

2017

Denver Water



Wirth, Richard A.

12/31/2017

BOARD OF WATER COMMISSIONERS
CITY AND COUNTY OF DENVER, COLORADO

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August 20, 2018

Dear Reader:

Information contained in this Disclosure Statement for the year ended December 31, 2017 has been prepared to comply with Rule 15c2-12 of the U.S. Securities and Exchange Commission as amended through the date hereof and Denver Water Debt Disclosure Policy, expected to be enacted in 2018, which further commits Denver Water (“Board”) to providing ongoing information about the Board’s financial condition. It also contains certain unaudited and prospective information as noted. The Disclosure Statement for the year ended December 31, 2017 must be read in conjunction with the Board’s Comprehensive Annual Financial Report (“CAFR”). It is the practice of the Board to separately file Event Notices on the Electronic Municipal Market Access (“EMMA”) website.

In May the Board issued \$142.7 million Series 2017A Master Resolution Water Revenue Green Bonds and \$41.8 million Series 2017B Master Resolution Water Revenue Bonds. The Series 2017A bond proceeds are being used to finance the redevelopment of Denver Water’s main operating and administrative complex. The bond was designated green because the project was designed with environmentally beneficial features including, following “LEED® (Leadership in Energy & Environmental Design) standards, incorporating “One Water” concepts, and recycling of construction and demolition debris. The Series 2017B bond proceeds were used to finance other additions and improvements to the water system operated by the Board. Both series bonds were issued pursuant to the amended and restated Master Resolution (3/22/17) and the Series 2017A-B Supplemental Bond Resolution.

The information contained in this Disclosure Statement is current as of December 31, 2017, or as otherwise indicated. Nothing contained in any continuing disclosure undertaking or this Disclosure Statement is, or should be construed as, a representation by any person, including the Board, that this Disclosure Statement includes all information that may be material to a decision to invest in, hold or dispose of any of the securities with respect to which this Disclosure Statement is provided, or any other securities of the Board. Nothing contained in this Disclosure Statement obligates the Board to update any of the financial information or operating data contained in this Disclosure Statement.

This Disclosure Statement contains statements relating to future results that are “forward-looking statements.” Words such as “expects,” “anticipates,” “intends,” “plans,” “projects,” “estimate,” or “propose” and similar expressions or variations of such words are intended to identify forward-looking statements. Such statements are based on facts and circumstances currently known to the Board and consequently, forward-looking statements are inherently subject to risks and uncertainties. The actual results may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Disclosure Statement. The Board has no obligation to revise or update any forward-looking statements to reflect any event or circumstance that may arise after the date of this Disclosure Statement.

For those who seek additional information about the Board’s 2017 transactions or other financings, the Official Statements and/or relevant Event Disclosures can be found online in the Electronic Municipal Market Access system, or EMMA® at <http://emma.msrb.org>, funded and operated by the Municipal Securities Rulemaking Board, or may be obtained by calling the Treasurer at (303) 628-6410.

Please contact my office if you have questions about the information contained within this Disclosure Statement for the Year Ended December 31, 2017.

Sincerely,
Angela Bricmont
Chief Finance Officer

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OFFICIALS

BOARD OF WATER COMMISSIONERS

Paula Herzmark, President Executive Director of the Denver Health Foundation	<i>Commissioner since April 2009; Term expires July 2019</i>
John Lucero, First Vice President Formerly Deputy Director, Mayor's Office of Economic Dev. Served as Broker Associate at Lucero Real Estate, Inc.	<i>Commissioner since July 2007 Term expires July 2021</i>
Greg Austin, Vice President Former Partner, Holland & Hart LLP	<i>Commissioner since July 2009 Term expires July 2019</i>
Gary Reiff, Vice President Chief Legal Officer, UC Health	<i>Commissioner since September 2017 Term expires July 2023</i>
Craig Jones, Vice President Managing Director of The Colony Group's Rocky Mountain Region	<i>Commissioner since October 2017 Term expires July 2023</i>

MANAGER AND STAFF

Jim Lochhead	CEO/Manager
Julie Anderson	Chief of Staff
Angela Bricmont	Chief Finance Officer
Christopher R. Dermody	Chief Information Officer
Gail Cagle	Chief Human Resources Officer
Brian Good	Chief Administrative Officer
Mike King	Chief of External Affairs
Robert J. Mahoney	Chief Engineering Officer
Tom Roode	Chief Operations & Maintenance Officer
Patricia L. Wells	General Counsel

BOARD OF WATER COMMISSIONERS
CITY AND COUNTY OF DENVER, COLORADO

THE SYSTEM

General

Denver Water is the largest and oldest supplier of water in the State and one of the largest water suppliers in the western United States. Denver Water is the third largest public landowner in the State. Denver Water was established in 1918 after Denver residents voted to buy the water system from a private company. Denver Water provides water in an area covering the boundaries of the City and many of its suburbs, constituting approximately 335 square miles with a treated and raw water customer base of approximately 1.4 million people (approximately ¼ of the residents of the State). The combined service area includes the service areas of 66 treated water distributors in the Denver metropolitan area. Denver Water also provides treated and raw water within the metropolitan area outside of its service area under several contracts with fixed contract amounts.

Denver Water's primary water sources include: The South Platte River, Blue River, Williams Fork River and Fraser River watersheds. Other water sources include: The South Boulder Creek, Ralston Creek and Bear Creek watersheds. The System has more than 3,100 miles of water mains (pipelines), 26 pumping stations, 13 raw water reservoirs and 30 underground reservoirs. Three water treatment plants (Marston, Moffat and Foothills) have a combined treatment capacity of 715 million gallons per day. In the past five years, the maximum daily consumption of the System has not exceeded 364.9 million gallons per day. In addition, the System also has a recycled water treatment plant with 45 million gallons per day capacity.

Denver Water's treated water use is divided between: single-family and small multi-family homes (40%), business and industry (29%), irrigation (4%), City and County of Denver (2%) and water for resale (25%). Set forth in the following table is a summary of basic statistical data relating to the System for the past five years.

Statistical Summary of the System

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Service area population (treated water only)	1,161,000	1,172,000	1,210,000	1,249,000	1,275,000
Total treated water consumption (million gallons)	60,212.44	61,185.27	60,115.97	65,003.83	63,808.64
Average daily consumption (million gallons)	164.97	167.63	164.70	178.09	174.82
Average daily consumption per capita (gallons)	142	143	136	142	137
Maximum daily consumption (million gallons)	354.50	335.20	344.26	355.88	364.92
Maximum hour treated water use rate (million gallons)	591.00	603.60	499.30	592.00	628.50
Treated water pumped (million gallons)	34,895.37	36,088.94	27,677.64	26,767.23	29,446.76
Raw water storage capacity (acre-feet)	569,534	569,534	569,534	568,642	569,648
Replacement reservoir storage capacity (acre-feet)	122,432	122,432	122,432	122,432	125,993
Supply from South Platte River (acre-feet)	142,915	148,680	166,561	158,324	132,115
Supply from Blue River/Roberts Tunnel system (acre-feet)	111,564	77,765	39,801	40,795	86,124
Supply from Moffat system (acre-feet)	141,159	73,585	73,016	75,551	79,639
Treated water pumping capacity (millions of gallons per day)	1,007.9	1,007.9	1,048.4	1,048.4	1,048.4
Raw water pumping capacity (millions of gallons per day)	112.2	112.2	112.2	112.2	112.2
Treatment plant capacity (millions of gallons per day)	715.0	715.0	715.0	715.0	715.0
Treated water reservoir capacity (million gallons)	353.3	353.3	353.3	351.4	351.4
Raw water supply mains in miles (mountain collection system)	77.4	77.4	77.4	77.4	74.7
Raw water supply mains in miles (metropolitan Denver area)	52.3	54.0	55.0	54.3	57.1
Transmission & distribution mains (miles) - Inside City and Outside City Total Service Contract distributors	3,058.2	3,074.2	3,091.7	3,109.3	3,142.6
Recycled water transmission & distribution mains (miles)	63.1	67.0	67.2	73.5	70.4
Total active taps - end of year	312,228	312,908	312,653	312,653	312,746
Fire hydrants operated & maintained	19,818	20,030	20,269	20,556	20,967
Fire hydrants tested and repaired	25,177	29,506	18,093	23,909	25,990
Breaks in mains - Denver	222	191	262	225	275
Service leaks	719	337	542	503	508
Total employees (actual, not authorized)	1,064.9	1,064.6	1,057.3	1,118.6	1,033.3
Additions to capital assets (thousands of dollars)	93,421	125,374	131,054	112,832	182,880
Total long-term debt (thousands of dollars)	414,013	418,200	416,196	463,553	642,877

Denver Water does not depend on any one individual customer or any group of customers for a major portion of its revenue. With the exception of its sales to the City for its governmental and proprietary operations, the 10 largest retail customers accounted for approximately 4.11% of total water sales revenue received in 2017.

10 Largest Retail Customers – 2017

<u>Account Type</u>	<u>Consumption</u>		<u>Revenue</u>	
	Gallons Sold (000)	Percent of Total Gallons Sold	Water Revenue ¹ (000)	Percent of Total Water Revenue
Oil and Gas Company	657,254	1.05%	\$ 2,840	1.03%
Public School System	487,439	0.78%	1,844	0.67%
Public Utility	485,690	0.78%	1,904	0.69%
Housing Authority	360,808	0.58%	1,384	0.50%
Parks System	188,051	0.30%	1,178	0.43%
Retail Grocer - 1	165,822	0.27%	505	0.18%
State Government	147,471	0.24%	430	0.16%
Beverage Company	136,973	0.22%	383	0.14%
Retail Grocer - 2	126,702	0.20%	550	0.20%
Hospitals	109,598	0.18%	313	0.11%
Total of the 10 largest customers	2,865,808	4.60%	\$ 11,331	4.11%
Total sales of treated water	62,414,996		\$ 276,303	

¹This column represents actual billings made for treated water and private fire protection service during the year. The difference from amounts on an accrual basis is immaterial. In addition to the 10 largest accounts listed, Denver Water provided 2,075 million gallons of treated water to the City and County of Denver. Revenues from these sales were \$5.7 million.

Source: Denver Water Comprehensive Annual Financial Report for Fiscal Year 2017, Statistical Section.

Rate Structure

Under the Charter, the Board is empowered to set rates for all its customers. For customers within the City, these rates are to be as low as good service will permit, although sufficient to pay for operation, maintenance, reserves, debt service, additions, extension and improvements, including those reasonably required for the anticipated growth of the Denver metropolitan area, and to provide for Denver's general welfare. The rates also may be sufficient to provide for the accumulation of reserves for improvements of such magnitude that they cannot be acquired from the surplus revenues of a single year. Since its inception, the Board has set rates at a level sufficient to service its debt and to meet its expenses of operation and maintenance.

