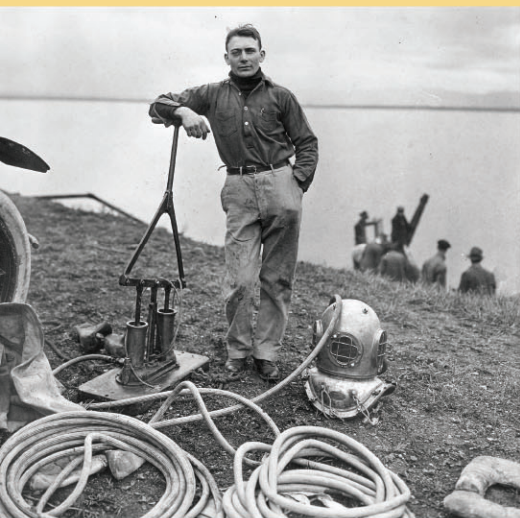


2018 | COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the years ended December 31, 2018 and 2017
Denver, Colorado



2018 | COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the years ended December 31, 2018 and 2017
Denver, Colorado

Prepared by
Finance Department

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April 23, 2019

To the Board of Water Commissioners and Our Customers:

We are pleased to transmit the “Comprehensive Annual Financial Report” (CAFR) of Denver Water for the year ended December 31, 2018.

Management assumes full responsibility for the completeness and reliability of the information contained in this report, based upon a comprehensive framework of internal control that it has established for this purpose. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

CliftonLarsonAllen LLP, Certified Public Accountants, has issued an unmodified opinion on Denver Water’s financial statements for the years ended December 31, 2018 and 2017. The independent auditors’ report is located at the front of the Financial Section of this report.

“Management’s Discussion and Analysis” (MD&A) immediately follows the independent auditors’ report and provides a narrative introduction, overview, and analysis of the basic financial statements. The MD&A complements this letter of transmittal and should be read in conjunction with it.

The Report

This report is presented in three sections as follows:

- I. **Introductory Section**, which includes this letter of transmittal, principal officials, organizational chart, and the Certificate of Achievement for Excellence in Financial Reporting for the previous year’s report.
- II. **Financial Section**, which includes the independent auditors’ report on the financial statements, MD&A, the basic financial statements, and supplemental bond schedules.
- III. **Statistical Section**, which includes financial trends information, revenue capacity information, debt capacity information, demographic and economic information, and operating information generally presented on a multi-year basis.

Profile of Denver Water

The privately-owned Denver City Water Company was organized in 1870. It was merged into the Denver Union Water Company in 1894, along with several smaller companies serving various parts of a growing Denver. In 1918, Denver residents voted to create a five-member Board of Water Commissioners and to purchase the Denver Union Water Company’s water system for approximately \$14 million, creating Denver Water. The five-member Board of Water Commissioners (the “Board”) structure is still in existence, governed under the Charter of the City and County of Denver Article X.

Denver Water is a public entity funded by water rates, hydropower revenues and new tap fees, not taxes. Today, its service area covers more than 335 square miles, including the City and several suburban distributors. The majority of Denver’s water comes from rivers and streams fed by mountain snowmelt. The South Platte River, Blue River, Williams Fork River and Fraser River watersheds are Denver Water’s primary water sources, but it also uses water from the South Boulder Creek, Ralston Creek, and Bear Creek watersheds. A system of reservoirs networked by tunnels and canals provides water to more than 1.4 million people. Three major treatment plants - Marston, Moffat, and Foothills - maintain water quality under the watchful eye of the Denver Water Quality Control Laboratory.

In 2018, Denver Water recognized its 100th anniversary celebrating its history, development, employees, and contribution to the community.

The mission of Denver Water is as follows:

*To expertly manage and supply an essential natural resource to sustain our vibrant community
— because water connects us all.*

Although Denver Water is not legally required to adopt budgetary accounting and reporting, the annual budget serves as the foundation for Denver Water’s financial planning and control. The budget process involves:

- Annual Business Plan and Strategic Plan Alignment
Prior to the commencement of the annual budget process, updates are made to the Annual Business Plan. A thorough review of ongoing and proposed organizational initiatives is completed to begin determining the organizational priorities for the upcoming year. 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 business case, and the remaining initiatives are prioritized. Early in this process, multi-year projects and programs that roll from year to year are flagged because they limit the number of new initiatives that can be added. Once completed, the Organizational Scorecard and Dashboard are reviewed and updated, as necessary, to align with the Annual Business Plan and the Strategic Plan. Finally, the Continuous Improvement activities are reviewed and modified to ensure alignment to the Annual Work Plan.
- Long-Range Financial Plan
Updates to the multi-year financial plan are made annually to determine the level of revenue adjustments needed to meet annual revenue requirements and financial performance measures. The Capital Plan projects additions, improvements, and replacements to water system facilities and infrastructure, based on projected demand for water, federal and state regulations, and ongoing system requirements. The Operations 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 includes financial performance measures such as debt service coverage, debt to asset ratio, and targeted reserve levels.
- Annual Budget Preparation
The budget development process is the formal method through which Denver Water ensures alignment between fiscal resources and organizational priorities for the upcoming year. It results in an Approved Budget, which is the defined plan of revenue and expense activities for the year. The approved budget is the main internal control document used to monitor and manage revenues and expenditures for Denver Water. The budget is presented to the Board in November at the annual Budget Workshop. Official approval by the Board occurs in December.

Factors Affecting Economic Condition

The information displayed in the financial statements presents Denver Water’s current *financial position*, i.e., its *existing* resources and claims on those resources. The following information is provided to help assess Denver Water’s *economic condition*, i.e., both existing and *future* resources and claims on those resources. Stated differently, economic condition reflects not only today’s financial position, but also the prospects that today’s financial position will improve or decline.

Local Economy

Denver is the center of economic activity in the state of Colorado. Major industries include aerospace, aviation, beverage production, bioscience, broadcasting and telecommunications, energy, financial services, healthcare and wellness, and IT-software. The statewide economy also includes agriculture and tourism. In 2016, Colorado was the seventh-fastest growing state (2017 U.S. Census Bureau) and population continues to increase. Water is essential to making Colorado beautiful and to ensuring the quality of life we enjoy. An overview of the Denver metropolitan area can be found in Section D, *Demographic and Economic Information*, in the Statistical Section.

Long-Term Financial Planning – Major Initiatives

The Operations Complex Redevelopment

- 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 Building and water distribution building will be remodeled. The four operations buildings were completed in September 2017. Final completion is anticipated in the 1st quarter of 2020. The projected cost for this project increased \$6 million in 2018 to add scope for slip-lining an adjacent water conduit and to deal with unforeseen soil conditions at the OCR site. A revised project budget of \$201.8 million, with an additional \$3 million added in 2019 for solar panels, was approved by Denver Water’s Board.

The North System Renewal

- Approximately \$464 million is planned 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 adding system balance and protecting against system vulnerabilities. A federal Clean Water Act Section 404 Permit and other state and federal permits have been issued for the project. In December 2018, six environmental groups sued the US Army Corps of Engineers and the US Fish and Wildlife Service arguing that the federal agencies had violated the National Environmental Policy Act, the Clean Water Act, and the Endangered Species Act in permitting the project. Denver Water intervened in the case to defend the federal agencies’ actions and decisions. Work on the project continues while the litigation proceeds, and as Denver Water continues to work through the local permitting process. Denver Water is awaiting a final license amendment from the Federal Energy Regulatory Commission.
- Approximately \$600 million is planned in capital cost for Denver Water’s Northwater Treatment Plant (NTP) and Conduit 16 replacement projects. This includes funds for the planning, design, and construction of a new 75-million gallon per day (MGD) Water Treatment Plant (WTP), with room to expand. Upon completion, the Northwater Treatment Plant 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.

Revenue adjustments identified in the 2019 Financial Plan are set at levels to meet annual revenue requirements, debt service coverage, and target reserves. Revenue requirements include annual operation and maintenance expenses, payments on existing and proposed debt service, and rate-funded capital projects. Denver Water uses a combination of debt and cash reserves to maintain leveled annual revenue adjustments to meet these requirements. The use of debt to fund specific capital projects distributes the annual cost of facilities over time rather than requiring the full amount in any one year. The adopted revenue adjustment for 2019 was effective beginning

February 1, 2019. This adjustment is expected to produce 3.0% of additional revenue over an 11-month period, assuming normal weather and consumption. In addition, annual revenue adjustments of 3.0% are projected in 2020 through 2028. The Financial Plan is updated annually.

Relevant Financial Policies and Practices – Investment Balance

Denver Water established a comprehensive set of financial policies and practices as a basic framework for the financial management of Denver Water and its planning and budgeting process. These policies and practices are listed in the Budget Book. Two investment balance related policies and practices are as follows:

Balanced Budget

The Denver Board of Water Commissioners has not adopted an official policy on a balanced budget. Our practice is to balance the budget by the planned use or contribution to investment balances.

Cash Reserves

The Charter of the City and County of Denver specifically allows the accumulation of reserves “sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, and betterments, including those reasonably required for anticipated growth of the Denver Metropolitan area and to provide for Denver’s general welfare.”

Denver Water began 2019 with an actual cash and investment balance of \$364 million, at market value. The 2019 budget projects this balance to increase by receipts of \$433 million and decrease by expenditures of \$508 million, resulting in a projected 2018 ending balance of \$289 million (see schedule of Receipts and Expenditures in the Statistical Section for details).

Note 2, *Deposits and Investments*, in the Financial Section provides more information on Denver Water’s investments. Investment balances in published financial statements are not directly comparable to the budgeted investment balance because different valuation methods are used.

Strategic Plan

The Strategic Plan is the overarching document that defines the vision, perspectives, goals, and objectives of the organization. Denver Water revised and refreshed its Strategic Plan in 2017 to ensure it was relevant for the next five years and that it resonated with our customers and employees. The Board adopted the refreshed plan in February 2017 and continues to operate under its guiding principles and the Strategic Perspectives.

There are three guiding principles in the Strategic Plan which are used to evaluate all decisions and purposefully move the organization toward its vision to be the best water utility in the nation:

1. **We are customer-centric.** We strive to earn the support and trust of our customers – everyone who pays for our service or uses our water. They are our top priority, and we are motivated to serve them.
2. **We are industry leaders.** We understand, help develop, implement, and share best industry practices. We are forward thinking – we anticipate future trends and look for and responsibly implement progressive solutions. We are adaptable, resilient and experts in our work.
3. **We take the long-term view.** We weigh the consequences of our decisions and actions against multiple scenarios to preserve future options and the sustainability of our community. We provide the best possible outcome for our customers, as well as future generations.

Additionally, the Strategic Plan is built on four foundational elements called Strategic Perspectives. Aligning business goals to the strategic perspectives gives the organization a balanced and holistic approach to creating goals and objectives. All goals, objectives, strategies and initiatives should align to one of the strategic perspectives. To achieve the organization’s vision, each perspective needs to have equal focus. The Strategic Perspectives are listed below:

- **Excellent Operations.** An organization that is effective, efficient and strategically driven.
 - We strategically align our projects and programs to provide the best value to our customers.
 - We employ best business practices in our day-to-day operations to increase efficiency and delivery of service to our customer.
 - We lead the utility industry in environmental stewardship and sustainability.
- **Strong Financials.** An organization that is financially strong and stable.
 - We sustain a financial plan that supports our strategic objectives.
 - We make financial decisions keeping in mind the best long-term interests of our customers.
- **Inspired People.** An organization that is passionate about our customers and our community.
 - We are inspired by our mission, vision and values, and we know we are a part of something meaningful and larger than our own self-interest.
 - We have leadership that inspires, fosters meaningful work, and develops our people.
- **Trusted Reputation.** An organization with satisfied and supportive customers and strategically effective relationships.
 - We play an integral role in building communities and advancing economic and social health.
 - We are the public’s trusted source on water.
 - We go beyond what is expected operating with the highest ethics and integrity.

SEC Periodic Disclosure Requirements

Rule 15c2-12 requires Participating Underwriters to determine that the issuer of municipal securities has undertaken in a written agreement for the benefit of holders of such securities to provide annual financial information in a timely manner to the Municipal Securities Rulemaking Board’s Electronic Municipal Market Access (“EMMA”) system. The Government Finance Officers’ Association of the United States and Canada (“GFOA”) recommends that the disclosure be contained in the CAFR. The disclosure that Denver Water has undertaken to provide in order that participating underwriters may comply with this rule can be found on the following pages:

Budgetary Controls	Section I – Letter of Transmittal
Audited Financial Statements	Section II - Financial Section
System Development Charges and Participation Receipts	Section II- Financial Section
Total Outstanding Indebtedness	Section II - Notes 6, 7, 9, Exhibits II-A through II-D
The Service Area	Section III – Statistical Section
Number of Customer Accounts	Section III – Statistical Section
Receipts and Expenditures	Section III – Statistical Section
Total Treated Water Delivered/Consumption	Section III – Statistical Section

Information for prior years and information related to the City and County of Denver is available on the Municipal Securities Rulemaking Board’s EMMA website at <https://www.emma.msrb.org>.

Awards, Recognition and Acknowledgements

Comprehensive Annual Financial Report. The GFOA awarded a Certificate of Achievement for Excellence in Financial Reporting to Denver Water for its CAFR for the fiscal year ended December 31, 2017. This was the 30th consecutive year that Denver Water has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized CAFR. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current CAFR continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

Annual Budget. Denver Water received the GFOA's Distinguished Budget Presentation Award for its annual budget document for the fiscal year beginning January 1, 2018. This is the 27th consecutive year Denver Water has received this award. To qualify for this award, Denver Water's budget document had to be judged proficient as a policy document, a financial plan, an operations guide, and a communications device.

The Leading Utilities of the World. Denver Water became one of the newest members of the Leading Utilities of the World network. Utilities must demonstrate outstanding innovation in various LUOW categories. Our categories included response to drought or scarcity with the From Forests to Faucets partnership with the U.S. and state forest services, energy efficiency with Denver Water's Sustainability Plan and hydroelectric operations and human resource development with our Continuous Improvement efforts.


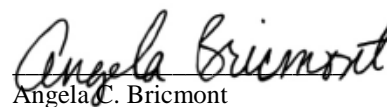
Sustainable Water Utility Management Award. The Association of Metropolitan Water Agencies awarded Denver Water the Sustainable Water Utility Management Award. It goes to utilities that balance innovative and successful efforts in areas of economic, social and environmental endeavors. That includes managing resources, protecting public health, meeting community responsibilities and providing cost-effective services to ratepayers.

Climate Registry. Denver Water had its ninth greenhouse gas inventory verified, receiving official registration recognition from the Climate Registry. The Climate Registry helps organizations measure, report and reduce their greenhouse gas emissions with integrity.

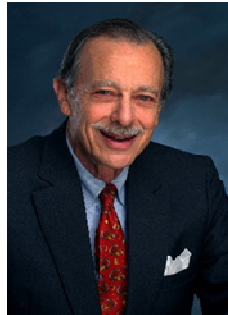
US Forest Service. The US Forest Service recognized Denver Water for ongoing dedication in stewarding critical watersheds that deliver clean, safe, reliable drinking water. This stems from the From Forests to Faucets program, a forest management partnership with Denver Water and the Rocky Mountain region of the Forest Service.

We wish to express our appreciation to all members of Denver Water who assisted and contributed to the preparation of this report. Credit must also be given to the Board of Water Commissioners for unflinching support in maintaining the highest standards of professionalism in the management of Denver Water's finances.

Sincerely,


James S. Lochhead
CEO/Manager
Angela C. Bricmont
Chief Finance Officer

BOARD OF WATER COMMISSIONERS



**Top from left, Paula Herzmark, John R. Lucero;
Bottom from left, Greg Austin, Gary Reiff, Craig Jones**

Paula Herzmark, President
Former Executive Director, Denver Health Foundation

*Commissioner since April 2009;
Term expires 2019.*

John Lucero, First Vice President
CEO, Lucero Development Services
Principal, Broker Owner, iMPAX Real Estate Group
Former Deputy Director, Denver Office of Economic Development

*Commissioner since July 2007;
Term expires 2021.*

Greg Austin, Vice President
Former Partner, Holland & Hart LLP.

*Commissioner since July 2009;
Term expires 2019.*

Gary Reiff, Vice President
Chief Legal Officer, UCHealth

*Commissioner since September 2017;
Term expires 2023.*

Craig Jones, Vice President
Managing Director, Colony Group's Rocky Mountain Region

*Commissioner since October 2017;
Term expires 2023.*

LAST 20 COMMISSIONERS

John A. Yelenick	Jul 1969 to Aug 1987	Andrew D. Wallach	Jul 2001 to Aug 2003
Marguerite S. Pugsley	May 1978 to Aug 1987	Daniel E. Muse	Feb 2000 to Nov 2003
Elizabeth A. Hennessey	Nov 1985 to Jul 1989	Richard A. Kirk	Jul 1993 to Oct 2005
Malcolm M. Murray	Aug 1987 to Jul 1993	William R. Roberts	Jul 1997 to Oct 2005
Donald L. Kortz	Aug 1987 to Jul 1993	Harris D. Sherman	Dec 2005 to Feb 2007
Monte Pascoe	Sep 1983 to Jul 1995	Denise S. Maes	Jul 1995 to Jul 2007
Romaine Pacheco	Jul 1989 to Jul 1995	Susan D. Daggett	Nov 2007 to Jan 2009
Hubert A. Farbes, Jr.	Jul 1985 to Jul 1997	George B. Beardsley	Feb 2004 to Mar 2009
Ronald L. Lehr	Jul 1993 to Apr 1999	Thomas A. Gougeon	Aug 2004 to Jul 2017
Joe Shoemaker	Jul 1995 to Jul 2001	Penfield W. Tate III	Oct 2005 to Jul 2017

EXECUTIVE LEADERSHIP



Top: Jim Lochhead, CEO/Manager;

Second row from left: Julie Anderson, Chief of Staff; Angela Bricmont, Chief Finance Officer;
Christopher R. Dermody, Chief Information Officer; Gail Cagle, Chief Human Resources Officer;

Third row from left: Brian Good, Chief Administrative Officer; Mike King, Chief External Affairs Officer;
Robert J. Mahoney, Chief Engineering Officer; Tom Roode, Chief Operations & Maintenance Officer;
Jessica Brody, General Counsel

DISCRETIONARY PERSONNEL

(Employees Serving in Executive Discretionary Positions Solely at the Pleasure of the Board)

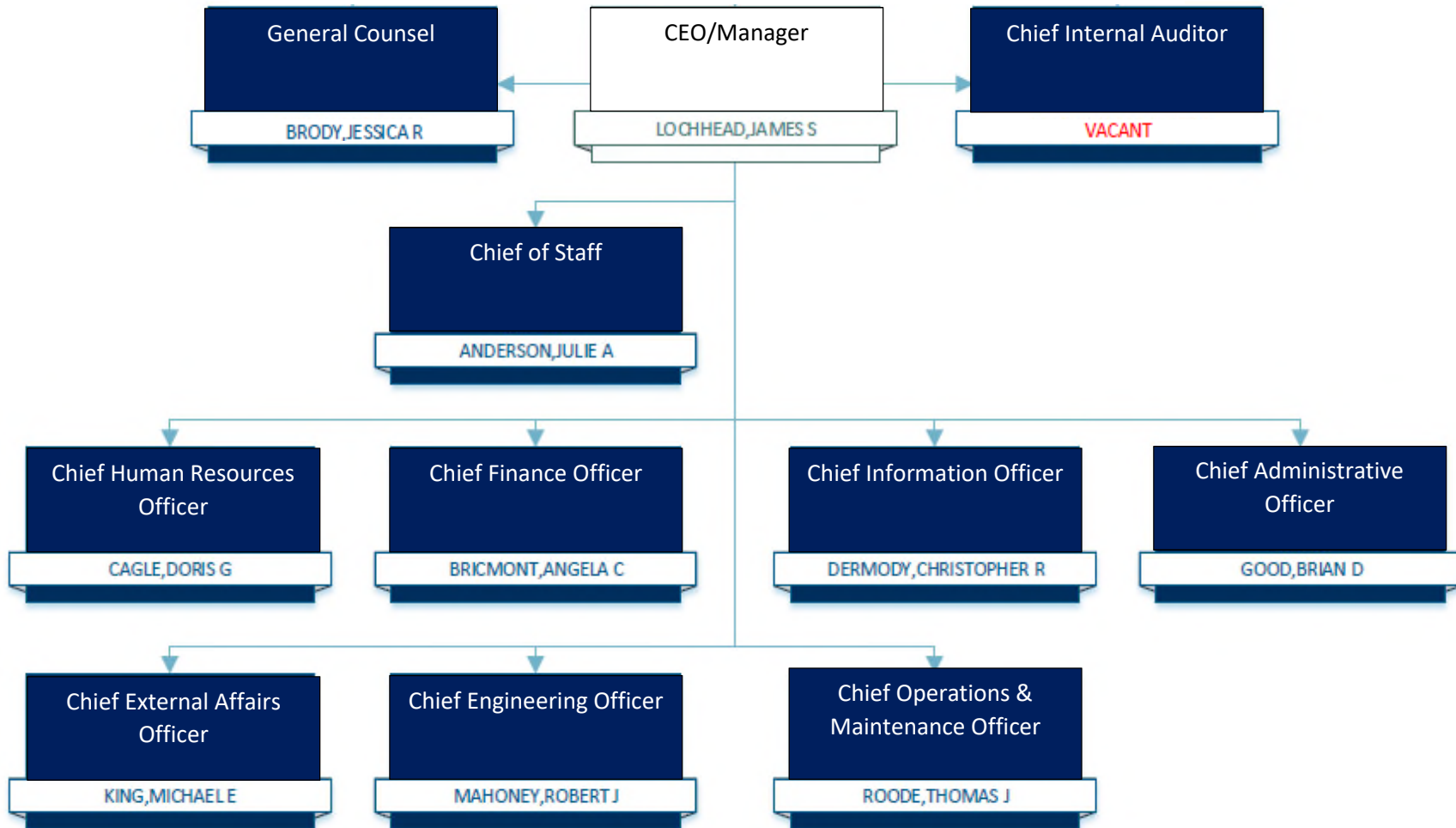
Executive Leadership

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 External Affairs Officer
Robert J. Mahoney, Chief Engineering Officer
Tom Roode, Chief Operations & Maintenance Officer
Jessica Brody, General Counsel

Other Staff

Stephen Reum, Director of Engineering
Usha Sharma, Treasurer
Stephanie M. Abram, Budget Manager
Fletcher Davis, Rates Manager
Christopher Piper, Government Relations Manager
Stacy Chesney, Director of Public Affairs
Kim Burgess, Director HR - Total Rewards

ORGANIZATIONAL CHART





Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Denver Water
Colorado**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2017

Christopher P. Morill

Executive Director/CEO

**DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO**

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INDEPENDENT AUDITORS' REPORT

Board of Water Commissioners
Denver Water
Denver, Colorado

Report on the Financial Statements

We have audited the accompanying financial statements of the business type activities and the remaining fund information of the Board of Water Commissioners, City and County of Denver, Colorado (the Board), as of and for the years ended December 31, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Board's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Board's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Board of Water Commissioners, City and County of Denver, Colorado as of December 31, 2018 and 2017, and the changes in its financial position and, where applicable, cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

During fiscal year ended December 31, 2018, the Board adopted GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. As a result of the implementation of this standard, the Board reported a restatement for the change in accounting principle (see Note 1.P to the financial statements). As of January 1, 2017, the Board's net position was restated to reflect the impact of this adoption. Our auditors' opinion was not modified with respect to the restatement

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Board Pension Contributions, and Schedule of Changes in the Net Other Postemployment Benefits Liability and Related Ratios as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the Board's basic financial statements. The Other Supplemental Information (as listed in the table of contents) and the Introductory and the Statistical Sections, as listed in the table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Other Supplemental Information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Other Supplemental Information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The Introductory Section and Statistical Section have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.



