2019 BUDGET AS PROPOSED
WITH 2017 ACTUAL AND 2018 ESTIMATED
For the Years Ended and Ending December 31

	ACTUAL 12/31/17	ACTUAL 9/30/18	BUDGET 2018	ESTIMATED 2018	PROPOSED 2019
BEGINNING FUNDS AVAILABLE	\$ 38,547,472	\$ 47,126,755	\$ 38,547,472	\$ 47,126,755	\$ 48,294,341
REVENUES					
Operating revenues:					
Water Charges	8,745,707	6,954,329	8,895,375	9,081,020	9,197,002
Sewer Charges	5,533,558	4,340,717	5,616,281	5,666,371	5,844,156
Fire Lines	1,087,887	846,611	1,092,849	1,119,824	1,142,220
Irrigation	2,601,253	2,495,096	2,213,386	2,777,698	2,323,440
Fees for Services	1,067,792	715,926	849,008	922,380	854,539
RO Plant Revenue	279,402	199,640	323,755	199,640	-
	19,315,600	15,552,320	18,990,653	19,766,933	19,361,358
Non-operating revenues:					
Interest Income	163,467	490,799	295,000	679,888	475,000
Miscellaneous Revenue	2,194,987	1,098,468	2,006,541	2,069,561	2,051,004
Tap Fees and Contributions	11,261,567	9,309,765	8,156,242	11,782,775	5,888,374
	13,620,021	10,899,033	10,457,783	14,532,224	8,414,378
Total revenues	32,935,622	26,451,353	29,448,436	34,299,157	27,775,735
Total funds available	71,483,094	73,578,108	67,995,908	81,425,912	76,070,076
EXPENDITURES					
Office Expense	227,872	164,059	303,816	276,720	313,449
Salaries and Benefits	3,712,081	2,774,182	3,920,975	3,779,351	4,083,411
Insurance	159,219	142,482	193,400	189,976	199,779
Legal	301,630	210,613	355,000	310,820	295,000
Professional Fees	530,068	520,089	706,856	746,117	846,900
Repairs and Maintenance	1,110,952	607,792	1,496,054	1,277,860	1,204,199
Operational	1,944,410	1,829,763	2,430,469	2,481,814	3,213,992
Utilities	1,342,800	915,700	1,332,089	1,225,934	1,209,183
Contract Services	261,833	191,711	250,500	256,848	263,766
Bad Debt Expense	-	-	500	500	500
Other Supplies and Expense	10,200	5,798	14,400	14,400	14,400
Debt Service	9,186,724	5,116,168	10,115,571	10,115,571	10,083,849
Capital Outlay	5,568,547	4,292,726	16,650,660	12,205,660	22,138,654
Contingency	-	-	425,000	250,000	300,000
Total expenditures	24,356,338	16,771,083	38,195,289	33,131,571	44,167,082
Total expenditures and transfers out requiring appropriation	24,356,338	16,771,083	38,195,289	33,131,571	44,167,082
ENDING FUNDS AVAILABLE	\$ 47,126,755	\$ 56,807,025	\$ 29,800,619	\$ 48,294,341	\$ 31,902,994
NET INCOME(LOSS)	\$ 8,579,283	\$ 9,680,270	\$ (8,746,853)	\$ 1,167,586	\$ (16,391,347)

13. Board Summary Forecasted 2019 Budget Water Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
WATER OPERATIONS
FORECASTED 2019 BUDGET AS PROPOSED
WITH 2017 ACTUAL AND 2018 ESTIMATED
For the Years Ended and Ending December 31

