

**Arapahoe County Water and Wastewater Authority  
(ACWWA)  
2018 Operating and Capital Improvement Budget**

November 8, 2017

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

**2018 Operating and Capital Improvement Budget**

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## BUDGET MESSAGE





# **1. Budget Message**

November 8, 2017

Board of Directors  
Arapahoe County Water and Wastewater Authority

Your management team is pleased to present the Arapahoe County Water and Wastewater Authority (ACWWA) 2018 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 2018.

ACWWA's budget is one of the most important documents prepared by ACWWA. Through the process of planning and preparing the budget, ACWWA is given the opportunity to assess its plans and goals for the coming and future years. 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 2018. As ACWWA's policy makers, you play a critical role in making decisions regarding ACWWA's future.

ACWWA's service area has a large number of undeveloped land parcels and has been experiencing a substantial increase in development over the past two years. New businesses and residential developments continue to come into the service area, and tap sales are expected to remain strong over the next several years.

The 2018 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 2018 budget furthers the Board's priorities as follows:

1. Improve Water Quality

- a. Together with Cottonwood Water and Sanitation District, ACWWA has been evaluating potential modifications to the treatment process at the Joint Water Purification Plant (JWPP). Additional analysis is currently being conducted to determine the most effective path.
- 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 2018 budget provides funding for several critical components of the project:
  - i. ACWWA will continue to acquire the necessary property interests and develop the required agreements to fully utilize this water supply.
  - ii. The continued adjudication of water rights for municipal use. ACWWA has adjudicated approximately 48% of the ACWWA Flow Project water rights. The 2018 budget provides funding for additional adjudication.
  - iii. The purchase of 500 acre-feet of firming storage in the South Platte Basin.
  - iv. Phase 2B of the ACWWA Connecting Main pipeline development project will allow for the transmission of ACWWA Flow water through newly installed pipelines in the Liverpool Open Space. The Liverpool Street to Euclid Drive section of the pipeline will be completed in spring 2018. Phase 2A, the Himalaya Vault project that was finished in 2017 provides over one million gallons per day (MGD) of potable water to ACWWA's distributions system; Phase 2B will increase the physical delivery capacity to approximately 4.5 MGD.
  - v. Treatment and delivery of 1500 acre-feet of ACWWA Flow water.
- c. In 2018, ACWWA will fund additional areas of enhanced water main cleaning. In the areas that were cleaned in 2016, discolored water events decreased by 75%. ACWWA conducted this cleaning process again in 2017 with very positive results, and discolored water complaints continue to decrease.
- d. ACWWA will further refine its water quality model to better manage water supplies and improve water quality in 2018.

2. Improve Customer Service/Relations

- a. ACWWA will continue to focus on customer service in 2018 to ensure that customer issues are addressed promptly and effectively. In 2015, ACWWA conducted a customer survey and will again utilize the results to help shape ACWWA's customer service/communication strategy. ACWWA will continue to reach out to the community with information and to listen to our ratepayers.
- b. ACWWA developed a new website in late 2016, and will continue to enhance it in 2018 to improve communication between ACWWA and its ratepayers.

### 3. Development Review

- a. During 2016 and 2017, staff began evaluating ACWWA's process for review of new development, and in 2017 added documentation of the procedures on the website. In 2018, staff will continue to assess development-related policies and procedures.
- 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 will review policies and procedures in 2018 to ensure they meet ACWWA's needs in the most cost-effective manner.
- b. ACWWA is constructing a multi-phase pipeline in Arapahoe Road and Liverpool Street that will connect ACWWA's system to the East Cherry Creek Valley Water and Sanitation District. This pipeline will allow ACWWA's water supply being treated at the ECCV Reverse Osmosis (RO) Water Treatment Plant (in which ACWWA owns capacity) to be delivered to ACWWA's service area. The two main components of the Phase 2 expansion of ECCV's Northern Project – the design and construction of the booster station and expanded treatment capacity of the RO Plant – are being coordinated with ECCV. Phase 2, which will be completed in mid-2020, will bring an additional three million MGD of treated water to ACWWA's service area.
- c. In 2018, 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.
- d. Ensuring system reliability through the maintenance of ACWWA's infrastructure is essential to avoiding significant service interruptions. The 2018 budget includes several projects to facilitate reliability:
  - i. Cleaning and video inspection of approximately one-third of the wastewater collection system. This entails the jetting of approximately 200,000 feet of piping, followed by closed-circuit video inspection.
  - ii. A third year of enhanced water line cleaning to remove sediment and iron and manganese deposits from the potable water system. In 2018, 30,000 – 35,000 thousand feet of water mains will be cleaned, bringing the total pipeline cleaned from 2016 – 2018 to over 25 miles of pipe.
  - iii. Assessing the condition of several wastewater lift stations including the evaluation of operational capabilities, and the design and installation of improvements as required.

The 2018 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 that will impact ACWWA in the coming years include:

- Greater federal and state regulation of water and wastewater operations;
- Increased pressure on water supplies, 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 as a result of regulation and managing increasing 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.

As we move into 2018, 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 2018 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 2017. The preparation of this document would not have been possible without the support and input from all departments.

Respectfully submitted,



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Steve Witter, P.E.  
General Manager





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Kate McRae

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, 2017**

*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, 2017.

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	3,376
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 (AWSD or the District). ACWWA was formed in 1988 for the purpose of developing water resources, systems and facilities, and wastewater treatment and disposal systems and facilities in whole or in part for the benefit of the customers, county inhabitants, and others.

#### **3.2 History**

Effective January 1, 1989, the IGA granted ACWWA all responsibility for and control over AWSD's operating system, related operating assets, tap fees, contributions, revenues and expenses. The agreement provided for a lease of the District's property, plant and equipment. The lease was set to expire on either December 1, 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 a number of 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 innovations.

## 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 nine 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 nine 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. Her 2010 campaign received donations from Bob Lembke and Pat Mulhern.
- **Jeff Baker's** conflict form has been filed; he is a member of the Arapahoe County Board of County Commissioners.
- **Brad Cromer's** conflict form has been filed; he has no conflicts to report and noted that he has previously made campaign contributions to Arapahoe County Commissioners Rod Bockenfeld, Nancy Sharpe, and Nancy Doty.
- **Kenneth Beard's** conflict form has been filed; he has no conflicts to report.
- **Keith Gardner'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, Kevin McBrien, 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 2018.

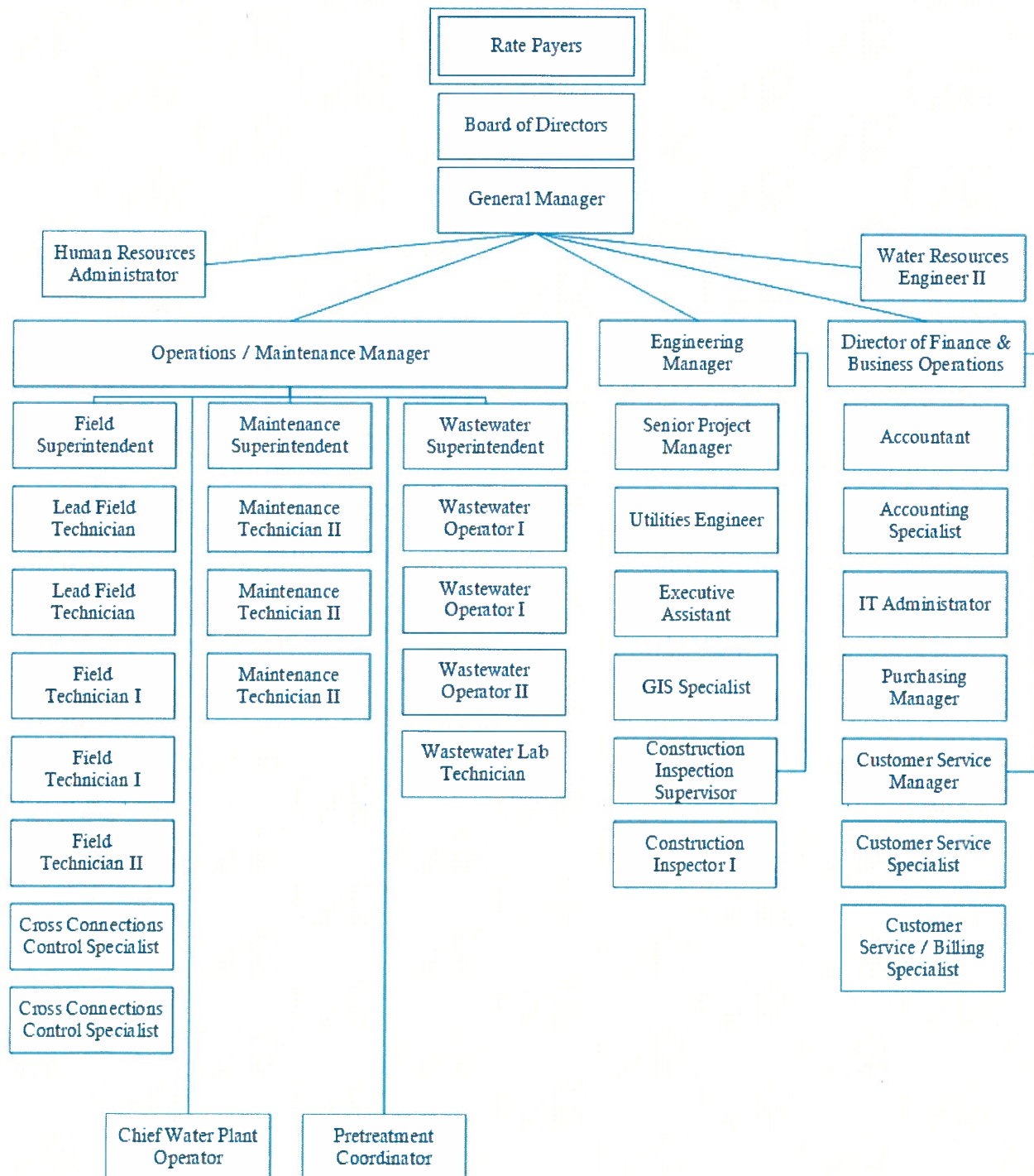


**Pictured above is the Clean in Place system at the Joint Water Purification Plant (JWPP); to the right is the Pall Microfiltration System currently in use to filter potable water.**



## 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 the 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**

This portion of the Official Statement contains general information concerning historic economic and demographic conditions in and surrounding Arapahoe County. It is provided so that prospective investors will be aware of factors which may affect future development and growth of the Authority and the surrounding area. The information was obtained from the sources indicated and is limited to the time periods indicated. The information is historic in nature; it is not possible to predict whether the trends shown will continue in the future. The Authority makes no representation as to the accuracy or completeness of data obtained from parties other than the Authority.