All Denver Water customers are grouped into customer classes (residential, non-residential, irrigation only, etc.), and by location of residence or facility, either inside City boundaries or outside City boundaries, and inside or outside the service area. The Board sets the rates for the Denver Water service area based on the results of the annual cost of service rate study. The cost of service rate study process assigns costs in proportion to the cost of providing the service to each customer class. The Charter specifies that rates for Outside City customers are to be based on the cost to provide service plus an additional amount.

There are two components to Denver Water's service rates: a monthly fixed fee based on the meter size and a volume rate charge per 1,000 gallons consumed. The volume charge structure varies based on the customer class. Customers are billed monthly. The monthly fixed fee recovers the cost of meter reading and billing, as well as a portion of general administrative expenses and a portion of capacity-related costs. The volume charge recovers the remainder

of operation and maintenance costs, annual payments on existing and proposed debt service and cash-funded capital expenditures.

The Board reviews and updates the financial plan annually to ensure revenue from rates is sufficient to meet annual expenditures. The rate adoption process includes a 30-day public comment period prior to a vote by the Board on proposed rates. Rates are effective 90 days after the successful adoption of the rates. Rate increases are generally adopted in December and implemented in April of the following year. In November 2017, Denver Water adopted a new rate schedule, effective March 1, 2018. Denver Water’s current rate structure is set forth on Page 19 – System Information, Rate Schedules and Water Supply.

Denver Water assesses a system development charge (the “System Development Charge”) for new connections to the System that represents the value of the capacity used by the new customer. The System Development Charge, instituted in 1973, assists in funding expansion-related capital expenditures and water rights costs. The System Development Charge applies to any applicant who is granted a license to take water through the System or through a system deriving its supply from Denver Water. This charge is assessed upon application for a new tap and is based on: (a) the gross square footage of a single family residential lot; (b) the number of units in a multi-family residential building; (c) the size of the connection (meter size) required for a non-residential building; and (d) the estimated acre-feet of water demand.

The following table shows Board-approved changes in total System water rate revenues and System Development Charge price changes for ¾ inch equivalent taps since 2008.

**Approved Water Rate Revenues and
System Development Charges**

<u>Water Rate Revenues Changes</u>		<u>System Development Charges (3/4" equivalent tap sizes)</u>	
<u>Effective Date</u>	<u>Increase in Revenues (000)</u>	<u>Effective Date</u>	<u>Incremental Increase⁽¹⁾ (%)</u>
2009	9.0	2009	5.4 ⁽²⁾
2010	6.0	2010	14.0
2011	9.5	2011	11.4
2012	5.5	2012	10.0
2013	2.5	2013	0.0
2014	3.5	2014	0.0
2015	2.2	2015	0.0
2016	3.8	2016	0.0
2017	3.0	2017	0.0
2018	3.0	2018	0.0

⁽¹⁾ Does not represent actual increases in water rate revenues, but instead reflects the projected increases for the next year in water rate revenues at the time the Board approved such changes based on approved rates and then-existing assumptions regarding growth and demand.

⁽²⁾ The reduction in System Development Charges in 2009 was the result of a comprehensive review of the customer water consumption and system reserve capacity assumptions used in the SDC pricing model.

The following table compares annual residential bills for Denver Water and other utilities in Colorado. Annual consumption is based on 115,000 gallons per year.

2017 Estimated Annual Residential Water Bills

<u>Municipality (Inside and Outside Municipal Boundries)</u>	<u>Annual Water Service and Consumption Charges</u>
Arapahoe	\$ 1,379.42
Colorado Springs	1,027.21
Erie	923.10
Aurora	778.63
Parker	756.09
Brighton	706.06
Denver Water Total Services	745.21
Thornton	667.98
Westminster	665.88
Golden	658.06
Northglenn	637.98
Louisville	595.24
Highlands Ranch	573.19
Denver Water Inside City	570.22
Boulder	543.74
Fort Collins	543.55
Arvada	482.36
Broomfield	472.06
Pueblo	381.14

Source Denver Water Rates reflect 2018 rates

Capital Improvements

General. For planning purposes, Denver Water classifies capital expenditures by the system that they support. Currently, there are six capital systems, four of which characterize Denver Water’s primary function of delivering quality water to its customers and two of which support service functions. The systems are: Collection, Distribution, Expansion, Operations Support, Treatment and Information Technology. Each system is further broken up by programs that specify unique activities and work that can be measured against key operational metrics. Expansion includes supply development and downstream reservoir programs. Collection programs are dams and reservoirs, the Treatment system is made up of the water treatment plants, and the Distribution system includes the main replacements, vaults, and conduit programs. The remaining two systems, Operations Support and Information Technology, provide services such as fleet, metal shop work, warehousing, and technology infrastructure to the organization. Capital expenditures are prioritized across systems to ensure alignment with the Strategic Plan. Capital projects are financed through a combination of participation receipts (payments for capacity in specific facilities to serve specific groups of customers), System Development Charges, reimbursements for relocations of water facilities because of highway and other construction, bond proceeds, reserves and other sources.

2018 Capital Budget. The 2018 capital budget includes total capital expenditures of \$196.5 million. The categorization of capital projects in the budget may differ in certain respects from that used in the capital improvement plan discussed below as the long term financial plan categorizes capital projects at a much higher level than budget.

Some of the larger projects in the 2018 capital budget include Operations Complex Redevelopment project (\$49.0 million), Northwater Treatment Plant upgrades (\$24.0 million), Conduit 16 and 22 replacements (\$19.2 million), replacement of Hillcrest tanks (\$17.3 million), and Gross Reservoir Expansion (\$6.4 million). The remaining \$80.6

million is projected to be spent on numerous small projects for improvements and replacements to facilities, equipment, conduits, hydrants, vaults, mains and pump stations, and reservoir rehabilitation.

A summary of the capital improvements plan for the next five years is set forth in the following table.

Denver Water 2018-2022 Capital Improvement Plan
(amount expressed in thousands⁽¹⁾)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Total</u>
Capital by System						
Collections	\$ 17,566	\$ 31,526	\$ 52,139	\$ 63,570	\$ 102,899	\$ 267,700
Distribution	79,408	101,428	79,394	35,504	28,840	324,573
Expansion	7,769	8,045	14,449	17,285	5,000	52,548
Information Technology	1,286	-	-	-	-	1,286
Operations Support	57,038	55,857	30,761	19,300	6,100	169,056
Treatment	33,459	35,523	81,050	108,312	144,330	402,674
Total Capital Programs	\$ 196,526	\$ 232,378	\$ 257,793	\$ 243,972	\$ 287,169	\$ 1,217,838
less						
Reimbursements - Cooperative Projects	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 750
Participation Receipts	9,960	8,218	10,113	12,678	19,843	60,812
Total	\$ 10,111	\$ 8,368	\$ 10,263	\$ 12,828	\$ 19,993	\$ 61,563
Total Capital Program Minus Reimbursements	\$ 186,414	\$ 224,010	\$ 247,530	\$ 231,144	\$ 267,176	\$ 1,156,275

⁽¹⁾Numbers may not total due to rounding.

Largest Projects. The largest projects for the years 2018 through 2022 in the schedule above include the replacement of the Moffat Water Treatment Plant (Northwater Treatment Plant), the redevelopment of Denver Water’s operation complex, the replacement of Conduit 16 and 22, and the Gross Reservoir Expansion Project (formerly the Moffat Collection System Project).

Approximately \$464 million is budgeted in total project costs for Denver Water’s Gross Reservoir Expansion Project, previously known as the Moffat Collection System Project, for the evaluation, permitting, mitigation, and construction process to augment our supply to the northern service area.

The Operations Complex Redevelopment (OCR) project includes construction of four new operations buildings consisting of a new consolidated trades shop, a warehouse, fleet services building, and meter shop. The project also includes a new parking structure, administration building, and a wellness building. In addition to the new construction, the three stone buildings and water distribution building will be remodeled. The four operations buildings were completed in September 2017. Completion of the remaining facilities is anticipated in the 1st quarter of 2020. The projected budget impact for this project is \$195.8 million.

Approximately \$600 million is budgeted in capital cost for Denver Water’s North System Renewal project. This includes funds for the planning, design, and construction of a new 75-million gallon per day (MGD) Water Treatment Plant (WTP), expandable to 150 MGD. Upon completion, the Northwater Treatment Plant (NTP) will replace the existing Moffat WTP with a state-of-the-art facility designed to improve reliability and operational flexibility. A portion of the existing Moffat WTP will also remain in service through 2040, and the project includes improvements at the Moffat site to convey treated water from both NTP and Moffat to the distribution system.

Conduit 16 and 22 Replacement projects will replace existing Conduit 16 between Ralston Reservoir and Moffat Treatment Plant with approximately 8.5 miles of 84-inch diameter welded steel pipeline. The aging 42 and 54-inch concrete pipelines are nearing the end of their useful lives. Additionally, conduit 22 will be upgraded to a potable water line to coincide with construction of the Northwater Treatment Plant. Construction of the conduits are anticipated

to take approximately 3-4 years to complete. Design resumed in 2016, and construction started in 2017 and will take approximately 5 years to complete. The project is expected to cost approximately \$87.7 million.

Historical Financial Operations

Set forth in the following table are comparative operating statements of the System for the past five years presented in accordance with accounting principles general accepted in the United States of America (“GAAP”) applicable to governmental entities. The information in the table should be read together with the 2017 Comprehensive Annual Financial Report posted on the Electronic Municipal Market Access (“EMMA”) system, operated by the Municipal Securities Rulemaking Board (“MSRB”), which serves as the official source for municipal securities disclosures and related market data.