CliftonLarsonAllen LLP

Greenwood Village, Colorado
April 23, 2019

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

December 31, 2018 and 2017

The following is Management's Discussion and Analysis ("MD&A") of the financial activities of the Board of Water Commissioners (DBA "Denver Water") for the years ended December 31, 2018 and 2017. This information should be read in conjunction with the basic financial statements which follow.

FINANCIAL HIGHLIGHTS

Denver Water's financial position is reflected by the change in net position, which improved 5% during 2018, compared to 4% during 2017. The 2017 financial statements were restated from published due to the implementation of GASB Statement No. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (OPEB). The cumulative effect of applying this GASB statement was reported as a restatement of beginning 2017 net position in the amount of \$7.9 million.

- ***Operating income*** was \$69.5 million in 2018 compared to \$42.5 million in 2017, an increase of 64%.
- ***Income before capital contributions*** was \$53.9 million in 2018 and \$25.8 million in 2017, an increase of 109%.
- ***Capital contributions*** were \$60.0 million in 2018 and \$57.3 million in 2017, an increase of 5%.
- ***Net position*** increased \$113.9 million, or 5%, in 2018 compared to \$75.2 million, or 4%, in 2017. The 2017 published change in net position was \$83.1 million. The beginning 2017 net position was restated for the GASB 75 implementation with a cumulative effect of \$7.9 million.
- ***Capital asset additions*** were \$228.2 million in 2018 compared to \$182.9 million in 2017, an increase of 25%.

OVERVIEW OF THE BASIC FINANCIAL STATEMENTS

This MD&A is intended to serve as an introduction to Denver Water's basic financial statements, which are comprised of five components: 1) Statements of Net Position, 2) Statements of Revenues, Expenses, and Changes in Net Position, 3) Statements of Cash Flows, 4) Notes to the Basic Financial Statements, and 5) Required Supplementary Information. Denver Water also provides certain supplemental information which is presented for additional analysis and is not a required part of the basic financial statements.

The **Statements of Net Position** present information on all of Denver Water's (a) assets and deferred outflows of resources, and (b) liabilities and deferred inflows of resources, with the difference between the two reported as ***net position***. "Deferred outflows of resources" is defined as consumption of net assets that is applicable to a future reporting period rather than the current reporting period. "Deferred inflows of resources" is defined as an acquisition of net assets that is applicable to a future reporting period rather than the current reporting period. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of Denver Water is improving or declining.

The **Statements of Revenues, Expenses, and Changes in Net Position** present information showing how Denver Water's net position changed during the years presented. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. This is known as the accrual basis of accounting. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in the future (e.g., unbilled water revenue and earned but unused paid time off) or that may have occurred in the past (e.g., amortization of debt premiums or discount and prepaid contributed capital). This statement

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measures the financial outcomes of Denver Water's activities and can be used to determine whether Denver Water has successfully recovered all its economic costs through its water rates, capital contributions, and other charges.

The **Statements of Cash Flows** report cash receipts, cash payments, and net changes in cash resulting from operating activities, capital and related financing activities, and investing activities for the years presented.

The **Notes to the Basic Financial Statements** provide additional information that is essential to a full understanding of the data provided in the basic financial statements, such as Denver Water's accounting policies, significant account balances and activities, material risks, obligations, commitments, contingencies and any subsequent events.

Required Supplementary Information provides the detail in support of the changes in the net pension liability and information pertaining to Denver Water's actuarially-determined contributions to the pension plan and other post-employment benefits (OPEB).

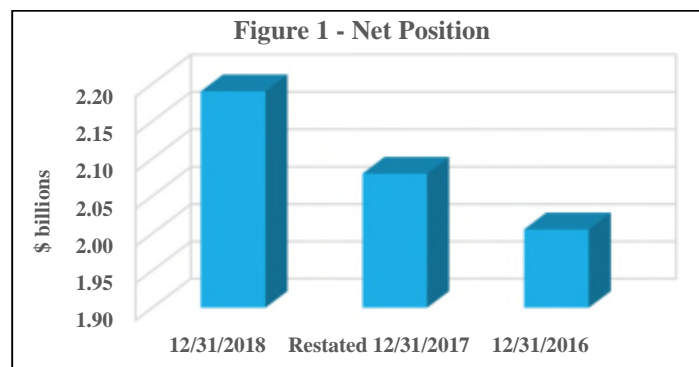
Supplemental Information provides details of Denver Water's bonded debt.

FINANCIAL ANALYSIS

In 2016, Denver Water reimplemented the financial system and reconfigured the chart of accounts to align with business functions to improve financial reporting and management. The restructure of the accounts resulted in reclassifications within the financial statements and variations in certain comparative data.

NET POSITION

As discussed above, net position may serve over time as a useful indicator of Denver Water's financial position. Denver Water's net position was \$2.2 billion at December 31, 2018, an increase of \$113.9 million, or 5% from December 31, 2017. Denver Water's net position was \$2.1 billion at December 31, 2017, an increase of \$75.2 million, or 4% from December 31, 2016 (see Figures 1 and 2 and Table 1).



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Table 1 - Condensed Statements of Net Position

(amounts expressed in thousands)

	As of December 31,			2018 - 2017		2017 - 2016	
	2018	Restated ¹ 2017	2016	Increase (Decrease)	% Change	Increase (Decrease)	% Change
Current and other assets	\$ 413,436	\$ 499,298	\$ 333,653	\$ (85,862)	(17)%	\$ 165,645	50%
Capital assets, net	<u>2,520,262</u>	<u>2,347,894</u>	<u>2,244,862</u>	<u>172,368</u>	<u>7%</u>	<u>103,032</u>	<u>5%</u>
Total assets	<u>2,933,698</u>	<u>2,847,192</u>	<u>2,578,515</u>	<u>86,506</u>	<u>3%</u>	<u>268,677</u>	<u>10%</u>
Deferred outflows of resources	<u>52,174</u>	<u>44,203</u>	<u>41,109</u>	<u>7,971</u>	<u>18%</u>	<u>3,094</u>	<u>8%</u>
Total assets and deferred outflows	<u>2,985,872</u>	<u>2,891,395</u>	<u>2,619,624</u>	<u>94,477</u>	<u>3%</u>	<u>271,771</u>	<u>10%</u>
Current liabilities	80,881	80,190	76,467	691	1%	3,723	5%
Noncurrent liabilities	<u>691,808</u>	<u>727,689</u>	<u>537,710</u>	<u>(35,881)</u>	<u>(5)%</u>	<u>189,979</u>	<u>35%</u>
Total liabilities	<u>772,689</u>	<u>807,879</u>	<u>614,177</u>	<u>(35,190)</u>	<u>(4)%</u>	<u>193,702</u>	<u>32%</u>
Deferred inflows of resources	<u>18,562</u>	<u>2,833</u>	<u>-</u>	<u>15,729</u>	<u>555%</u>	<u>2,833</u>	<u>100%</u>
Total liabilities and deferred outflows	<u>791,251</u>	<u>810,712</u>	<u>614,177</u>	<u>(19,461)</u>	<u>(2)%</u>	<u>196,535</u>	<u>32%</u>
Net position:							
Net investment in capital assets	<u>1,946,849</u>	<u>1,803,684</u>	<u>1,788,250</u>	<u>143,165</u>	<u>8%</u>	<u>15,434</u>	<u>1%</u>
Restricted	<u>14,094</u>	<u>13,143</u>	<u>14,505</u>	<u>951</u>	<u>7%</u>	<u>(1,362)</u>	<u>(9)%</u>
Unrestricted	<u>233,678</u>	<u>263,856</u>	<u>202,692</u>	<u>(30,178)</u>	<u>(11)%</u>	<u>61,164</u>	<u>30%</u>
Total net position	<u>\$ 2,194,621</u>	<u>\$ 2,080,683</u>	<u>\$ 2,005,447</u>	<u>\$ 113,938</u>	<u>5%</u>	<u>\$ 75,236</u>	<u>4%</u>

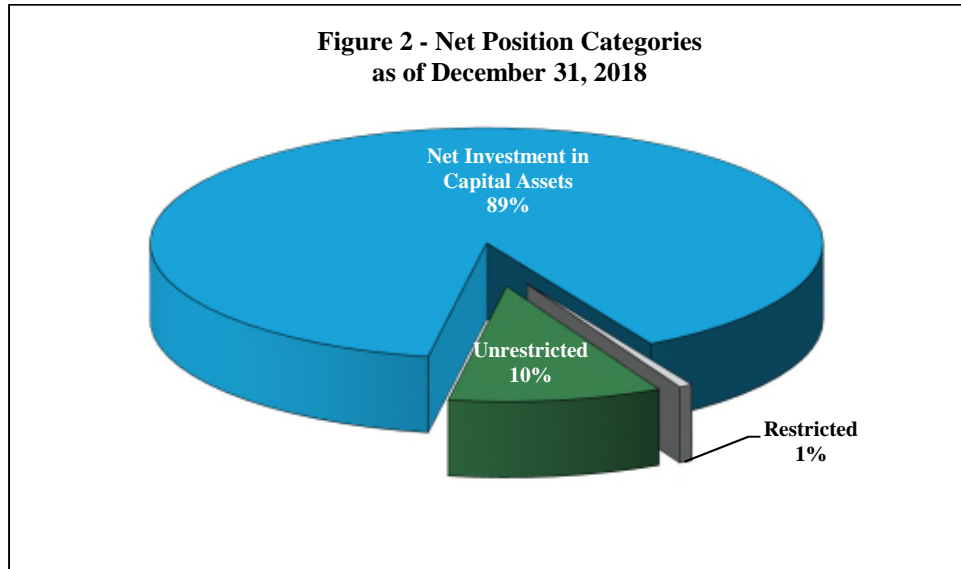
¹ The 2017 financial statements were restated as required for the implementation of GASB Statement No. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

The largest portion of Denver Water's net position reflects its investment in capital assets, less any related debt used to acquire those assets. Denver Water uses these capital assets to provide water, consequently, these assets are not available for future spending. Although Denver Water's investment in its capital assets is reported net of related debt, the resources to repay this debt must be provided from other sources, since the capital assets themselves are not intended to be liquidated to repay these liabilities.

A small portion of Denver Water's net position represents resources that are subject to external restrictions on how they may be used. Denver Water's 2018, 2017, and 2016 restricted net positions consisted of debt service reserve and debt reserve funds for revenue bonds. In 2017, amounts were restricted for grants supporting the Colorado River System Conservation Pilot Program, and in 2018 amounts were restricted for a motor vehicle claims reserve.

The remaining balance of Denver Water's net position represents unrestricted net position and may be used to meet Denver Water's ongoing obligations to creditors.

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Denver Water's increase in net position during 2018 of \$113.9 million, or 5%, indicates an improved financial position.

Other changes in the Statements of Net Position were as follows:

- **CURRENT AND OTHER ASSETS** decreased in 2018 by \$85.9 million, or 17% from 2017. The decrease in 2018 was primarily due to the use of funds from investments restricted for capital projects to support on-going construction on the Operations Complex Redevelopment Project (OCR) and a decrease in investments compared to 2017 due to the use of funds in 2018 received from the 2017 bond issuance. The increase of \$165.6 million, or 50% between 2017 and 2016 was primarily due to an increase in investments from 2017 bond issuance proceeds, reimbursing a portion of 2016 and 2017 capital expenditures, and amounts restricted for capital projects from that issuance.
- **CAPITAL ASSETS, NET** increased in 2018 by \$172.4 million, or 7% from 2017. There was an increase of \$103.0 million, or 5% between 2017 and 2016. The increase in both years was due to asset additions, offset by increased accumulated depreciation and asset retirements (see Table 8 for current year additions).
- **DEFERRED OUTFLOWS OF RESOURCES** increased in 2018 by \$8.0 million from 2017. The increase was primarily the result of pension and OPEB-related assumption changes, pension-related economic/demographic losses, net investment losses associated with pension plan investments, and pension and OPEB contributions after the measurement date. The increase of \$3.1 million between 2017 and 2016 was the result of pension-related economic/demographic losses, changes in the pension plan assumptions, net investment losses associated with pension plan investments, contributions after the measurement date, and the amortization of the deferred loss on refunding into interest expense.
- **CURRENT LIABILITIES** increased in 2018 by \$0.7 million, or 1% from 2017. The increase in 2018 was primarily the result of an increase in accruals for project work done during December and an increase in the payroll and benefits accrual due to the alignment of paid time off (PTO) with Denver Water's accrual policy. This

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was offset by a decrease in the accrual for accounts payable outstanding in December. The increase of \$3.7 million, or 5% between 2017 and 2016 was primarily the result of various factors such as an increase in accruals for project work done during December and an increase in accrued interest due to the 2017 debt issuance. This increase was offset by a decrease in the payroll and other benefits accrual due to a higher accrual in 2016 for the PTO payout conversion.

- **NONCURRENT LIABILITIES** decreased in 2018 by \$35.9 million, or 5% from 2017. The decrease in 2018 was primarily the result of debt payments and a decrease in the actuarially-calculated pension and OPEB liabilities. The increase of \$190.0 million, or 35% between 2017 and 2016 was primarily the result of the Series 2017A and 2017B bond issuance and customer advances for construction, offset by the decrease in the pension liability due to changes in plan assumptions and investment experience.
- **DEFERRED INFLOWS OF RESOURCES** increased in 2018 by \$15.7 million from 2017 due to net investment gains associated with differences between the expected and actual earnings on pension plan investments and economic/demographic gains used in the calculation of the pension and OPEB liabilities. The increase of \$2.8 million between 2017 and 2016 was the result of pension-related investment losses from differences between actual and expected plan earnings and the amortization of pension investment gains or losses as a component of pension expense.

CHANGE IN NET POSITION

While the Statements of Net Position display Denver Water's assets, liabilities and net position at year-end, the Statements of Revenues, Expenses, and Changes in Net Position provide information on the sources of change in net position during the year. Net position increased \$113.9 million in 2018 consisting of income before capital contributions of \$53.9 million and capital contributions of \$60.0 million. Net position increased by \$83.1 million in 2017, consisting of income before capital contributions of \$25.8 million and capital contributions of \$57.3 million. The cumulative effect of implementing GASB 75 was \$7.9 million which resulted in a restated change in net position of \$75.2 million for 2017. (see Table 2).

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Table 2 - Condensed Statements of Revenues, Expenses, and Changes in Net Position
(amounts expressed in thousands)

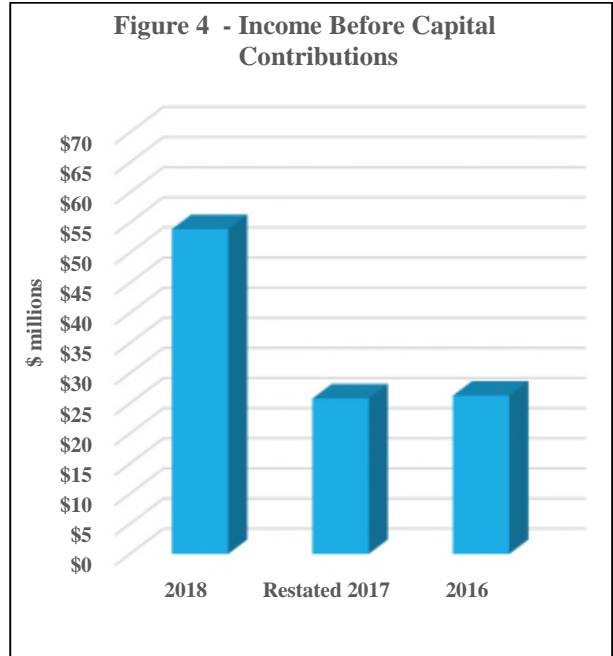
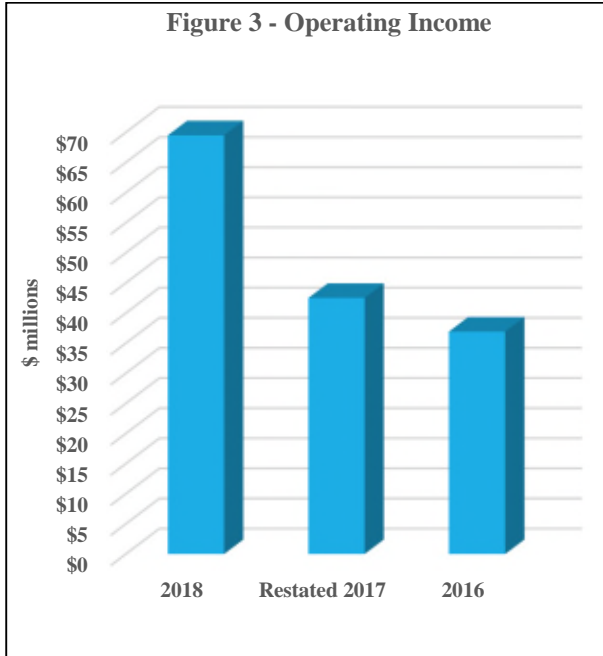
	Years Ended December 31,			2018 - 2017		2017 - 2016	
	Restated ¹			Increase	%	Increase	%
	2018	2017	2016	(Decrease)	Change	(Decrease)	Change
Operating revenues	\$ 320,556	\$ 298,505	\$ 284,454	\$ 22,051	7%	\$ 14,051	5%
Nonoperating revenues	13,201	10,136	9,029	3,065	30%	1,107	12%
Total revenues	<u>333,757</u>	<u>308,641</u>	<u>293,483</u>	<u>25,116</u>	<u>8%</u>	<u>15,158</u>	<u>5%</u>
Operating expenses	251,027	256,008	247,520	(4,981)	(2)%	8,488	3%
Nonoperating expenses	28,785	26,811	19,655	1,974	7%	7,156	36%
Total expenses	<u>279,812</u>	<u>282,819</u>	<u>267,175</u>	<u>(3,007)</u>	<u>(1)%</u>	<u>15,644</u>	<u>6%</u>
Income before capital contributions	53,945	25,822	26,308	28,123	109%	(486)	(2)%
Capital contributions	<u>59,993</u>	<u>57,267</u>	<u>61,109</u>	<u>2,726</u>	<u>5%</u>	<u>(3,842)</u>	<u>(6)%</u>
Increase in net position	<u>113,938</u>	<u>83,089</u>	<u>87,417</u>	<u>30,849</u>	<u>37%</u>	<u>(4,328)</u>	<u>(5)%</u>
Beginning net position	<u>2,080,683</u>	<u>2,005,447</u>	<u>1,918,030</u>	<u>83,089</u>	<u>4%</u>	<u>79,564</u>	<u>4%</u>
Cumulative effect of GASB 75		(7,853)					
Restated beginning net position		<u>1,997,594</u>					
Ending net position	<u>\$ 2,194,621</u>	<u>\$ 2,080,683</u>	<u>\$ 2,005,447</u>	<u>\$ 113,938</u>	<u>5%</u>	<u>\$ 75,236</u>	<u>4%</u>

¹ The 2017 financial statements were restated as required for the implementation of GASB Statement No. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

There was **operating income** (operating revenues; less operating expenses not reflected in Table 2, see *Statements of Revenues, Expenses, and Changes in Net Position*) of \$69.5 million in 2018, compared to \$42.5 million in 2017 and \$36.9 million in 2016 (see Figure 3).

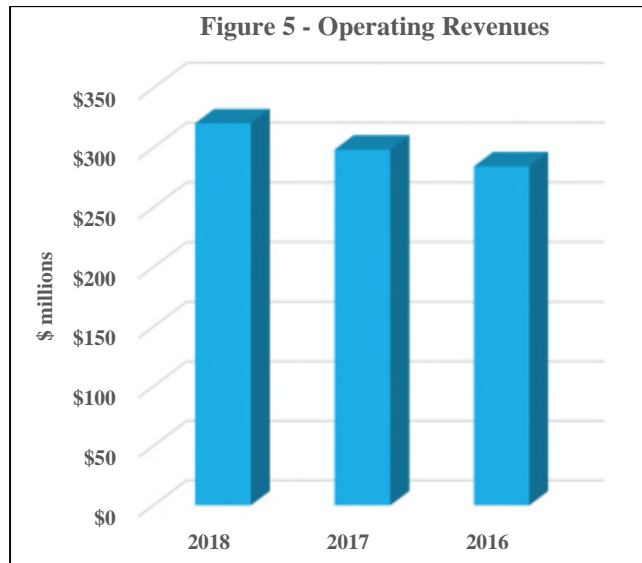
There was **income before capital contributions** of \$53.9 million in 2018 compared to \$25.8 million in 2017 and \$26.3 million in 2016 (see Figure 4).

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Specifically, major changes in the Statements of Revenues, Expenses, and Changes in Net Position were as follows:

- **OPERATING REVENUES** increased in 2018 by \$22.1 million, or 7% from 2017. There was an increase of \$14.1 million, or 5% between 2017 and 2016 (see Figure 5 and Table 3).