### **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 2000 and 2015, the population of Arapahoe County increased 29.2%, and the populations of the Denver-Aurora CBSA and the State increased 28.0% and 26.9%, respectively.

### Population

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 <sup>(1)</sup>	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	585,590	--	2,601,637	--	5,120,686	--
2012	595,961	1.4%	2,648,529	1.8%	5,193,097	1.4%
2013	607,751	1.2	2,699,708	1.9	5,272,677	1.5
2014	619,093	2.6	2,754,951	2.0	5,356,626	1.6
2015	630,564	1.5	2,813,024	2.1	5,456,584	1.9

(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 2015 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 <sup>(1)</sup>	Arapahoe County	Denver-Aurora CBSA	Colorado	United States
2011	\$45,432	\$46,666	\$42,955	\$42,461
2012	47,578	49,290	45,089	44,282
2013	48,790	51,558	46,824	44,493
2014	51,743	54,937	49,823	46,464
2015	52,545	55,975	50,971	48,190
2016	n/a	n/a	52,059	49,571

(1) Denver-Aurora CBSA and County figures updated November 17, 2016. State and national figures updated March 28, 2017. 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	2012	2013	2014	2015	2016
Accommodation and Food Services	22,253	22,901	24,151	25,461	26,161
Administrative and Waste Services	25,737	26,993	27,591	28,314	26,640
Agriculture, Forestry, Fishing, Hunting	80	102	89	94	94
Arts, Entertainment and Recreation	4,955	5,038	5,320	5,347	5,470
Construction	14,531	16,112	17,986	19,107	20,244
Educational Services	21,658	21,839	22,230	22,760	22,930
Finance and Insurance	25,361	26,011	25,921	27,531	28,516
Government	12,978	13,193	13,108	13,194	13,051
Health Care and Social Assistance	33,933	36,414	38,291	41,116	43,035
Information	18,265	18,035	18,305	17,710	17,675
Management of Companies/Enterprises	7,009	8,221	8,092	8,130	7,280
Manufacturing	7,602	7,660	7,827	8,041	8,148
Mining	1,446	873	942	925	714
Non-classifiable	42	23	33	22	28
Other Services	7,849	8,258	8,541	8,610	8,959
Professional and Technical Services	26,974	27,801	29,153	30,364	31,529
Real Estate, Rental and Leasing	5,663	5,701	5,884	6,234	6,312
Retail Trade	30,726	32,189	33,121	34,414	34,614
Transportation and Warehousing	4,632	4,766	4,817	4,796	5,069
Utilities	256	239	241	249	260
Wholesale Trade	<u>13,578</u>	<u>13,636</u>	<u>13,922</u>	<u>14,180</u>	<u>14,836</u>
Total All Industries <sup>(1)</sup>	<u>285,527</u>	<u>296,004</u>	<u>305,562</u>	<u>316,597</u>	<u>321,566</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	2012	2013	2014	2015	2016
Accommodation and Food Services	114,400	120,092	125,851	131,834	137,017
Administrative and Waste Services	89,085	89,621	93,355	96,178	97,345
Agriculture, Forestry, Fishing, Hunting	1,973	2,047	2,449	2,548	2,844
Arts, Entertainment and Recreation	24,874	24,669	25,713	26,471	27,183
Construction	63,534	70,661	79,242	83,954	89,122
Educational Services	95,375	97,238	100,206	103,588	105,846
Finance and Insurance	66,954	69,639	70,087	73,181	75,472
Government	69,006	69,334	69,484	70,710	71,750
Health Care and Social Assistance	144,827	151,898	159,389	168,378	175,797
Information	43,786	44,959	45,494	46,446	47,513
Management of Companies/Enterprises	25,843	28,342	29,275	30,036	30,096
Manufacturing	63,544	64,146	65,556	68,431	69,390
Mining	10,379	10,586	11,770	11,270	9,119
Non-Classifiable	126	172	194	146	144
Other Services	38,098	39,015	40,976	42,261	43,934
Professional and Technical Services	108,807	115,827	120,525	125,944	130,440
Real Estate, Rental and Leasing	23,836	24,364	25,357	26,777	27,926
Retail Trade	125,469	128,770	132,152	136,082	138,161
Transportation and Warehousing	49,971	52,303	53,916	55,380	57,092
Utilities	5,649	5,613	5,766	5,768	5,769
Wholesale Trade	63,631	65,233	67,695	69,961	71,162
Total All Industries <sup>(1)</sup>	<u>1,231,564</u>	<u>1,277,012</u>	<u>1,326,751</u>	<u>1,377,873</u>	<u>1,415,505</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

Year	Arapahoe County <sup>(1)</sup>		Denver-Aurora CBSA <sup>(1)</sup>		Colorado <sup>(1)</sup>		United States
	Labor Force	Percent Unemployed	Labor Force	Percent Unemployed	Labor Force	Percent Unemployed	Percent Unemployed
2012	322,881	7.7%	1,448,248	7.7%	2,757,222	7.9%	8.1%
2013	327,290	6.6	1,468,452	6.6	2,775,670	6.8	7.4
2014	332,255	4.9	1,491,978	4.8	2,810,415	5.0	6.2
2015	335,254	3.7	1,509,959	3.7	2,833,509	3.9	5.3
2016	341,904	3.1	1,541,194	3.1	2,891,046	3.3	4.9
<u>Month of April</u>							
2016	344,026	3.1%	1,550,856	3.1%	2,910,544	3.2%	5.0%
2017	349,133	2.1	1,573,511	2.1	2,944,747	2.2	4.4

(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

Name of Employer	Product or Service	Number of Local Employees <sup>(1)</sup>
Comcast Corporation	Telecommunications	4,540
HealthONE <sup>(2)</sup>	Healthcare	3,830
CenturyLink	Telecommunications	2,830
Great-West Financial	Insurance/Retirement Savings Services	2,680
Raytheon Company	Aerospace Systems and Software	2,430
Kaiser Permanente	Healthcare	2,210
Arrow Electronics	Electronic Component Wholesaler	1,930
Centura Health <sup>(3)</sup>	Healthcare	1,650
United Healthcare	Insurance	1,510
24-7 Intouch	Customer Service Solutions	1,350

(1) Figures as of May 2017.

(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

<u>Year</u>	<u>Single Family</u>		<u>Multi-Family<sup>(1)</sup></u>		<u>Commercial/Industrial<sup>(2)</sup></u>	
	<u>Permits</u>	<u>Value</u>	<u>Permits</u>	<u>Value</u>	<u>Permits</u>	<u>Value</u>
2012	178	\$28,391,024	296	\$28,527,700	206	\$23,762,897
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	189	66,910,543
2016	265	57,248,257	8	1,615,896	125	55,820,398
2017 <sup>(3)</sup>	87	16,892,151	-0-	-0-	1	45,000

(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, 2017.