Water Works Fund

Operating Revenues	2013	2014⁽¹⁾	2015	2016	2017
Water	\$ 230,482	\$ 239,288	\$ 241,836	\$ 273,238	\$ 286,139
Power Generation and Other	12,141	11,380	10,224	11,216	12,366
Total Operating Revenues	\$ 242,623	\$ 250,668	\$ 252,060	\$ 284,454	\$ 298,505
Operating Expenses:					
Source of Supply, Pumping, Treatment and Distribution	68,722	83,091	75,972	82,418	84,725
General and Administration	81,494	85,347	81,994	103,380	97,917
Customer Service	12,894	10,851	9,962	11,370	10,999
Depreciation and Amortization	45,805	45,772	47,897	50,352	62,348
Total Operating Expenses	208,915	225,061	215,825	247,520	255,989
Operating income:	33,708	25,607	36,235	36,934	42,516
Nonoperating Revenues (expenses)					
Investment Income	1,488	1,552	1,479	1,603	2,140
Interest Expense, Less Capitalized Interest	(13,602)	(12,664)	(13,049)	(11,446)	(12,711)
Loss on Disposition of Cap Assets	(2,171)	(5,394)	(4,720)	(6,348)	(11,443)
Other Income	6,606	6,143	5,595	7,426	7,996
Other Expense	(2,939)	(2,252)	(2,499)	(1,861)	(2,657)
Total nonoperating expenses, net	(10,618)	(12,615)	(13,194)	(10,626)	(16,675)
Income (loss) before capital contributions	23,090	12,992	23,041	26,308	25,841
Capital Contributions					
Contributions in Aid of Construction	21,424	23,190	33,256	22,147	14,781
System Development Charges	34,461	32,736	36,109	38,962	42,486
Total Capital Contributions	55,885	55,926	69,365	61,109	57,267
Increase in Net Assets	78,975	68,918	92,406	87,417	83,108
Net Assets, Beginning of Year	1,743,153	1,822,128	1,825,624	1,918,030	2,005,447
2014 Adjustment ⁽²⁾		(65,422)			
Net Assets, End of Year	\$ 1,822,128	\$ 1,891,046	\$ 1,918,030	\$ 2,005,447	\$ 2,088,555

⁽¹⁾ Operating expenses in fiscal year 2014 were restated to reflect a \$6.2 million reduction in pension expenses as a result of implementation of GASB Statement No. 68 and GASB Statement No. 71.

⁽²⁾ Cumulative effect of GASB 68 implementation.

Budgets

The annual budget serves as the foundation for Denver Water's financial planning and control. The budget process involves:

- Long Range Planning - Denver Water maintains long-range capital, operation and maintenance, and financial plans that are updated annually. The Capital Plan projects additions, improvements, and replacements to water system facilities, based on projected demand for water, federal and state regulations, and ongoing system requirements. The Operation and Maintenance Plan includes the ongoing costs of operating and maintaining the water system and the impact of the Capital Plan on operations. The Financial Plan considers compliance with debt covenants and the year-end target cash reserve.
- Annual Work Plan and Strategic Plan Alignment - Prior to the commencement of the annual budget process, a thorough review of ongoing and proposed organizational initiatives is completed. With help from Section Leaders, Chiefs utilize a filtering tool to show how the initiatives link to the updated Strategic Plan, to identify the demands placed on the business, and to reflect the impact to the Strategic Plan. Initiatives are deferred if they do not have a strong enough case, and the remaining initiatives are prioritized. Early in this process, multi-year Initiatives and Programs that roll from year to year are flagged because they limit the number of new initiatives that can be added. As a result, few new initiatives are seen, and large ongoing Programs are included into the Work Plan. Finally, work is done on aligning the Continuous Improvement and Audit activities to better support the Annual Work Plan. The Organizational Scorecard and Dashboard are updated to reflect the new Strategic Plan.
- Annual Budget Preparation - The annual budget is prepared on a program budget basis that follows the flow of water from the sources of raw water to customers' taps and cuts across organizational boundaries. The focus is first on what Denver Water is doing (what our resources are used for), then on organizational structure (the divisions and sections expending the resources), and then by type of expenditures (what types of resources – payroll, services, etc., are being used). The intent of this format is to facilitate the reader's understanding of how we are accomplishing our mission to serve our customers' needs in the past, present and future.

2017-2018 Budget Summary and Comparison. Set forth below is a summary of Denver Water's Fiscal Year 2018 budget compared to the Fiscal Year 2017 budget and actual year to date financial results. The 2017 actual numbers are different than the 2017 numbers provided in the foregoing table captioned Water Works Fund since the foregoing table is presented in conformance with GAAP and the following table is presented on a budgetary basis.

Water Works Fund Receipts and Expenditures 2017-2018

(Budgetary Basis)

(amounts expressed in thousands)

	<u>2017</u> <u>Budget</u>	<u>2017</u> <u>Actual</u>	<u>2018</u> <u>Budget</u>
Beginning Investment Balance	\$ 287,394	\$ 240,889	\$ 400,549
Sources of Funds			
Water Sales	269,481	284,304	282,658
Hydropower	4,607	4,499	4,607
Contributions	-	9,240	4,800
System Development Charges	34,035	42,486	34,000
Interest on Investments	848	3,974	2,912
Nonoperating	7,620	8,670	7,875
Other Revenue	7,230	12,713	8,130
Subtotal	<u>\$ 323,821</u>	<u>\$ 365,886</u>	<u>\$ 344,982</u>
Debt Proceeds	205,000	205,864	60,000
Total Sources of Funds	<u>\$ 528,821</u>	<u>\$ 571,750</u>	<u>\$ 404,982</u>
Uses of Funds			
Operating Expenditures:			
Salaries	78,073	78,313	77,884
Benefits	45,415	42,153	44,006
Professional and Other Services	45,685	46,845	45,465
Materials and Supplies	18,076	16,556	17,232
Utilities	9,258	9,283	7,812
Conservation and Refunds	1,598	1,587	1,336
Other Expenditures	3,165	2,719	3,779
Total Operating Expenditures	<u>\$ 201,270</u>	<u>\$ 197,455</u>	<u>\$ 197,515</u>
Capital Expenditures:			
Collection	16,068	10,911	17,566
Distribution	76,759	70,406	79,408
Expansion	15,293	13,170	7,769
Information Technology	6,446	4,899	1,286
Operations Support	52,884	47,669	57,038
Treatment	17,375	21,332	33,459
Total Capital	<u>\$ 184,826</u>	<u>\$ 168,386</u>	<u>\$ 196,526</u>
Debt Service:	45,456	43,686	49,149
Total Uses of Funds	<u>\$ 431,552</u>	<u>\$ 409,527</u>	<u>\$ 443,190</u>
Net Cash Flow	97,269	162,223	(38,208)
Ending Investment Balance	\$ 384,663	\$ 403,112	\$ 362,341

Outstanding Bonds and Other Obligations

Authority. As amended by City's voters at the November 5, 2002 election, the Charter authorizes the Board to issue only revenue bonds without prior voter approval. Prior to this amendment, the Board was authorized to issue both general obligation bonds and revenue bonds, in either case subject to prior approval of the City's electorate except for certain refunding bonds. There are no longer any general obligation bonds outstanding. Denver Water has no legal debt limits. However, the Board has adopted a debt policy to direct the timing and use of debt.

Outstanding Bonds. The following table sets forth the Parity Bonds that are outstanding as of December 31, 2017.

Outstanding Parity Bonds

Issue	Principal Balance
Series 2007A	\$ 20,110,000
Series 2008A	600,000
Series 2009A	42,785,000
Series 2010B	87,330,000
Series 2012A	35,740,000
Series 2012B	33,975,000
Series 2014A	44,025,000
Series 2016A	90,950,000
Series 2016B	63,470,000
Series 2017A	142,665,000
Series 2017B	41,765,000
Total Bonds	\$ 603,415,000

Historical and Budgeted Net Revenue and Debt Service Coverage

The following table sets forth the Net Revenue collected, the debt service coverage for the Fiscal Years 2013 through 2017 and the budgeted Net Revenue and budgeted debt service coverage for 2018. These amounts have been determined in accordance with the Bond Resolution and are not intended to be a presentation in accordance with generally accepted accounting principles. Historical coverage levels are not intended to be a projection of future levels of debt service coverage on the Board’s outstanding financial obligations.

**Historical and Budgeted Net Revenue and
Historical and Budgeted Debt Service Coverage⁽¹⁾**
(amounts expressed in thousands, except coverage ratios)

	Actual					Budget
	2013	2014⁽⁶⁾	2015	2016	2017	2018
Gross Revenues						
Total Operating Revenues	\$ 242,623	\$ 250,668	\$ 252,060	\$ 284,454	\$ 298,505	\$ 294,335
Proceeds from Disposition of Property, Plant and Equipment	337	285	1,117	2,143		1,060
Other Income	6,606	6,143	5,595	7,426	7,996	7,875
Interest Income	1,488	1,552	1,479	1,603	2,140	2,912
System Development Charges	34,461	32,736	36,109	38,752	42,486	34,000
Participation Receipts (cash portion)	4,834	6,384	8,713	2,335	9,240	4,800
Total Gross Revenue ⁽²⁾	<u>\$ 290,349</u>	<u>\$ 297,768</u>	<u>\$ 305,073</u>	<u>\$ 336,713</u>	<u>\$ 360,367</u>	<u>\$ 344,982</u>
Operation and Maintenance Expenses						
Total Operating Expenses	208,915	225,061	215,825	247,520	255,989	246,664
Other Expense	2,939	2,252	2,499	1,861	2,657	-
Less Depreciation and Amortization ⁽⁷⁾	<u>(45,805)</u>	<u>(45,772)</u>	<u>(47,897)</u>	<u>(50,352)</u>	<u>(62,348)</u>	<u>-</u>
Total Operation and Maintenance	<u>166,049</u>	<u>181,541</u>	<u>170,427</u>	<u>199,029</u>	<u>196,298</u>	<u>246,664</u>
Net Revenue	<u>124,300</u>	<u>116,227</u>	<u>134,646</u>	<u>137,684</u>	<u>164,069</u>	<u>98,318</u>
Historical and Budgeted Coverage Ratios⁽⁴⁾						
Required Debt Service ⁽¹⁾⁽³⁾⁽⁵⁾	\$ 46,220	\$ 46,744	\$ 47,919	\$ 40,076	\$ 43,686	\$ 48,707
Coverage Ratios	2.69x	2.49x	5.81x	3.44x	3.76x	2.02x

⁽¹⁾ This schedule reflects certain reclassifications to revenues and expenses made to prior years financial statements to conform to the current year financial statement.

⁽²⁾ These amounts vary from amounts shown in the table captioned "Water Works Fund" due to accrual versus cash accounting methods.

⁽³⁾ For purposes of this table, "Debt Service Requirements" includes Parity Bonds and the Capital Lease.

⁽⁴⁾ All items computed as defined in the bond covenants. The rate maintenance covenant is 1.10; the additional bonds test is 1.20 times the average annual debt service.

⁽⁵⁾ The Subordinate Line of Credit has a subordinate lien to the lien on Net Revenues given to the outstanding Parity Bonds and is not subject to the Bond Resolution debt service coverage covenant. Therefore actual debt service requirements do not include amounts paid on the Subordinate Line of Credit.

⁽⁶⁾ Operating expenses in 2014 were restated to reflect a \$6.2 million reduction in pension expenses as a result of implementation of GASB Statement No. 68 and GASB Statement No. 71.