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Table 3 - Operating Revenues								
(amounts expressed in thousands)								
	Years Ended December 31,			2018 - 2017		2017 - 2016		
	2018	2017	2016	Increase (Decrease)	%	Increase (Decrease)	%	
Water:								
Water sales	\$ 307,743	\$ 286,139	\$ 273,238	\$ 21,604	8%	\$ 12,901	5%	
Power generation and other:								
Power sales	3,944	4,499	4,009	(555)	(12)%	490	12%	
Special assessments	7,393	7,052	6,844	341	5%	208	3%	
Other	1,476	815	363	661	81%	452	125%	
	12,813	12,366	11,216	447	4%	1,150	10%	
Total operating revenues	\$ 320,556	\$ 298,505	\$ 284,454	\$ 22,051	7%	\$ 14,051	5%	

Water sales increased in 2018 due to a rate increase effective March 1, 2018, designed to increase overall system water rate revenue by 3.0%, as well as an increase in water sold (74.1 billion gallons sold in 2018 compared to 72.1 billion gallons sold in 2017). Water sales increased in 2017 due to a rate increase effective April 1, 2017, designed to increase overall system water rate revenue by 3.0%, as well as an increase in water sold (72.1 billion gallons sold in 2017 compared to 71.7 billion gallons sold in 2016).

Changes in water consumption from year to year are generally directly related to changes in temperature, and inversely related to changes in precipitation, except for mandatory drought restrictions. Longer term changes in consumption are the result of changes in consumer conservation habits and changes in the customer base.

Power Sales consist of sales of electricity to Xcel Energy and Tri-State Generation and Transmission Association from seven power generating facilities: Dillon, Foothills, Gross, Hillcrest, Roberts Tunnel, Strontia Springs, and Williams Fork. Because power is generated by use of water turbines, differences in power sales from year to year are caused primarily by increases or decreases in water flows due to weather conditions or interruptions of power-generating operations for repairs and maintenance.

Special assessments consist primarily of delinquent bill charges, hydrant meter revenue, turn-off/turn-on charges, and charges for water violations and exemption permits. Differences from year to year are caused by increases or decreases in one or more of these components.

Other consists of refunds, project reimbursements, and miscellaneous fees.

- **NONOPERATING REVENUES** increased in 2018 by \$3.1 million, or 30% from 2017. There was an increase of \$1.1 million, or 12% between 2017 and 2016 (see Table 4).

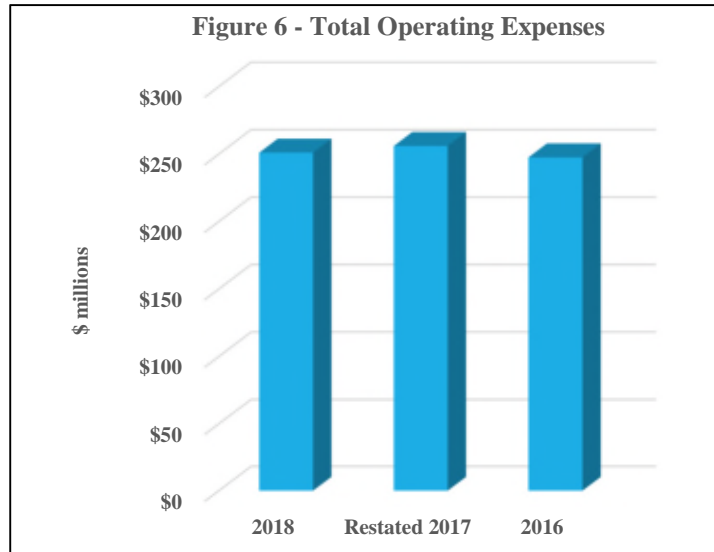
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Table 4 - Nonoperating Revenues								
(amounts expressed in thousands)								
	Years Ended December 31,			2018 - 2017		2017 - 2016		
	2018	2017	2016	Increase (Decrease)	% Change	Increase (Decrease)	% Change	
Investment income	\$ 6,219	\$ 2,140	\$ 1,603	\$ 4,079	191%	\$ 537	33%	
Other nonoperating income	6,982	7,996	7,426	(1,014)	(13)%	570	8%	
Total nonoperating revenues	\$ 13,201	\$ 10,136	\$ 9,029	\$ 3,065	30%	\$ 1,107	12%	

Investment income increased by \$4.1 million in 2018 primarily due to increase in average investment balance, higher interest rates earned on such balance, and changes in fair market value of financial assets. The increase of \$0.5 million in 2017 is attributable mainly to interest rate increases during the year on investment balances and higher average investment balances.

Other nonoperating income decreased in 2018 by \$1.0 million from 2017. This decrease was primarily due to insurance damage proceeds received in 2017 for the data center damages. The increase of \$0.6 million in 2017 was primarily due to an increase in ditch billing and expense reimbursements in 2017, offset by a decrease in external grant funds due to higher Federal Emergency Management Agency (FEMA) grant income received in 2016.

- **OPERATING EXPENSES** decreased in 2018 by \$5.0 million, or 2% from 2017. There was an increase of \$8.5 million, or 3% between 2017 and 2016 (see Figures 6 and Table 5).



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Table 5 - Operating Expenses by Category

(amounts expressed in thousands)

	Years Ended December 31,			2018 - 2017		2017 - 2016	
	2018	Restated ¹	2016	Increase	%	Increase	%
		2017		(Decrease)	Change	(Decrease)	Change
SOS, Treatment, T&D	\$ 88,231	\$ 84,733	\$ 82,418	\$ 3,498	4%	\$ 2,315	3%
General and administrative	99,469	97,926	103,380	1,543	2%	(5,454)	(5)%
Customer service	11,660	11,001	11,370	659	6%	(369)	(3)%
Depreciation and amortization	51,667	62,348	50,352	(10,681)	(17)%	11,996	24%
Total operating expenses	\$ 251,027	\$ 256,008	\$ 247,520	\$ (4,981)	(2)%	\$ 8,488	3%

¹ The 2017 financial statements were restated as required for the implementation of GASB Statement No. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

Major changes to operating expenses were as follows:

2018

Operating expenses had an overall decrease in 2018. This was primarily the result of a reduction in depreciation expense over 2017 due to the reimplementation of the fixed asset module in 2017, which resulted in the realignment of useful lives and additional depreciation expense for that year. This decrease was offset by milestone payments made in 2018 under the Colorado River Cooperative Agreement (CRCA).

2017

During 2017 Denver Water's fixed asset system module was reimplemented. During this process, management evaluated the useful lives of assets and realigned them by classification. The result of this was additional depreciation expense in the current year. Operating expense increases also stemmed from operating projects such as the Denver Parks Irrigation project and the Cheesman Hydro Line Leak repair project, as well as an increase in main and service line maintenance and repair, including the lead service line program. Increases in operating expenses were offset by reductions in other operational expenses such as temporary employees, professional services, chemicals used, and payments made in 2016 associated with the 2016 compensation study and prepaid capacity under the WISE agreement.

- **NONOPERATING EXPENSES** increased in 2018 by \$2.0 million, or 7% from 2017. There was an increase of \$7.2 million, or 36% between 2017 and 2016 (see Table 6).

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Table 6 - Nonoperating Expenses							
(amounts expressed in thousands)							
	Years Ended December 31,			2018 - 2017		2017 - 2016	
	2018	2017	2016	Increase (Decrease)	%	Increase (Decrease)	%
Interest expense	\$ 22,093	\$ 12,711	\$ 11,446	\$ 9,382	74%	\$ 1,265	11%
Loss on disposition of capital assets	2,823	11,443	6,348	(8,620)	(75)%	5,095	80%
Other nonoperating expense	3,869	2,657	1,861	1,212	46%	796	43%
Total nonoperating expenses	\$ 28,785	\$ 26,811	\$ 19,655	\$ 1,974	7%	\$ 7,156	36%

Interest expense increased in 2018 primarily due to Denver Water's implementation of GASB Statement No. 89 *Accounting for Interest Cost Incurred before the End of a Construction Period*. Prior to the implementation of GASB Statement No. 89, interest was capitalized, and the interest was added to the cost of the project and deducted from interest expense. As a result of implementing GASB No. 89 in 2018, Denver Water did not capitalize any interest in 2018. Other changes from year to year are due to a combination of differences in the amount of debt and interest rates paid on the debt.

Loss on disposition of capital assets in 2018 was primarily due to the disposal of vehicles, equipment, mains and hydrants. The loss in 2017 was primarily due to asset retirements as part of the Operations Complex Redevelopment (OCR) project, abandoned yard piping at Moffat treatment plant, and the data center impairment.

Other nonoperating expense increased in 2018 by \$1.2 million, or 46% primarily due to an increase in professional services related to the Colorado River System Conservation Pilot Project and the write-off of Federal Emergency Management Agency (FEMA) grants receivable. The increase of \$0.8 million, or 43% in 2017 was primarily due to an increase in professional services related to the issuance of debt and expenses related to the Colorado River System Conservation Pilot Project.

- **CAPITAL CONTRIBUTIONS** in 2018 increased by \$2.7 million, or 5% from 2017. There was a decrease of \$3.8 million, or 6% between 2017 and 2016 (see Table 7).

Table 7 - Capital Contributions							
(amounts expressed in thousands)							
	Years Ended December 31,			2018 - 2017		2017 - 2016	
	2018	2017	2016	Increase (Decrease)	%	Increase (Decrease)	%
Contributions in aid of construction	\$ 19,113	\$ 14,781	\$ 22,147	\$ 4,332	29%	\$ (7,366)	(33)%
System development charges	40,880	42,486	38,962	(1,606)	(4)%	3,524	9%
Total capital contributions	\$ 59,993	\$ 57,267	\$ 61,109	\$ 2,726	5%	\$ (3,842)	(6)%

Contributions in aid of construction represent facilities, or cash payments for facilities, conveyed to the distribution system from property owners, governmental agencies, and customers who receive benefit from such facilities. Normally, differences from year to year are attributed to the general level of construction activity in the Denver metropolitan area and are considered 'earned' by the percentage of completion of the projects.

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System development charges (“SDC”) represent fees charged to customers to connect to the water system. Normally, differences from year to year are also driven by the general level of construction activity in the Denver metropolitan area.

CAPITAL ASSET ACTIVITY

Denver Water’s capital assets at December 31, 2018 and 2017 totaled \$2.5 billion and \$2.3 billion, respectively, net of accumulated depreciation and amortization. Capital asset additions in 2018 and 2017 were \$228.2 million and \$182.9 million, respectively, an increase of \$45.3 million, or 25%. The values below represent total additions including amounts associated with completed projects transferred from construction in progress (CIP). Major projects were as follows (see Table 8):

Table 8 - Capital Additions	
Year Ended December 31, 2018	
(amounts expressed in thousands)	
Distribution Mains and Hydrants	\$ 53,570
Operation Complex Development Project	52,216
Treated Water Conduits	26,807
Northwater Treatment Plant	22,603
Hillcrest Pump Station	17,959
Gross Reservoir	10,017
Downstream Reservoirs	8,287
Foothills Treatment Plant	6,906
Vehicles and Heavy Equipment	5,687
Moffat Treatment Plant	4,257
Marston Treatment Plant	4,142
Chatfield Pump Station Modifications	3,552
Dillon Hydro	2,814
Ashland Pump Station	1,839
Williams Fork Penstock Slide	1,766
South Complex Bambei-Walker Water Quality Mitigation	1,318
Radio Systems	928
Other	3,501
Total	\$ 228,169

Information on Denver Water’s capital assets can be found in Note 4 to the basic financial statements.

LONG-TERM DEBT ACTIVITY

Denver Water’s \$30.0 million revolving line of credit issued in 2013 matured in November of 2018. Denver Water entered into a new contract for a revolving line of credit in the amount of \$60.0 million with an option to increase it by an additional \$20.0 million in December 2018, effective January 1, 2019. The line of credit has a subordinate pledge of and lien on the net revenue of Denver Water. There was \$0 balance on the line of credit at December 31, 2018.

Denver Water issued the Series 2017A Master Resolution Water Revenue Green Bonds and the 2017B Master Resolution Water Revenue Bonds on May 23, 2017, in an aggregate principal amount of \$142.7 million and \$41.8 million, respectively. The proceeds from the sale of the Series 2017A are being used to finance the redevelopment of Denver Water’s main operating and administrative complex. The bonds were designated green because the project

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

December 31, 2018 and 2017

was designed with environmentally beneficial features including, but not all inclusive of, completing construction to LEED® (Leadership in Energy & Environmental Design) standards, incorporating “One Water” concepts, and recycling of construction and demolition debris. The Series 2017B Master Resolution Water Bond Proceeds were used to finance a portion of other additions and improvements to the water system operated by Denver Water. Unspent proceeds for the Series 2017A bonds at December 31, 2018 were \$49.8 million.

Information on Denver Water’s long-term debt can be found in Notes 6, 7, and 9 to the basic financial statements and Exhibits II-A through II-D of the supplemental financial information.

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of Denver Water’s finances for all those with an interest in Denver Water’s finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Chief Finance Officer
Denver Water
1600 W. 12th Ave.
Denver, CO 80204-3412

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO

Statements of Net Position

December 31, 2018 and 2017

(Amounts expressed in thousands)

<u>ASSETS</u>	2018	Restated 2017
CURRENT ASSETS:		
Cash	\$ 5,468	\$ 6,898
Short-term investments, at fair value, including accrued interest	127,278	171,139
Restricted investments - capital projects, debt service, & other	68,355	72,880
Accounts receivable	27,431	26,210
Materials and supplies inventory, at weighted average cost	4,549	5,099
Prepaid expenses	248	513
	233,329	282,739
NONCURRENT ASSETS:		
Capital assets:		
Capital depreciable	2,887,895	2,746,758
Capital non-depreciable	200,917	200,261
	3,088,812	2,947,019
Less accumulated depreciation and amortization	(939,029)	(895,482)
	2,149,783	2,051,537
Utility plant under capital lease, less accumulated amortization of \$12,939 and \$12,380, respectively	30,041	30,600
Construction in progress	340,438	265,757
Net capital assets	2,520,262	2,347,894
Other noncurrent assets:		
Long-term investments (restricted \$0 and \$47,629, respectively)	163,069	198,462
Prepaid expenses and other assets	6,305	5,600
Long-term receivable	10,733	12,497
Total other noncurrent assets	180,107	216,559
	2,700,369	2,564,453
	2,933,698	2,847,192
<u>DEFERRED OUTFLOWS OF RESOURCES</u>		
Deferred amount on refunding	5,921	6,431
Pension-related deferred outflows of resources	43,570	35,446
OPEB-related deferred outflows of resources	2,683	2,326
Total deferred outflows of resources	52,174	44,203
	2,985,872	2,891,395

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO

Statements of Net Position

December 31, 2018 and 2017

(Amounts expressed in thousands)

<u>LIABILITIES</u>	<u>2018</u>	<u>Restated 2017</u>
CURRENT LIABILITIES:		
Accounts payable	\$ 28,195	\$ 30,299
Payroll and other employee benefits	12,885	11,796
Construction contracts (including retainages of \$9,884 and \$8,300 respectively)	13,034	10,493
Accrued interest on long-term debt	4,616	4,867
Unearned revenue	-	226
Current portion of revenue bonds payable	19,390	19,925
Current portion of obligation under capital lease	2,761	2,584
	<u>80,881</u>	<u>80,190</u>
NONCURRENT LIABILITIES:		
Revenue bonds payable, net	592,343	616,155
Obligation under capital lease	1,451	4,213
Customer advances for construction	12,779	9,878
Compensated absences	4,391	4,310
Net pension liability	57,321	67,301
Other postemployment benefits	16,970	19,394
Waste disposal closure and postclosure care	6,553	6,438
	<u>691,808</u>	<u>727,689</u>
Total liabilities	<u>772,689</u>	<u>807,879</u>
<u>DEFERRED INFLOWS OF RESOURCES</u>		
Pension-related deferred inflows of resources	16,933	2,833
OPEB-related deferred inflows of resources	1,629	-
Total deferred inflows of resources	<u>18,562</u>	<u>2,833</u>
Total liabilities and deferred inflows of resources	<u>791,251</u>	<u>810,712</u>
<u>NET POSITION</u>		
Net investment in capital assets	1,946,849	1,803,684
Restricted for debt service	14,038	12,743
Other Restricted	56	400
Unrestricted	233,678	263,856
Total net position	<u>\$ 2,194,621</u>	<u>\$ 2,080,683</u>

See accompanying notes to basic financial statements.

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
Statements of Revenues, Expenses, and Changes in Net Position
Years Ended December 31, 2018 and 2017
(Amounts expressed in thousands)

	2018	Restated 2017
	<u> </u>	<u> </u>
OPERATING REVENUES:		
Water	\$ 307,743	\$ 286,139
Power generation and other	12,813	12,366
	<u> </u>	<u> </u>
Total operating revenues	320,556	298,505
	<u> </u>	<u> </u>
OPERATING EXPENSES:		
Source of supply, pumping, treatment and distribution	88,231	84,733
General and administrative	99,469	97,926
Customer service	11,660	11,001
Depreciation and amortization	51,667	62,348
	<u> </u>	<u> </u>
Total operating expenses	251,027	256,008
	<u> </u>	<u> </u>
OPERATING INCOME	69,529	42,497
	<u> </u>	<u> </u>
NONOPERATING REVENUES (EXPENSES):		
Investment income	6,219	2,140
Interest expense, less capitalized interest of \$0 and \$7,192 respectively	(22,093)	(12,711)
Loss on disposition of capital assets	(2,823)	(11,443)
Other income	6,982	7,996
Other expense	(3,869)	(2,657)
	<u> </u>	<u> </u>
Total nonoperating expenses, net	(15,584)	(16,675)
	<u> </u>	<u> </u>
INCOME BEFORE CAPITAL CONTRIBUTIONS	53,945	25,822
	<u> </u>	<u> </u>
CAPITAL CONTRIBUTIONS:		
Contributions in aid of construction	19,113	14,781
System development charges	40,880	42,486
	<u> </u>	<u> </u>
Total capital contributions	59,993	57,267
	<u> </u>	<u> </u>
INCREASE IN NET POSITION	113,938	83,089
NET POSITION:		
Beginning of year	2,080,683	2,005,447
Cumulative effect of GASB 75 implementation		(7,853)
Restated beginning net position		1,997,594
End of year	<u>\$ 2,194,621</u>	<u>\$ 2,080,683</u>

See accompanying notes to basic financial statements.

**DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO**

Statements of Cash Flows

Years Ended December 31, 2018 and 2017

(Amounts expressed in thousands)

	<u>2018</u>	<u>Restated 2017</u>
CASH FLOWS FROM OPERATING ACTIVITIES:		
Receipts from customers	\$ 321,099	\$295,249
Payments to employees	(123,347)	(126,423)
Payments to suppliers	(82,071)	(67,334)
Other receipts	6,756	7,996
Other payments	(3,869)	(1,707)
	<u>118,568</u>	<u>107,781</u>
 CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
Proceeds from contributions in aid of construction ("CIAC") and prepaid CIAC	5,756	9,240
Proceeds from system development charges ("SDC") and prepaid SDC	41,045	42,486
Proceeds from sales of capital assets	1,311	5,524
Proceeds from long-term revenue bonds, plus premium, less issuance costs	-	205,447
Acquisition of capital assets	(209,342)	(166,947)
Principal payments for long-term bonds	(19,925)	(19,595)
Principal payments for capital lease obligations	(2,585)	(2,418)
Interest paid (includes capitalized interest of \$0 and \$7,192, respectively)	(26,256)	(21,673)
	<u>(209,996)</u>	<u>52,064</u>
 CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from sales and maturities of investments	376,795	362,785
Interest received from investments	6,542	3,314
Purchases of investments	(293,339)	(540,323)
	<u>89,998</u>	<u>(174,224)</u>
 NET DECREASE IN CASH	 (1,430)	 (14,379)
 CASH, AT BEGINNING OF YEAR	 <u>6,898</u>	 <u>21,277</u>
 CASH, AT END OF YEAR	 <u>\$ 5,468</u>	 <u>\$ 6,898</u>

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO

Statements of Cash Flows

Years Ended December 31, 2018 and 2017

(Amounts expressed in thousands)

	2018	Restated 2017
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:		
Operating income	\$ 69,529	\$ 42,497
Adjustments to reconcile operating income to net cash provided by operating activities-		
Other revenues	6,982	7,996
Other expenses	(3,869)	(1,707)
Depreciation and amortization of capital assets	51,667	62,348
Change in assets and liabilities-		
Accounts receivable and long-term receivable	543	(3,256)
Materials and supplies inventory	357	388
Prepaid expenses - current	265	(57)
Prepaid expenses and other assets - noncurrent	(705)	(916)
Deferred outflows of resources - pension-related	(8,124)	(1,278)
Deferred outflows of resources - OPEB-related	(357)	(72)
Accounts payable	(2,104)	9,986
Payroll and other employee benefits	1,170	(4,701)
Unearned revenue	(226)	-
Net pension liability	(9,980)	(5,555)
Other postemployment benefits	(2,424)	(863)
Waste disposal closure and postclosure care	115	138
Deferred inflows of resources - pension-related	14,100	2,833
Deferred inflows of resources - OPEB-related	1,629	-
Net cash provided by operating activities	\$ 118,568	\$ 107,781
NONCASH INVESTING, AND CAPITAL AND RELATED FINANCING ACTIVITIES:		
Assets acquired through contributions in aid of construction	\$ 16,440	\$ 12,655
Assets acquired through contracts payable	13,034	10,493
Loss on disposition of capital assets	(2,823)	(11,443)
Amortization of deferred loss on refunding	(510)	(510)
Decrease in fair value of investments	(367)	(1,835)

See accompanying notes to basic financial statements.

**EMPLOYEES RETIREMENT PLAN OF THE
DENVER BOARD OF WATER COMMISSIONERS**

Statements of Fiduciary Net Position

December 31, 2018 and 2017

(Amounts expressed in thousands)

	2018	2017
Assets:		
Cash and cash equivalents	\$ 4,435	\$ 3,517
Dividends, interest and other receivables	104	410
Investments, at fair value		
Equities:		
Common stock funds	184,527	209,317
Fixed income:		
Other fixed income funds	73,791	55,018
Real estate	51,681	52,169
Hedge funds	18,518	33,981
Private equity	9,912	6,397
Total investments	338,429	356,882
Total assets	342,968	360,809
Liabilities:		
Accrued administrative expense	38	-
Accrued investment expense	107	94
Total liabilities	145	94
Fiduciary net position restricted for pension	\$ 342,823	\$ 360,715

See accompanying notes to basic financial statements.