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

## 5.7 Foreclosure Activity

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

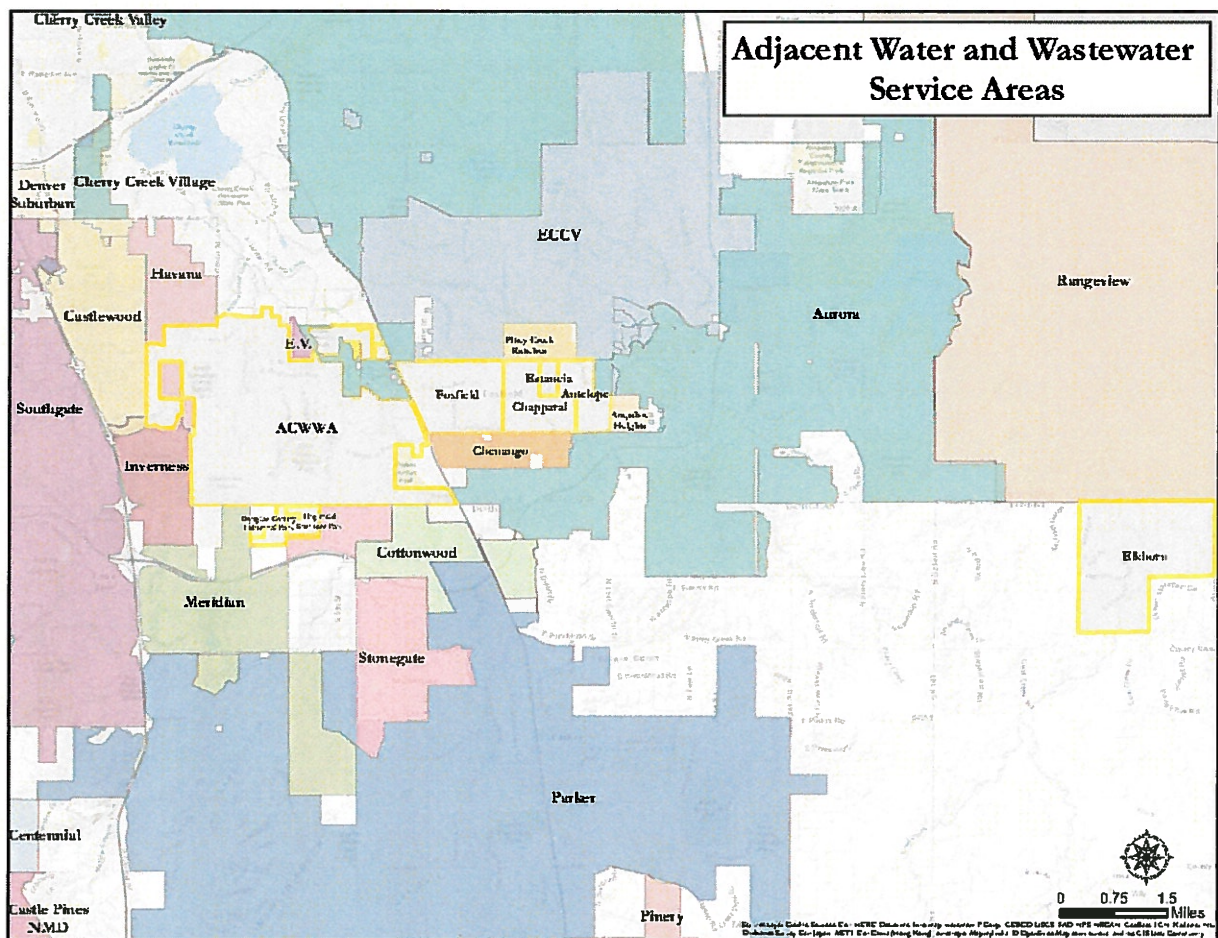
### History of Foreclosures – Arapahoe County

<u>Year</u>	<u>Number of Foreclosures Filed</u>	<u>Percent Change</u>
2011	3,959	--
2012	3,589	(9.3)%
2013	1,700	(52.6)
2014	1,314	(22.7)
2015	858	(34.7)
2016 <sup>(1)</sup>	459	--

(1) Figures are for January 1 through July 31, 2016.

Sources: Colorado Division of Housing (2011-2015 figures) and the Arapahoe County Office of the Public Trustee (2017 figure).

## 5.8 Service Area Map



## 6. Water Supply

At full build-out of the current service area, ACWWA estimates that demand will be approximately 10,500 acre-feet per year. In 2009, ACWWA began developing the ACWWA Flow Project, and as of 2018 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 was 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 the 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. ACWWA has also successfully adjudicated an augmentation plan, in addition to the water rights. The ACWWA Flow Project is currently delivering about 1,500 acre-feet of water annually, or 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 2018, 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**

2017 has been a productive year for ACWWA. Key accomplishments include:

### **Water Quality Improvements:**

- Conducted enhanced main cleaning of a total of 27,000 feet of 8", 10" and 12" pipe. This added to the pipeline cleaned in 2016, for a two-year total of over 110,000 feet of pipe cleaned, or just over 20 miles of our 160 miles of distribution system piping. This year's cleaning continues to help ACWWA with its water quality by removing sediment in the pipes that had accumulated over time; and
- The Colorado Department of Public Health and Environment (CDPHE) awarded ACWWA the Gold Tier of their "Pursuing Excellence Program." The program recognizes public water systems that go above and beyond to: document source water protection goals, treatment system goals, distribution system goals, and to create optimization action plans to improve drinking water operations. For the past two years, the ACWWA Field Operations team has committed to go above and beyond the obligations of compliance and regulatory standards. Eight optimization action plans were achieved that directly improved water quality, precise water analysis, safer operations and controlled key performance indicators through critical parameters.

### **Managing Internal Expenses/Financial Planning**

- Reduced ACWWA expenses related to retirement contributions from 2016 to 2017 by 2.0%, in addition to a 2% reduction in ACWWA expenses from 2015 to 2016;
- Affirmed our AA- credit rating with Standard and Poor's by continuing to adhere to sound financial management practices;
- Refunded the Series 2007 Bonds, resulting in a gross present value savings of more than \$3.3 million over the remaining term of the bonds in lower principal and interest payments; and
- Changed investment vehicles to substantially increase returns.

### **Managing External Costs**

- Updated ACWWA's financial planning model, and modeled scenarios to assess the impact of lowering certain fixed fees. The proposed rates were presented and accepted by the Board of Directors, with the result that some fixed fees will be reduced in 2018.; evaluated the fee structure for the development review process (for new developments) to see if changes should be considered.

### **Improving Customer Service/Relations**

- Instituted a program for public tours of ACWWA systems, and conducted several tours of ACWWA's Lone Tree Creek Water Reuse Facility;
- Continue to enhance ACWWA's website, which was updated in 2016, by adding functionality for locates and tour request forms, as well as some customer service activities, to facilitate processes for our customers;
- Attended and presented at several Homeowners Association Meetings in 2017;
- Developed Welcome/Informational Packets for new Commercial and Residential customers; and
- Evaluated potential water and wastewater service issues for hotels, as ACWWA now has five hotels in its service area, with four of these opening in 2017.

### **Safety**

- There were no lost time accidents in 2017.

### **Employee Certifications**

- ACWWA employees achieved 15 new certifications in 2017.

### **Vulnerability Assessment**

- Staff worked with the Arapahoe County Sheriff's office in 2016 to assess the vulnerability of ACWWA facilities and services. During 2017, 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 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 48% of the ACWWA Flow water;
- Completed a new water line connection at Arapahoe Road and Himalaya to 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;
- Developed and installed breakpoint chlorination technology and operations on the Western water line; and
- Substantially updated ACWWA GIS system by field verifying over 95.9% of ACWWA's components in 2017.



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**

#### **Date**

#### **Activity**

March 2017	Long-term strategic priorities are approved by the Board.
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August 2017	Director of Finance meets with Executive Team and department heads to determine staffing levels, expense budgets, and capital outlay needed for 2018; begin developing budget.
September 2017	Staff continues to develop the budget.
October 2017	Staff presents draft 2018 budget to the Finance Committee on October 4 and to the full Board on October 11.
November 2017	Staff presents 2 <sup>nd</sup> draft of 2018 budget to Board and holds rate hearing.
December 2017	On or before December 31, the Board adopts the budget.
January 2018	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**

The 2018 Budget for ACWWA includes both operating and non-operating components. It was prepared by ACWWA's Finance Department in accordance with Generally Accepted Accounting Principles (GAAP) and State of Colorado budgetary requirements. We believe the data presented is accurate in all material respects and is presented in a manner designed to fairly set forth the financial position of ACWWA.

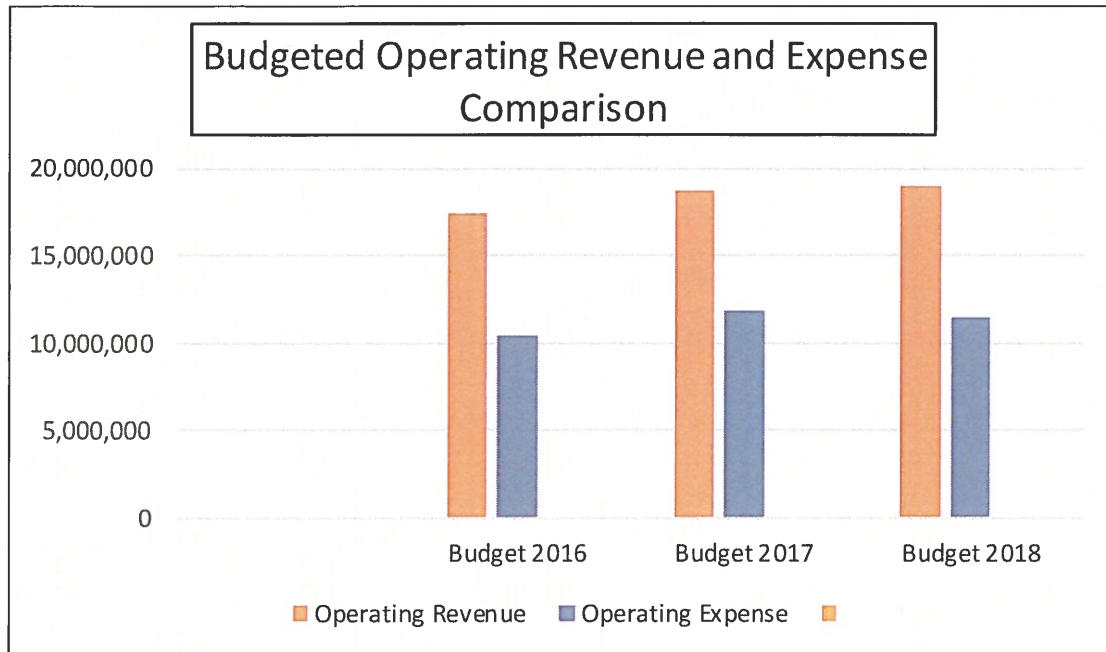
ACWWA has one fund only, and distinguishes operating revenues and expenditures from non-operating items. Operating revenues and expenditures generally result from providing services and delivering water in connection with the ongoing operations. The principal operating revenues of the Authority are charges 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 2018 budget provides funds for the minimum 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 2018 budget include:

- Water volume rate increase of 2%; an 8% decrease to residential fixed fees with no increase to commercial fixed fees;
- Wastewater volume rate increase of 2%; an 8% decrease to residential fixed fees with no increase to commercial fixed fees
- Water tap fee increase of 3%; wastewater tap fee increase of 2% for a combined tap fee increase of 2.8%;
- Operating revenue of \$19.0 million;
- Operating expenses of \$11.4 million;
- Non-operating revenue of \$10.5 million, primarily from tap fees;
- Non-operating expenditures of \$26.8 million comprised mainly of debt service payments of \$10.1 million and capital spending of \$16.7 million, including \$3.2 million in capital costs that are being carried over to 2018 after being budgeted for in prior years;
- ACWWA is able to fund necessary capital improvements through 2019 without incurring new debt; however, a bond issue may be necessary around 2020 to pay for system improvements.