	ACTUAL 12/31/17	BUDGET 2018	ESTIMATED 2018	PROPOSED 2019
REVENUES				
Operating revenues:				
Water Charges	8,745,707	8,895,375	9,081,020	9,197,002
Fire Lines	1,087,887	1,092,849	1,119,824	1,142,220
Irrigation	2,601,253	2,213,386	2,777,698	2,323,440
Fees for Services	620,225	448,912	498,513	433,643
RO Plant Revenue	279,402	323,755	199,640	-
Total operating revenues	13,334,475	12,974,276	13,676,695	13,096,306
EXPENSES				
Operating expenses:				
Office Expense	173,462	240,945	216,659	245,554
Salaries and Benefits	2,217,550	2,372,041	2,281,076	2,398,467
Insurance	99,059	129,074	131,256	137,826
Legal	262,080	289,200	263,330	229,200
Professional Fees	407,753	512,595	538,580	708,716
Repairs and Maintenance	782,804	885,340	685,827	568,393
Operational	1,557,061	2,008,683	2,101,572	2,808,067
Utilities	813,193	832,317	727,644	686,364
Contract Services	59,507	36,875	69,894	70,208
Bad Debt Expense	-	360	360	360
Other Supplies and Expense	7,344	10,368	10,368	10,368
Contingency	-	306,000	180,000	216,000
Total operating expenditures	6,379,812	7,623,798	7,206,566	8,079,524
Operating Income (not including depreciation)	6,954,663	5,350,478	6,470,129	5,016,782
Non-operating revenues:				
Interest Income	117,696	212,400	489,519	342,000
Miscellaneous Revenue	2,192,243	2,003,731	2,066,750	2,048,198
Tap Fees and Contributions	8,634,117	6,379,818	9,592,873	4,084,245
Total non-operating revenues	10,944,057	8,595,949	12,149,142	6,474,443
Non-operating expenses:				
Debt Service	8,628,815	9,513,916	9,513,916	9,480,099
Capital Outlay	5,376,195	11,250,660	9,179,000	16,287,254
Capital Outlay - Carryforward		3,200,000	2,700,000	3,715,000
Total non-operating expenses	14,005,010	23,964,576	21,392,916	29,482,353
NET INCOME (not including depreciation)	\$ 3,893,709	\$ (10,018,149)	\$ (2,773,645)	\$ (17,991,128)

14. Board Summary Forecasted 2019 Sewer Operations

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY
SEWER OPERATIONS
FORECASTED 2019 BUDGET AS PROPOSED
WITH 2017 ACTUAL AND 2018 ESTIMATED
For the Years Ended and Ending December 31

	ACTUAL 12/31/17	BUDGET 2018	ESTIMATED 2018	PROPOSED 2019
REVENUES				
Operating revenues:				
Sewer Charges	5,533,558	5,616,281	5,666,371	5,844,156
Fees for Services	447,567	400,096	423,867	420,895
Total operating revenues	5,981,125	6,016,377	6,090,238	6,265,051
EXPENSES				
Operating expenses:				
Office Expense	41,347	57,824	60,061	67,895
Salaries and Benefits	1,486,898	1,548,934	1,493,275	1,684,944
Insurance	55,214	64,326	58,720	61,953
Legal	39,550	65,800	47,491	65,800
Professional Fees	122,315	194,261	207,537	138,184
Repairs and Maintenance	388,164	653,500	592,033	635,806
Operational	387,348	421,686	390,792	405,925
Utilities	529,607	501,398	498,290	522,818
Contract Services	162,960	174,360	181,405	193,558
Bad Debt Expense	-	140	140	140
Other Supplies and Expense	2,856	4,032	4,032	4,032
Contingency	-	119,000	70,000	84,000
Total operating expenditures	3,216,260	3,805,260	3,603,774	3,865,055
	2,764,865	2,211,116	2,486,464	2,399,996
Non-operating revenues:				
Interest Income	45,771	82,600	190,369	133,000
Miscellaneous Revenue	2,744	2,810	2,811	2,806
Tap Fees and Contributions	2,627,450	1,776,424	2,189,902	1,804,129
Total non-operating revenues	2,675,965	1,861,834	2,383,082	1,939,935
Non-operating expenses:				
Debt Service	403,769	601,655	601,655	603,750
Capital Outlay	351,488	2,200,000	326,660	2,136,400
Carry-forward Capital	-	-	-	-
Total non-operating expenses	755,257	2,801,655	928,315	2,740,150
NET INCOME (not including depreciation)	\$ 4,685,574	\$ 1,271,296	\$ 3,941,231	\$ 1,599,781

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 CoBiz Bank, in public funds certificates of deposit (CDARS™), and in Colotrust and CSAFE investments.

15.1.8 Miscellaneous Revenue

This item is primarily comprised of the Build America Bond interest refund.

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 158 in 2019, with Cottonwood wastewater tap sales projected at 21.