**EMPLOYEES RETIREMENT PLAN OF THE
DENVER BOARD OF WATER COMMISSIONERS
Statements of Changes in Fiduciary Net Position**

December 31, 2018 and 2017

(Amounts expressed in thousands)

	2018	2017
Additions:		
Employer contributions	\$ 18,000	\$ 18,000
Employee contributions	662	-
Investment income:		
Net appreciation (depreciation) in fair value of investments	(16,432)	45,807
Interest	1,024	810
Dividends	1,890	2,646
Real estate income, net of operating expenses	1,422	1,259
	(12,096)	50,522
Less investment expense	(2,223)	(2,249)
Net investment income (loss)	(14,319)	48,273
Total additions	4,343	66,273
Deductions:		
Retirement benefits	22,022	19,824
Death benefits	30	80
Refunds of employee contributions	3	23
Administrative expenses	180	48
Total deductions	22,235	19,975
Net increase (decrease) in fiduciary net position	(17,892)	46,298
Fiduciary net position restricted for pension:		
Beginning of year	360,715	314,417
End of year	\$ 342,823	\$ 360,715

See accompanying notes to basic financial statements.

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO

Notes to Basic Financial Statements
December 31, 2018 and 2017

Note

- 1 Summary of Significant Accounting Policies:
 - A. Reporting Entity
 - B. Measurement Focus and Basis of Accounting
 - C. Accounting Standards
 - D. Use of Estimates
 - E. Restricted Net Position and Flow Assumption for Restricted Net Position
 - F. Cash
 - G. Investments
 - H. Materials and Supplies Inventory
 - I. Capital Assets
 - J. Capital Contributions
 - K. Employee Compensated Absences
 - L. Pension Plan
 - M. Operating Revenues and Expenses
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- 2 Deposits and Investments

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- 4 Capital Assets

- 5 Risk Management

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(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Reporting Entity

The Board of Water Commissioners (DBA “Denver Water”) was created under the Charter of the City and County of Denver, Colorado (the “City”) as an independent, nonpolitical board. Denver Water has complete charge and control of a water works system and plant, which supplies water to customers located within the City and to entities serving other customers located in certain outlying areas in the Denver metropolitan area. Denver Water also operates seven hydropower plants which generate power for sale to Xcel Energy and Tri-State Generation and Transmission Association, for internal consumption, and for repayment to the U.S. Department of Energy for power interference.

Denver Water has a five-member governing body, which is appointed by the Mayor of the City for overlapping six-year terms. In accordance with Governmental Accounting Standards Board (“GASB”) Statements No. 14, *The Financial Reporting Entity*, No. 39, *Determining Whether Certain Organizations Are Component Units* and No. 61, *The Financial Reporting Entity: Omnibus*, Denver Water is classified as a special-purpose “other stand-alone government.” A special-purpose other stand-alone government is defined as a legally separate governmental organization that (a) does not have a separately elected governing body and (b) does not meet the definition of a component unit because it does not have a financial benefit or burden relationship with a primary government.

Denver Water is a “related organization” in the City’s financial reporting entity. A related organization is defined as an organization for which a primary government is not financially accountable (because it does not impose its will or have a financial benefit or burden relationship) even though the primary government appoints a voting majority of the organization’s governing board.

Denver Water sponsors a trustee, single-employer defined benefit pension plan, (the “Plan”). Denver Water contributes to the Plan based upon actuarial analysis and has fiduciary responsibility for the Plan. The Plan financial statements are included in the accompanying financial statements as a fiduciary fund of Denver Water. Complete financial statements of the Plan can be obtained from the Denver Water website.

B. Measurement Focus and Basis of Accounting

Denver Water, as a business type activity, is accounted for in an enterprise fund, which is used to report any activity for which a fee is charged to external users for goods or services. Both Denver Water’s basic financial statements and the financial statements of the Plan are accounted for on the flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and liabilities associated with operations are included on the statements of net position, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred. Under the terms of grant agreements, Denver Water funds certain programs using a combination of cost-reimbursement grants and general revenues. It is Denver Water’s policy to first apply cost-reimbursement grant resources to such programs, followed by general revenues.

C. Accounting Standards

Denver Water applies all applicable pronouncements of the GASB.

D. Use of Estimates

The preparation of basic financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions. These estimates may affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the basic financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

E. Restricted Net Position and Flow Assumption for Restricted Net Position

Restricted net position consists of both the revenue bonds debt reserve fund, the revenue bonds debt service account, motor vehicle claims reserve, and may include amounts restricted under certain grant agreements included in cash and short-term investments. The revenue bonds debt service account is used to pay principal and interest on the revenue bonds as they become due. The revenue bonds debt reserve fund is set aside to pay bondholders in the event funds are not available at the time the debt payment is due. These restricted funds are used for their intended purpose before unrestricted funds.

F. Cash

The definition of cash, for purposes of the Statements of Cash Flows, is cash on deposit in the Water Works Fund, cash in lock box, and cash on hand.

G. Investments

Denver Water's investments consist of money market investments (commercial paper and money market mutual funds), local government investment pools, U.S. Treasury, U.S. agency, commercial paper, and corporate notes and bonds. The money market investments and local government investment pools are measured at net asset value which is generally equivalent to fair value. U.S. Treasury, U.S. agency, commercial paper, and corporate notes and bonds investments are fair value based on quoted market prices (see Note 2, *Deposits and Investments*).

H. Materials and Supplies Inventory

Materials and supplies inventory is valued at weighted average cost, which approximates lower of cost or market.

I. Capital Assets

Purchased and constructed capital assets are recorded at cost. Donated capital assets are recorded at their estimated acquisition value on the date received. Assets are capitalized if they have a cost of \$50,000 or more and have a useful life of more than one year.

Land and water rights are also recorded at cost. Land is not depreciated, and water rights are granted in perpetuity and not amortized.

Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective depreciable or amortizable asset classes as follows:

	<u>Years</u>
Building and building improvements	15-75
Fleet	7-15
Improvements (land)	25-80
Infrastructure	25-80
Machinery and equipment	5-75

Maintenance and repairs are charged to expense as incurred, whereas major betterments are capitalized and depreciated or amortized. At the time of retirement or disposition of depreciable property, the related cost and accumulated depreciation are removed from the accounts, and the resulting gain or loss is reflected in nonoperating revenues (expenses).

J. Capital Contributions

Capital contributions consist of contributions in aid of construction ("CIAC") and system development charges ("SDC"). CIAC represent facilities, or cash payments for facilities, received from developers, property owners, governmental agencies, or customers who receive benefit from such facilities. SDC represent fees charged to customers to connect to the water system. Contributions are recognized in the Statements of Revenues, Expenses, and Changes in Net Position, after nonoperating revenues (expenses), when earned. Assets acquired through CIAC are included in capital assets.

K. Employee Compensated Absences

Denver Water's personnel policy provides that employees receive payment for unused paid time off (PTO) up to the maximum allowed at termination. Accumulated unpaid leave is recorded as a liability split between current and long-term based on prior-year usage.

L. Pension Plan

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Employees' Retirement Plan of the Denver Board of Water Commissioners (the "Plan") and additions to and/or deductions from the Plan's fiduciary net position have been determined on the same basis as reported by the Plan. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value. In 2016, Denver Water approved changes to the Plan that were effective January 1, 2018. These changes include two 'tiers' of benefit provisions, which depend on the employees' date of hire, as well as the inclusion of employee contributions to the Plan. As allowed by GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, Denver Water elected to report pension liability information based on a one-year lag. The total pension liability reported as of December 31, 2018 is based on an actuarial measurement date of December 31, 2017. Consequently, the above referenced Plan changes will not impact the net pension liability depicted in the financial statements until 2019.

M. Operating Revenues and Expenses

Operating revenues consist primarily of charges to customers directly or indirectly related to the sale of water. Operating expenses consist of the cost of providing water and power, including administrative expenses and depreciation on capital assets. All other revenues and expenses are classified as nonoperating.

Denver Water accrues for estimated unbilled revenues for water provided through the end of each year from the last reading of the meters, based on the billing cycle.

N. Rates and Fees

Under Article X, Section 10.1.9 of the City Charter, Denver Water is empowered to set rates for all of its customers. These rates "...may be sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, betterments, including those reasonably required for the anticipated growth of the Denver metropolitan area, and to provide for Denver's general welfare...."

Consumption and Service Charges

On November 14, 2018, Denver Water approved a water rate increase, effective February 1, 2019. The rate increase is designed to increase overall total system water rate revenue by 3.0%.

On November 15, 2017, Denver Water approved a water rate increase, effective March 1, 2018. The rate increase is designed to increase overall total system water rate revenue by 3.0%.

On December 14, 2016, Denver Water approved a water rate increase, effective April 1, 2017. The rate increase was designed to increase overall total system water rate revenue by 3.0%.

System Development Charges (“SDC”)

System Development Charges were not adjusted in either 2017 or 2018.

O. Reclassifications

Certain reclassifications have been made to prior year’s information to conform to the current year presentation.

P. Recently Issued Accounting Standards

GASB Statement No. 82, *Pension Issues* was implemented in 2017 and is reflected in the Required Supplementary Information schedules relating to Denver Water’s pension.

In 2018, Denver Water implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (OPEB) and restated the 2017 financial statements. The primary effect was to record Denver Water’s other postemployment benefits liability of \$17.0 million and \$19.4 million on the Statements of Net Position as of December 31, 2018 and 2017, respectively. The cumulative effect of applying this GASB statement was reported as a restatement of beginning 2017 net position in the amount of \$7.9 million (see Note 12, Other Postemployment Benefits). Below is a reconciliation of the restated net position for the implementation of GASB 75.

<u>Reconciliation of Net Position for GASB 75 Implementation</u>		
(amounts expressed in thousands)		
Beginning 2017 net position as published	\$	2,005,447
Implementation of GASB 75 adjustments:		
Net OPEB liability measured as of 12/31/15	(20,257)	
Write off of OPEB liability under GASB 45	10,149	
Deferred outflows of resources for contributions after measurement date	<u>2,255</u>	
Cumulative effect of GASB 75 implementation	<u>(7,853)</u>	
Restated 2017 beginning net position		1,997,594
2017 change in net position as published	83,108	
Change in OPEB expense from GASB 45	<u>(19)</u>	
Restated change in net position		<u>83,089</u>
December 31, 2017 restated net position		<u>\$ 2,080,683</u>

Denver Water also implemented GASB Statement No. 85 *Omnibus 2017* and GASB Statement No. 86 *Certain Debt Extinguishment Issues* in 2018 and they are reflected in the Notes to the Financial Statements and the Required Supplementary Information schedules.

In 2018, Denver Water early implemented these additional GASB Statements:

GASB Statement No. 83 *Certain Asset Retirement Obligations* was evaluated and deemed to have no impact.

GASB Statement No. 84 *Fiduciary Activities*. The Employees' Retirement Plan is reported as a fiduciary fund in Denver Water's financials.

GASB Statement No. 88 *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements* and is reflected in the notes to the financial statements.

GASB Statement No. 89 *Accounting for Interest Cost Incurred before the End of a Construction Period* and recognized all interest costs incurred as an expense in the financial statements. In 2017, prior to implementation, \$7.2 million of interest expense was capitalized.

(2) DEPOSITS AND INVESTMENTS

DENVER WATER

Cash Deposits with Financial Institutions

Custodial Credit Risk - Deposits

Custodial credit risk for deposits is the risk that in the event of a bank failure, Denver Water's deposits may not be returned to it. All of Denver Water's cash deposits at December 31, 2018 and 2017 were either insured by FDIC or covered by the Colorado Public Deposit Protection Act ("PDPA") (C.R.S., 11-10.5-101). Under the PDPA, all deposits exceeding the amount insured by the FDIC are required to be fully collateralized at 102% of the deposits with specific approved securities identified in the act. Deposits collateralized under the PDPA are considered collateralized with securities held by the pledging financial institutions' trust department or agent in Denver Water's name.

Investments

A reconciliation of cash and investments reported on the *Statements of Net Position* as of December 31, is as follows:

<u>Cash and Investments</u>		
(amounts expressed in thousands)		
	December 31,	
	2018	2017
Cash	\$ 5,468	\$ 6,898
Short-term investments, at fair value, including accrued interest	127,278	171,139
Restricted investments - debt service	18,512	17,380
Restricted investments - capital projects	49,787	55,100
Restricted investments - other	56	400
Long-term investments	163,069	150,833
Restricted investments - capital projects	-	47,629
Total investments	<u>358,702</u>	<u>442,481</u>
Total cash and investments	<u>\$ 364,170</u>	<u>\$ 449,379</u>

Colorado statutes and the City Charter authorize Denver Water to expend funds for the operation of Denver Water, including the purchase of investments. It is the policy of Denver Water to invest funds in priority order to preserve principal, provide sufficient liquidity, and to obtain a market rate of return within the constraints of Denver Water's investment policy. Operational needs and prevailing market conditions affect the investment portfolio allocation at year end. The following table identifies the investment types that are authorized by Denver Water's investment policy, as well as certain provisions of the investment policy that address interest rate risk, credit quality risk, and concentration of credit risk.

Investments Authorized by Denver Water's Investment Policy

December 31, 2018 and 2017

<u>Authorized Investment Type</u>	<u>Maximum Maturity</u>	<u>Minimum Issuer Credit Quality¹</u>	<u>Maximum in Portfolio²</u>	<u>Maximum Investment One Issuer²</u>
U.S. Treasury securities	5 years	Not applicable	No limit	No limit
U.S. agency / Supranational securities	4 years	AA- / Aa3	50%	15%
Commercial paper	270 days	A-1 / P-1	25% ³	5% ⁴
Corporate fixed income securities	3 years	AA- / Aa3	25% ³	5% ⁴
Money market mutual funds	Not applicable	AAAm	25%	5%
Local government investment pools	Not applicable	AAAf	10%	5%
Certificates of deposit	180 days	AA- / Aa3	15%	10%
Bankers' acceptances	180 days	A-1 / P-1	25% ³	5% ⁴
Repurchase agreements	Overnight	AA- / Aa3	25%	25%
Municipal bonds	5 years	AA- / Aa3	15%	5%

¹ Investments must meet a minimum credit quality rating at time of purchase. Investments that fall below the minimum credit quality may be sold or held to maturity at the discretion of Denver Water. Ratings are S&P first and Moody's second.

² Calculated as a percentage of book value of the aggregate cash and investment portfolio at the time of purchase.

³ Maximum concentration in aggregate for commercial paper, corporate fixed income securities, and bankers' acceptances.

⁴ Maximum concentration in a single issuer of commercial paper, corporate fixed income securities, and bankers' acceptances.

Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Normally the longer the maturity of an investment the greater the sensitivity of its fair value to changes in market interest rates. Denver Water manages interest rate risk by purchasing investments with varying maturities, continuously investing a portion of the portfolio in readily available funds, limiting total investments maturing in more than three years to 25% of the portfolio, limiting the maximum maturity of investments by type of investment and limiting maximum allocation of callable securities to 15% of the portfolio.

Denver Water's cash and investments, including accrued interest, at December 31, 2018 and 2017, and their maturities were as follows:

Cash, Current and Long-Term Investments

December 31, 2018

(amounts expressed in thousands)

Investment Type	Percent of Investment Portfolio	Fair Value	Investment Maturities (in years)		
			1 or less	1 - 3	3 - 5
U.S. Treasury securities	43.4%	\$ 155,695	\$ 106,286	\$ 49,409	\$ -
U.S. agency securities	9.8%	35,060	4,196	30,864	-
Supranational securities	5.4%	19,401	3,054	16,347	-
Corporate fixed income securities	20.0%	71,798	5,349	66,449	-
Money market funds	12.8%	45,848	45,848	-	-
Local government investment pools	8.6%	30,900	30,900	-	-
Total investments	<u>100.0%</u>	<u>358,702</u>	<u>\$ 195,633</u>	<u>\$ 163,069</u>	<u>\$ -</u>
Cash		<u>5,468</u>			
Total cash and investments		<u>\$ 364,170</u>			

Denver Water's investment policy established maximum concentrations based on total cash, cash equivalents, and investments at the time of purchase. There is no requirement to sell investments if the concentration changes at a later date due to market factors.

Cash, Current and Long-Term Investments

December 31, 2017

(amounts expressed in thousands)

Investment Type	Percent of Investment Portfolio	Fair Value	Investment Maturities (in years)		
			1 or less	1 - 3	3 - 5
U.S. Treasury securities	41.6%	\$ 183,982	\$ 102,779	\$ 76,243	\$ 4,960
U.S. agency securities	14.3%	63,307	32,242	16,157	14,908
Supranational securities	5.8%	25,467	6,064	19,403	-
Commercial paper	1.4%	6,085	6,085	-	-
Corporate fixed income securities	17.2%	76,112	9,321	66,791	-
Money market funds	12.9%	57,262	57,262	-	-
Local government investment pools	6.8%	30,266	30,266	-	-
Total investments	<u>100.0%</u>	<u>442,481</u>	<u>\$ 244,019</u>	<u>\$ 178,594</u>	<u>\$ 19,868</u>
Cash		<u>6,898</u>			
Total cash and investments		<u>\$ 449,379</u>			

Denver Water's investment policy established maximum concentrations based on total cash, cash equivalents, and investments at the time of purchase. There is no requirement to sell investments if the concentration changes at a later date due to market factors.

Credit Risk

Credit risk is the risk that the issuer of a debt security will not fulfill its obligations to the holder of the obligation. National rating agencies assess this risk and assign a credit quality rating for most investments. Presented below are the lowest credit ratings at December 31, 2018 and 2017, for each investment type.

Investment Ratings

December 31, 2018

(amounts expressed in thousands)

Rating Agencies ¹	U.S. Treasury Securities	U.S. Agency Securities	Supranational Securities	Corporate Fixed Income Securities	Money Market Mutual Funds	Local Government Investment Pools	Total
AAA/Aaa	\$ -	\$ -	\$ 19,401	\$ 12,965	\$ -	\$ -	\$ 32,366
AAAm	-	-	-	-	45,848	-	45,848
AAAf	-	-	-	-	-	30,900	30,900
AA/Aa	-	35,060	-	58,833	-	-	93,893
Not Applicable	155,695	-	-	-	-	-	155,695
	<u>\$ 155,695</u>	<u>\$ 35,060</u>	<u>\$ 19,401</u>	<u>\$ 71,798</u>	<u>\$ 45,848</u>	<u>\$ 30,900</u>	<u>\$ 358,702</u>

¹ The rating agencies are S&P, Moody's, and Fitch. Actual credit ratings as of the year end for each investment type. For securities with split ratings the lowest rating is shown. Securities that fall below the minimum credit quality may be sold or held at the discretion of Denver Water.

Investment Ratings

December 31, 2017

(amounts expressed in thousands)

Rating Agencies ¹	U.S. Treasury Securities	U.S. Agency Securities	Supranational Securities	Commercial Paper	Corporate Fixed Income Securities	Money Market Mutual Funds	Local Government Investment Pools	Total
AAA/Aaa	\$ -	\$ -	\$ 25,467	\$ -	\$ 18,198	\$ -	\$ -	\$ 43,665
AAAm	-	-	-	-	-	57,262	-	57,262
AAAf	-	-	-	-	-	-	30,266	30,266
A-1/P-1	-	-	-	6,085	-	-	-	6,085
AA/Aa	-	63,307	-	-	57,914	-	-	121,221
Not Applicable	183,982	-	-	-	-	-	-	183,982
	<u>\$ 183,982</u>	<u>\$ 63,307</u>	<u>\$ 25,467</u>	<u>\$ 6,085</u>	<u>\$ 76,112</u>	<u>\$ 57,262</u>	<u>\$ 30,266</u>	<u>\$ 442,481</u>

¹ The rating agencies are S&P, Moody's, and Fitch. Actual credit ratings as of the year end for each investment type. For securities with split ratings the lowest rating is shown. Securities that fall below the minimum credit quality may be sold or held at the discretion of Denver Water.

Concentration of Credit Risk

Denver Water's investments comply with the requirements of the investment policy regarding maximum concentrations of securities at the time of purchase. Specific limitations within the investment policy are displayed in the schedule titled Investments Authorized by Denver Water's Investment Policy. Generally accepted accounting principles require disclosure of certain investments in any one issuer that exceed five percent concentration of total investments. The following investments represent five percent or more of Denver Water's total investments at December 31, 2018 and 2017:

Concentration of Credit Risk

(amounts expressed in thousands)

Issuer	Type of Security	December 31,	
		2018	2017
Apple Inc.	Corporate Fixed Income	<u>Fair Value</u> \$ 21,397	<u>Fair Value</u> \$ -
International Bank for Reconstructions (IBRD)	Supranational	19,401	25,467
Federal Home Loan Mortgage Corporation - (FHLMC)	U.S Agencies	-	28,928

Fair Value

Denver Water categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets. Level 2 inputs are valued using a matrix pricing technique. Matrix pricing involves using a selection of data points, such as quoted prices, or yield curves to calculate prices for separate financial instruments that can share characteristics similar to the data points. Level 3 inputs are significant unobservable inputs.

Denver Water has the following recurring fair value measurements as of December 31, 2018 and 2017:

Investments Measured at Fair Value				
December 31, 2018				
(amounts expressed in thousands)				
	12/31/2018	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Investments by fair value level:				
U.S. Treasury securities	\$ 155,695	\$ 155,695	\$ -	\$ -
U.S. agency securities	35,060	-	35,060	-
Suprenational securities	19,401	-	19,401	-
Corporate fixed income securities	71,798	-	71,798	-
Total investments by fair value level	<u>281,954</u>	<u>\$ 155,695</u>	<u>\$ 126,259</u>	<u>\$ -</u>
Investments measured at net asset value (NAV):				
Local government investment pools	30,900			
Money market funds	<u>45,848</u>			
Total investments by NAV	<u>76,748</u>			
Total investments	<u>\$ 358,702</u>			

Investments Measured at Fair Value				
December 31, 2017				
(amounts expressed in thousands)				
	12/31/2017	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Investments by fair value level:				
U.S. Treasury securities	\$ 183,982	\$ 183,982	\$ -	\$ -
U.S. agency securities	63,307	-	63,307	-
Supranational securities	25,467	-	25,467	-
Commercial paper	6,085	-	6,085	-
Corporate fixed income securities	76,112	-	76,112	-
Total investments by fair value level	<u>354,953</u>	<u>\$ 183,982</u>	<u>\$ 170,971</u>	<u>\$ -</u>
Investments measured at net asset value (NAV):				
Local government investment pools	30,266			
Money market funds	<u>57,262</u>			
Total investments by NAV	<u>87,528</u>			
Total investments	<u>\$ 442,481</u>			

The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented in the following table:

<u>Investments Measured at NAV</u>				
December 31, 2018				
(amounts expressed in thousands)				
	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency</u>	<u>Redemption Notice Period</u>
Local government investment pools	\$ 30,900	\$ -	Daily	same day
Money market funds	45,848	-	Daily	same day
	<u>\$ 76,748</u>	<u>\$ -</u>		

<u>Investments Measured at NAV</u>				
December 31, 2017				
(amounts expressed in thousands)				
	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency</u>	<u>Redemption Notice Period</u>
Local government investment pools	\$ 30,266	\$ -	Daily	same day
Money market funds	57,262	-	Daily	same day
	<u>\$ 87,528</u>	<u>\$ -</u>		

Local government investment pools (“LGIP”) typically combine the cash of participating jurisdictions and invest the cash in securities allowed under the state’s laws regarding government investments. By pooling funds, participating governments benefit from economies of scale, full-time portfolio management, diversification, and liquidity. Interest is normally allocated to the participants daily, proportionate to the size of the investment. The Fund currently utilizes two LGIPs, the Colorado Local Government Liquid Asset Trust (“COLOTRUST”) and the Colorado Core Fund operated through the Colorado Surplus Asset Fund Trust (“CSAFE”). CSAFE Core fund redemptions are limited to three per month.