## 9.2 Operating Budget



**Operating Budget 2016 - 2018**

### **Operating Revenue**

Operating revenue is projected to be \$19.0 million in 2018, about the same as estimated 2017 revenue. From January through September of 2017, the Arapahoe County area received only 10.81" of precipitation, compared to 14.52" during the same period in 2016, which was also a very dry year. The lack of moisture in 2017 contributed to irrigation revenue that is projected to be \$429 thousand or 20.7% above budgeted revenue. Thus, assuming that 2018 will have average precipitation, a 2% increase in water and sewer charges, and an expected 3% growth in accounts may be offset by decreases in consumption compared to 2017. 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 or 2017 revenue as the basis for the budget.

### **Water Charges**

Water charges revenue for 2018 is forecasted to increase \$149 thousand or 1.7% from 2017 estimated revenue. Volume revenue will increase by a 2% rate factor and a 3% account growth factor, which will be offset by an 8% reduction in residential fixed service fees.

### **Sewer Charges**

Based on 2015 results escalated for account growth and rate increases, wastewater revenue is expected to increase slightly from estimated 2017 revenue, by \$67 thousand, or 1.2%, reflecting a 2% volume increase, 3% account growth, and an 8% decrease in the wastewater fixed fee.

### **Fire Lines**

Fire line stand-by revenue is anticipated to increase by an account growth factor of 2% in 2018.

### **Irrigation Revenue**

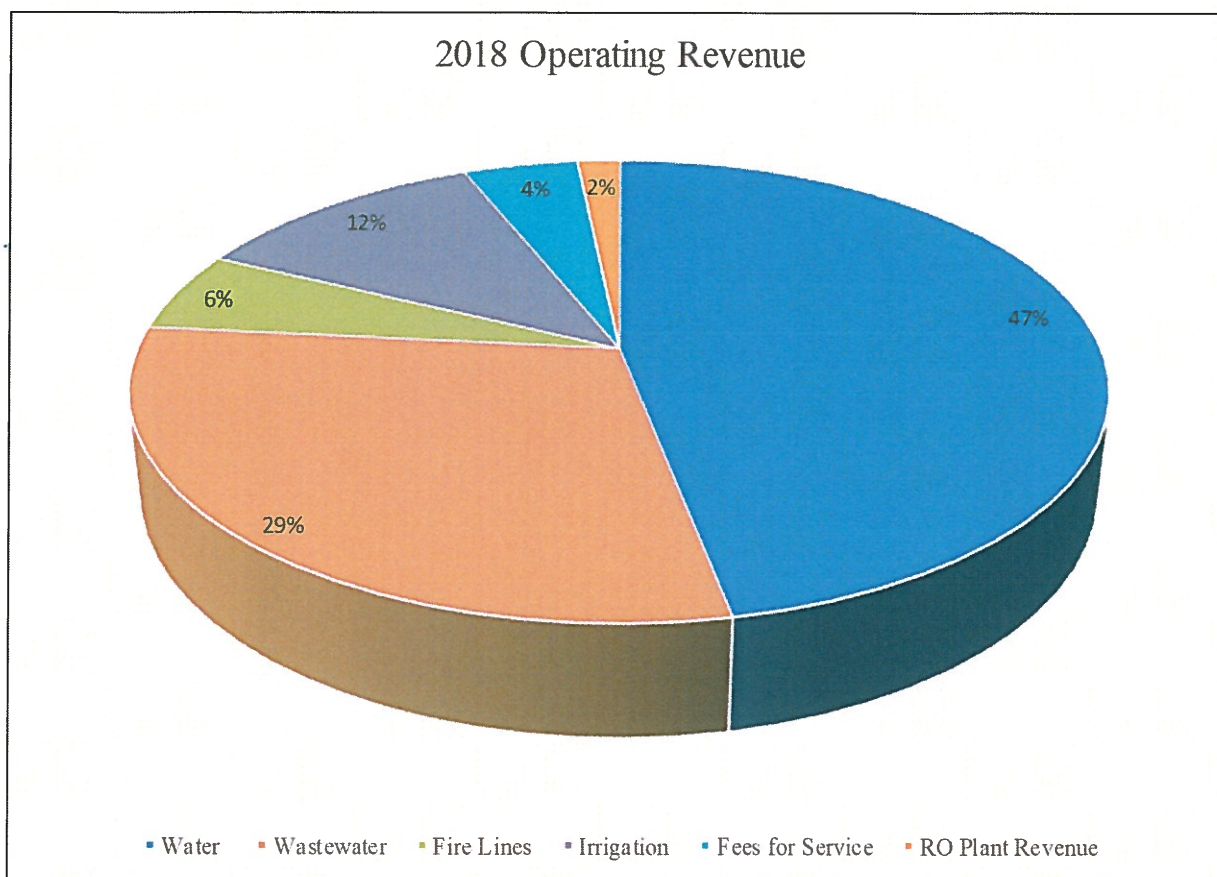
As noted above, 2017's irrigation season was abnormally dry, resulting in revenue that is estimated to be 20.7% above budget for the year. The budget for 2018 is based on an average-precipitation year, and reflects a decrease of \$333 thousand, or 12.7% from 2017 projected revenue.

### **Fees for Service**

Fees for service are budgeted to increase slightly in 2018, by \$14 thousand, or 1.6%.

### **RO Plant Revenue**

RO Plant revenue is the reimbursement of the Joint Water Purification Plant (JWPP) operating expenses by Cottonwood Water and Sanitation District for their share of costs, and is directly offset in operational expenses. The 2018 budgeted cost of operating the JWPP has decreased from 2017 budgeted expenses, as the conversion to a blended RO/microfiltration plant is not expected to take place in 2018. RO Plant revenue is budgeted to increase \$50 thousand, or 18.5% over forecasted 2017 levels, and will be offset by operating expenses of the same amount.



### **Operating Expenses**

The 2018 operating expense budget reflects a 4.7% overall decrease from 2017 budgeted operating expenses. Expenditures of \$11.4 million are budgeted to be \$1.2 million higher than estimated 2017 expenses of \$10.2 million. One of the main factors driving the increase is the anticipated full utilization of ACWWA's treated water complement from ECCV. During 2017, utilization has been approximately 22.2% lower than budget because the connection to ECCV was shut down for three months to construct the new flow meter vault on Himalaya. Additionally, several repair and maintenance projects are scheduled that will cause expenses to be higher in 2018.

### **Office Expenses**

The budget for 2018 office expenses includes a 3% estimated increase in year-over-year costs, and includes \$20 thousand for document manage software, resulting in an overall increase of \$18 thousand, or 6.6% from the 2017 budget, and an increase of \$24 thousand, or 9.0% from 2017 estimated.

### **Salaries and Benefits**

The 2018 salaries and benefits budget reflects an increase of .49% from the 2017 budget and includes 38 FTE for the entire year. Compared to 2017 estimated costs, salaries and benefits expense in 2018 will be \$227 thousand higher due to full staffing, and increases in line items including a 3.5% overall salary adjustment, and a 5.5% increase in medical benefit premiums, partially offset by a 2.4% reduction in ACWWA's contributions to the employee retirement plan.



Salaries and benefit expense is expended by department as listed below

**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 2018;
- 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 2018 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.

## **Insurance**

General liability, property, and workers' compensation insurance premiums are expected to increase an average of 5% from 2017 levels in 2018.

## **Legal Fees**

Legal fees are projected to increase 19.6% compared to 2017 estimated, as there is potential for litigation on several legal matters. The 2018 budget of \$355 thousand is \$3 thousand less than the 2017 legal fee budget.

## **Professional Fees**

The 2018 budget for professional fees of \$707 thousand is \$75,000, or 9.6%, less than the 2017 budget. Compared to 2017 estimated fees, 2018 expenses reflect an increase of \$75 thousand to fund several studies including a water loss study and an evaluation of the Elkhorn booster pump station.

## **Repairs and Maintenance**

The repairs and maintenance budget of \$1.5 million reflects an increase of \$245 thousand over 2017 estimated expenses and includes \$100 thousand for additional enhanced water main cleaning in 2018, which will contribute to improving water quality. The budget also includes \$200,000 for sewer line cleaning and inspection, as well as normal repair and maintenance activities and line break repairs. The 2018 budget is \$106 thousand higher than the 2017 budget.