⁽⁷⁾ Depreciation expense was restated for all years shown to reflect amounts on the Statements of Revenue, Expenses, and Changes in Net Position. Prior to this change depreciation expense from Note 4 of the comprehensive annual financial reports was used.

SYSTEM INFORMATION, RATE SCHEDULES AND WATER SUPPLY

ANALYSIS OF CUSTOMER ACCOUNTS FOR TREATED WATER - 2017

		Number of Customers ^{1,2,3}		
		12/31/2017	12/31/2016	Increase (Decrease)
METERED GENERAL CUSTOMERS				
Residential	Denver	137,627	135,398	2,229
	Outside City	32,390	33,261	(871)
	Total Service	33,579	32,150	1,429
Non-Residential	Denver	25,083	24,961	122
	Outside City	3,058	3,193	(135)
	Total Service	3,849	3,590	259
Irrigation	Denver	1,434	1,390	44
	Outside City	447	443	4
	Total Service	616	599	17
TOTAL METERED GENERAL CUSTOMERS		238,083	234,985	3,098
PUBLIC AUTHORITIES				
City & County of Denver	Irrigation	707	696	11
	Non-Irrigation	421	409	12
TOTAL PUBLIC AUTHORITIES		1,128	1,105	23
RESALE ACCOUNTS (MASTER METER)⁴		76,269	76,322	(53)
TOTAL TREATED WATER CUSTOMERS		315,480	312,412	3,068

¹ A customer account is defined as a person or legal entity to which Denver Water currently provides service or has provided service at any Time during the last five consecutive years. A customer may have more than one license, tap and/or premise.

² Represents the number of active metered services at year-end.

³ In 2016, Denver Water underwent a significant change in rate structures. As part of this change Denver Water also consolidated various Revenue accounts to simplify and streamline financial reporting. The classification of Number of Customers' was modified to reflect this Change. Information as of December 31, 2015 was also modified for comparability purposes.

⁴ See "Sales of Treated Water for Resale".

OPERATING REVENUE AND RELATED WATER CONSUMPTION¹ - 2017

(amounts expressed in thousands)

		Revenue	Gallons Sold (000)	Number of Customers ²		Per 1,000 Gallons
I. SALES OF TREATED WATER						
A. METERED GENERAL CUSTOMERS³						
Residential	Inside City	\$ 61,877	12,330,988	137,627	\$	5.0180
	Outside City-Read and Bill	20,948	4,056,528	32,390		5.1640
	Outside City-Total Service	27,509	4,390,838	33,579		6.2651
Irrigation	Inside City	4,681	895,806	1,434		5.2255
	Outside City-Read and Bill	2,830	509,332	447		5.5563
	Outside City-Total Service	3,873	559,663	616		6.9202
Non-Residential	Inside City	53,396	15,520,778	25,083		3.4403
	Outside City-Read and Bill	12,583	3,030,397	3,058		4.1523
	Outside City-Total Service	12,595	2,568,339	3,849		4.9039
		200,292	43,862,669	238,083		4.5663
B. PRIVATE FIRE PROTECTION SERVICE⁴						
Sprinklers -	Inside City	928	-			
	Outside City-Read and Bill	93	-			
	Outside City-Total Service	153	-			
		1,174	-			
C. OTHER SALES TO PUBLIC AUTHORITIES						
City & County of Denver	Irrigation	3,336	1,166,206	707		2.8606
	Non-Irrigation	2,349	909,091	421		2.5839
		5,685	2,075,297	1,128		2.7394
D. SALES OF TREATED WATER FOR RESALE⁵						
Outside City - Master Meter		64,604	15,481,203	76,269		4.1731
Outside the Combined Service Area		4,545	995,827	-		4.5640
		69,149	16,477,030	76,269		4.1967
TOTAL SALES OF TREATED WATER⁶		\$ 276,300	62,414,996	315,480	\$	4.4268
II. SALES OF NON-POTABLE WATER⁷						
Inside City		\$ 837	1,276,051	97	\$	0.6559
Outside City		6,217	6,725,771	22		0.9244
Outside the Combined Service Area		1,681	1,686,761	12		0.9963
		8,735	9,688,583	131		0.9015
TOTAL SALES OF WATER		\$ 285,035	72,103,579	315,611	\$	3.9531
III. OTHER NON-POTABLE WATER DELIVERIES⁷			1,501,364			
TOTAL GALLONS SOLD			73,604,943			

See accompanying footnotes on final page of report.

(continued)

OPERATING REVENUE AND RELATED WATER CONSUMPTION - 2017, (continued)

		(non-accrual basis) ¹ (amounts expressed in thousands)		
	Revenue	Gallons Sold (000)	Number of Customers	Per 1,000 Gallons
IV. OTHER OPERATING REVENUE				
A. POWER SALES REVENUE⁸				
Foothills Treatment Plant	\$ 422			
Strontia Springs	272			
Dillon Dam	530			
Roberts Tunnel	1,174			
Hillcrest	405			
Williams Fork	442			
Gross Reservoir	<u>1,255</u>			
	<u>4,500</u>			
B. SPECIAL ASSESSMENTS				
Administrative Fees	3,572			
Penalty Fees	38			
Stub-in, Taps and Meter Fees	2,001			
Hydrant Fees	1,705			
Plan Review, Easement, Distribution Inspection	850			
Other Assessments	<u>(1,109)</u>			
	<u>7,057</u>			
TOTAL OTHER OPERATING REVENUE	<u>11,557</u>			
TOTAL OPERATING REVENUE	<u>\$ 296,592</u>			

¹ This schedule represents actual billings made for water during the year. No accruals were made for revenue earned on unbilled accounts. Therefore, amounts on this schedule do not agree with amounts on the Statement of Revenues, Expenses and Changes in Net Position. The difference from amounts on an accrual basis is immaterial.

² Represents the number of active metered services at year-end.

³ In 2016, Denver Water underwent a significant change in rate structures. As part of this change Denver Water also consolidated various revenue accounts to simplify and streamline financial reporting. The classification of 'Metered General Customers' was modified to reflect this change.

⁴ Private fire protection consumption is unmetered and is considered part of non-revenue water. See "Sales of Treated Water between Denver and Outside City" for this estimate.

⁵ See "Sales of Treated Water for Resale".

⁶ See "Sales of Treated Water Between Denver and Outside City".

⁷ See "Sales of Non-Potable Water Between Denver and Outside City".

⁸ Power Sales Revenue represents actual billings made for power during the year. No accruals were made for unbilled revenue. Therefore, amounts on this schedule do not agree with amounts on other schedules which report the value of power produced.

SALES OF TREATED WATER BETWEEN DENVER AND OUTSIDE CITY - 2017

(non-accrual basis)¹
(amounts expressed in thousands)

	Revenue		Gallons Sold		# of Customers
	Amount	% of Total	Amount	% of Total	
I. <u>INSIDE CITY</u>					
A. METERED GENERAL CUSTOMERS²					
Residential	\$ 61,877	22.39%	12,330,988	19.76%	137,627
Irrigation	4,681	1.69%	895,806	1.44%	1,434
Non-Residential	53,396	19.33%	15,520,778	24.87%	25,083
	<u>119,954</u>	<u>43.41%</u>	<u>28,747,572</u>	<u>46.07%</u>	<u>164,144</u>
B. PRIVATE FIRE PROTECTION SERVICE³					
Sprinklers	<u>928</u>	<u>0.34%</u>	<u>-</u>		
C. OTHER SALES TO PUBLIC AUTHORITIES					
City And County of Denver-Irrigation	3,336	1.21%	1,166,206	1.87%	707
City and County of Denver-Non-Irrigation	2,349	0.85%	909,091	1.46%	421
	<u>5,685</u>	<u>2.06%</u>	<u>2,075,297</u>	<u>3.33%</u>	<u>1,128</u>
TOTAL SALES OF TREATED WATER - DENVER					
	<u>126,567</u>	<u>45.81%</u>	<u>30,822,869</u>	<u>49.40%</u>	<u>165,272</u>
Revenue per 1,000 Gallons - Denver			<u>\$ 4.1063</u>		
II. <u>OUTSIDE CITY</u>					
A. METERED GENERAL CUSTOMERS					
Residential - Read & Bill	20,948	7.58%	4,056,528	6.50%	32,390
Irrigation - Read & Bill	2,830	1.02%	509,332	0.82%	447
Non-Residential - Read & Bill	12,583	4.55%	3,030,397	4.86%	3,058
Residential - Total Service	27,509	9.96%	4,390,838	7.03%	33,579
Irrigation - Total Service	3,873	1.40%	559,663	0.90%	616
Non-Residential - Total Service	12,595	4.56%	2,568,339	4.11%	3,849
	<u>80,338</u>	<u>29.07%</u>	<u>15,115,097</u>	<u>24.22%</u>	<u>73,939</u>

See accompanying footnotes on final page of report.

(Continued)

SALES OF TREATED WATER BETWEEN DENVER AND OUTSIDE CITY - 2017, (continued)

(non-accrual basis)¹
(amounts expressed in thousands)

	Revenue		Gallons Sold		# of Customers
	Amount	% of Total	Amount	% of Total	
II. OUTSIDE CITY (Continued)					
B. PRIVATE FIRE PROTECTION SERVICE ²					
Sprinklers	\$ 93	0.03%	-		
Sprinklers - Total Service	153	0.06%	-		
	246	0.09%	-		
C. SALES OF TREATED WATER FOR RESALE ^{3,4}					
Master Meter Distributors	64,604	23.38%	15,481,203	24.80%	76,269
Outside CSA-Fixed Limit Contracts	4,545	1.64%	995,827	1.60%	-
	69,149	25.02%	16,477,030	26.40%	76,269
TOTAL SALES OF TREATED WATER - OUTSIDE CITY	149,733	54.19%	31,592,127	50.62%	150,208
Revenue per 1,000 Gallons - Outside City			\$ 4,7396		
TOTAL SALES OF TREATED WATER	\$ 276,300	100.00%	62,414,996	100.00%	315,480
Revenue per 1,000 Gallons - Total			\$ 4,4268		

RECONCILIATION/CALCULATION OF NON-REVENUE WATER

Total Water Treated (Production) - Water Treated Monthly	63,837,010	
(Increase) Decrease in Clear Water Storage - Water Treated Monthly	(28,370)	
Total Treated Water Delivered - Water Treated Monthly	63,808,640	
Water Purchased	-	
Total Treated Water Available (Consumption) - Water Treated Monthly	63,808,640	100.00%
Less Sale of Treated Water	(62,414,996)	(97.82%)
Less Load Shifted Treated Water	-	0.00%
Non-revenue Water ³	1,393,644	2.18%

¹ This schedule represents actual billings made for water during the year. No accruals were made for revenue earned on unbilled accounts.