The money market funds include four money market funds that invest in U.S. Treasury securities, federal instrumentality securities, and agency securities. Unitized money market mutual funds are reported at fair value based upon the net asset value of shares/units held at year end, provided by fund administrators. All investments contained in the mutual funds are valued in accordance with the authoritative guidance on fair value measurements and disclosures. Funds are available for withdrawal daily.

EMPLOYEES’ RETIREMENT PLAN

Investment Policy

The Plan’s investment policy and any changes to the policy are adopted by the Board acting in its capacity as Trustee of the Plan. The most recent version of the policy was approved on April 11, 2018. Revisions to the policy included changes to the language concerning proxy voting responsibilities, additions to the language surrounding the liquidity needs of the Plan, additional language that defines the policy review process, modification to the asset class structure by removing private real estate from the alternative asset class to a separate asset class, and revisions to the long-term asset allocation ranges.

The primary objective of the Board’s investment policy is to preserve the actuarial soundness of the Plan by achieving a long-term return of at least the actuarial-assumed rate of return and to prudently manage the inherent investment risks that are related to the achievement of this goal. The Board recognizes that the investment objective is long-term in nature, and that actual year-to-year returns achieved may be above or below the actuarially assumed rate of return.

Long-term asset allocation ranges are developed based on several factors including: the long-term investment goals of the Plan; the Board’s tolerance for short-term losses; the Plan’s liquidity needs; and any legal or regulatory requirements.

As of December 31, the Plan's long-term asset allocation ranges were as follows:

Employees' Retirement Plan		
<u>Long-Term Asset Allocation Ranges</u>		
Asset segment	Allowable range	
	Years ended December 31	
	2018	2017
Public Equities	40–65%	35–70%
Fixed Income	10–40%	10–50%
Real Estate	10–20%	-
Alternative	5–20%	10–40%

Money Weighted Rate of Return

For the years ended December 31, 2018 and 2017, respectively, the annual money-weighted rate of return on Plan investments, net of investment expense, was (4.0)% and 15.3%. The money-weighted rate of return considers the changing amounts invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the end of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

Custody and Management of Assets

During 2018 and 2017, the Northern Trust Company served as asset custodian for all Plan assets. The Board has elected to hire professional investment managers to invest the assets of the Plan on a fully discretionary basis, subject to the investment policy of the Board. Each manager is evaluated periodically against the appropriate benchmark for his/her asset class and style. Failure to achieve the desired result does not necessitate, nor does achievement of the desired result preclude, termination of investment managers.

During 2018 and 2017, the Plan assets were managed by the following investment managers

Aberdeen Asset Management Inc.	Since August 2015
Advisory Research Inc.	Terminated in November 2017
AllianceBernstein L.P.	Since May 2018
Barings LLC formerly Babson Capital Management LLC	Since August 2013
BlackRock Alternative Advisors	Since March 2012
BlackRock Institutional Trust Company N.A.	Since May 2016
Dimensional Fund Advisors, LP	Since February 2008
Harbert Management Corporation	Since July 2014
Harding Loevner Funds, Inc.	Since August 2011
Horsley Bridge Venture	Since July 2015
Northern Trust Investments, N.A.	Since July 2006
Principal Global Investors, LLC	Since March 2016
Fidelity Institutional Asset Management	Since July 2011
RREEF America LLC	Since January 2015
UBS Realty Investors, LLC	Since May 1998
Vanguard Group, Inc.	Terminated in May 2017
Winslow Capital Management, LLC	Since August 2011

Custodial Credit Risk

Custodial credit risk is the risk that, in the event of a failure of the counterparty, the Plan will not be able to recover its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Plan, and are held by either the counterparty or the counterparty's trust department or agent but not in the Plan's name.

All securities are held in a bank trust account in the Plan's name by the Plan's custodian except for investments in mutual and commingled funds, and limited partnerships, which by their nature, may have an independent custodian for the fund assets. Investments in short-term investment funds and in a domestic equity index fund are held in a SEC-registered pooled fund managed by the fund's custodian bank. Cash for benefit payments transferred to the benefit payment service provider immediately prior to the payment date is held in an omnibus account held in a commercial bank and not in the Plan's name and therefore, is exposed to custodial risk. As of December 31, 2018, and December 31, 2017, \$1.8 million and \$1.6 million, respectively, was subject to custodial credit risk.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Since the debt investment portfolio may contain holdings with prepayments and variable cash flows, an analysis of interest rate risk using the segmented time distribution method is presented in the schedule below:

Employees' Retirement Plan						
<u>Schedule of Interest Rate Risk – Segmented Time Distribution of Investment Maturities</u>						
December 31, 2018						
(amounts expressed in thousands)						
Investment type	Fair value/NAV	Less than 1 year	1 to 6 years	6 to 10 years	10+ years	Maturity not determined ¹
Other fixed income funds	\$ 73,791	\$ -	\$ -	\$ -	\$ -	\$ 73,791

¹ Amounts represent investments in commingled funds. Maturities of individual securities held by the funds are not reported by the fund.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single issuer. As of December 31, 2018, the Plan has no single issuer that exceeds 5% of total investments. Investments issued or explicitly guaranteed by the U.S. government and investments in diversified mutual funds, external investment pools, and other pooled investments are excluded.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to a debt instrument will not fulfill its obligations to the Plan. There are no Plan-wide policy limitations for credit risk exposures within the portfolio. Each portfolio is managed in accordance with an investment contract that is specific as to permissible credit quality ranges, the average credit quality of the overall portfolios, and issuer concentration.

The quality ratings of investments in fixed income securities as described by Standard and Poor's and Moody's rating organization as of December 31, 2018 are listed below. For securities with split ratings, the lowest rating is shown.

Employees' Retirement Plan
Schedule of Credit Risk

December 31, 2018
(amounts expressed in thousands)

<u>Investment type</u>	<u>Quality rating</u>	<u>Fair value</u>	<u>Percentage of asset class</u>
Other fixed income funds	NR/NA ¹	\$ 73,791	100%
Total fixed income securities		\$ 73,791	

¹ NR/NA indicates the securities were either not able to be categorized into any other ratings or the rating was not available to the custodian.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment or a deposit. The Plan holds investments in mutual funds and hedge funds whose underlying securities are invested in multiple foreign currencies and are subject to foreign currency risk.

The following table provides the Plan's maximum exposure to foreign currency risk as a percentage of its asset class as of December 31, 2018:

Employees' Retirement Plan	
<u>Schedule of Assets in Foreign Currencies</u>	
December 31, 2018	
(amounts expressed in thousands)	Percentage of asset class invested in foreign currencies
Equities	
Common stock funds	27.60%
Hedge funds	47.40%
Private equity	2.30%

Derivatives

Derivatives are financial instruments whose values depend upon, or are derived from, the value of something else, such as one or more underlying investments, indexes or currencies. Derivatives may be used both for hedging and to enhance returns. Derivatives may be traded on organized exchanges, or individually negotiated transactions with other parties, known as over-the-counter derivatives. Derivatives involve special risks and costs and may result in losses to the Plan. The successful use of derivatives requires sophisticated management, and, to the extent that derivatives are used, the Plan will depend on the investment managers and their advisors to analyze and manage derivatives transactions.

Certain commingled funds held by the Plan at year end were permitted through their individual investment guidelines to use derivative instruments, including forwards, futures, swaps, and options. Disclosures about derivative holdings

of the commingled fund managers can be found in their respective audited financial statements. The Plan did not directly own any derivatives as of December 31, 2018 and 2017.

Fair Value of Investments

The Plan has the following recurring fair value measurements as of December 31, 2018 and 2017:

Employees' Retirement Plan				
<u>Investments and Derivative Instruments Measured at Fair Value</u>				
December 31, 2018				
(amounts expressed in thousands)				
	December 31, 2018	Fair Value Measurements Using		
		(Level 1)	(Level 2)	(Level 3)
Investments by fair value level				
Debt securities				
Other fixed income funds	\$ 73,791	\$ -	\$ 73,791	\$ -
Total debt securities	73,791	-	73,791	-
Equity securities				
Common stock funds	184,527	171,512	13,015	-
Total equity securities	184,527	171,512	13,015	-
Total investments by fair value level	258,318	\$ 171,512	\$ 86,806	\$ -
Investments measured by the net asset value (NAV)				
Real estate funds	51,681			
Hedge funds	18,518			
Private equity funds	9,912			
Total investments measured by the NAV	80,111			
Total investments measured at fair value	\$ 338,429			

Employees' Retirement Plan				
<u>Investments and Derivative Instruments Measured at Fair Value</u>				
December 31, 2017				
(amounts expressed in thousands)				
	December 31, 2017	Fair Value Measurements Using		
		(Level 1)	(Level 2)	(Level 3)
Investments by fair value level				
Debt securities				
Other fixed income funds	\$ 55,018	\$ -	\$ 55,018	\$ -
Total debt securities	55,018	-	55,018	-
Equity securities				
Common stock funds	209,317	191,058	18,259	-
Total equity securities	209,317	191,058	18,259	-
Total investments by fair value level	264,335	\$ 191,058	\$ 73,277	\$ -
Investments measured by the net asset value (NAV)				
Real estate funds	52,169			
Hedge funds	33,981			
Private equity funds	6,397			
Total investments measured by the NAV	92,547			
Total investments measured at fair value	\$ 356,882			

Equity securities, fixed income funds and common stock funds classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued based on evaluated prices using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Level 3 inputs are significant unobservable inputs. Pricing for all securities was provided by a third-party pricing vendor and developed in accordance with the provisions of GASB Statement No. 72 *Fair Value Measurement and Application*. The valuation for investments measured at the net asset value (NAV) per share (or its equivalent) as of December 31, 2018 and 2017 are presented on the following tables.

Employees' Retirement Plan				
<u>Investments Measured at the NAV</u>				
December 31, 2018				
(amounts expressed in thousands)				
	NAV	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Real estate funds	\$ 51,681	\$ 1,519	Quarterly/None	45-90 days
Hedge funds	18,518	-	Quarterly	45-90 days
Private equity funds	9,912	3,130	None	N/A
Total investments measured at the NAV	<u>\$ 80,111</u>	<u>\$ 4,649</u>		

Employees' Retirement Plan				
<u>Investments Measured at the NAV</u>				
December 31, 2017				
(amounts expressed in thousands)				
	NAV	Unfunded Commitments	Frequency (If Currently Eligible)	Redemption Notice Period
Real estate funds	\$ 52,169	\$ 1,762	Quarterly/None	45-90 days
Hedge funds	33,981	-	Quarterly	45-90 days
Private equity funds	6,397	5,971	None	N/A
Total investments measured at the NAV	<u>\$ 92,547</u>	<u>\$ 7,733</u>		

Real Estate funds

This fund category includes three open-end and one closed-end real estate funds. Open-end funds are reported at fair value based upon the NAV of shares/units held at year end, provided by fund managers. The closed-end fund, Harbert United States Real Estate Fund V, L.P., is reported at fair value based upon the net value of the Plan's ownership interest in partners' capital, as provided by the investment manager.

Investments in the open-end real estate funds can be redeemed with the fund managers as of the end of a calendar quarter. Redemption requests are subject to certain restrictions and the availability of cash. Should redemption requests exceed such available cash, the funds prorate available cash among withdrawing investors according to the ratio of the requesting investor's units to the total units of all investors then requesting redemptions. Any redemption request that is not fully honored in any given quarter is deemed effective in following quarters until completed. The funds are not obligated to sell assets, borrow funds, alter investment or capital improvement plans or reduce reserves in order to honor redemption requests.

The investment in the closed-end fund, which represents approximately 18.7% of the value of the investments in this type, cannot be redeemed. Distributions from the fund are received as the underlying investments of the funds are liquidated. It is expected that the fund life of the underlying assets will be 10 years from the initial draw down date with two one-year extensions, at the discretion of the manager.

Hedge funds

This fund category includes an investment in one hedge fund that is a multi-strategy fund pursuing a variety of absolute return strategies, investing in a wide range of financial instruments, including, but not limited to, long or short positions in U.S. or non-U.S. publicly traded or privately issued or negotiated common stocks, preferred stocks, stock warrants and rights, corporate or sovereign debt, bonds, notes or other debentures or debt participations, commodities, partnership interests, interests in investment companies, convertible securities, swaps, options (purchased or written), swaptions, futures contracts and other derivative instruments markets and relative value, as well as private investment funds (hedge fund of funds). The fair values of the investments in this category have been determined using the NAV per share of the investments, as provided by the investment manager. The fund limits the amount that can be redeemed each quarter to 25% of each investor's total investment.

Private Equity Funds

This fund category includes investments in two private equity fund-of-funds, which invest in private investment funds. Aberdeen U.S. Private Equity VI, L.P., which is a buyout fund-of-funds, offers a concentrated multi-manager approach with 14-16 private equity managers along with selective co-investments and secondary investments and focuses on small-to-medium sized companies. Horsley Bridge Venture XI, L.P., which is a venture capital fund-of-funds, is expected to invest in 15-20 established and emerging private equity managers providing seed and early stage exposure to the technology sector in the United States, Europe and Asia.

Private equity funds are reported at fair value based upon the net asset value of the Plan's ownership interest in partners' capital, as provided by the investment managers.

The investment in the private equity funds of funds can never be redeemed. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the fund life of the underlying assets will be 12 to 15 years from the initial draw down date.

(3) ACCOUNTS RECEIVABLE

Current and long-term accounts receivable at December 31, 2018 and 2017 were as described below. Other receivables include receivables for contributions in aid of construction, system development charges, non-potable and hydrant water sales, and power sales. Long-term receivables represent financing arrangements with various suburban water districts for the sale of water. Denver Water has no allowance for uncollectible accounts as it relates to water sales since non-payment of receivables may result in discontinuation of service that attaches to the property location. An allowance for uncollectible accounts was established in 2016 to recognize the potential of uncollectible amounts in non-water sales receivables. The amounts below include an allowance for uncollectible accounts of approximately \$17,000 for both 2018 and 2017.

Accounts Receivable				
(amounts expressed in thousands)				
	December 31,			
	2018		2017	
Total Accounts Receivable				
<i>Current</i>				
Water sales	\$ 23,493	86%	\$ 21,115	81%
Other	3,938	14%	5,095	19%
<i>Total Current</i>	<u>\$ 27,431</u>	<u>100%</u>	<u>\$ 26,210</u>	<u>100%</u>
<i>Long-term</i>	<u>\$ 10,733</u>		<u>\$ 12,497</u>	
From the City and County of Denver (included above)				
<i>Current</i>				
Water sales	\$ 1,738		\$ 278	
<i>Total Current</i>	<u>1,738</u>		<u>278</u>	
<i>Long-term</i>	-		-	
<i>Total from City and County of Denver</i>	<u>\$ 1,738</u>		<u>\$ 278</u>	

(4) CAPITAL ASSETS

Capital asset activity for the years ended December 31, 2018 and 2017 was as follows:

Capital Assets					
Year Ended December 31, 2018					
(amounts expressed in thousands)					
	December 31,			Retirements	December 31,
	2017	Additions	Transfers	& Sales	2018
Capital assets not being depreciated:					
Land and land rights	\$ 129,789	\$ -	\$ 664	\$ (8)	\$ 130,445
Water rights and other	70,472	-	-	-	70,472
Construction in progress	265,757	211,940	(135,364)	(1,895)	340,438
Total capital assets not being depreciated	<u>466,018</u>	<u>211,940</u>	<u>(134,700)</u>	<u>(1,903)</u>	<u>541,355</u>
Capital assets being depreciated:					
Buildings and improvements	405,375	-	8,643	(226)	413,792
Improvements other than buildings	1,971,680	16,158	102,275	(3,317)	2,086,796
Machinery and equipment	412,683	71	23,782	(6,249)	430,287
Total capital assets being depreciated	<u>2,789,738</u>	<u>16,229</u>	<u>134,700</u>	<u>(9,792)</u>	<u>2,930,875</u>
Less accumulated depreciation:					
Buildings and improvements	(117,420)	(6,793)	-	130	(124,083)
Improvements other than buildings	(563,245)	(26,813)	-	1,762	(588,296)
Machinery and equipment	(227,197)	(18,061)	-	5,669	(239,589)
Total accumulated depreciation	<u>(907,862)</u>	<u>(51,667)</u>	<u>-</u>	<u>7,561</u>	<u>(951,968)</u>
Total capital assets being depreciated, net	<u>1,881,876</u>	<u>(35,438)</u>	<u>134,700</u>	<u>(2,231)</u>	<u>1,978,907</u>
Total capital assets, net	<u>\$ 2,347,894</u>	<u>\$ 176,502</u>	<u>\$ -</u>	<u>\$ (4,134)</u>	<u>\$ 2,520,262</u>

Capital Assets
Year Ended December 31, 2017
(amounts expressed in thousands)

	December 31, 2016	Additions	Transfers	Retirements & Sales	Asset Reclassifications	December 31, 2017
<u>Capital assets not being depreciated:</u>						
Land and land rights	\$ 99,108	\$ -	\$ 3,453	\$ (864)	\$ 28,092	\$ 129,789
Water rights and other	105,785	-	652	-	(35,965)	70,472
Construction in progress	<u>259,690</u>	<u>170,826</u>	<u>(158,564)</u>	<u>(6,195)</u>	<u>-</u>	<u>265,757</u>
Total capital assets not being depreciated	<u>464,583</u>	<u>170,826</u>	<u>(154,459)</u>	<u>(7,059)</u>	<u>(7,873)</u>	<u>466,018</u>
<u>Capital assets being depreciated:</u>						
Buildings and improvements	199,329	-	49,547	(10,044)	166,543	405,375
Improvements other than buildings	2,044,423	12,054	80,951	(5,925)	(159,823)	1,971,680
Machinery and equipment	<u>392,963</u>	<u>-</u>	<u>23,961</u>	<u>(5,394)</u>	<u>1,153</u>	<u>412,683</u>
Total capital assets being depreciated	<u>2,636,715</u>	<u>12,054</u>	<u>154,459</u>	<u>(21,363)</u>	<u>7,873</u>	<u>2,789,738</u>
Less accumulated depreciation:						
Buildings and improvements	(48,453)	(6,015)	-	4,249	(67,201)	(117,420)
Improvements other than buildings	(596,587)	(30,244)	-	2,113	61,473	(563,245)
Machinery and equipment	<u>(211,396)</u>	<u>(26,089)</u>	<u>-</u>	<u>4,560</u>	<u>5,728</u>	<u>(227,197)</u>
Total accumulated depreciation	<u>(856,436)</u>	<u>(62,348)</u>	<u>-</u>	<u>10,922</u>	<u>-</u>	<u>(907,862)</u>
Total capital assets being depreciated, net	<u>1,780,279</u>	<u>(50,294)</u>	<u>154,459</u>	<u>(10,441)</u>	<u>7,873</u>	<u>1,881,876</u>
Total capital assets, net	<u>\$ 2,244,862</u>	<u>\$ 120,532</u>	<u>\$ -</u>	<u>\$ (17,500)</u>	<u>\$ -</u>	<u>\$ 2,347,894</u>

Depreciation and amortization for the years ended December 31, 2018 and 2017 were \$51.7 million and \$62.3 million, respectively.

Major retirements during 2018 primarily resulted from disposal of vehicles, equipment, mains and hydrants. Major retirements during 2017 were primarily the result of assets disposed of as part of the Operations Complex Redevelopment (OCR) project, abandoned yard piping at Moffat treatment plant, and the write-off of the data center assets due to an impairment resulting from damages.

(5) **RISK MANAGEMENT**

Denver Water is exposed to various risks of loss including torts, general liability, property damage (all limited under the Colorado Governmental Immunity Act to \$350,000 per person and \$990,000 per occurrence), and employee life, medical, dental, and accident benefits. Beginning in 2019, these limits are adjusted every three years for inflation. Denver Water has a risk management program that includes self-insurance for liability, employee medical (including stop-loss coverage), dental, and vision. Denver Water carries commercial property insurance for catastrophic losses, including floods, fires, earthquakes and terrorism, for scheduled major facilities including the Westside Complex, Marston Treatment Plant and Lab, Moffat Treatment Plant, Foothills Treatment Plant, the Recycling Plant, and water turbines. It carries limited insurance for other nonscheduled miscellaneous locations. Denver Water also carries commercial insurance for life, accident, short-term and long-term disability, employee dishonesty, and fiduciary exposure.

Denver Water is also self-insured for workers' compensation and carries an excess liability (stop-loss) policy for individual claims exceeding \$500,000. Prior to February 1, 2016, Denver Water was insured for workers' compensation insurance by a large deductible policy whereby Denver Water was responsible for the first \$250,000 per claim with a maximum aggregate cost of \$2.6 million. Several claims remain open under this policy. In addition, Denver Water is at times party to pending or threatened lawsuits under which it may be required to pay certain amounts

upon their final disposition. Settled claims have not exceeded this commercial coverage in any of the past three fiscal years.