## **Operational Expenses**

Under operational expenses, the cost of treatment for the ACWWA Flow water supply is projected to increase \$219 thousand, or 21.2% from the 2017 forecast amount. Costs for 2017 are lower than anticipated, as the ECCV connection was shut down for three months in the spring to complete the flow meter vault at Arapahoe Road and Himalaya. This category also includes CWSD's \$323 thousand share of the JWPP expenses, which is offset by a corresponding revenue amount. Operational expenses are budgeted to be \$2.4 million, an increase of \$330 thousand over 2017 estimated costs. Compared to the 2017 budget, 2018 expenses are expected to decrease by \$592 thousand.

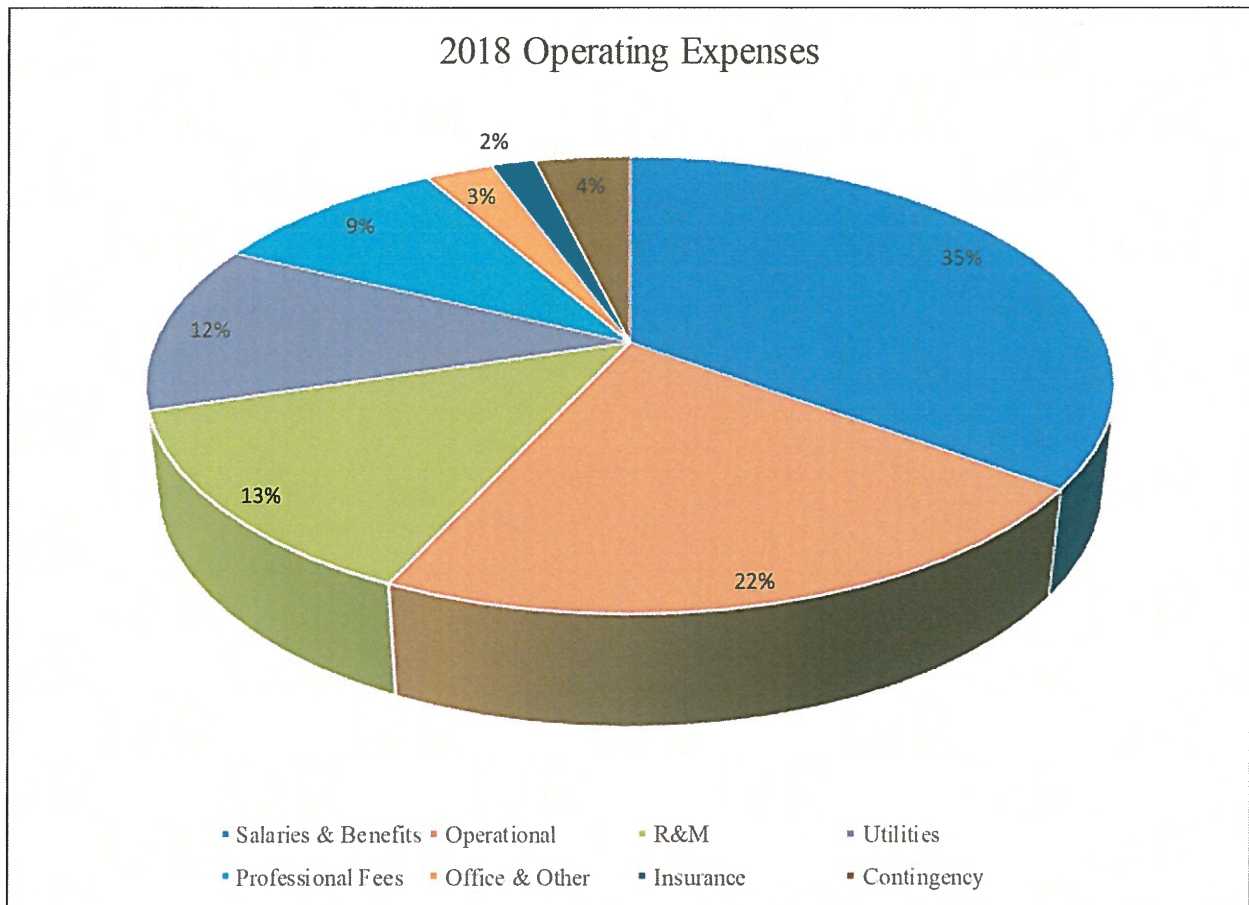
## **Other Supplies and Expense**

There are no increases budgeted in this category.

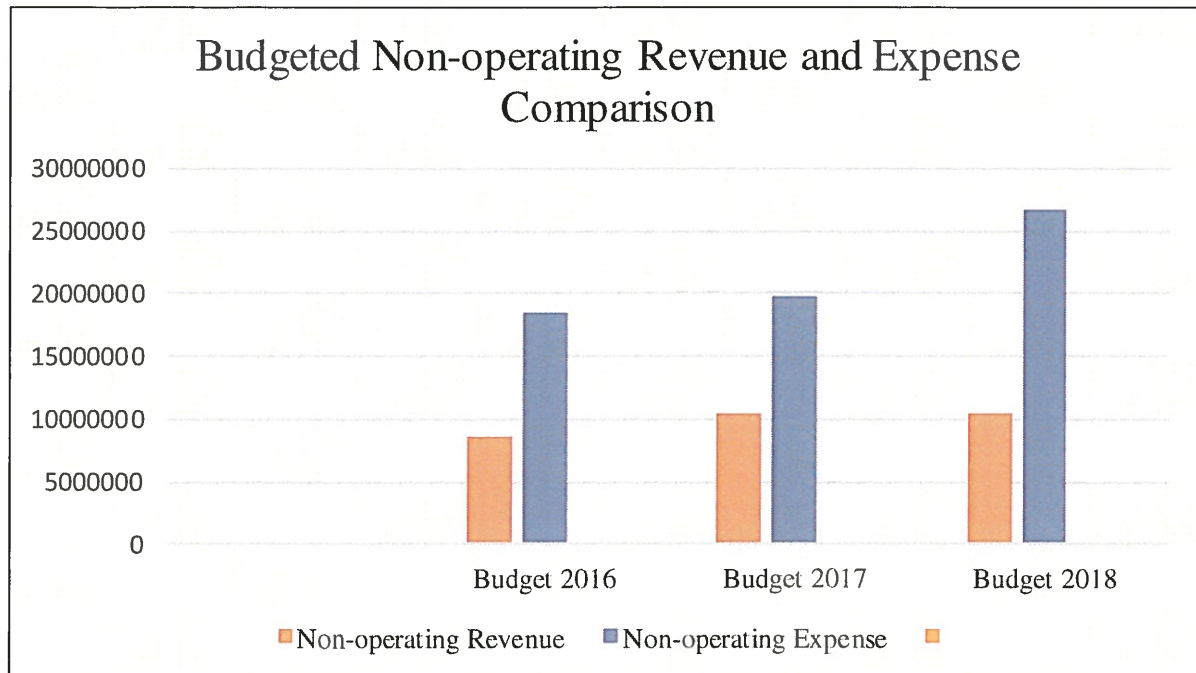
## **Contingency**

A contingency budget of \$425 thousand was included to fund unanticipated expenses such as major emergency system repairs. ACWWA has experienced several major line breaks in the third and fourth quarters of 2017 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 increase \$648 thousand, or 2.3% from estimated 2017 revenue. The 2018 budget reflects a 0.5% decrease from the 2017 budget, as lower tap fees will be offset by increased investment income.

#### **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 is expected to increase investment income by \$205 thousand over estimated 2017 revenue, and reflects an increase of \$243 thousand from the 2017 budget.

#### **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 2018, resulting in a smaller subsidy.

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

Both water and wastewater tap sales are anticipated to be strong again in 2018 as the service area continues to build out, and are budgeted to increase 6.6% (\$503 thousand) over estimated 2017 sales. The 2018 projected tap sales of 225 is expected to be \$270 thousand, or 3.2%, less than the budget for 2017.



### **Non-operating Expenses**

Non-operating expenses are budgeted to increase approximately \$10.0 million, or 59.1%, over 2017 estimated expenditures because of \$16.7 million in capital spending, including \$3.2 million carried forward from 2017. The 2018 budgeted amount is \$7.0 million higher than the 2017 budget, and includes \$7.5 million for the ECCV NWTP expansion.

### **Debt Service**

Debt service is expected to decrease \$113 thousand, or 1.1% in 2018, following the 2017 refunding of the 2007 bonds. ACWWA will realize greater interest rate savings from the refunding in years 2018 – 2022 seeing interest payments reduced by over \$650 thousand in each of those years, and then small increases of between \$14-53 thousand per year from 2022 through 2033.

### **Capital Outlay**

Of the \$16.7 million capital budgeted for 2018, \$3.2 million is carried over from the 2017 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 2018 budget for new capital projects is \$13.5 million, and includes \$7.5 million for ACWWA's share of the ECCV Northern Water Treatment Plant expansion, \$1.8 million for a filter unit at the LTCWRF, \$1.5 million for relining Chambers Reservoir, \$1 million for water rights adjudication, and \$700 thousand for the ACWWA Flow connecting main. A detailed list of 2018 capital projects can be found in §10.