² Private fire protection consumption is unmetered and is considered part of non-revenue water.

³ See "Sales of Treated Water For Resale".

⁴ During 2016, the Board of Directors at Denver Water approved modifications to its rate structures, changes to how Denver Water classifies selected revenues and expenses for financial statement presentation, and the presentation of certain information included in its statistical schedules. The 2016 financial statements reflect these changes.

SALES OF TREATED WATER FOR RESALE - 2017

Treated Water Sold Outside Denver to Municipalities and Distributors through Master Meters^{2,3}

(non-accrual basis)¹
(amounts expressed in thousands)

	Revenue	Gallons Sold (000)	Number of Customers
MASTER METER DISTRIBUTORS			
Alameda Water & Sanitation District	\$ 312	71,920	335
Bancroft-Clover Water & Sanitation District	6,109	1,466,574	8,817
Bonvue Water & Sanitation District	60	14,381	169
Bow-Mar Water & Sanitation District	441	103,742	290
Cherry Creek Valley Water & Sanitation District	3,881	925,442	1,972
Cherry Creek Village Water & Sanitation District	562	133,740	476
City of Edgewater	784	184,562	1,482
City of Glendale	1,091	261,492	237
City of Lakewood	792	188,635	729
Consolidated Mutual Water Company	9,114	2,186,674	15,702
Crestview Water & Sanitation District	2,357	568,721	4,489
Green Mountain Water & Sanitation District	6,563	1,585,460	10,111
High View Water District	603	144,750	891
Ken-Caryl Water & Sanitation District	3,180	765,283	3,742
Lakehurst Water & Sanitation District	3,650	867,333	5,519
Meadowbrook Water & Sanitation District	659	154,194	1,321
North Pecos Water & Sanitation District	695	162,820	402
North Washington Street Water & Sanitation District	3,198	765,167	3,637
Northgate Water District	20	4,169	4
South Adams County Water & Sanitation District	2,401	531,000	166
Valley Water District	2,107	505,053	1,781
Wheat Ridge Water District	3,150	752,465	5,845
Willowbrook Water & Sanitation District	1,924	457,995	3,415
Willows Water District	3,005	720,423	4,737
Chatfield South Water District	35	7,262	-
City and County of Broomfield	6,312	1,524,329	-
East Cherry Creek Valley Water District	1,089	238,619	-
GSA	200	46,719	-
Inverness Water District	572	137,504	-
Rocky Mountain Arsenal	69	11,916	-
South Adams County Special Contract Area	1,428	319,659	-
Suncor Energy USA	2,785	669,027	-
Total Sales of Treated Water for Resale	\$ 69,148	16,477,030	76,269

¹ This schedule represents actual billings made for water during the year. No accruals were made for revenue earned on unbilled accounts. Therefore, amounts on this schedule do not agree with amounts on the Statement of Revenues, Expenses, and Changes in Net Position. The difference from amounts on an accrual basis is immaterial.

² Sales on Total Service or Read and Bill Contracts are not included.

³ During 2016, the Board of Directors at Denver Water approved modifications to its rate structures, changes to how Denver Water classifies selected revenues and expenses for financial statement presentation, and the presentation of certain information included in its statistical schedules. The 2016 financial statements reflect these changes.

SALES OF NON-POTABLE WATER BETWEEN DENVER AND OUTSIDE CITY - 2017

(non-accrual basis)¹
(amounts expressed in thousands)

	Revenue		Gallons Sold		Number of Customers ²	Revenue Per 1,000 Gallons
	Amount	Percent of Total	Amount (000)	Percent of Total		
I. <u>INSIDE CITY</u>						
Raw Water Sales						
City & County of Denver	\$ 76	0.87%	238,310	2.46%	1	\$ 0.3189
All Other	49	0.56%	61,016	0.63%	6	0.8031
	<u>125</u>	<u>1.43%</u>	<u>299,326</u>	<u>3.09%</u>	<u>7</u>	<u>0.4176</u>
Effluent Sales						
City & County of Denver	23	0.26%	72,685	0.75%	1	0.3164
All Other	11	0.13%	16,739	0.17%	2	0.6571
	<u>34</u>	<u>0.39%</u>	<u>89,424</u>	<u>0.92%</u>	<u>3</u>	<u>0.3802</u>
Recycle Sales						
City & County of Denver	103	1.18%	467,738	4.83%	11	0.2202
All Other	575	6.58%	419,563	4.33%	76	1.3705
	<u>678</u>	<u>7.76%</u>	<u>887,301</u>	<u>9.16%</u>	<u>87</u>	<u>0.7641</u>
Total Denver	<u>837</u>	<u>9.58%</u>	<u>1,276,051</u>	<u>13.17%</u>	<u>97</u>	<u>0.6559</u>
II. <u>OUTSIDE CITY, WITHIN COMBINED SERVICE AREA</u>						
Raw Water Sales-All Others	6,202	71.00%	6,710,634	69.26%	15	0.9242
Effluent Sales-All Others	15	0.17%	15,137	0.16%	7	0.9909
Total Outside City, Within Combined Service Area	<u>6,217</u>	<u>71.17%</u>	<u>6,725,771</u>	<u>69.42%</u>	<u>22</u>	<u>0.9244</u>
III. <u>OUTSIDE COMBINED SERVICE AREA</u>						
Raw Water Sales						
Centennial Water & Sanitation District	331	3.79%	315,193	3.25%	1	1.0500
Consolidated Mutual Water	152	1.74%	144,352	1.49%	1	1.0500
All Other	443	5.08%	557,852	5.76%	9	0.7941
	<u>926</u>	<u>10.61%</u>	<u>1,017,397</u>	<u>10.50%</u>	<u>11</u>	<u>0.9097</u>
Recycle Sales						
Total Outside Combined Service Area	<u>755</u>	<u>8.64%</u>	<u>669,364</u>	<u>6.91%</u>	<u>1</u>	<u>1.1279</u>
	<u>1,681</u>	<u>19.25%</u>	<u>1,686,761</u>	<u>17.41%</u>	<u>12</u>	<u>0.9963</u>
TOTAL SALES OF NON-POTABLE WATER	<u>\$ 8,735</u>	<u>100.00%</u>	<u>9,688,583</u>	<u>100.00%</u>	<u>131</u>	<u>\$ 0.9016</u>
IV. <u>OTHER NON-POTABLE WATER DELIVERIES</u>						
City Ditch at Washington Park			763,696			
City of Englewood (Cabin-Meadow Exchange)			<u>737,668</u>			
Total Other Non-Potable Water Deliveries			<u>1,501,364</u>			
TOTAL NON-POTABLE WATER DELIVERIES			<u>11,189,947</u>			

¹ This schedule represents actual billings made for water during the year. No accruals were made for revenue earned on unbilled accounts. the difference from amounts on an accrual basis is immaterial.

² If the customer is reflected in the count of raw water customers, it is excluded from the count of effluent and minimum contract payment customers.

Denver Water Customer Groups

<u>Service Type</u>	<u>Inside City</u>	<u>Outside City</u>			
		<u>Read & Bill</u>	<u>Total Service</u>	<u>Master Meter</u>	<u>All Others</u>
Treated					
Single Family	X	X	X		
Nonresidential	X	X	X		
Irrigation	X	X	X		
Nonpotable					
Raw	X			X	X
Recycled	X				X
Wholesale-Treated					
				X	X

(1) OCSA: Outside Combined Service Area. Special contracts for treated and nonpotable services outside Denver Water's combined service area.

Source: Denver Water Rates Section.

This table compares typical monthly winter and summer water bills for single family residential customers within the City and County of Denver and outside the City and County of Denver.

Comparison of Typical monthly Winter and Summer Water ⁽¹⁾		
Type of Service	Based on Calendar Year 2017 Rates	
	Winter	Summer
Inside City	\$ 25.29	\$ 66.69
Outside City (Read and Bill)	25.97	69.48
Outside City (Total Service)	29.24	82.81
	Consumption	
Month	(Gallons)	
January	5	
February	4	
March	4	
April	6	
May	9	
June	14	
July	18	
August	16	
September	17	
October	11	
November	6	
December	5	
Total Annual Consumption	115	

⁽¹⁾ Estimated water bills are based on 2017 rates and service charges effective March 2017. Winter is defined as the six-month period November through April, and summer is defined as the six-month period May through October.

Source: Denver Water Budget/Rate Administration Section

WATER RATE SCHEDULES - 2017

Rate Schedule 1
Treated Water Rates
For Meters Read On or After April 1, 2017

A. Monthly Fixed Charges, \$ per Bill

Meter Size inches	Inside City of Denver	Outside City		
		Read & Bill	Total Service	Wholesale
5/8" & 3/4"	\$11.86	\$11.86	\$11.86	\$11.86
1"	15.13	15.13	15.13	15.13
1 1/2"	25.28	25.28	25.28	25.28
2"	39.35	39.35	39.35	39.35
3"	79.29	79.29	79.29	79.29
4"	135.26	135.26	135.26	135.26
6"	295.65	295.65	295.65	295.65
8"	519.87	519.87	519.87	519.87
10"	808.25	808.25	808.25	808.25
12"	1,161.14	1,161.14	1,161.14	1,161.14

B. Treated Water Volume Rates, \$ per 1,000 gallons

Customer Class	Tier Threshold 1,000 gallons	Inside City of Denver	Outside City		
			Read & Bill	Total Service	Wholesale
Single Family Residential					
Tier 1	0 to AWC (note D.3)	\$2.55	\$2.68	\$3.30	N/A
Tier 2	AWC + 15	4.59	4.82	5.94	
Tier 3	Greater than AWC + 15	6.12	6.43	7.92	
Nonresidential (note D.4, D.5)					
Tier 1	0 to AWC	\$2.71	\$3.25	\$3.77	N/A
Tier 2	AWC to 4 x AWC	3.79	4.55	5.28	
Tier 3	Greater than 4 x AWC	4.34	5.20	6.03	
Irrigation					
Winter (Nov. 1 through April 30)		\$1.27	\$1.38	\$1.74	N/A
Summer (May 1 through October 31)		5.08	5.52	6.96	
Wholesale					
Master Meter					\$4.10
Outside the Combined Service Area					4.48

C. Private Fireline

Fireline Size inches	Inside City of Denver	Outside City		
		Read & Bill	Total Service	Wholesale
1"	\$3.78	\$2.46	\$3.79	
2"	6.31	4.11	6.32	
4"	9.74	6.35	9.77	
6"	13.92	9.08	13.96	N/A
8"	24.36	15.88	24.43	
10"	34.80	22.69	34.90	
12"	55.68	36.31	55.85	
16"	139.20	90.77	139.62	
Fire Hydrants	\$13.92	\$9.08	\$13.96	