Claims expenses and liabilities are reported when it is probable that a loss has occurred, and the amount of that loss can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported (IBNR). IBNR is an estimate based on actuarial analysis and historical experience. At December 31, 2018 and 2017, IBNR claims, consisting of workers' compensation, and medical and dental benefits were \$2.7 million and \$2.4 million, respectively. At December 31, 2018 and 2017, legal claims were \$0 and \$350,000, respectively. Changes in the balances of these liabilities during 2018 and 2017 were as follows:

Claims Liabilities					
(amounts expressed in thousands)					
	Beginning- of-Year Liability	Current-Year Claims and Changes in Estimates	Claim Payments		Balance at Year-End
2018	\$ 2,781	\$ 15,586	\$ (15,645)	\$	2,722
2017	1,343	15,061	(13,623)	\$	2,781

Medical, dental, and workers' compensation claims liabilities are reported in *Payroll and Other Employee Benefits*; any legal claims are reported in *Accounts Payable* on the *Statements of Net Position*. It is expected the claims will be paid within the next twelve months.

(6) NOTES AND BONDS PAYABLE

Notes Payable

On November 20, 2013, Denver Water executed a credit agreement with Bank of America, N.A., to provide a variable-rate revolving note payable for a maximum initial principal amount of \$30.0 million. The credit facility expired in November 2018. On December 12, 2018, Denver Water executed a 5-year credit agreement with PNC Bank, N.A., effective January 1, 2019, to provide a variable-rate revolving note payable for a maximum initial principal amount of \$60.0 million as an interim source of financing for capital improvements to the water works system. The credit facility contains an option to increase the credit amount to \$80.0 million. The line of credit contains a provision that in the event of default, the lender may take any or all of the following actions; (1) cease making any further advances, (2) convert the loan to a term loan at a specified default rate, (3) cause the default rate to apply to all outstanding amounts drawn on the line and (4) pursue any other remedies to which it is entitled under the credit agreement, at law or in equity. The line of credit has a subordinate pledge of and lien on the net revenue of Denver Water.

The funds drawn on the line of credit will be classified as long-term liabilities because the debt provisions permit refinancing the note on a long-term basis. Notes payable activity for the years ended December 31, 2018 and 2017 was as follows:

Notes Payable					
(amounts expressed in thousands)					
	Beginning Balance	Draws	Repayments		Ending Balance
2018	\$ -	\$ -	\$ -	\$	-
2017	-	-	-	\$	-

Revenue Bonds Payable

Revenue bonds payable consists of water revenue improvement and refunding bonds of Denver Water. Denver Water has pledged to repay the bonds and related interest from net revenues and to maintain adequate rates to ensure its ability to do so. Coupon rates for the revenue bonds outstanding at December 31, 2018 and 2017 ranged from 0.75% to 6.15% each year. The weighted average yield to maturity at issue for outstanding bonds was 3.24% and 3.21% for the years ended December 31, 2018 and 2017, respectively. The weighted average yield to maturity for the Series 2009A and Series 2010B Build America revenue bonds is calculated net of the 35% interest subsidy, less the adjustment for the congressional sequestration. In 2018 and 2017 the 35% subsidy was reduced by 6.2% and 6.6%, respectively. In accordance with the issuing bond resolutions, Denver Water has established a reserve fund for the revenue bonds totaling \$18.5 million and \$17.4 million at December 31, 2018 and 2017, respectively.

Denver Water issued the Series 2017A Master Resolution Water Revenue Green Bonds and the 2017B Master Resolution Water Revenue Bonds on May 23, 2017, in an aggregate principal amount of \$142.7 million and \$41.8 million, respectively. The true interest cost at sale was 3.67% for the Series 2017A and 3.40% for the Series 2017B bonds. The proceeds from the sale of the Series 2017A bonds are being used to finance the Operations Complex Redevelopment Project (OCR). The bonds were designated green because the project was designed with environmentally beneficial features including, but not inclusive of, constructing to LEED® (Leadership in Energy & Environmental Design) standards, incorporating “One Water” concepts, and recycling of construction and demolition debris. The Series 2017B Master Resolution Water Revenue Bond proceeds were used to finance other additions and improvements to the water system operated by Denver Water. Both series of bonds were issued pursuant to the amended and restated Master Bond Resolution (3/22/17) and the Series 2017A-B Supplemental Bond Resolution.

Denver Water issued the Series 2016A and 2016B Master Resolution Water Revenue Bonds on May 10, 2016 in an aggregate principal amount of \$94.8 million and \$63.5 million, respectively. The true interest cost at sale was 2.7% for the Series 2016A and 2.3% for Series 2016B. The proceeds from the sale of the Series 2016A were used to finance additions and improvements to the water system operated by Denver Water and to pay down \$30.0 million of the Bank of America credit facility. The Series 2016B Master Resolution Water Revenue Bonds were used to advance refund a portion of the Series 2007A Master Resolution Water Revenue Bonds. The proportionate share of proceeds for the advance refunding, together with cash funds of \$1.0 million from the Series 2007A debt service reserve fund, were placed in an irrevocable trust with an escrow agent to defease \$66.2 million in aggregate principal of the revenue bonds.

The advance refunding resulted in a difference between the reacquisition price and the net carrying amount of the old debt (“deferred amount on refunding”) of \$3.1 million. This difference, reported in the accompanying basic financial statements as a *Deferred Outflow of Resources*, is being amortized using the straight-line method as a component of interest expense through 2037. The remaining unamortized amount of refunding of all bonds considered defeased is \$5.9 million and \$6.4 million at December 31, 2018 and 2017, respectively.

Denver Water completed the advance refunding to reduce its total debt service payments and to obtain an economic gain (difference between the present values of the old and new debt service payments). The reduction in total debt service requirements over the next 22 years is \$17.3 million, with an economic gain of \$12.5 million.

The Series 2008 Master Resolution Water Revenue Bonds are direct placement bonds and were issued as Clean Renewable Energy Tax Bonds as defined in Section 54 of the internal revenue code of 1986. The Series 2008 bonds have an extraordinary mandatory redemption provision in the event the bonds lose their tax credit eligibility. In this event the bonds must be redeemed in full at a redemption price of 100% of the principal plus accrued interest to the date of redemption. The principal amount outstanding is \$480,000 and \$600,000 at December 31, 2018 and 2017, respectively.

A summary of debt maturity for the revenue bonds as of December 31, 2018 is as follows:

Revenue Bonds			
December 31, 2018			
(amounts expressed in thousands)			
<u>Year of Maturity:</u>	<u>Principal</u>	<u>Interest¹</u>	<u>Total</u>
Current:	\$ 19,390	\$ 24,852	\$ 44,242
Long-term:			
2020	18,475	23,962	42,437
2021	19,305	23,085	42,390
2022	19,075	22,219	41,294
2023	19,900	21,384	41,284
2024-2028	82,160	95,370	177,530
2029-2033	96,450	77,590	174,040
2034-2038	114,550	56,257	170,807
2039-2043	120,725	32,040	152,765
2044-2048	73,460	7,897	81,357
	564,100	359,804	923,904
Plus premium	28,243	-	28,243
Total long-term	592,343	359,804	952,147
	<u>\$ 611,733</u>	<u>\$ 384,656</u>	<u>\$ 996,389</u>

¹

Excludes Build America Bonds interest subsidy. Amounts received during both 2018 and 2017 were approximately \$2.2 million. Denver Water is eligible to receive approximately \$29.0 million over the remaining life of the bonds, subject to appropriations by Congress.

(7) LEASES

Capital Lease

On July 21, 1992, Denver Water entered into an agreement amending the lease agreement of March 3, 1987 with the Colorado River Water Conservation District ("District") whereby the District was required to construct Ritschard Dam and Wolford Mountain Reservoir ("Wolford") on Muddy Creek, a tributary of the Colorado River north of Kremmling, Colorado. In consideration of quarterly and semiannual lease payments for 27 years beginning after issuance of a notice of award for construction and payments of 40% of the annual operating costs of Wolford beginning after the end of the lease term, the District will convey to Denver Water at the end of the lease term ownership, use and control of 40% of the storage capacity of Wolford, and 40% of the water rights. The present value of the minimum lease payments at the beginning of the lease term, including a \$2.4 million nonrefundable deposit, was \$43.0 million, and Denver Water recorded an asset and obligation under capital lease of that amount in 1992. The project was completed in the fall of 1995. The assets under the Wolford capital lease by major asset class, recorded in Utility Plant under Capital Lease, are as follows:

<u>Assets Under Capital Lease - Wolford Mountain</u>		
(amounts expressed in thousands)		
	December 31,	
	2018	2017
Improvements other than buildings	\$ 42,980	\$ 42,980
Less: accumulated amortization	(12,939)	(12,380)
	<u>\$ 30,041</u>	<u>\$ 30,600</u>

Minimum capital lease payments were \$3.0 million during both 2018 and 2017. The following is a schedule by year of future minimum lease payments, together with the present value of the minimum lease payments as of December 31, 2018:

<u>Obligation Under Capital Lease - Wolford Mountain</u>	
As of December 31, 2018	
(amounts expressed in thousands)	
<u>Year Ending December 31:</u>	
2019	\$ 3,000
2020	<u>1,500</u>
Total minimum lease payments	4,500
Less interest at 6.75%	<u>(288)</u>
Present value of minimum lease payments (obligation under capital lease)	4,212
Less current portion	<u>(2,761)</u>
Total long-term	<u>\$ 1,451</u>

Operating Leases

Denver Water is committed under various cancellable operating leases for property and equipment. Lease expenses for the years ended December 31, 2018 and 2017 were \$0.8 million and \$1.0 million, respectively. Denver Water expects these leases to be replaced in the ordinary course of business with similar leases.

(8) WASTE DISPOSAL CLOSURE AND POSTCLOSURE CARE

Denver Water operates a landfill and residuals drying beds at the Foothills Water Treatment Plant for disposal of aluminum sulfate solids/residuals generated as a by-product of the potable water treatment process at the Foothills and Marston Water Treatment Plants. It also operates residuals drying beds near the Ralston Reservoir and at West 41st Avenue and Independence Court for dewatering of aluminum sulfate solids/residuals generated as a by-product of the potable water treatment process at the Moffat Water Treatment Plant. These sites have been in operation since 1995. State and federal laws and regulations require Denver Water to perform certain closing functions on these disposal sites when they stop accepting residuals, including placing a final cover on the Foothills landfill and performing certain maintenance and monitoring functions at the Foothills landfill for thirty years after closure.

Although these sites are not municipal solid waste landfills, and are outside the scope of GASB Statement No. 18, *Accounting for Municipal Solid Waste Landfill Closure and Postclosure Care Costs*, (“GASB No. 18”), Denver Water voluntarily implemented the provisions of that statement in 2000 to meet State of Colorado and federal financial assurance requirements discussed below.

During 2013, Colorado revised its solid waste regulations to require reporting for the Foothills and 41st and Independence drying beds, which were previously not required to be reported. Also, the change in regulations no longer requires recording a liability for postclosure care costs for drying beds if they are “clean closed,” which means that all residuals are removed upon closure. Despite this, the postclosure care liability for Ralston drying beds of \$791,000 and \$777,000, respectively, has been included in 2018 and 2017 pending receipt of a revised Certificate of Designation from Jefferson County.

As required by GASB No. 18, although closure and postclosure care costs will be paid only near or after the date that the disposal sites stop accepting waste, Denver Water reports a portion of the Foothills closure and postclosure care costs as an operating expense and liability in each year based on landfill capacity used as of each *Statements of Net Position* date. Denver Water reports the entire liability for closure costs for the Foothills, Ralston, and 41st and Independence residual drying beds since they are not “filled” like a landfill but are reusable.

Approximately \$6.6 million and \$6.4 million was reported as *Waste Disposal Closure and Postclosure Care* liability in the *Statements of Net Position*, at December 31, 2018 and 2017, respectively, for the sites as follows:

<u>Waste Disposal Closure and Postclosure Care Liability</u>				
(amounts expressed in thousands)				
	<u>Foothills</u>	<u>Ralston</u>	<u>41st & Independence</u>	<u>Total</u>
<u>2018</u>				
Closure costs	\$ 2,437	\$ 2,307	\$ 723	\$ 5,467
Postclosure care costs	295	791	-	1,086
	<u>\$ 2,732</u>	<u>\$ 3,098</u>	<u>\$ 723</u>	<u>\$ 6,553</u>
<u>2017</u>				
Closure costs	\$ 2,394	\$ 2,267	\$ 710	\$ 5,371
Postclosure care costs	290	777	-	1,067
	<u>\$ 2,684</u>	<u>\$ 3,044</u>	<u>\$ 710</u>	<u>\$ 6,438</u>

These costs are based on the use of 24.8% of the active portion of the Foothills landfill at December 31, 2018 and 2017, and 100% of the Foothills, Ralston, and 41st and Independence drying beds. Denver Water will recognize the remaining estimated cost of the Foothills postclosure care of \$895,000 as the remaining capacity is filled. These amounts are based on what it would cost to perform all closure and postclosure care in 2018. Actual cost may be higher due to inflation, changes in technology, or changes in regulations. The remaining life of the Foothills landfill is estimated to be approximately 74.2 years for the active disposal area of 61.7 acres. The Foothills, Ralston, and 41st and Independence drying beds have an indefinite life.

Denver Water is required by state and federal laws and regulations to establish financial assurance sufficient to ensure full payment of closure and postclosure care of its disposal sites by selecting one of a variety of financial mechanisms. Denver Water chose the “Local Government Financial Test” which includes profitability requirements, minimum general obligation bond ratings, unmodified audit opinions, and the implementation of GASB No. 18.

(9) CHANGES IN LONG-TERM LIABILITIES

Long-term liability activity for the years ended December 31, 2018 and 2017 was as follows:

<u>Long-Term Liabilities</u>					
Year Ended December 31, 2018					
(amounts expressed in thousands)					
	December 31, 2017 (Current and Long-Term)	2018		December 31, 2018 (Current and Long-Term)	Due Within One Year
		<u>Additions</u>	<u>Reductions</u>		
Revenue bonds payable, net	\$ 636,080	\$ -	\$ (24,347)	\$ 611,733	\$ 19,390
Obligation under capital lease	6,797	-	(2,585)	4,212	2,761
Customer advances for construction	9,878	6,098	(3,197)	12,779	-
Compensated absences	10,170	750	(518)	10,402	6,011 ¹
Waste disposal closure	6,438	115	-	6,553	-
	<u>669,363</u>	<u>\$ 6,963</u>	<u>\$ (30,647)</u>	<u>645,679</u>	<u>\$ 28,162</u>
Less current portion	<u>(28,369)</u>			<u>(28,162)</u>	
Total long-term liabilities	<u>\$ 640,994</u>			<u>\$ 617,517</u>	

¹ Included in Payroll and Other Employee Benefits in the Statements of Net Position.

<u>Long-Term Liabilities</u> ²					
Year Ended December 31, 2017					
(amounts expressed in thousands)					
	December 31, 2016 (Current and Long-Term)	2017		December 31, 2017 (Current and Long-Term) Restated	Due Within One Year
		<u>Additions</u>	<u>Reductions</u>		
Revenue bonds payable, net	\$ 454,338	\$ 205,864	\$ (24,122)	\$ 636,080	\$ 19,925
Obligation under capital lease	9,215	-	(2,418)	6,797	2,584
Customer advances for construction	3,402	11,993	(5,517)	9,878	-
Compensated absences	15,974	3,903	(9,707)	10,170	5,860 ¹
Waste disposal closure	6,300	245	(107)	6,438	-
	<u>572,234</u>	<u>\$ 222,005</u>	<u>\$ (41,871)</u>	<u>669,363</u>	<u>\$ 28,369</u>
Less current portion	<u>(34,524)</u>			<u>(28,369)</u>	
Total long-term liabilities	<u>\$ 537,710</u>			<u>\$ 640,994</u>	

¹ Included in Payroll and Other Employee Benefits in the Statements of Net Position.

² 2017 liabilities were restated as part of the implementation of GASB 75.

(10) PENSION PLAN

General Information about the Pension Plan

In December 2016, Denver Water approved changes to Denver Water trustee, single-employer defined benefit pension plan, (the "Plan") with an effective date of January 1, 2018. Employees hired prior to January 1, 2018 will be under Tier I of the Plan and will contribute 3% of their compensation, phased in at 1% each year, over three years beginning in 2018. There are no other substantive changes to the Tier I portion of the Plan. Employees hired after January 1, 2018 will be under Tier II of the Plan and will contribute 3% of their compensation beginning immediately upon hire. The Tier II Plan differs from the Tier I Plan in that the benefit multiplier is 1.75%, special early retirement benefits are under the rule of 85 at a minimum age of 60, and there is no cost of living adjustment. Non-vested employees under either tier, who leave employment will be refunded their contributions with an established rate of interest. Under GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, Denver Water elected to report pension liability information based on a one-year lag. Because of this, the above referenced Plan changes will not impact the net pension liability depicted in the financial statements or note disclosures until 2019's financial statements.

Plan Description

Denver Water sponsors and administers a trustee, single-employer defined benefit pension plan, (the "Plan"). The Plan provides retirement benefits with limited annual cost-of-living adjustments to retired members and, if elected by the member, to his or her surviving spouse. Members of the Plan include substantially all regular and discretionary full-time and part-time employees of Denver Water. Article X, Section 10.1.6 of the Charter of the City assigns the authority to establish and amend benefit provisions to Denver Water. The Plan contains provisions regarding amendments, including a provision for employee voting on amendments in specifically described situations. The Plan issues a publicly available financial report that includes financial statements and required supplementary information for the Plan. That report may be obtained by writing to: Treasurer, Denver Water, 1600 West 12th Avenue, Denver, CO 80204-3412. It can also be obtained from the Denver Water website.

Benefits Provided

The Plan provides retirement benefits with limited annual cost-of-living adjustments to retired members and, if elected by the member, to his or her surviving spouse. It also provides retirement service in the event of disability, and a \$5,000 death benefit to retirees receiving monthly payments from the Plan. Retirement benefits are calculated based on the employee's (a) average final compensation during the 36 consecutive months out of the last 120 completed calendar months of employment with Denver Water that produce the highest average; (b) the "Covered Compensation" for Social Security tax purposes; (c) years of credited service; (d) age when pension benefit begins; and (e) the form chosen to receive pension benefits. The basic monthly benefit from the Plan for the normal retirement age of 65 will equal the sum of the following amounts: (1) .015 times the average final compensation times the number of years of credited service, and (2) .0045 times the amount by which the average final compensation exceeds the covered compensation times the number of years of credited service. There are also early retirement options beginning at age 55. Monthly pension benefits are automatically adjusted at the beginning of each year to reflect the annual rate of change in the Consumer Price Index from the previous year, limited to no more than 4.4%.

Employees Covered by Benefit Terms

At January 1, 2017 and 2016, the valuation date, the following employees were covered by the benefit terms:

<u>Employees Covered by Pension Plan Benefit Terms</u>		
	<u>2017</u>	<u>2016</u>
Inactive employees or beneficiaries currently receiving benefits	651	616
Inactive employees entitled to but not yet receiving benefits	106	100
Active employees	<u>1,019</u>	<u>1,004</u>
	<u>1,776</u>	<u>1,720</u>

Contributions

Article X, Section 10.1.6 of the Charter of the City assigns the authority to establish and amend the contribution requirements to Denver Water. Denver Water’s funding policy is established and may be amended by Denver Water, which acts as trustee of the Plan. Denver Water reserves the right to suspend, reduce, or permanently discontinue all contributions at any time, pursuant to the termination provisions of the Plan.

On August 28, 2013, Denver Water adopted the Employees’ Retirement Plan Funding Policy effective for 2014 and future years. The policy was last amended on May 23, 2018. The Policy defines the objectives of Denver Water in funding the Plan. The policy establishes principles governing employee and employer contributions to the Plan. The primary funding objectives specified in the policy are to maintain a stable or increasing funded ratio and to minimize volatility of employer contributions. In accordance with the policy, Denver Water will base its contributions to the Plan on Actuarially Determined Contributions (“ADC”) calculated annually by an independent actuary using agreed upon methods and assumptions developed by the Actuarial Standards Board, while considering any other facts and circumstances relevant to the funding decision. Denver Water has discretion to change the contribution rates in the future. For both years ended December 31, 2018 and 2017, Denver Water contributed \$18.0 million to the Plan.

Net Pension Liability

Denver Water has elected a measurement date for the current year-end as of the prior year end. Therefore, the net pension liability reported as of December 31, 2018 was measured as of December 31, 2017, and the net pension liability reported as of December 31, 2017 was measured as of December 31, 2016. The total pension liability used to calculate the net pension liability for 2018 and 2017 was determined by an actuarial valuation performed as of January 1, 2017 and January 1, 2016.

Actuarial Assumptions

The Entry Age Normal actuarial cost method was used to measure the total pension liability. The actuarial assumptions included a 7.00% investment rate of return for 2018 and a 7.25% investment rate of return for 2017. For both 2018 and 2017 assumptions included age-based salary increases ranging from 6.25% to 3.35% per year for funding, and a 2.75% inflation factor. The actuarial value of Plan assets was determined using techniques that smooth the effects of short-term volatility in the market value of investments over a three-year period. Effective January 1, 2014, the Plan’s unfunded actuarial accrued liability will be amortized in level dollar amounts over 15 years on a layered basis, which more closely reflects the average period of active service of Plan members.

Mortality rates used for 2018 were based on the Combined RP-2014 Healthy Employee Mortality Table with scale MP-2016. Mortality rates used for 2017 were based on the RP-2000 Combined Healthy Mortality Table, projected to 2020 using Scale BB.

The actuarial assumptions that determined the total pension liability as of January 1, 2017 and January 1 2016, were based on the results of an actuarial experience study for the period 2010 through 2014.

Discount Rate

The discount rate used to measure the total pension liability was 7.00% for 2018 and 7.25% for 2017. The projection of cash flows used to determine the discount rate assumed that Denver Water contributions will be made at approximately the current actuarially determined contribution rate. Based on this assumption, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimate of the 10-year geometric mean return for each major asset class are summarized in the following table:

Target Asset Allocation and Long-Term Expected Return		
As of January 1, 2017		
<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Domestic fixed income	17.0%	0.8%
Domestic equity	30.0%	4.6%
International equity	20.0%	4.8%
Private equity	8.0%	5.1%
Real estate	15.0%	3.5%
Hedge funds	5.0%	2.8%
Bank loans	5.0%	2.1%
	<u>100.0%</u>	

Sensitivity of the Net Pension Liability to Changes in Discount Rate

The following presents the net pension liability of Denver Water, calculated using the discount rate of 7.00% for 2018 and 7.25% for 2017, as well as what Denver Water’s net pension liability would be if it were calculated using the discount rate that is one percentage point lower or one percentage point higher than the current rate:

Sensitivity of the Net Pension Liability to Changes in Discount Rate			
As of December 31, 2018			
(amounts expressed in thousands)			
	<u>1% Decrease (6.00%)</u>	<u>Current Discount Rate (7.00%)</u>	<u>1% Increase (8.00%)</u>
Net pension liability	<u>\$ 105,633</u>	<u>\$ 57,321</u>	<u>\$ 15,564</u>

Sensitivity of the Net Pension Liability to Changes in Discount Rate

As of December 31, 2017

(amounts expressed in thousands)

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net pension liability	\$ 109,420	\$ 67,301	\$ 31,428

Pension Plan Fiduciary Net Position

Detailed information about the Plan's fiduciary net position is available in the separately issued Plan financial report discussed above.