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 2019 Capital Outlay

**Arapahoe County Water & Wastewater Authority
Capital Improvement Program Budget
For the year ending December 31, 2019**

Project	Budgeted Cost	Category
Water Rights Adjudication	\$ 1,200,000	Water Supply
ECCV RO Facility Expansion	2,945,054	IGA
ECCV Pump Station	3,847,800	IGA
ECCV DI Wells	732,800	IGA
Elkhorn Ranch Well Completion	600,000	Water Supply
ACWWA Connecting Pipeline - Phase 2C	1,700,000	IGA
Water Development - CCPWA	100,000	Water Supply
Generator Natural Gas Conversion.	100,000	Efficiency
3rd Clarifier for LTCWRF	1,385,000	Risk
SCADA Upgrades for Field/JWPP	100,000	Risk
JWPP RO Conversion	3,600,000	IGA
JWPP CIP	208,000	IGA
Family Sports NP piping	265,000	Water Supply
Water system upgrades	100,000	Risk
Well rehab and cleaning	300,000	Risk
Wastewater Infiltration Abatement	100,000	Risk
Waterbury Lift Station	200,000	Risk
Water Meter Upgrades	60,000	Efficiency
Chloramine Conversion Design	25,000	Water Supply
Site improvements	50,000	Risk
Administration Building Improvements	5,000	Risk
Water System Asset Replacement	400,000	Risk
Total Priority 1 Capital	18,023,654	
<u>Carryforward Projects (from 2018 Budget)</u>		
Storage reservoir	1,900,000	IGA
Chambers Reservoir Relining	1,000,000	Water Supply
Chambers Reservoir Pump Station Design	50,000	Efficiency
Chloramine Conversion Design	75,000	Water Supply
Mixing System - IMG Storage Tank	40,000	Water Supply
LTCWRF AWT Filter Unit	150,000	Risk
JWPP RO Reconversion	200,000	IGA
Integrated Master Plan - Water Supply	300,000	Water Supply
Total carryforward	3,715,000	
Capital Equipment Outlay	400,000	
Total 2019 Budgeted Capital Expenditures	\$ 22,138,654	

¹ Category denotes what is driving the need for the capital project - an IGA, a risk of failure or regulatory non-compliance, operational efficiency, or water supply development/conservation. There could be more than one driver for a project; listed are the primary factors.