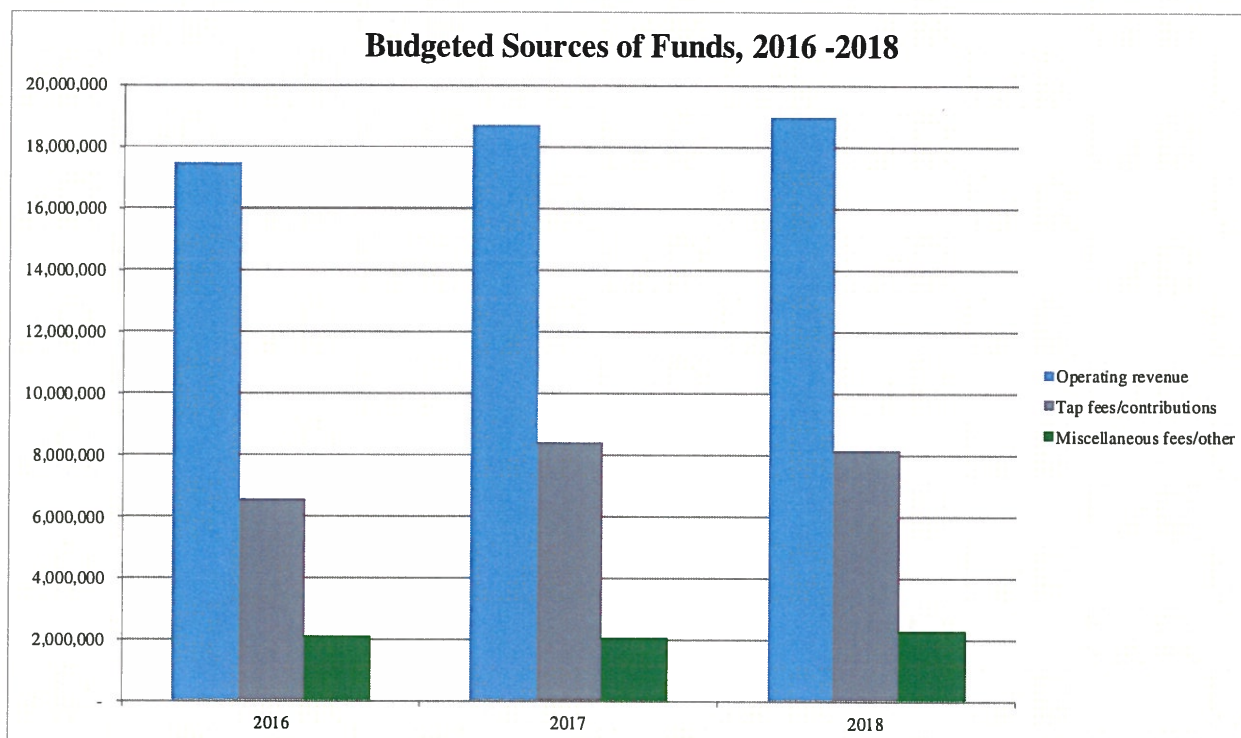
## **9.4 Long-range Financial Plan**

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).

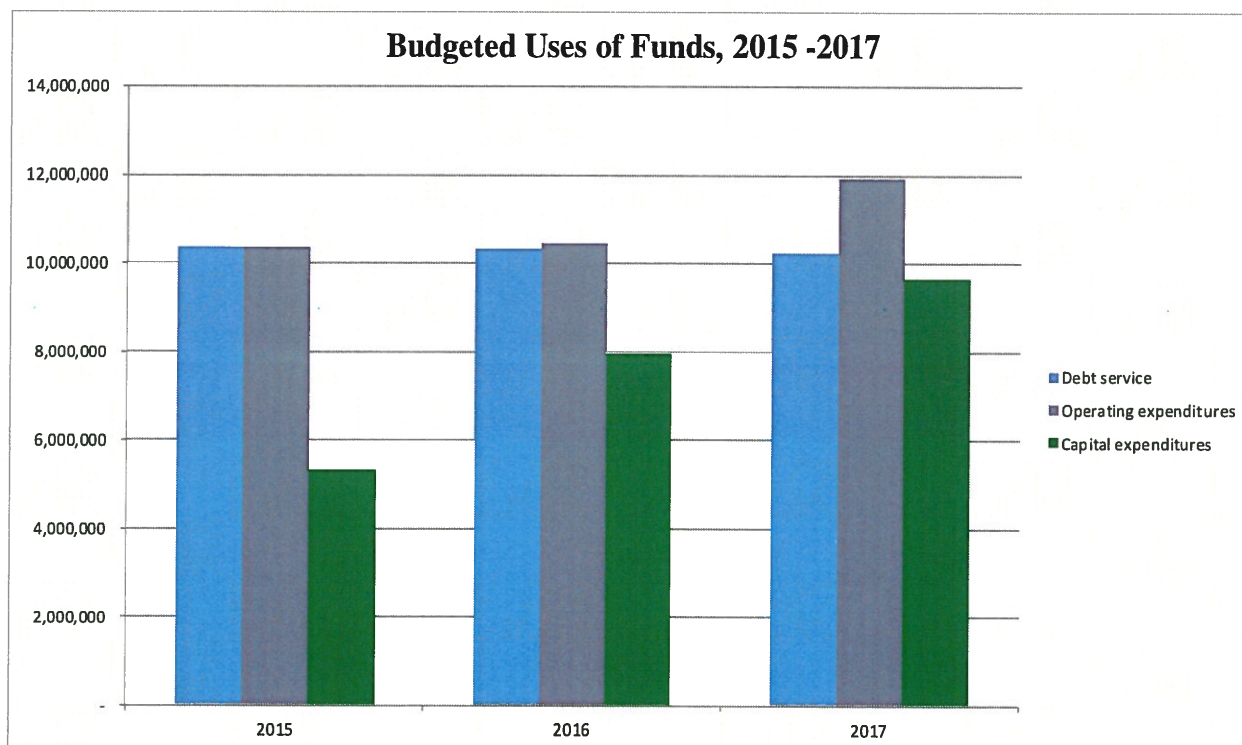
Based on financial trends through mid-2015, Carollo projected that ACWWA would need to raise water and wastewater rates 3% and 2%, respectively, each year to fund operations and projected capital needs. ACWWA does not have taxing powers and thus must fund capital projects through a combination of cash provided by rates and fees, and debt financing.

Because of higher than anticipated tap sales and irrigation water revenue in 2016 and 2017, ACWWA's water rate increase in 2018 is 2% rather than the expected 3%. Wastewater rates will also increase 2% for 2018. Some fixed fees will decrease or remain unchanged. Revenue in 2017 is forecasted to be below budget by \$501 thousand while expenses are projected to be under budget by \$4.8 million, resulting in a favorable budget variance of approximately \$4.3 million. The financial plan prepared by Carollo projected that ACWWA would need to issue debt in 2020 to fund \$18.8 million in capital improvements needed that year; however, the better than expected results in 2016-2017 could mitigate the need for additional debt. ACWWA plans to update the financial model with 2017 actual and 2018 projected revenues and expenses, and will review the long-range forecast at that time.

## 9.5 Sources and Uses of Funds (Budgeted)



**Budgeted Sources of Funds 2015 – 2018**



**Budgeted Uses of Funds 2015 -2018**

## **10. 2018 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 2018 capital improvement budget are listed in this section.

Projects have been ranked by priority as follows:

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

This includes the anticipated 2018 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 2018:

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

The estimated cost for ACWWA Flow water rights adjudication for 2018 is \$1,000,000.

### **ACWWA Flow Project Development**

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 of this project is 2018 is \$150,000.

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

ACWAA 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 2018 is \$300,000.

#### **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, ACWAA has certain obligations to fund operational and capital costs. ACWWA has budgeted \$45,000 in 2018 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.

#### **ECCV Northern Project Phase 2 Expansion - 2018 Design and Construction**

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

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 of 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 will begin in 2017, 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 the 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 has started in 2017, and design will continue in 2018, 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 2018 are \$7,462,000.



### **IT- Compliance Management Software – water & wastewater compliance reporting:**

ACWWA has budgeted \$350,000 to purchase a compliance reporting software system that will allow the water and wastewater field operations to automate data collection, in order to streamline regulatory compliance practices and improve data integrity. The software allows for data collection in the field with compliance reporting, trending and review of necessary water and wastewater sampling data.

### **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. ACWAA has budgeted \$67,000 for this, the third year of a multi-year effort to remove and replace the existing transmitters

### **Chambers Pump Station – 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 is being considered at a cost of \$1,500,000.

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

ACWWA has budgeted \$75,000 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.

### **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.

### **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 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.

### **Security Upgrades**

ACWWA has been evaluating the security of all its facilities, with assistance from the Arapahoe County Sheriff's Office. Security enhancements began in 2017, and \$50,000 has been budgeted for additional upgrades in 2018.

### **Joint Water Purification Plant (JWPP) – RO Reconversion Project**

Options for converting the JWPP back to the reverse osmosis (RO) water treatment process are currently being reviewed. This is a joint project with Cottonwood Water and Sanitation District (CWSD) and ACWWA. Possible reconversion of the JWPP to a blended treatment of reverse osmosis and microfiltration, along with a selenium treatment process, is being evaluated. Included in the 2018 budget is \$500,000 for proposal study/design.

### **JWPP – Microfiltration (MF) system – replacement of one set of Pall MF Filters:**

During the evaluation of the existing equipment at the JWPP, one set of the microfiltration filters was determined to be operating ineffectively. The replacement of this filtration unit is needed, as the operation of the JWPP requires the use of reliable MF units. The estimated \$200,000 cost of the replacement will be shared between ACWWA and CWSD.

### **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 2018.

The costs for the 500 acre-feet of storage in the South Platte Storage reservoir is \$1,900,000.