Changes in the Net Pension Liability

Changes in Net Pension Liability

As of December 31, 2018

(amounts expressed in thousands)

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 12/31/17	\$ 381,718	\$ 314,417	\$ 67,301
Changes for the year:			
Service cost	8,522	-	8,522
Interest on total pension liability	27,728	-	27,728
Effect of plan changes	-	-	-
Effect of economic/demographic gains or losses	(2,255)	-	(2,255)
Effect of assumption changes or inputs	22,250	-	22,250
Benefit payments	(19,927)	(19,927)	-
Employer contributions	-	18,000	(18,000)
Member contributions	-	-	-
Net investment income	-	48,273	(48,273)
Administrative expenses	-	(48)	48
Net changes	36,318	46,298	(9,980)
Balances at 12/31/18	\$ 418,036	\$ 360,715	\$ 57,321

Changes in Net Pension Liability

As of December 31, 2017

(amounts expressed in thousands)

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) - (b)
Balances at 12/31/16	\$ 371,431	\$ 298,575	\$ 72,856
Changes for the year:			
Service cost	7,330	-	7,330
Interest on total pension liability	26,237	-	26,237
Effect of plan changes	-	-	-
Effect of economic/demographic gains or losses	(3,348)	-	(3,348)
Effect of assumption changes or inputs	-	-	-
Benefit payments	(19,932)	(19,932)	-
Employer contributions	-	14,500	(14,500)
Member contributions	-	-	-
Net investment income	-	21,326	(21,326)
Administrative expenses	-	(52)	52
Net changes	10,287	15,842	(5,555)
Balances at 12/31/17	\$ 381,718	\$ 314,417	\$ 67,301

Changes in assumptions reflect a change in the discount rate from 7.25% to 7.00% and a change in the mortality tables.

For both the years ended December 31, 2018 and 2017, Denver Water recognized pension expense of \$14.0 million. At December 31, 2018 and 2017, Denver Water reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

Deferred Outflows and Inflows of Resources Related to Pensions

As of December 31, 2018

(amounts expressed in thousands)

	Deferred Outflows of Resources	Deferred Inflows of Resources
Economic/demographic gains or losses	\$ 1,088	\$ 4,226
Net difference between projected and actual earnings	-	12,707
Assumption changes	24,482	-
Contributions made subsequent to measurement date	18,000	-
Total	\$ 43,570	\$ 16,933

Deferred Outflows and Inflows of Resources Related to Pensions

As of December 31, 2017

(amounts expressed in thousands)

	Deferred Outflows of Resources	Deferred Inflows of Resources
Economic/demographic gains or losses	\$ 1,486	\$ 2,833
Net difference between projected and actual earnings	8,806	-
Assumption changes	7,154	-
Contributions made subsequent to measurement date	18,000	-
Total	<u>\$ 35,446</u>	<u>\$ 2,833</u>

The \$18.0 million reported as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, as of December 31, 2017, was recognized as a reduction of the net pension liability in the year ended December 31, 2018. The \$18.0 million reported as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, as of December 31, 2018, will be recognized as a reduction of the net pension liability in the year ended December 31, 2019.

The remaining amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

**Amortization of Deferred Outflows and Inflows of Resources
Related to Pensions**

As of December 31, 2018

(amounts expressed in thousands)

Year ended December 31,	
2019	\$ 3,658
2020	3,060
2021	(980)
2022	(1,457)
2023	2,816
Thereafter	1,540

**Amortization of Deferred Outflows and Inflows of
Resources Related to Pensions**

As of December 31, 2017

(amounts expressed in thousands)

Year ended December 31,	
2018	\$ 1,829
2019	5,849
2020	5,250
2021	1,211
2022	734
Thereafter	(260)

(11) OTHER RETIREMENT PLANS

Denver Water sponsors and administers Denver Water Supplemental Retirement Savings Plan (“SRSP”). The SRSP is a 401(k) defined contribution plan. Article X, Section 10.1.6 of the Charter of the City assigns the authority to establish and amend benefit provisions to Denver Water. All regular and discretionary employees are eligible to participate in the plan. Under the terms of the plan, Denver Water will make a matching contribution to the SRSP’s trust fund each year in an amount equal to 100% of each participant’s elective contributions, limited to 3% of the participant’s base salary for the year. During 2018 and 2017, Denver Water made contributions totaling approximately \$2.1 million and \$6.8 million (inclusive of \$4.8 million paid by Denver Water into the 401K for a compensated absences conversion and buy down), respectively and members contributed approximately \$4.4 million and \$4.3 million, respectively, to the SRSP. Employee rollovers from other plans to the SRSP were \$1.2 million in 2018 and \$1.0 million in 2017.

Denver Water sponsors and administers a deferred compensation plan that is available for its employees, created in accordance with Internal Revenue Code Section 457. The plan is available to all regular and discretionary employees and permits them to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination, retirement, death, or qualifying unforeseeable emergency. Participation in the plan is voluntary. Denver Water may make discretionary employer contributions to a qualified participant. Discretionary employer contributions are limited by Treasury Regulations under I.R.S. Code §415, 401(a)(17).

(12) OTHER POSTEMPLOYMENT BENEFITS

Denver Water implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* in 2018 and restated 2017 financial statements.

General Information about the OPEB Plans

A. Healthcare

Plan Description

Denver Water’s other postemployment benefits (“OPEB”) plan provides healthcare for employees hired before January 16, 2012. The postemployment healthcare benefit is provided through a single-employer, defined benefit plan. Denver Water provides this benefit under authority of Article X, Section 10.1.6 of the City Charter, which assigns the authority to establish and amend benefit and funding provisions to Denver Water. Payments of OPEB benefits are made on a pay as you go basis in amounts necessary to provide current benefits to recipients. No assets are accumulated in a trust that meets the criteria in paragraph 4 of Statement 75. This OPEB plan does not issue a separate report.

Benefits Provided

The OPEB plan provides benefits in the form of partially subsidized healthcare costs, until the retiree attains age 65. The benefit is provided through Denver Water’s self-insured health plan to employees and dependents who meet eligibility requirements of the postemployment healthcare benefit plan. The eligibility requirements include retiring under the Special Early Retirement (Rule of 75) provision of Denver Water’s defined benefit pension plan and being covered as an employee or dependent under the employee healthcare plan, excluding COBRA coverage, at the time of retirement. The subsidy is separate from Denver Water’s defined benefit retirement plan and is not paid out of retirement plan funds. In January 2012, Denver Water discontinued its subsidy for this benefit for employees hired on or after January 16, 2012. However, employees can still access this program upon reaching age 60, at full cost. In January 2014, Denver Water changed the benefit for those hired after January 16, 2012, by increasing the minimum age from 55 to 60, with some transition options.

Employees Covered by Benefit Terms

At January 1, 2017 and 2016, the valuation date, the following employees were covered by the benefit terms:

<u>Employees Covered by OPEB Plan Benefit Terms</u>		
	<u>2017</u>	<u>2016</u>
Inactive employees or beneficiaries currently receiving benefits	165	166
Inactive employees entitled to but not yet receiving benefits	-	-
Active employees	<u>1,053</u>	<u>1,049</u>
	<u>1,218</u>	<u>1,215</u>

Total OPEB Liability

Denver Water has elected a measurement date for the current year end as of the prior year end. Therefore, the OPEB reported as of December 31, 2018 was measured as of December 31, 2017, and the OPEB liability reported as of December 31, 2017 was measured as of December 31, 2016. The total OPEB liability was determined by an actuarial valuation performed as of January 1, 2017 and January 1, 2016.

Actuarial Assumptions and Other Inputs

The Entry Age Normal actuarial cost method was used to calculate the total OPEB liability. The actuarial assumptions for 2018 included (a) 4.00% investment rate of return including an inflation component of 2.75%, (b) 3.31% discount rate, (c) healthcare cost trend rates, based on the Getzen Model, starting at 7.5% and gradually decreasing to an ultimate trend rate of 4.25%, and (d) 28% retiree's share of benefit-related costs. The actuarial assumptions for 2017 included (a) 4.00% investment rate of return including an inflation component of 2.75%, (b) 3.78% discount rate, (c) healthcare cost trend rates, based on the Getzen Model, starting at 7.25% and gradually decreasing to an ultimate trend rate of 4.00%, and (d) 26% retiree's share of benefit-related costs. The liability will be amortized in level dollar amounts over 30 years on an open basis.

Since the plan does not have formal assets, the discount rate should equal the tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date. The discount rate was based on the weekly rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index".

Mortality rates for 2018 were based on the RP-2014 Combined Healthy Mortality table projected using MP-2016. Mortality rates for 2017 were based on the RP-2000 Combined Healthy Mortality table projected to 2020 using scale BB.

The actuarial assumptions that determined the total OPEB liability as of January 1, 2017 and January 1 2016, were based on the results of an actuarial experience study for the period 2010 through 2014.

Changes in the Total OPEB Liability

<u>Changes in Total OPEB Liability</u>	
As of December 31, 2018 (amounts expressed in thousands)	
	Total OPEB Liability (a)
	<hr/>
Balances at 12/31/17	\$ 19,394
Changes for the year:	
Service cost	558
Interest on total OPEB liability	700
Changes in benefit terms	-
Difference between expected and actual experience	(1,813)
Changes in assumptions or other inputs	457
Benefit payments	(2,326)
Net changes	(2,424)
Balances at 12/31/18	<u>\$ 16,970</u>

<u>Changes in Total OPEB Liability</u>	
As of December 31, 2017 (amounts expressed in thousands)	
	Total OPEB Liability (a)
	<hr/>
Balances at 12/31/16	\$ 20,257
Changes for the year:	
Service cost	655
Interest on total OPEB liability	736
Changes in benefit terms	-
Difference between expected and actual experience	-
Changes in assumptions or other inputs	-
Benefit payments	(2,254)
Net changes	(863)
Balances at 12/31/17	<u>\$ 19,394</u>

Changes in assumptions and other inputs reflect a change in the municipal bond rate from 3.78% to 3.31% and a 0.25% increase in the healthcare trend rates.

Sensitivity of the Total OPEB Liability to Changes in the Discount Rate

The following represents the total OPEB liability of Denver Water, calculated using the discount rate of 3.31% for 2018 and 3.78% for 2017, as well as what Denver Water’s total OPEB liability would be if it were calculated using the discount rate that is one percentage point lower or one percentage point higher than the current rate:

Sensitivity of the Total OPEB Liability to Changes in Discount Rate			
As of December 31, 2018			
(amounts expressed in thousands)			
	1% Decrease (2.31%)	Current Discount Rate (3.31%)	1% Increase (4.31%)
Total OPEB liability	\$ 17,983	\$ 16,970	\$ 16,012

Sensitivity of the Net OPEB Liability to Changes in Discount Rate			
As of December 31, 2017			
(amounts expressed in thousands)			
	1% Decrease (2.78%)	Current Discount Rate (3.78%)	1% Increase (4.78%)
Total OPEB liability	\$ 20,562	\$ 19,394	\$ 18,298

Sensitivity of the Total OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following represents the total OPEB liability of Denver Water, calculated using the healthcare cost trend rate starting at 7.5% and gradually decreasing to 4.25% for both 2018 and 2017, as well as what Denver Water’s total OPEB liability would be if it were calculated using the healthcare cost trend rates that are one percentage point lower or one percentage point higher than the current rate:

Sensitivity of the Total OPEB Liability to Changes in Healthcare Cost Trend Rates			
As of December 31, 2018			
(amounts expressed in thousands)			
	1% Decrease (6.5% decreasing to 3.25%)	Healthcare Cost Trend Rates (7.5% decreasing to 4.25%)	1% Increase (8.5% decreasing to 5.25%)
Total OPEB liability	\$ 15,598	\$ 16,970	\$ 18,526

<u>Sensitivity of the Total OPEB Liability to Changes in Healthcare Cost Trend Rates</u>			
As of December 31, 2017			
(amounts expressed in thousands)			
	1% Decrease (6.5% decreasing to 3.25%)	Healthcare Cost Trend Rates (7.5% decreasing to 4.25%)	1% Increase (8.5% decreasing to 5.25%)
Total OPEB liability	\$ 17,851	\$ 19,394	\$ 21,147

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the years ended December 31, 2018 and 2017, Denver Water recognized OPEB expense of \$1.1 million and \$1.4 million, respectively. At December 31, 2018 and 2017, Denver Water reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

<u>Deferred Outflows and Inflows of Resources Related to OPEB</u>		
As of December 31, 2018		
(amounts expressed in thousands)		
	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ -	\$ 1,629
Assumption changes	411	-
Contributions after measurement date	2,272	-
Total	<u>\$ 2,683</u>	<u>\$ 1,629</u>

<u>Deferred Outflows and Inflows of Resources Related to OPEB</u>		
As of December 31, 2017		
(amounts expressed in thousands)		
	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ -	\$ -
Assumption changes	-	-
Contributions after measurement date	2,326	-
Total	<u>\$ 2,326</u>	<u>\$ -</u>

The remaining amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Amortization of Deferred Outflows and Inflows of Resources
Related to OPEB

As of December 31, 2018
(amounts expressed in thousands)

Year ended December 31,		
2019	\$	(138)
2020		(138)
2021		(138)
2022		(137)
2023		(137)
Thereafter		(530)

Amortization of Deferred Outflows and Inflows of Resources
Related to OPEB

As of December 31, 2017
(amounts expressed in thousands)

Year ended December 31,		
2018	\$	-
2019		-
2020		-
2021		-
2022		-
Thereafter		-

B. Long-term Disability

Denver Water also provides a long-term disability (“LTD”) insured plan for each employee who attains regular status. Denver Water provides this beneficiary it under authority of Article X, Section 10.1.6 of the City Charter, which assigns the authority to establish and amend benefit provisions to Denver Water. The insured plan provides for an 84-day elimination period for LTD benefits with a benefit of 60% of pay to a maximum of \$10,000 per month. Benefits are payable during the first two years if the disabled employee is incapable of employment at his or her own occupation with a 20% or more loss in indexed monthly earnings. Thereafter, benefits are payable provided the disabled employee continues to experience 20% or more reduction in indexed monthly earnings while working in any occupation or is incapable of employment at any occupation. Benefit duration depends on age at disability. Benefits are payable to age 65 for disabilities that occur before age 60. If the disability occurs after age 60, benefit duration depends on a benefit payment schedule. Because under the insured plan the obligation for the payment of benefits has been transferred to the insurance company, it is not included in the calculation of the OPEB liability. In 2018 and 2017, Denver Water paid \$232,000 and \$234,000 in LTD premiums, respectively. This OPEB plan does not issue a separate report.

(13) **POLLUTION REMEDIATION LIABILITY**

In 2016, as part of the Operations Complex Redevelopment (OCR) project, a site assessment determined that a portion of the soil around the Operations Complex was contaminated with polycyclic aromatic hydrocarbons, or ash. The source of the ash is unknown. Approximately \$702,293 was expended in 2018 for the disposal of the contaminated soils and an additional \$23,258 in remediation costs were incurred for the backfill and testing of four underground fuel tanks. At the end of 2018, a liability was accrued for \$422,000 to dispose of the remaining identified contaminated soil and \$100,000 to import backfill material replacing soils that will be hauled off-site during 2019. This liability is shown in Accounts Payable on the Statements of Net Position. The assumptions used to estimate the remaining

liability were based on rough order of magnitude cost estimates developed by Mortenson for work already completed, but not yet billed. This work was associated with the removal of contaminated soil and the import of backfill material from the proposed Administration Building basement footprint and the Parking Garage associated with Phase II construction. The method used to estimate the remaining liability utilized the following: 1) the rough order of magnitude area of soil to be removed of 8,440 cubic yards; 2) the average cost of the previous remediation work was \$50 per cubic yard; 3) the rough order of magnitude area of soil to be filled of 10,000 cubic yards; and 4) the average cost of the import of backfill material was \$10 per cubic yard. The actual cost could vary depending on the full reconciliation of these expenditures.

(14) CAPITAL CONTRIBUTIONS

Inception-to-date and current year proceeds from contributions in aid of construction (“CIAC”) and system development charges (“SDC”) were as follows:

Capital Contributions		
Years Ended December 31, 2018 and 2017		
(amounts expressed in thousands)		
	<u>CIAC</u>	<u>SDC</u>
Inception through December 31, 2016	\$ 544,025	\$ 783,873
2017 Additions	<u>14,781</u>	<u>42,486</u>
Inception through December 31, 2017	558,806	826,359
2018 Additions	<u>19,113</u>	<u>40,880</u>
Inception through December 31, 2018	<u>\$ 577,919</u>	<u>\$ 867,239</u>

(15) CONTINGENCIES

In the normal course of business, there are various outstanding legal proceedings, claims, commitments, and contingent liabilities. In the opinion of management, the ultimate disposition of these matters will not have a materially adverse effect on Denver Water’s financial statements.

(16) CONTRACT COMMITMENTS

Contractual commitments as of December 31, 2018 for construction and other purposes are estimated at \$923.4 million.

Operations Complex Redevelopment Project

The Operations Complex Redevelopment project was approved by Denver Water in 2013. Design started in 2014 with construction expected to be complete by Spring of 2020. The plan includes two phases of construction. Phase 1 included four operations buildings and site work. Phase 2 includes the administration and wellness building, parking structure, renovation of two existing buildings, and the balance of the site work. Construction commenced at the end of 2015 and Phase 1 was substantially complete as of September 2017. Construction is underway on Phase 2: the renovation of the Water Distribution Building is complete, the Administration Building structure has topped out and interior work has started, the Parking Garage is nearly finished, and the Wellness Building is weather tight with interior work underway. Many of the buildings on the existing Operations Complex were more than 50 years old and were no longer adequate for today’s demands. The new layout will improve traffic and work flow, while taking advantage of matching functions with building adjacencies. Sustainability is a key factor, as the complex is being designed to

incorporate LEED® certification, educational demonstrations of net-zero energy, and leading-edge concepts around the management of all water sources. The projected budget for this project increased \$6.0 million in 2018 to add scope for slip-lining an adjacent water conduit and to deal with unforeseen soil conditions at the OCR site. The revised projected budget impact is \$201.8 million.

Northwater Treatment Plant

The Northwater Treatment Plant project is one of the largest construction projects in Denver Water history. With a projected cost of nearly \$600.0 million, the project includes building an 8.5-mile water pipeline, making modifications to the Moffat Treatment Plant, and building the new Northwater Treatment Plant. The centerpiece of the \$600.0 million project will be a state-of-the-art treatment plant and pipeline in Jefferson County, north of Golden. The plant will be capable of treating up to 75 million gallons of water a day with room for expansion, and will incorporate sustainability practices throughout its operations, including making use of alternative energy sources like hydropower.

Denver Water's North System was constructed in the 1930s, when the surrounding area was mostly farmland. Now, 80 years later, the North System is reaching the end of its lifespan requiring replacement of pipelines and valves, and updating water treatment technology.

Design of the new treatment plant is underway, and the first phase of construction for the new pipeline began in the fall of 2017. The entire project is scheduled to be completed in 2024.

Gross Reservoir Expansion Project

After more than a dozen years of study, the Army Corps of Engineers approved the expansion of Gross Dam and Reservoir on July 6, 2017. The project earned key endorsements from state and federal lawmakers, major environmental groups, local governments and county officials, and water interests on both sides of the Continental Divide. The additional storage capacity in Gross Reservoir will help prevent future shortfalls during droughts and help offset an imbalance in Denver Water's collection system.

The project will raise the dam height by 131 feet from the current 340 feet to 471 feet. The storage capacity of the Reservoir will be increased from its current capacity of 41,811 acre-feet to approximately 118,811 acre-feet, an increase of approximately 77,000 acre-feet. Most of the additional capacity will be used for future challenges such as drought, fires, and growth on the north side of the collection system. It will also allow for 5,000 acre-feet to be set aside to be used as an environmental pool, providing additional water for South Boulder Creek during low flow periods.

After completion of two major engineering studies, finishing the 404 permit process, and finalizing procurement of the Owner's Representative and Design Engineer, the project budget has been revised from previous projections of \$380.0 million to \$420.0 million in 2017 dollars, and escalating to \$464.0 million in 2026 dollars.

The City of Arvada will participate in the project by paying a percentage of the total costs of the enlargement based on its portion of yield created by the expansion, and by paying a system development charge (SDC). Assuming the enlargement will produce a yield of 18,000 acre-feet of water and Arvada contracts for its maximum allowable amount of 3,000 acre-feet of the new supply, Arvada's share of the capital costs will be 16.67% and Arvada will pay an SDC of \$33.8 million.

(17) SUBSEQUENT EVENTS

Denver Water has evaluated subsequent events through April 23, 2019 which is the date the basic financial statements were available to be issued and no subsequent events were identified.