17. Schedule of Debt Service Requirements to Maturity

ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY											
SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY											
December 31, 2018											
\$91,545,000 Variable Rate Taxable Water And Wastewater Revenue Refunding Bonds, Series 2009A Dated December 8, 2009 Variable Interest Rate Principal And Interest Due December 1		\$5,525,000 Fixed Rate Water And Wastewater Revenue Refunding Loan Series 2012 Dated September 26, 2012 Fixed Interest Rate Interest Due June 1 and December 1 Principal Due December 1		\$16,475,000 Variable Rate Revenue Refunding Bonds, Series 2016 Dated October 4, 2016 Variable Interest Rate Principal And Interest Due December 1		\$12,720,000 Variable Rate Revenue Refunding Bonds, Series 2017 Dated September 7, 2017 Variable Interest Rate Principal And Interest Due December 1		Total Debt Service Requirements			
Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Total	
2019	1,845,000	5,459,155	1,080,000	96,444	420,000	579,500	145,000	458,750	3,490,000	6,593,849	10,083,849
2020	1,915,000	5,364,230	1,110,000	73,116	435,000	566,900	130,000	455,850	3,590,000	6,460,096	10,050,096
2021	1,980,000	5,262,831	1,135,000	49,248	450,000	553,850	130,000	453,250	3,695,000	6,319,179	10,014,179
2022	2,050,000	5,155,020	1,145,000	24,840	465,000	540,350	705,000	448,050	4,365,000	6,168,260	10,533,260
2023	2,120,000	5,040,322	-	-	475,000	526,400	860,000	419,850	3,955,000	5,986,572	9,941,572
2024	2,200,000	4,918,528	-	-	1,015,000	487,400	900,000	385,450	4,115,000	5,791,378	9,906,378
2025	2,285,000	4,788,838	-	-	1,055,000	446,800	915,000	367,450	4,255,000	5,603,088	9,858,088
2026	2,380,000	4,641,913	-	-	1,100,000	404,600	950,000	330,850	4,430,000	5,377,363	9,807,363
2027	2,480,000	4,488,879	-	-	1,140,000	360,600	1,000,000	292,850	4,620,000	5,142,329	9,762,329
2028	2,585,000	4,329,415	-	-	1,190,000	315,000	1,035,000	252,850	4,810,000	4,897,265	9,707,265
2029	2,690,000	4,163,199	-	-	1,235,000	267,400	1,085,000	211,450	5,010,000	4,642,049	9,652,049
2030	2,805,000	3,990,232	-	-	1,285,000	218,000	1,135,000	168,050	5,225,000	4,376,282	9,601,282
2031	2,925,000	3,807,066	-	-	1,335,000	166,600	1,180,000	122,650	5,440,000	4,096,316	9,536,316
2032	3,050,000	3,616,063	-	-	1,385,000	113,200	1,235,000	75,450	5,670,000	3,804,713	9,474,713
2033	3,175,000	3,416,898	-	-	1,445,000	57,800	1,280,000	38,400	5,900,000	3,513,098	9,413,098
2034	6,125,000	3,209,571	-	-	-	-	-	-	6,125,000	3,209,571	9,334,571
2035	6,385,000	2,809,608	-	-	-	-	-	-	6,385,000	2,809,608	9,194,608
2036	6,660,000	2,383,090	-	-	-	-	-	-	6,660,000	2,383,090	9,043,090
2037	6,950,000	1,938,202	-	-	-	-	-	-	6,950,000	1,938,202	8,888,202
2038	7,250,000	1,473,942	-	-	-	-	-	-	7,250,000	1,473,942	8,723,942
2039	14,815,000	989,642	-	-	-	-	-	-	14,815,000	989,642	15,804,642
Total	\$ 84,670,000	\$ 81,246,640	\$ 4,470,000	\$ 243,648	\$ 14,930,000	\$ 5,604,400	\$ 12,685,000	\$ 4,481,200	\$ 116,755,000	\$ 91,575,888	\$ 208,330,888

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 project demands for water. These may include aquifer storage and recovery, wastewater reuse projects and the acquisition of water through the purchase of water rights.
- **Amendment** – An amendment is a change to an adopted budget. It can increase or decrease a fund total.
- **Appropriation** – An authorization granted by the Governing Board to make expenditures and to incur obligations for specific purposes.
- **Aquifer** – An aquifer is an underground bed or layer of earth, gravel or porous stone that yields water.
- **Aquifer Storage and Recovery** – This is the practice of injecting surplus water into an aquifer through wells and then pumping it out as needed.
- **Assets** – Property owned by ACWWA which has monetary value.
- **Audit** – The examination of documents, records, report, systems of internal control, accounting and financial procedures, and other evidence for the purpose of ascertaining fair presentation of financial statements, determining propriety, legality and accuracy of transactions.
- **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.
- CWSD – Cottonwood Water and Sanitation District
- Debt – An obligation resulting from the borrowing of money or from the purchase of goods and services.
- Debt Service – Cash outlays in the form of debt principal payments, periodic interest payments and related services charges for debt incurred in prior periods.
- Deficit – The excess of expenditures over revenues during a fiscal year.
- Department – An organizational unit such as Water or Wastewater.
- Depreciation – The expiration in the service life of an asset generally attributable to wear and tear through use, lapse of time or obsolescence. Depreciation is generally not budgeted; however, it is accounted for on the financial statements.
- Disbursement – A cash payment for goods or services procured by ACWWA.
- Enterprise – An entity that qualifies under the Taxpayer’s Bill of Rights (TABOR) as being a government-owned business authorized to issue its own revenue bonds and receiving fewer than 10 percent of its annual revenue in grants from all Colorado state and local governments combined.
- Enterprise Fund – A fund established to finance and account for the acquisition, operation, and maintenance of governmental facilities and services, which are entirely or predominantly self-supporting, by user charges.
- Expenditure – Under the accrual basis or modified accrual basis, this term designates the cost of goods delivered or services rendered, whether paid or unpaid. This expression is generally used for governmental type funds.
- Expenses – Charges incurred, whether paid or unpaid for operation, maintenance, and interest, and other charges, which are presumed to benefit the current fiscal period. This expression is generally used for proprietary type funds such as enterprises, trust and agencies.
- Fiscal period – A period of time usually consisting of twelve months. At the end of the fiscal period a governmental unit determines its financial position and the results of its operations. ACWWA’s fiscal period is January 1 to December 31.
- FTE – An FTE is a “Full-Time Equivalent” which is equivalent to one full-time employee who works 40 hours per week for 52 weeks, for a total of 2,080 work hours.