D. Notes

- 1. Applicability:** See Chapter 2 of [Denver Water's Operating Rules](#)
- 2. Payment:** Bills are due and payable to Denver Water upon issuance. Monthly bills are delinquent 20 days after the billing date. Late charges will be assessed per Denver Water policy.
- 3. Single Family AWC:** A customer's average winter consumption (AWC) is used to determine the tier 1 threshold. The AWC is calculated by averaging each customer's billed monthly water use from January through March, which is a way of determining essential indoor water use. Denver Water has set the tier 1 minimum threshold at 5,000 gallons and a maximum of 15,000 gallons. For example, if the customer's AWC is less than 5,000 gallons, tier 1 is 0 to 5,000 gallons. If the AWC is over 15,000 gallons, tier 1 is 0 to 15,000 gallons. Volume rates are applied to billed monthly usage.
- 4. Nonresidential AWC:** The tier 1 threshold is based on each customer's average winter consumption (AWC). This represents demands during the system off-peak period. The AWC is the average of a customer's billed water use for the months of January, February, and March. Volume rates are applied to billed monthly usage. Tier 2 is equal to 4 times the customer's AWC. Tier 3 is for usage in excess of 4 times the AWC.
- 5. Small Multifamily:** For 2016, the small multifamily class (duplex through 5-plex) is now included in the nonresidential class.
Schedule 4 Applicability: Charges for treated water service under this schedule are applicable to entities (i.e. municipalities, quasi-municipal districts and water companies) outside the limits of the City and County of Denver served under distributor agreements whereby the entity operates and maintains water systems to supply individual licensees. Denver Water bills distributors for water delivered through "master meters." Each distributor establishes charges for its individual licensees for water service.

(continued)

WATER RATE SCHEDULES - 2017, (continued)

Rate Schedule No. 2

Nonpotable Water Rates

For Meters Read On or After April 1, 2017

A. Monthly Fixed Charges, \$ per Bill

Meter Size inches	Inside City of Denver	Outside City	Outside Combined Service Area
5/8" & 3/4"	\$11.86	\$11.86	\$11.86
1"	15.13	15.13	15.13
1 1/2"	25.28	25.28	25.28
2"	39.35	39.35	39.35
3"	79.29	79.29	79.29
4"	135.26	135.26	135.26
6"	295.65	295.65	295.65
8"	519.87	519.87	519.87
10"	808.25	808.25	808.25
12"	1,161.14	1,161.14	1,161.14

B. Nonpotable Water Volume Rates, \$ per 1,000 gallons

Customer Class	Inside City of Denver	Outside City	Outside Combined Service Area
Recycled			
\$ per 1,000 gallons	\$0.99		\$1.11
\$ per Acre-Foot	322.59	N/A	361.69
Raw Water (Monthly Fixed Charges Not Applicable)			
\$ per 1,000 gallons	\$0.63	\$0.98	\$1.05
\$ per Acre-Foot	205.29	319.33	342.14

C. Notes

1. **Applicability:** See Chapter 2 of [Denver Water's Operating Rules](#)
2. **Payment:** Bills are due and payable to Denver Water upon issuance. Monthly bills are delinquent 20 days after the billing date. Late charges will be assessed per Denver Water per Denver Water policy.

WATER RATE SCHEDULES - 2017, (continued)

Rate Schedule 3
City and County of Denver Governmental Rates
For Meters Read On or After April 1, 2017

A. Monthly Fixed Charges, \$ per Bill

Meter Size inches	Fixed Charge
5/8" & 3/4"	\$11.86
1"	15.13
1 1/2"	25.28
2"	39.35
3"	79.29
4"	135.26
6"	295.65
8"	519.87
10"	808.25
12"	1,161.14

B. Treated Water Volume Rates, \$ per 1,000 gallons

Domestic	
Year-Round	\$2.31
Irrigation	
Winter (Nov. 1 through April 30)	\$1.06
Summer (May 1 through October 31)	\$2.65

C. Nonpotable Water Volume Rates, \$ per 1,000 gallons

Raw	\$0.32
Recycled	\$0.24

D. Private Fireline

Fireline Size inches	Fixed Charge
1"	\$3.78
2"	6.31
4"	9.74
6"	13.92
8"	24.36
10"	34.80
12"	55.68
16"	139.20
Fire Hydrants	\$13.92

E. Notes

- 1. Applicability:** See Chapter 2 of [Denver Water's Operating Rules](#)
- 2. Payment:** Bills are due and payable to Denver Water upon issuance. Monthly bills are delinquent 20 days after the billing date. Late charges will be assessed per Denver Water policy.

(continued)

WATER RATE SCHEDULES - 2017, (continued)

(Effective for bills dated on or after April 28, 2013)

		Schedule 4			
		System Development Charges			
		Treated Water			
		<u>Inside City</u>	<u>Outside City</u>		
I. SINGLE FAMILY RESIDENTIAL					
Base Charge		\$ 3,030		\$ 4,240	
First 22,000 sq. ft., \$ per sq. ft.		0.70		0.98	
Over 22,000 sq. ft., \$ per sq. ft.		0.35		0.49	
Auxiliary Dwelling Unit ¹		\$ 1,940		\$ 2,710	
II. RESIDENTIAL MULTIPLEX					
Base Charge, \$ per unit		\$ 3,030		n/a	
Lot size charge, \$ per sq. ft.		0.70		n/a	
III. MULTIFAMILY RESIDENTIAL					
Base charge for the first two dwelling units that are on same parcel		\$ 10,040		\$ 14,060	
Charge for next 6 dwelling units that are on the same parcel		2,420		3,390	
Charge for each additional dwelling units above 8 that are on the same parcel		1,940		2,710	
IV. IRRIGATION-ONLY					
Minimum charge: first 5,000 sq. ft.		\$ 5,820		\$ 8,150	
Over 5,000 sq. ft., \$ per sq. ft.		0.87		1.22	
V. NON-RESIDENTIAL^{2,3,4}					
<u>Tap Size</u>		<u>Treated Water</u>		<u>Non-Potable Water</u>	
		<u>Inside City</u>	<u>Outside City</u>	<u>Inside City</u>	<u>Outside City</u>
3/4"		\$ 10,730	\$ 15,030	\$ 9,370	\$ 13,120
1"		19,170	26,840	16,730	23,420
1 1/2"		42,180	59,050	36,810	51,540
2"		76,690	107,360	66,930	93,710
VI. MIXED USE⁵ (sum of the following SDC)					
Multifamily component		As set forth in Section III of this schedule			
Nonresidential component		\$ 2.91		\$ 4.08	
\$ per sq. ft. of nonresidential gross floor area irrigation, if applicable		As set forth in Section IV of this schedule			
VII. SPECIAL CONTRACTS, FIXED VOLUME CONTRACTS, & LARGE VOLUME CUSTOMERS					
<u>Description</u>		<u>Treated Water</u>		<u>Non-Potable Water</u>	
		<u>Inside City</u>	<u>Outside City</u>	<u>Inside City</u>	<u>Outside City</u>
Inside the Combined Service Area					
Acre Foot Conversion (\$/AF)		\$ 18,980	\$ 26,570	\$ 16,570	\$ 23,190
1,000 Gallons Conversion (\$/1,000 gallons)		58.26	81.57	50.85	71.19
Outside the Combined Service Area					
Acre Foot Conversion (\$/AF)		n/a	37,210	n/a	32,470
1,000 Gallons Conversion (\$/1,000 gallons)		n/a	114.10	n/a	99.60

System Development Charge Applicability: Licenses for treated and non-potable water taps within the City and County of Denver and Denver Water service areas, including special contracts. System Development Charges are due and payable prior to issuance of a license to the customer.

Note: Several distributor contracts and water service agreements contain negotiated tap ratio conversions per acre foot and some agreements contain negotiated and/or prepaid system development charges. These contracts will continue to be administered utilizing the system development charge calculations and/or tap ratio conversions specified in each of the contracts. Tap credit pools are administered consistent with the applicable water service agreement and Denver Water Operating Rules.

¹ Units such as a guest house or carriage house that are detached from the primary residence and contain provisions for sleeping, cooking, and sanitation.

² Includes commercial, industrial, institutional development.

³ SDC for nonpotable by tap size apply only to recycled water taps.

⁴ Tap sizes greater than 2 inches are determined on an individual basis using peak demand requirements.

DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA – 2017

The following is general information concerning the economic and demographic conditions in the City and County of Denver (“Denver” or the “City”) and the immediate vicinity. The statistics presented below have been obtained from the sources indicated and represent the most current information available from such sources. However, certain information is released only after a significant amount of time has passed since the most recent date of the reported data and therefore such information may not be indicative of economic and demographic conditions as they currently exist or conditions which may be experienced in the near future. Furthermore, the reported data has not been adjusted to reflect economic trends, notably inflation.

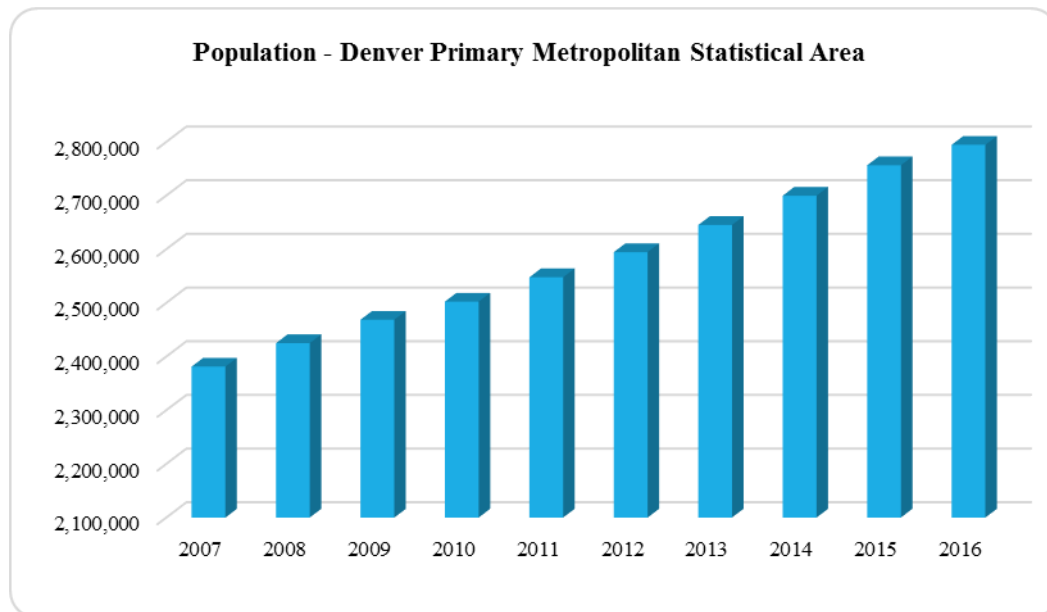
Population

The following table sets forth population statistics for Denver, the Denver Primary Metropolitan Statistical Area (“PMSA”) and the State of Colorado. The Denver PMSA includes the counties of Adams, Arapahoe, Denver, Douglas, and Jefferson.