**ACWWA Connecting Main Project – Piney Creek and Liverpool Metro Open space crossing to East Euclid Drive:**

This extension of the existing 24" pipeline along Arapahoe Road will install the remaining pipeline to the area of East Euclid Drive and Liverpool Street. The pipeline will cross through the Liverpool Metro District Open Space area, to tie into the recently (2017) installed piping that extended under Piney Creek. The timing of this initial section of pipeline was accelerated due to the inclusion of the pipe construction with the Urban Drainage and Flood Control District (UDFCD) and SEMSWA's joint project to stabilize this stretch of Piney Creek. By joining the project, ACWWA realized a cost savings and the partnership allowed ACWWA to minimize the disturbance in this area. The pipeline crossing in this area is a transmission-only pipeline that will help ACWWA increase the physical capacity of this connection to approximately 4.5 MGD and allow ACWWA to deliver its current flow from the project of 2.25 MGD flow. The 2018 project will allow the newly installed Piney Creek Crossing to complete the connection to ECCV distribution system in Liverpool Street.

The construction costs are estimated to be \$700,000 in 2018.

**LTC WRF – AWT New Filter No. 4:**

**System benefit:** The existing filters have been experiencing fouling, requiring taking a filter offline to complete a chemical soak to remove accumulated chemical fouling. An additional filter will provide the plant operations staff with additional redundancy to reduce the potential of having to discharge 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.

**System Risk:** Loss of adequate filtration capacity. If two filters are offline due to fouling or damage, then filtration capacity will not be adequate to filter all secondary effluent. This could result in discharge permit violations, shut down of the reuse system, and need to divert raw wastewater to Metro.

The construction costs are estimated to be \$1,800,000 in 2018.

**2018 Unallocated Projects Budget**

The unallocated projects budget amount is based on previous budget years and the expenses incurred those years 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 - 2018**

### **Maintenance Department/ Fleet Management:**

ACWAA plans to replace four older, higher-mileage vehicles and purchase a landscaping seeder to help with aesthetics and erosion control at an estimated cost of \$155,000.

### **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 2018. These purchases can be funded from the LTCWRF Reserve Fund.



## FINANCIAL SUMMARIES AND NOTES



## 11. Board Summary Forecasted 2018 Combined Operations

### ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

#### BOARD SUMMARY

#### FORECASTED 2018 BUDGET AS PROPOSED

#### WITH 2016 ACTUAL AND 2017 ESTIMATED

For the Years Ended and Ending December 31

	ACTUAL 12/31/16	BUDGET 2017	ESTIMATED 2017	PROPOSED 2018
BEGINNING FUNDS AVAILABLE	\$ 33,218,058	\$ 34,818,836	\$ 42,557,683	\$ 44,481,238
REVENUES				
Operating revenues:				
Water Charges	8,507,027	8,632,563	8,746,021	8,895,375
Sewer Charges	5,561,283	5,401,709	5,548,990	5,616,281
Fire Lines	1,039,277	1,058,942	1,071,421	1,092,849
Irrigation	2,492,732	2,129,610	2,535,976	2,213,386
Fees for Services	815,513	877,508	854,160	849,008
RO Plant Revenue	285,006	692,084	273,334	323,755
	18,700,837	18,792,417	19,029,903	18,990,653
Non-operating revenues:				
Interest Income	42,804	52,000	90,000	295,000
Miscellaneous Revenue	2,075,947	2,030,328	2,027,113	2,006,541
Tap Fees and Contributions	9,319,951	8,426,598	7,653,400	8,156,242
	11,438,702	10,508,927	9,770,513	10,457,783
Total revenues	30,139,539	29,301,343	28,800,416	29,448,436
Total funds available	63,357,597	64,120,179	71,358,098	73,929,674
EXPENDITURES				
Office Expense	204,380	271,795	265,590	289,694
Salaries and Benefits	3,666,725	3,901,825	3,694,006	3,920,975
Insurance	176,991	204,837	191,557	193,400
Legal	268,640	358,000	296,944	355,000
Professional Fees	721,527	781,494	631,260	706,856
Repairs and Maintenance	1,153,403	1,389,993	1,251,421	1,496,054
Operational	1,880,148	3,022,363	2,099,941	2,430,469
Utilities	1,232,138	1,373,558	1,274,160	1,332,089
Contract Services	212,583	261,453	239,110	250,500
Bad Debt Expense	-	500	500	500
Other Supplies and Expense	11,400	14,400	14,400	14,400
Debt Service	7,190,348	10,229,901	10,229,901	10,116,558
Capital Outlay	4,081,630	9,638,000	6,438,071	16,650,660
Contingency	-	400,000	250,000	425,000
Total expenditures	20,799,914	31,848,119	26,876,861	38,182,154
Total expenditures and transfers out requiring appropriation	20,799,914	31,848,119	26,876,861	38,182,154
ENDING FUNDS AVAILABLE	\$ 42,557,683	\$ 32,272,060	\$ 44,481,238	\$ 35,747,520

## 12. Board Summary Forecasted 2018 Budget Water Operations

### ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

#### WATER OPERATIONS

#### FORECASTED 2018 BUDGET AS PROPOSED

#### WITH 2016 ACTUAL AND 2017 ESTIMATED

For the Years Ended and Ending December 31

	ACTUAL 12/31/16	BUDGET 2017	ESTIMATED 2017	PROPOSED 2018
<b>REVENUES</b>				
Operating revenues:				
Water Charges	8,507,027	8,632,563	8,746,021	8,895,375
Fire Lines	1,039,277	1,058,942	1,071,421	1,092,849
Irrigation	2,492,732	2,129,610	2,535,976	2,213,386
Fees for Services	412,188	438,665	456,807	448,912
Antelope Surcharge				-
RO Plant Revenue	285,006	692,084	273,334	323,755
Total operating revenues	12,736,229	12,951,864	13,083,560	12,974,276
<b>EXPENSES</b>				
Operating expenses:				
Office Expense	103,129	215,117	210,984	229,938
Salaries and Benefits	2,207,755	2,382,385	2,205,528	2,372,041
Insurance	112,719	136,074	130,294	129,074
Legal	224,790	291,360	251,190	289,200
Professional Fees	540,012	631,280	492,037	512,595
Repairs and Maintenance	822,910	1,001,775	857,213	885,340
Operational	1,388,557	2,521,271	1,697,682	2,008,683
Utilities	752,837	851,385	794,565	830,691
Contract Services	22,834	88,828	69,829	76,140
Bad Debt Expense	-	360	360	360
Other Supplies and Expense	8,208	10,368	10,368	10,368
Contingency	-	288,000	180,000	306,000
Total operating expenditures	6,183,749	8,418,204	6,900,049	7,650,430
Operating Income (not including depreciation)	6,552,479	4,533,660	6,183,511	5,323,847
Non-operating revenues:				
Interest Income	30,819	37,440	64,800	212,400
Miscellaneous Revenue	2,071,359	2,027,312	2,024,375	2,003,731
Tap Fees and Contributions	6,535,385	6,624,918	5,791,664	6,379,818
Total non-operating revenues	8,637,563	8,689,671	7,880,839	8,595,949
Non-operating expenses:				
Debt Service	6,412,213	8,968,226	8,968,226	9,514,903
Capital Outlay	3,841,552	6,877,000	3,397,231	11,250,660
Capital Outlay - Carryforward		2,397,000	2,700,000	3,200,000
Total non-operating expenses	10,253,765	18,242,226	15,065,457	23,965,563
NET INCOME (not including depreciation)	\$ 4,936,277	\$ (5,018,895)	\$ (1,001,108)	\$ (10,045,768)

### 13. Board Summary Forecasted 2018 Sewer Operations

**ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY**  
**SEWER OPERATIONS**  
**FORECASTED 2017 BUDGET AS PROPOSED**  
**WITH 2015 ACTUAL AND 2016 ESTIMATED**  
**For the Years Ended and Ending December 31**

	ACTUAL 12/31/16	BUDGET 2017	ESTIMATED 2017	PROPOSED 2018
<b>REVENUES</b>				
Operating revenues:				
Sewer Charges	5,561,283	5,401,709	5,548,990	5,616,281
Fees for Services	403,325	438,844	397,353	400,096
Total operating revenues	5,964,609	5,840,553	5,946,343	6,016,377
<b>EXPENSES</b>				
Operating expenses:				
Office Expense	42,737	56,678	54,606	59,756
Salaries and Benefits	1,458,970	1,519,440	1,488,478	1,548,934
Insurance	55,376	68,763	61,263	64,326
Legal	43,850	66,640	45,754	65,800
Professional Fees	181,515	150,214	139,223	194,261
Repairs and Maintenance	330,494	388,218	394,208	610,714
Operational	491,592	501,092	402,259	421,786
Utilities	479,301	522,173	479,595	501,398
Contract Services	199,101	172,625	169,282	174,360
Bad Debt Expense	-	140	140	140
Other Supplies and Expense	3,192	4,032	4,032	4,032
Contingency	-	112,000	70,000	119,000
Total operating expenditures	3,286,128	3,562,014	3,308,840	3,764,506
Operating Income (not including depreciation)	2,678,480	2,278,539	2,637,503	2,251,870
Non-operating revenues:				
Interest Income	11,985	14,560	25,200	82,600
Miscellaneous Revenue	4,588	3,016	2,738	2,810
Tap Fees and Contributions	2,784,566	1,801,680	1,861,736	1,776,424
Total non-operating revenues	2,801,139	1,819,256	1,889,674	1,861,834
Non-operating expenses:				
Debt Service	601,998	1,261,675	1,261,675	601,655
Capital Outlay	492,096	364,000	489,040	2,200,000
Carry-forward Capital	-	-	-	-
Total non-operating expenses	1,094,094	1,625,675	1,750,715	2,801,655
NET INCOME (not including depreciation)	\$ 4,385,525	\$ 2,472,120	\$ 2,776,463	\$ 1,312,050



## **14. Budget Notes**

### **14.1 Revenue**

#### **14.1.1 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.

#### **14.1.2 Sewer Charges**

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

#### **14.1.3 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.

#### **14.1.4 Irrigation**

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

#### **14.1.5 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.

#### **14.1.6 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

#### **14.1.7 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.

#### **14.1.8 Miscellaneous Revenue**

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

### **14.1.9 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 240 in 2018, with Cottonwood wastewater tap sales projected at 150.