- Fund – A self-balancing accounting entity segregated to carry on specific activities or attain certain objectives in accordance with special regulations, restriction or limitation such as Water and Wastewater.
- Fund Balance – Resources remaining from prior years, which are available to be budgeted in the current year.
- FY – Fiscal Year
- Generally Accepted Accounting Principles (GAAP) – Generally Accepted Accounting Principles are uniform minimum standards and guidelines for financial accounting and reporting. Currently, the Financial Accounting Standards Board (FASB), the Governmental Accounting Standards Board (GASB) and the Federal Accounting Standards Advisory are authorized to establish these principles.
- Gross Revenue – All income and revenues directly or indirectly derived from the operation and use of the System, or any part thereof.
- 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.
- 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.

APPENDIX



FPP.1. Financial Policies and Procedures

FPP.1.1 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.1.2 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.1.3 Rates and Charges

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

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

- Rates and charges are established utilizing a generally accepted cost recovery methodology that is consistent and legally defensible using the following approaches: revenue requirement analysis, cost of service analysis, and rate design analysis. ACWWA conducted a rate study in the third quarter of 2015, which is the basis for 2019 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.1.4 Recognition of Revenues

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

FPP.1.5 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.1.6 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.1.7 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.1.8 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.1.9 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.1.10 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 relative small scale or are for short-lived improvements, the costs of these improvements will be paid from current revenues.

FPP.1.11 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 \$7.6 million. Additionally, ACWWA established board-designated reserve funds in 2017, including an operating, rate stabilization, and emergency capital reserve funds.

FPP.1.12 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.1.13 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.1.14 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.1.15 Short-Term Debt

User 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.1.16 Debt Authorizations

All long and short-term debt shall require Board authorization prior to issuance. ACWWA has no plans to issue new debt in 2019, but will consider refunding the 2009 bonds if market conditions are favorable.

FPP.1.16.1 Current Debt Outstanding

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

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

In 2009, 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 2009 Series Bonds were used to purchase a renewable water source, infrastructure, and water storage. This project is identified as the ACWWA Flow Project. In 2012, ACWWA refunded the 2009 Series B Bonds.

A summary of outstanding debt is as follows:

- Taxable Water and Wastewater Revenue Direct Pay Build America Bonds, Series 2009A Bonds, original amount \$91,545,000; amount outstanding January 1, 2019 - \$84,670,000
- Water and Wastewater Revenue Bonds, Series 2012 Bonds, original amount \$5,525,000; amount outstanding January 1, 2019 - \$4,465,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2016 Bonds, original amount \$16,475,000; amount outstanding January 1, 2019 - \$14,930,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2017 Bonds, original amount \$12,720,000; amount outstanding January 1, 2019 - \$12,685,000.

FPP.1.16.2 Debt Limits

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

FPP.1.17 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.1.18 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.1.18.1 Funds Available

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

FPP.1.18.2 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 two debt service reserve funds required by bond covenants, and asset replacement reserves for the LTCWRF and the JWPP. In 2018, ACWWA funded two additional restricted project funds for the ECCV Northern Plant Expansion and the JWPP RO Plant reversion.

FPP.1.18.3 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.1.18.4 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.1.18.5 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 2018-03

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 2019, AND ENDING ON THE LAST DAY OF DECEMBER 2019.

WHEREAS, the proposed 2019 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 October 10, 2018 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: 2019 Budget Revenues. That the estimated revenues for each fund set out in the budget are accepted and approved.

Section 2: 2019 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, 2018, ending fund balance of the Operating Fund, the exact amount to be determined as part of the audit of the December 31, 2018 financial statements, is designated as a general reserve for future contingencies.

Section 4: Adoption of Budget for 2019. 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 2019.

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 ____ day of November 2018.

President

ATTEST:

Secretary