Population Estimates			
Year	Denver	Denver PMSA	State of Colorado
2007	570,437	2,381,281	4,821,784
2008	581,903	2,424,992	4,901,938
2009	595,573	2,468,523	4,976,853
2010	604,879	2,502,291	5,050,332
2011	620,684	2,547,350	5,119,538
2012	634,471	2,593,544	5,191,086
2013	648,162	2,642,797	5,268,413
2014	662,855	2,695,536	5,350,118
2015	680,658	2,751,120	5,448,055
2016	693,292	2,794,512	5,538,180
2017	n/a	n/a	n/a

(n/a = not available)

Source: Colorado Department of Local Affairs, Division of Local Government, State Demography Office.



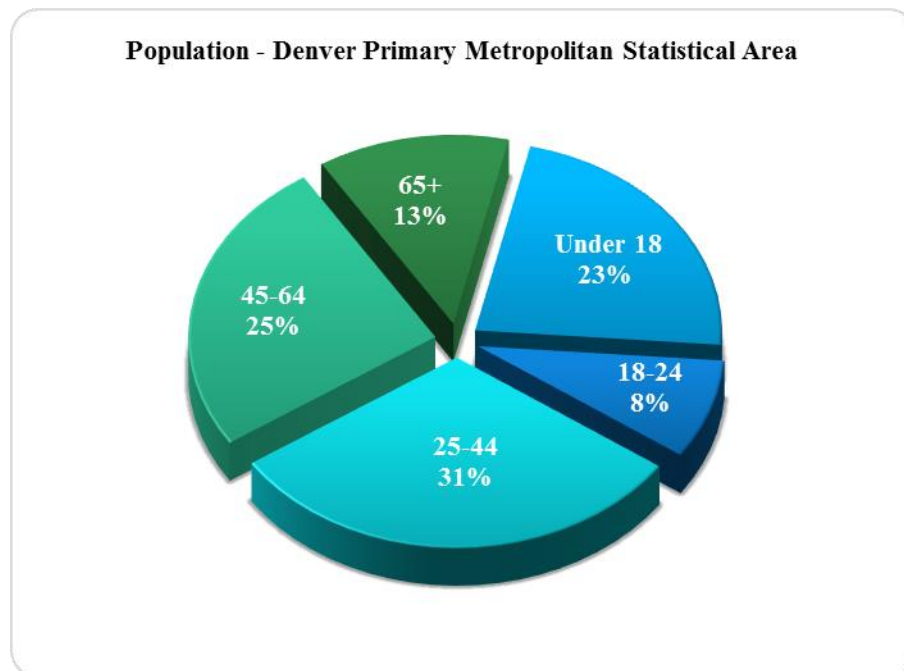
Age Distribution

The following table sets forth a forecasted age distribution profile for Denver, the Denver PMSA, and the State of Colorado for 2017.

Age Groups	Percent of Population		
	Denver	Denver PMSA	State of Colorado
Under 18	19.6%	22.6%	22.5%
18-24	7.8%	8.5%	9.8%
25-44	38.1%	30.9%	28.5%
45-64	22.9%	25.4%	25.4%
65+	11.5%	12.6%	13.8%

(Columns may not add to 100% due to rounding)

Sources: Colorado Department of Local Affairs, Division of Local Government, State Demography Office.



Income

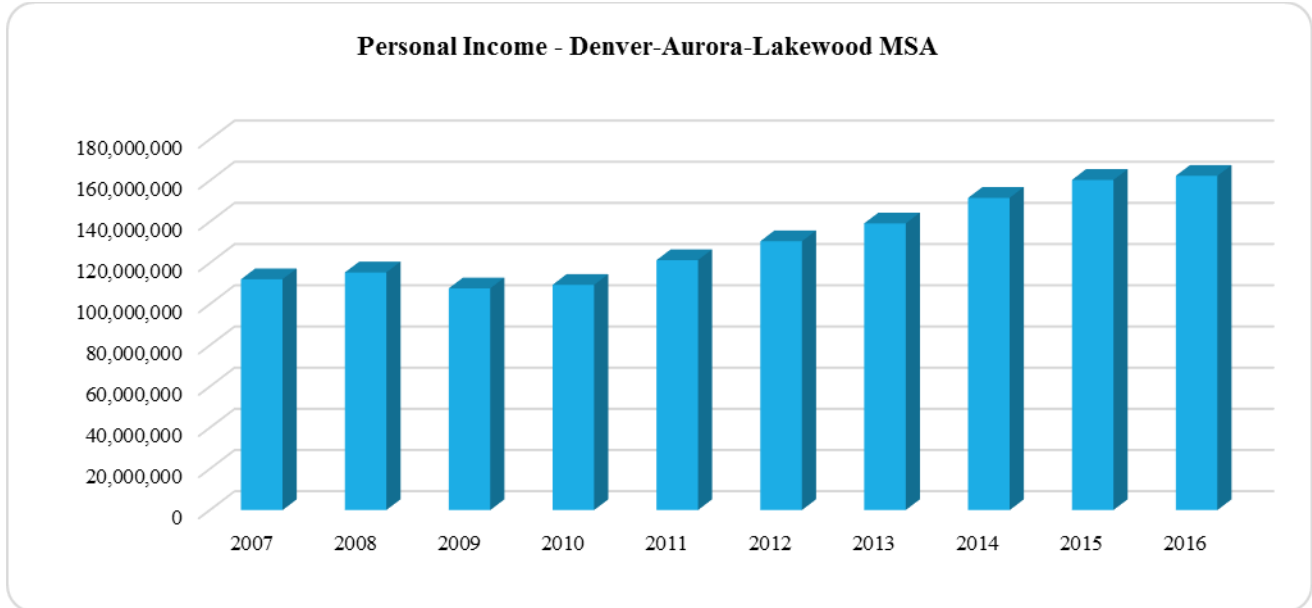
The following tables set forth recent annual personal income and per capita personal income levels for Denver, the Denver-Aurora-Lakewood Metropolitan Statistical Area (“MSA”), the State of Colorado and the United States from 2007 through 2016 as reported by the U.S. Department of Commerce, Bureau of Economic Analysis. The Denver-Aurora-Lakewood MSA includes the counties of Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson and Park.

Personal Income

Year	Denver-Aurora-Lakewood MSA			
	Denver	MSA	State of Colorado	United States
2007	\$ 29,907,155	\$ 112,087,470	\$ 201,743,269	#####
2008	31,995,450	115,393,714	208,608,111	12,492,705,000
2009	27,446,777	107,655,385	198,082,468	12,079,444,000
2010	28,829,542	109,386,712	201,569,924	12,459,613,000
2011	32,836,870	121,383,631	219,860,916	13,233,436,000
2012	36,287,725	130,544,627	234,005,901	13,904,485,000
2013	40,408,827	139,212,185	246,648,165	14,068,960,000
2014	45,032,564	151,608,447	267,225,467	14,811,388,000
2015	47,707,288	160,329,809	282,665,204	15,547,661,000
2016	46,612,315	162,316,535	288,103,337	15,912,777,000
2017	n/a	n/a	n/a	n/a

(n/a = not available. All dollar estimates are in current dollars not adjusted for inflation. Last updated: November 16, 2017 -- new estimates for 2010-2015.)

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

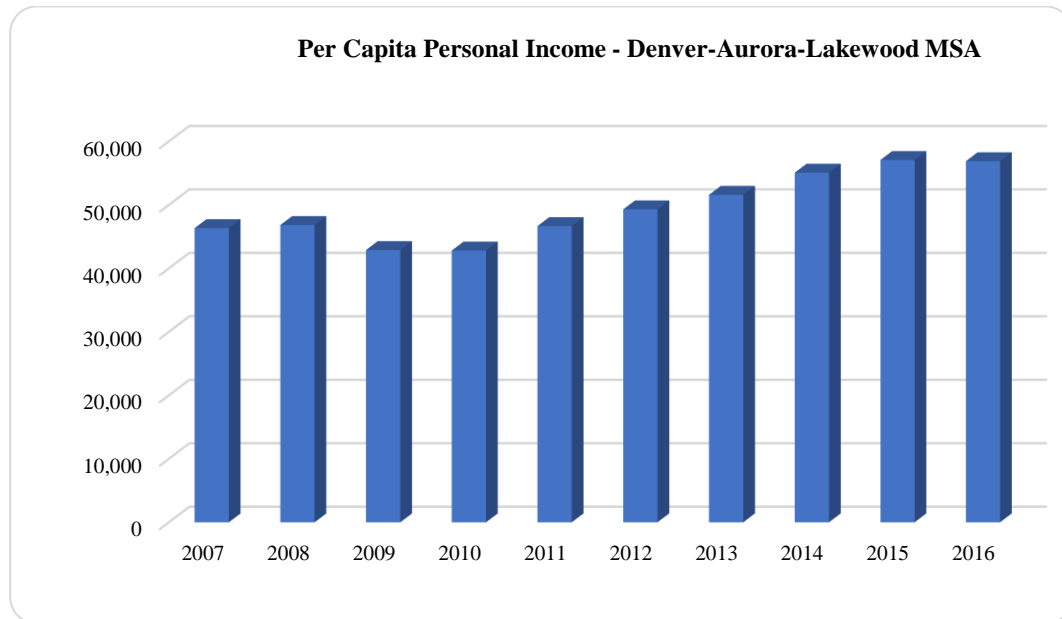


Per Capita Personal Income

Year	Denver	Aurora- Lakewood MSA	State of Colorado	United States
2007	\$ 52,990	\$ 46,342	\$ 41,996	\$ 39,821
2008	55,575	46,832	42,663	41,082
2009	46,598	42,901	39,838	39,376
2010	47,784	42,815	39,926	40,277
2011	53,024	46,670	42,995	42,461
2012	57,276	49,302	45,089	44,282
2013	62,414	51,596	46,824	44,493
2014	67,981	55,082	49,952	46,494
2015	70,154	57,081	51,876	48,451
2016	67,256	56,892	51,999	49,246
2017	n/a	n/a	n/a	n/a