## **14.2 Expenses**

### **14.2.1 Office Expenses**

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

### **14.2.2 Salaries and Benefits Expenses**

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

### **14.2.3 Insurance Expenses**

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

### **14.2.4 Legal Fees**

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

### **14.2.5 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.

### **14.2.6 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.

### **14.2.7 Operational**

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

#### **14.2.8 Utilities**

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

#### **14.2.9 Contract Services**

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

#### **14.2.10 Bad Debt**

This is an estimate for writing off uncollectible accounts.

#### **14.2.11 Other Supplies and Expenses**

This line includes Board of Directors expense.

#### **14.2.12 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.

#### **14.2.13 Debt Service**

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

#### **14.2.14 Capital Outlay**

This item includes budgeted capital projects and equipment.

## 15. Budgeted 2018 Capital Outlay

### Arapahoe County Water & Wastewater Authority Capital Improvement Program Budget For the year ending December 31, 2018

<u>Project</u>	<u>Budgeted Cost</u>
<b><u>Priority 1 Projects</u></b>	
Adjudication Costs	\$ 1,000,000
ECCV RO Facility Expansion	7,462,000
Chambers Reservoir Relining	1,500,000
LTCWRF AWT Filter Unit	1,800,000
ACWWA Flow Project Development	150,000
Water Development - CCPWA	45,000
Integrated Master Planning	300,000
Security Upgrades	50,000
Water Operations Compliance Software	30,000
JWPP Pall Replacement - ACWWA share 63.33%	126,660
Water Meter Upgrades	67,000
Mixing System - IMG Storage Tank	40,000
Chloramine Conversion Design	75,000
Chambers Reservoir Pump Station Design	50,000
Water and Wastewater Asset Replacement	400,000
Total Priority 1 Capital	13,095,660
<b><u>Carryforward Projects (from 2017 Budget)</u></b>	
Storage reservoir	1,900,000
ACWWA Connecting Pipeline - Phase 2B	700,000
JWPP RO Reconversion	500,000
Smith 2 Well-site improvements	50,000
Integrated Master Plan - Water Supply	50,000
Total carryforward	3,200,000
Capital Equipment Outlay	355,000
Total 2018 Budgeted Capital Expenditures	\$ 16,650,660

# 16. Schedule of Debt Service Requirements to Maturity

## ARAPAHOE COUNTY WATER AND WASTEWATER AUTHORITY

### SCHEDULE OF DEBT SERVICE REQUIREMENTS TO MATURITY

December 31, 2017

	\$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 Water And Wastewater Revenue Bonds, Series 2017 Dated September 7, 2017 Variable Interest Rate Principal And Interest Due December 1		\$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		Total Debt Service Requirements		
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	
2018	415,000	587,800	35,000	566,655	1,790,000	5,546,776	1,055,000	120,327	3,295,000	6,821,558	10,116,558
2019	420,000	579,500	145,000	458,750	1,845,000	5,459,155	1,080,000	97,433	3,490,000	6,594,838	10,084,838
2020	435,000	566,900	130,000	455,850	1,915,000	5,364,230	1,110,000	73,997	3,590,000	6,460,977	10,050,977
2021	450,000	553,850	130,000	453,250	1,980,000	5,262,831	1,135,000	49,910	3,695,000	6,319,841	10,014,841
2022	465,000	540,350	705,000	448,050	2,050,000	5,155,020	1,145,000	25,281	4,365,000	6,168,701	10,533,701
2023	975,000	526,400	860,000	419,850	2,120,000	5,040,322	-	-	3,955,000	5,986,572	9,941,572
2024	1,015,000	487,400	900,000	385,450	2,200,000	4,918,528	-	-	4,115,000	5,791,378	9,906,378
2025	1,055,000	446,800	915,000	367,450	2,285,000	4,788,838	-	-	4,255,000	5,603,088	9,858,088
2026	1,100,000	404,600	950,000	330,850	2,380,000	4,641,913	-	-	4,430,000	5,377,363	9,807,363
2027	1,140,000	360,600	1,000,000	292,850	2,480,000	4,488,879	-	-	4,620,000	5,142,329	9,762,329
2028	1,190,000	315,000	1,035,000	252,850	2,585,000	4,329,415	-	-	4,810,000	4,897,265	9,707,265
2029	1,235,000	267,400	1,085,000	211,450	2,690,000	4,163,199	-	-	5,010,000	4,642,049	9,652,049
2030	1,285,000	218,000	1,135,000	168,050	2,805,000	3,990,232	-	-	5,225,000	4,376,282	9,601,282
2031	1,335,000	166,600	1,180,000	122,650	2,925,000	3,807,066	-	-	5,440,000	4,096,316	9,536,316
2032	1,385,000	113,200	1,235,000	75,450	3,050,000	3,616,063	-	-	5,670,000	3,804,713	9,474,713
2033	1,445,000	57,800	1,280,000	38,400	3,175,000	3,416,898	-	-	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	\$ 15,345,000	\$ 6,192,200	\$ 12,720,000	\$ 5,047,855	\$ 86,460,000	\$ 86,793,416	\$ 5,525,000	\$ 366,948	\$ 120,050,000	\$ 98,400,419	\$ 218,450,419



## 17. Historical Rate Tables

### Volume charges (per 1,000 gallons)

	Water And Irrigation			Sewer		
	Amount	\$ Increase	% Increase	Amount	\$ Increase	% Increase
2011	\$ 3.18	\$ 0.15	5.0%	\$ 4.10	\$ -	0.0%
2012	3.28	0.10	3.1%	4.22	0.12	2.8%
2013	3.38	0.10	3.0%	4.35	0.13	3.0%
2014	3.48	0.10	3.0%	4.48	0.13	2.9%
2015	3.58	0.10	2.9%	4.61	0.13	2.8%
2016	3.69	0.11	3.1%	4.80	0.19	4.0%
2017	3.76	0.07	2.0%	4.90	0.10	2.0%
Average			3.1			2.5

### Service fees

	Water And Irrigation			Sewer		
	Amount	\$ Increase	% Increase	Amount	\$ Increase	% Increase
2011	\$ 34.72	\$ -	0.0%	\$ 18.20	\$ -	0.0%
2012	37.55	2.83	8.2%	18.75	0.55	2.9%
2013	38.68	1.13	3.0%	19.30	0.55	2.8%
2014	39.84	1.16	3.0%	19.88	0.58	2.9%
2015	41.04	1.20	3.0%	20.48	0.60	2.9%
2016	42.27	1.23	3.0%	21.30	0.82	3.8%
2017	43.12	0.85	2.0%	21.73	0.43	2.0%
Average			3.2			2.5

### Tap Fees

	Water And Irrigation			Sewer		
	Amount	\$ Increase	% Increase	Amount	\$ Increase	% Increase
2011	\$ 22,228	\$ 1,028	4.6%	\$ 5,678	\$ 263	4.6%
2012	23,306	1,078	4.8%	5,950	272	4.6%
2013	24,000	694	3.0%	6,128	178	2.9%
2014	24,725	725	3.0%	6,312	184	2.9%
2015	25,467	742	3.0%	6,501	189	2.9%
2016	25,690	223	0.9%	7,360	859	11.7%
2017	26,204	514	2.0%	7,507	147	2.0%
Average			3.0%			4.5%

## 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 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, and vested sick leave benefits is recorded as a long-term liability.

### **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 2018 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 debt in 2018, but does intend to refund the Series 2007 bonds.

##### **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, 2017 by the Series 2017 Water and Wastewater Revenue Refunding Bonds in the amount of \$16,475,000 to take advantage of lower interest rates.

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

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, 2018 - \$86,460,000
- Water and Wastewater Revenue Bonds, Series 2012 Bonds, original amount \$5,525,000; amount outstanding January 1, 2018 - \$5,525,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2016 Bonds, original amount \$16,475,000; amount outstanding January 1, 2018 - \$15,345,000.
- Water and Wastewater Revenue Refunding Bonds, Series 2017 Bonds, original amount \$12,720,000; amount outstanding January 1, 2018 - \$12,720,000

#### **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.

### **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 2017-06**

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 2018, AND ENDING ON THE LAST DAY OF DECEMBER 2018.

WHEREAS, the proposed 2018 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 November 8, 2017 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: 2018 Budget Revenues. That the estimated revenues for each fund set out in the budget are accepted and approved.

Section 2: 2018 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, 2017, ending fund balance of the Operating Fund, the exact amount to be determined as part of the audit of the December 31, 2017 financial statements, is designated as a general reserve for future contingencies.


Section 4: Adoption of Budget for 2018. 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 2018.

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.

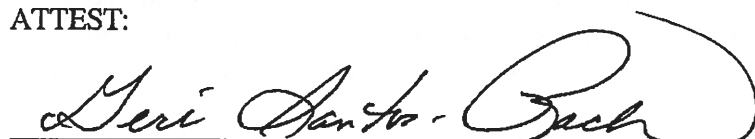
Section 6: Appropriations. That the amounts set forth as expenditures and balances remaining, as specifically allocated in the budget are hereby appropriated from the revenue of each fund, to each fund, for the purposes stated and no other.

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 8<sup>th</sup> day of November 2017.

  
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President

ATTEST:

  
\_\_\_\_\_  
Secretary