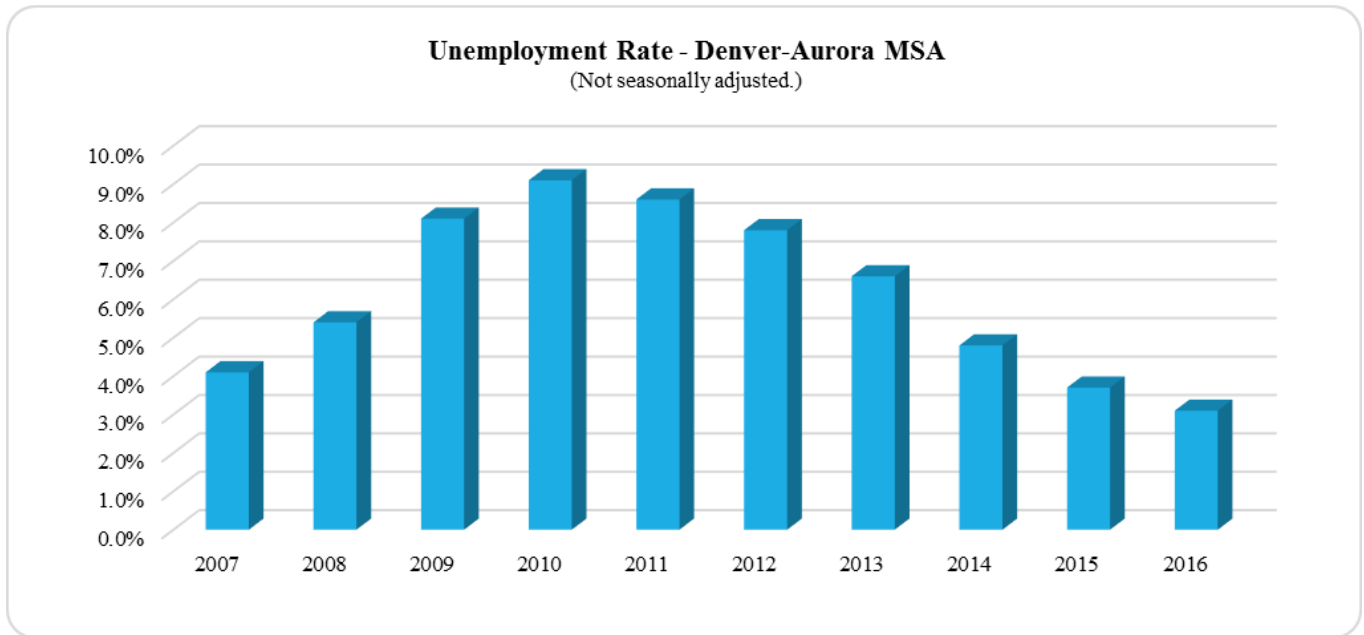
(n/a = not available. Per capita personal income was computed using Census Bureau midyear population estimates. Estimates for 2010-2016 reflect county population estimates available as of March 2017. All dollar estimates are in current dollars not adjusted for inflation. Last updated: November 16, 2017 -- new estimates for 2010-2015.)

Source: U.S. Department of Commerce, Bureau of Economic Analysis.



Employment

The following table sets forth recent total labor force, employment and unemployment statistics for Denver, the Denver-Aurora MSA and the State of Colorado. The national unemployment rate is estimated to be approximately 4.1% as of December 2017.



Source: Colorado Department of Labor and Employment.

Local Area Employment Statistics
(Not seasonally adjusted.)

Denver

Year	Labor Force (Thousands)	% Change	Unemployed (Thousands)	% Unemployment Rate
2007	314.8	2.9	13.0	4.1
2008	323.3	2.7	17.4	5.4
2009	324.3	0.3	26.3	8.1
2010	347.6	7.2	31.7	9.1
2011	352.2	1.3	30.3	8.6
2012	357.7	1.6	28.1	7.9
2013	363.9	1.7	24.1	6.6
2014	369.9	1.7	17.8	4.8
2015	376.6	1.8	14.0	3.7
2016	384.3	2.0	12.1	3.1
2017	n/a	n/a	n/a	n/a

Denver-Aurora MSA

Year	Labor Force (Thousands)	% Change	Unemployed (Thousands)	% Unemployment Rate
2007	1,359.0	1.5	51.8	3.8
2008	1,393.4	2.5	68.9	4.9
2009	1,392.7	(0.1)	104.2	7.5
2010	1,423.4	2.2	123.6	8.7
2011	1,431.2	0.5	118.8	8.3
2012	1,448.2	1.2	112.0	7.7
2013	1,468.5	1.4	96.9	6.6
2014	1,492.0	1.6	71.7	4.8
2015	1,510.0	1.2	55.9	3.7
2016	1,541.2	2.1	48.2	3.1
2017	n/a	n/a	n/a	n/a

State of Colorado

Year	Labor Force (Thousands)	% Change	Unemployed (Thousands)	% Unemployment Rate
2007	2,664.7	1.6	99.5	3.7
2008	2,716.6	1.9	131.4	4.8
2009	2,723.0	0.2	198.5	7.3
2010	2,724.4	0.1	238.0	8.7
2011	2,736.1	0.4	228.8	8.4
2012	2,757.2	0.8	217.3	7.9
2013	2,775.7	0.7	189.7	6.8
2014	2,810.4	1.3	140.5	5.0
2015	2,833.5	0.8	110.5	3.9
2016	2,891.0	2.0	95.8	3.3
2017	n/a	n/a	n/a	n/a

Source: Colorado Department of Labor and Employment

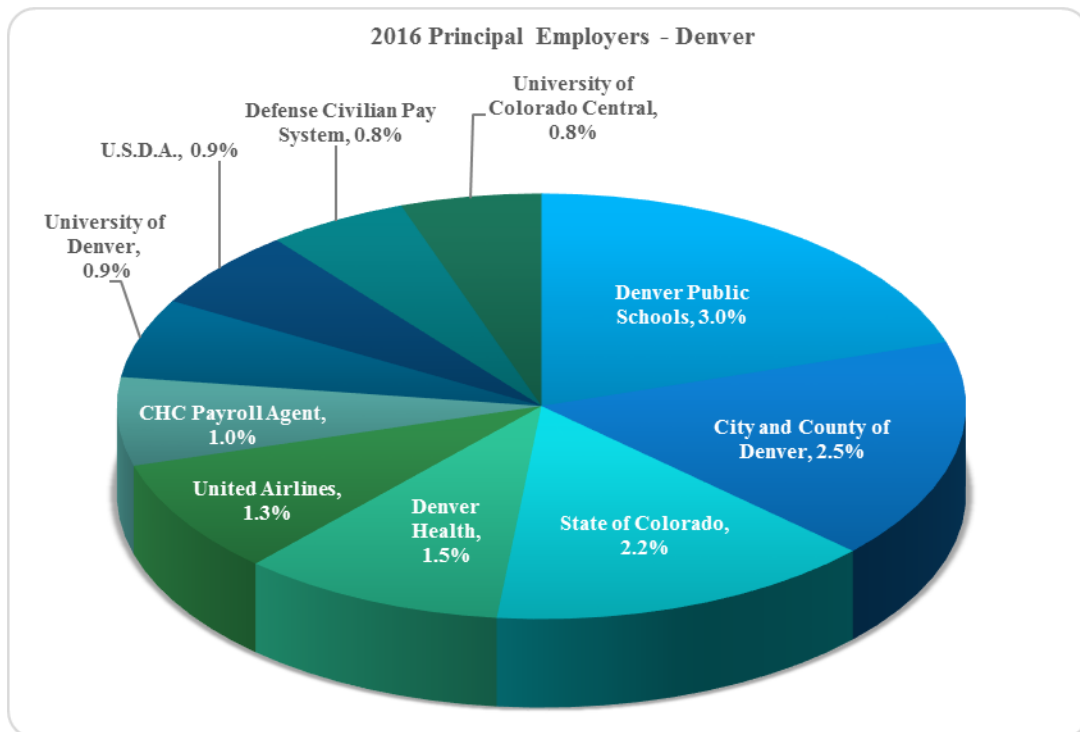
Principal Employers

Set forth in the following table are the ten largest employers in Denver for 2016 and the period nine years prior, the number of persons each employ, and the percentage of total employment that each represents.

Principal Employers in Denver Current Year and Nine Years Ago						
	2016			2007		
	Employees	Rank	% of Total City Employment	Employees	Rank	% of Total City Employment
Denver Public School District #1	12,924	1	3.0%	9,298	2	2.6%
City and County of Denver	10,781	2	2.5%	11,602	1	3.3%
State of Colorado Central Payroll	9,588	3	2.2%	9,183	3	2.6%
Denver Health & Hospital Authority	6,541	4	1.5%	3,982	8	1.1%
United Airlines, Inc.	5,777	5	1.3%	5,455	6	1.5%
CHC Payroll Agent, Inc. (HCA Health One)	4,196	6	1.0%	3,199	9	0.9%
University of Denver	3,866	7	0.9%			
U.S.D.A. National Finance Center	3,852	8	0.9%	8,833	4	2.5%
Defense Civilian Pay System	3,323	9	0.8%			
University of Colorado Central	3,317	10	0.8%	6,060	5	1.7%
Frontier Airlines Inc.				4,171	7	1.2%
King Soopers				2,509	10	0.1%
Total	64,165		14.9%	64,292		17.5%

(2017 data not available at time of publication.)

Source: City and County of Denver annual report. Based on 2016 and 2007 Occupational Privilege Tax Remitters.



New Residential Building Construction

Set forth in the following table are recent historical residential building permit statistics for Denver and the Denver metropolitan area (Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties).

New Residential Units in Denver and the Denver Metropolitan Area								
Year	Denver				Denver Metropolitan Area			
	Single-Family Detached	Single-Family Attached	Multi-Family ²	Total	Single-Family Detached	Single-Family Attached	Multi-Family	Total
2007	1,215	201	2,266	3,682	7,799	398	6,195	14,392
2008	837	148	2,195	3,180	4,037	224	5,296	9,557
2009	485	74	329	888	2,690	133	1,465	4,288
2010	632	130	470	1,232	3,791	285	1,478	5,554
2011	703	147	1,835	2,685	3,885	309	3,005	7,199
2012	1,056	166	4,356	5,578	5,947	299	8,679	14,925
2013	1,284	256	4,330	5,870	7,396	399	9,145	16,940
2014	1,710	287	3,961	5,958	8,396	440	8,074	16,910
2015	1,847	134	5,920	7,901	9,786	422	9,061	19,269
2016	1,887	374	5,581	7,842	10,663	532	12,301	23,496
2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

(n/a = not available. Single-family attached permits consists of structures with 2-4 units.)

Source: Metro Denver Economic Development Corporation based on U.S. Census Bureau.