REQUIRED SUPPLEMENTARY INFORMATION

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
 REQUIRED SUPPLEMENTARY INFORMATION
Schedule of Changes in the Net Pension Liability and Related Ratios
 2009 - 2018
 (amounts expressed in thousands)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total pension liability										
Service cost	\$ 8,522	\$ 7,330	\$ 6,757	\$ 6,071	\$ 6,046	\$ -	\$ -	\$ -	\$ -	\$ -
Interest	27,728	26,237	25,820	25,044	24,051	-	-	-	-	-
Effect of plan changes	-	-	-	-	-	-	-	-	-	-
Effect of economic/demographic (gains) or losses	(2,255)	(3,348)	801	-	2,037	-	-	-	-	-
Effect of changes of assumptions	22,250	-	10,152	-	-	-	-	-	-	-
Benefit payments	(19,927)	(19,932)	(20,693)	(20,365)	(17,850)	-	-	-	-	-
Net change in pension liability	36,318	10,287	22,837	10,750	14,284	-	-	-	-	-
Total pension liability-beginning	381,718	371,431	348,594	337,844	323,560	-	-	-	-	-
Total pension liability-ending (a)	418,036	381,718	371,431	348,594	337,844	-	-	-	-	-
Plan fiduciary net position										
Employer contributions	18,000	14,500	14,500	14,500	15,000	-	-	-	-	-
Member contributions	-	-	-	-	-	-	-	-	-	-
Net investment income	48,273	21,326	2,473	18,523	39,023	-	-	-	-	-
Benefit payments	(19,927)	(19,932)	(20,693)	(20,365)	(17,850)	-	-	-	-	-
Administrative expense	(48)	(52)	(44)	(144)	(116)	-	-	-	-	-
Net change in plan fiduciary net position	46,298	15,842	(3,764)	12,514	36,057	-	-	-	-	-
Plan fiduciary net position-beginning	314,417	298,575	302,339	289,825	253,768	-	-	-	-	-
Plan fiduciary net position-ending (b)	360,715	314,417	298,575	302,339	289,825	-	-	-	-	-
Net pension liability-ending (a)-(b)	\$ 57,321	\$ 67,301	\$ 72,856	\$ 46,255	\$ 48,019	\$ -	\$ -	\$ -	\$ -	\$ -
Plan fiduciary net position as a percentage of the total pension liability	86.29%	82.37%	80.39%	86.73%	85.79%	-	-	-	-	-
Covered payroll	\$ 77,159	\$ 75,740	\$ 75,990	\$ 71,847	\$ 71,940	\$ -	\$ -	\$ -	\$ -	\$ -
Net position liability as a percentage of covered payroll	74.29%	88.86%	95.88%	64.38%	66.75%	-	-	-	-	-

Notes to schedule:

Information prior to 2014 was not available.

Because the measurement date is December 31 of the previous year, these amounts will differ by one fiscal year when comparing to information displayed on the *Schedule of Denver Water Pension Contributions*.

Changes in assumptions: Changes of assumptions and other inputs reflect the effects of changes in the discount rate each period. The following are the discounts used in each period:

2018	7.00%
2017	7.25%
2015	7.50%

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
 REQUIRED SUPPLEMENTARY INFORMATION
Schedule of Denver Water Pension Contributions
 2009 - 2018
 (amounts expressed in thousands)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	\$ 18,489	\$ 18,089	\$ 14,017	\$ 14,068	\$ 13,532	\$ 11,958	\$ 12,256	\$ 12,414	\$ 12,639	\$ 11,872
Contributions in relation to the actuarially determined contribution	18,000	18,000	14,500	14,500	14,500	15,000	14,300	15,400	12,639	14,500
Contribution deficiency (excess)	<u>\$ 489</u>	<u>\$ 89</u>	<u>\$ (483)</u>	<u>\$ (432)</u>	<u>\$ (968)</u>	<u>\$ (3,042)</u>	<u>\$ (2,044)</u>	<u>\$ (2,986)</u>	<u>\$ -</u>	<u>\$ (2,628)</u>
Covered payroll	\$ 82,151	\$ 77,159	\$ 75,740	\$ 75,990	\$ 71,847	\$ 71,940	\$ 71,172	\$ 69,927	\$ 70,372	\$ 65,721
Contributions as a percentage of covered payroll	21.91%	23.33%	19.14%	19.08%	20.18%	20.85%	20.09%	22.02%	17.96%	22.06%

Notes to schedule:

Valuation date:

Actuarially determined contribution rates are calculated as of January 1, the beginning of each fiscal year

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age normal
Amortization method	Level dollar amount, layered
Remaining amortization period	15 years
Asset valuation method	3-year smoothed market
Inflation	2.75%
Salary increases	Aged-based rates from 6.25% to 3.35%
Investment rate of return	7.00% investment rate of return (net of administrative expenses and including an inflation component of 2.75%)
Retirement age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	Mortality rates were based on the Combined RP-2014 Healthy Mortality Table projected with scale MP-2016
Cost-of-Living-Adjustment	2.75%

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
 REQUIRED SUPPLEMENTARY INFORMATION
Schedule of Changes in the Net Other Postemployment Benefits Liability and Related Ratios
 2009 - 2018
 (amounts expressed in thousands)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total OPEB liability										
Service cost	\$ 558	\$ 655	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest	700	736	-	-	-	-	-	-	-	-
Effect of plan changes	-	-	-	-	-	-	-	-	-	-
Effect of economic/demographic (gains) or losses	(1,813)	-	-	-	-	-	-	-	-	-
Effect of changes of assumptions	457	-	-	-	-	-	-	-	-	-
Benefit payments	(2,326)	(2,254)	-	-	-	-	-	-	-	-
Net change in total OPEB liability	(2,424)	(863)	-	-	-	-	-	-	-	-
Total pension liability-beginning	19,394	20,257	-	-	-	-	-	-	-	-
Total pension liability-ending (a)	\$ 16,970	\$ 19,394	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 78,369	\$ 78,510	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total OPEB liability as a percentage of covered payroll	21.65%	24.70%	-	-	-	-	-	-	-	-

Notes to schedule:

Information prior to 2017 was not available

There are no assets accumulated in trust for payment of benefits.

Changes in assumptions: Changes of assumptions and other inputs reflect the effects of changes in the discount rate each period. The following are the discounts used in each period:

2018 3.31%
 2017 3.78%

OTHER SUPPLEMENTAL INFORMATION

**DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO**

Revenue Water Improvement and Refunding Bonds Outstanding

December 31, 2018

(amounts expressed in thousands)

Date of Issue	Interest Rates on Bonds Outstanding as of December 31, 2018	Amount			Bonds Which Are Callable	
		Issued	Retired	Outstanding	Callable Amount	Initial Date Callable
Mar 22, 2007A	3.000%	\$ 100,000	\$ (79,890)	\$ 20,110	\$ 20,110	Dec 15, 2017
Jun 23, 2008A	0.750%	1,800	(1,320)	480	-	Not callable
June 2, 2009A	5.000-6.150%	44,000	(2,460)	41,540	40,255	Dec 15, 2019
Sep 28, 2010B	3.375-5.170%	90,000	(5,390)	84,610	78,990	Dec 15, 2020
May 22, 2012A	3.500-5.000%	36,555	(1,675)	34,880	32,040	Dec 15, 2021
Jun 26, 2012B	3.000-5.000%	108,545	(79,765)	28,780	16,315	Dec 15, 2021
Sep 16, 2014A	3.000-5.000%	48,670	(4,645)	44,025	43,730	Dec 15, 2023
May 24, 2016A	2.500-5.000%	94,755	(10,320)	84,435	59,530	Sep 15, 2026
May 24, 2016B	2.000-5.000%	63,470	(3,270)	60,200	33,455	Sep 15, 2026
May 24, 2017A	3.000-5.000%	142,665	-	142,665	121,010	Sep 15, 2027
May 24, 2017B	3.000-5.000%	41,765	-	41,765	41,765	Sep 15, 2027
		<u>\$ 772,225</u>	<u>\$ (188,735)</u>	583,490	<u>\$ 487,200</u>	
Plus premium				28,243		
Total Revenue Bonds				<u>\$ 611,733</u>		

See accompanying independent auditors' report.

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
Summary of Revenue Bond Debt Service Requirements Outstanding

December 31, 2018

Years 2019 to 2048, inclusive
(amounts expressed in thousands)

Year	Rev. Bond Retirements (Exhibit II-C)	Rev. Bond Interest ¹ (Exhibit II-D)	Total Debt Service	Build America Bonds Interest Subsidy ²
2019	\$ 19,390	\$ 24,852	\$ 44,242	\$ 2,116
2020	18,475	23,962	42,437	2,070
2021	19,305	23,085	42,390	2,019
2022	19,075	22,219	41,294	1,960
2023	19,900	21,384	41,284	1,897
2024	15,335	20,481	35,816	1,828
2025	15,715	19,809	35,524	1,781
2026	16,390	19,082	35,472	1,776
2027	17,095	18,324	35,419	1,690
2028	17,625	17,674	35,299	1,651
2029	17,365	17,018	34,383	1,503
2030	18,545	16,326	34,871	1,403
2031	19,355	15,554	34,909	1,298
2032	20,190	14,735	34,925	1,186
2033	20,995	13,957	34,952	1,069
2034	21,355	13,068	34,423	949
2035	22,215	12,154	34,369	822
2036	23,010	11,289	34,299	689
2037	23,880	10,360	34,240	550
2038	24,090	9,386	33,476	406
2039	23,895	8,368	32,263	254
2040	23,255	7,325	30,580	97
2041	23,710	6,372	30,082	-
2042	24,515	5,459	29,974	-
2043	25,350	4,516	29,866	-
2044	26,530	3,418	29,948	-
2045	17,645	2,265	19,910	-
2046	14,285	1,464	15,749	-
2047	15,000	750	15,750	-
2048	-	-	-	-
	<u>\$ 583,490</u>	<u>\$ 384,656</u>	<u>\$ 968,146</u>	<u>\$ 29,014</u>
Plus premium	<u>28,243</u>	<u>-</u>	<u>28,243</u>	<u>-</u>
	<u><u>\$ 611,733</u></u>	<u><u>\$ 384,656</u></u>	<u><u>\$ 996,389</u></u>	<u><u>\$ 29,014</u></u>

¹ Excludes Build America Bonds interest subsidy.

² Receipt of Build America Bonds interest subsidy is subject to appropriations by Congress.

See accompanying independent auditors' report.

DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO
Schedule of Bond Retirements for Revenue Bonds Outstanding

December 31, 2018
 Years 2019 to 2048, inclusive
 (amounts expressed in thousands)

Year	Series 2007A Improvement	Series 2008A Improvement	Series 2009A Improvement	Series 2010B Improvement	Series 2012A Improvement	Series 2012B Refunding	Series 2014A Improv/Ref	Series 2016A Improv/Ref	Series 2016B Refunding	Series 2017A Improvement	Series 2017B Improvement	Total
2019	\$ -	\$ 120	\$ 1,285	\$ 2,780	\$ 900	\$ 3,025	\$ -	\$ 7,845	\$ 3,435	\$ -	\$ -	\$ 19,390
2020	-	120	1,325	2,840	945	3,635	-	3,735	3,590	2,285	-	18,475
2021	-	120	1,370	2,910	995	5,805	-	2,770	2,940	2,395	-	19,305
2022	-	120	1,420	2,980	1,045	5,950	-	1,975	3,070	2,515	-	19,075
2023	-	-	1,475	3,055	1,095	6,200	295	1,965	3,200	2,615	-	19,900
2024	-	-	1,530	3,140	1,140	995	330	2,105	3,345	2,750	-	15,335
2025	-	-	1,595	3,230	1,185	755	360	2,210	3,495	2,885	-	15,715
2026	-	-	1,660	3,330	1,230	780	390	2,300	3,670	3,030	-	16,390
2027	-	-	1,730	3,430	1,280	805	420	2,395	3,855	3,180	-	17,095
2028	-	-	1,805	3,540	1,340	830	450	2,455	3,930	3,275	-	17,625
2029	-	-	1,885	3,660	1,400	-	475	2,515	4,020	970	2,440	17,365
2030	4,665	-	1,970	3,780	1,460	-	505	2,585	-	-	3,580	18,545
2031	4,900	-	2,065	3,910	1,530	-	530	2,660	-	-	3,760	19,355
2032	5,145	-	2,160	4,050	1,595	-	560	2,735	-	-	3,945	20,190
2033	5,400	-	2,265	4,190	1,670	-	585	2,820	-	-	4,065	20,995
2034	-	-	2,370	4,340	1,745	-	610	2,905	5,120	-	4,265	21,355
2035	-	-	2,480	4,495	1,820	-	640	2,990	5,310	-	4,480	22,215
2036	-	-	2,600	4,650	1,885	-	665	3,080	5,500	-	4,630	23,010
2037	-	-	2,720	4,815	1,960	-	695	3,180	5,720	-	4,790	23,880
2038	-	-	2,850	4,985	2,040	-	720	3,285	-	4,400	5,810	24,090
2039	-	-	2,980	5,160	2,120	-	750	3,385	-	9,500	-	23,895
2040	-	-	-	5,340	2,205	-	960	3,485	-	11,265	-	23,255
2041	-	-	-	-	2,295	-	6,350	3,590	-	11,475	-	23,710
2042	-	-	-	-	-	-	8,885	3,695	-	11,935	-	24,515
2043	-	-	-	-	-	-	9,240	3,810	-	12,300	-	25,350
2044	-	-	-	-	-	-	9,610	3,920	-	13,000	-	26,530
2045	-	-	-	-	-	-	-	4,040	-	13,605	-	17,645
2046	-	-	-	-	-	-	-	-	-	14,285	-	14,285
2047	-	-	-	-	-	-	-	-	-	15,000	-	15,000
2048	-	-	-	-	-	-	-	-	-	-	-	-
	<u>\$ 20,110</u>	<u>\$ 480</u>	<u>\$ 41,540</u>	<u>\$ 84,610</u>	<u>\$ 34,880</u>	<u>\$ 28,780</u>	<u>\$ 44,025</u>	<u>\$ 84,435</u>	<u>\$ 60,200</u>	<u>\$ 142,665</u>	<u>\$ 41,765</u>	583,490
Plus premium												28,243
												<u>\$ 611,733</u>

See accompanying independent auditors' report.

**DENVER WATER
CITY AND COUNTY OF DENVER, COLORADO**

Schedule of Bond Interest for Revenue Bonds Outstanding¹

December 31, 2018
Years 2019 to 2048, inclusive
(amounts expressed in thousands)

Year	Series 2007A Improvement	Series 2008A Improvement	Series 2009A Improvement	Series 2010B Improvement	Series 2012A Improvement	Series 2012B Refunding	Series 2014A Improv/Ref	Series 2016A Improv/Ref	Series 2016B Refunding	Series 2017A Improvement	Series 2017B Improvement	Total
2019	\$ 604	\$ 4	\$ 2,471	\$ 3,961	\$ 1,485	\$ 1,151	\$ 1,700	\$ 2,968	\$ 2,271	\$ 6,535	\$ 1,702	\$ 24,852
2020	604	3	2,407	3,867	1,440	1,030	1,699	2,576	2,099	6,535	1,702	23,962
2021	604	2	2,337	3,768	1,393	853	1,699	2,388	1,919	6,420	1,702	23,085
2022	604	1	2,262	3,664	1,343	621	1,699	2,250	1,772	6,301	1,702	22,219
2023	603	-	2,182	3,553	1,291	383	1,699	2,152	1,619	6,200	1,702	21,384
2024	603	-	2,097	3,431	1,247	135	1,685	2,053	1,459	6,069	1,702	20,481
2025	603	-	2,009	3,300	1,201	95	1,671	1,948	1,292	5,987	1,703	19,809
2026	603	-	1,913	3,161	1,154	73	1,657	1,860	1,117	5,842	1,702	19,082
2027	603	-	1,813	3,015	1,105	49	1,645	1,768	933	5,691	1,702	18,324
2028	603	-	1,709	2,859	1,047	25	1,633	1,708	856	5,532	1,702	17,674
2029	603	-	1,601	2,694	987	-	1,619	1,643	768	5,401	1,702	17,018
2030	603	-	1,488	2,520	924	-	1,605	1,574	678	5,353	1,581	16,326
2031	463	-	1,370	2,337	858	-	1,590	1,503	678	5,353	1,402	15,554
2032	317	-	1,246	2,141	789	-	1,574	1,423	678	5,353	1,214	14,735
2033	161	-	1,116	1,939	718	-	1,556	1,341	678	5,353	1,095	13,957
2034	-	-	980	1,730	642	-	1,537	1,257	677	5,353	892	13,068
2035	-	-	838	1,510	564	-	1,517	1,169	524	5,353	679	12,154
2036	-	-	686	1,283	500	-	1,495	1,080	365	5,353	527	11,289
2037	-	-	526	1,047	425	-	1,473	979	186	5,353	371	10,360
2038	-	-	360	800	346	-	1,448	876	-	5,353	203	9,386
2039	-	-	183	543	265	-	1,423	778	-	5,176	-	8,368
2040	-	-	-	276	180	-	1,397	676	-	4,796	-	7,325
2041	-	-	-	-	92	-	1,363	572	-	4,345	-	6,372
2042	-	-	-	-	-	-	1,109	464	-	3,886	-	5,459
2043	-	-	-	-	-	-	754	353	-	3,409	-	4,516
2044	-	-	-	-	-	-	385	239	-	2,794	-	3,418
2045	-	-	-	-	-	-	-	121	-	2,144	-	2,265
2046	-	-	-	-	-	-	-	-	-	1,464	-	1,464
2047	-	-	-	-	-	-	-	-	-	750	-	750
2048	-	-	-	-	-	-	-	-	-	-	-	-
	<u>\$ 8,181</u>	<u>\$ 10</u>	<u>\$ 31,594</u>	<u>\$ 53,399</u>	<u>\$ 19,996</u>	<u>\$ 4,415</u>	<u>\$ 38,632</u>	<u>\$ 37,719</u>	<u>\$ 20,569</u>	<u>\$ 143,454</u>	<u>\$ 26,687</u>	<u>\$ 384,656</u>

¹ Excludes Build America Bonds interest subsidy. See Exhibit II-B.
See accompanying independent auditors' report.

III - STATISTICAL SECTION - CONTENTS AND EXPLANATIONS

This part of Denver Water's comprehensive annual financial report presents detailed information as a contest for understanding what the information in the financial statements, not disclosures, and required supplementary information says about Denver Water's overall financial health.

Contents and Explanations	III - 1
Statistical Summary, Last 10 Years	III - 3

A - Financial Trends Information **III - 5**

These schedules contain trend information to help the reader understand how Denver Water's financial performance and well-being have changed over time.

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B- Revenue Capacity Information **III - 11**

These schedules contain trend information to help the reader access Denver Water's primary revenue sources.

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C- Debt Capacity Information **III - 39**

These schedules present information to help the reader assess the affordability of Denver Water's current levels of outstanding debt and its ability to issue additional debt in the future.

Ratios of Total Outstanding Debt by Type, Last 10 Years	III - 41
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D- Demographic and Economic Information **III - 45**

These schedules offer demographic and economic indicators to help the reader understand the environment within which Denver Water's financial activities take place.

Demographic and Economic Overview of the Denver Metropolitan Area	III - 47
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(continued)

III- STATISTICAL SECTION - CONTENTS AND EXPLANATIONS (continued)

E - Operating Information **III - 55**

These schedules present information about Denver Water's operations and resources to help the reader understand how Denver water's financial information relates to the services Denver Water provides and the activities it performs.

Employees by Division, Last 10 Years	III - 57
Capital Assets by Function, Last 10 Years	III - 60
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Sources: *Unless otherwise noted, the information in these schedules is derived from the financial statements for the relevant year or internal Denver Water operating groups.*

Rounding: *Some columns in the statistical section are totaled according to the precision of the numbers entered rather than as displayed, and may not appear to total correctly.*

STATISTICAL SUMMARY: 2009 - 2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Population served ¹	1,306,000	1,275,000	1,249,000	1,210,000	1,172,000	1,161,000	1,147,000	1,135,000	1,125,000	1,111,000
Total treated water consumption (million gallons) ²	67,149.48	63,808.64	65,003.83	60,115.97	61,185.27	60,212.44	71,968.70	68,260.80	69,695.40	62,106.90
Average daily consumption (million gallons)	183.97	174.82	178.09	164.70	167.63	165.00	196.64	187.02	190.95	170.16
Average daily consumption per capita (gallons) ¹	141	137	142	136	143	142	171	165	170	153
Maximum daily consumption (million gallons)	396.40	364.92	355.88	344.26	335.20	355.00	398.20	366.40	365.81	341.80
Maximum hour treated water use rate (million gallons per day)	637.00	628.50	592.00	499.30	603.60	591.00	628.00	546.80	577.75	516.90
Treated water pumped (million gallons)	33,906.51	29,446.76	26,767.23	27,677.64	36,088.94	34,895.00	39,484.10	36,443.50	41,611.30	38,198.90
Raw water storage capacity (acre-feet) ³	569,648	569,648	568,642	569,534	569,534	569,534	569,534	569,534	561,883	561,883
Replacement reservoir storage capacity (acre-feet)	131,996	125,993	122,432	122,432	122,432	122,432	122,432	122,432	122,432	122,432
Supply from South Platte River (acre-feet) ⁴	78,967	132,115	158,324	166,561	148,680	142,915	85,765	117,559	151,891	138,791
Supply from Blue River/Roberts Tunnel system (acre-feet)	56,101	86,124	40,795	39,801	77,765	111,564	54,394	148,643	74,674	58,468
Supply from Moffat system (acre-feet)	86,144	79,639	75,551	73,016	73,585	141,159	54,523	93,763	76,318	79,636
Treated water pumping capacity (mgd)	1,048.4	1,048.4	1,048.4	1,048.4	1,007.9	1,007.9	1,003.3	1,003.3	1,095.9	1,095.9
Raw water pumping capacity (mgd)	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2
Treatment plant capacity (mgd)	715.0	715.0	715.0	715.0	715.0	715.0	715.0	715.0	715.0	715.0
Treated water reservoir capacity (million gallons)	351.8	351.4	351.4	351.4	353.3	353.3	381.7	371.7	371.7	371.7
Raw water supply mains in miles (mountain collection system)	74.7	74.7	77.3	77.4	77.4	77.4	77.5	77.5	76.9	77.5
Raw water supply mains in miles (metropolitan Denver area)	57.0	57.1	54.3	54.2	54.0	52.3	47.7	47.7	47.1	46.0
Transmission & distribution mains (miles) - Inside City and Outside City Total Service Contract distributors	3,158.5	3,142.6	3,109.3	3,091.7	3,074.2	3,058.2	3,050.1	3,041.0	3,037.0	2,954.0
Recycled water transmission & distribution mains (miles)	71.7	70.4	73.5	67.2	67.0	63.1	49.0	45.0	44.2	35.3
Total active taps - end of year	312,675	312,746	312,876	312,653	312,908	312,228	310,463	309,269	309,562	310,068
Fire hydrants operated & maintained	21,195	20,967	20,556	20,269	20,030	19,818	19,670	19,553	19,439	19,159
Fire hydrants tested and repaired	24,922	25,990	23,909	18,093	29,506	25,177	25,112	26,760	21,103	18,472
Breaks in mains - Denver	275	275	225	262	191	222	232	313	261	220
Service leaks	538	508	503	542	337	719	402	385	287	329
Total employees (actual)	1,000.7	1,033.3	1,058.0	1,057.3	1,064.6	1,064.9	1,082.5	1,069.8	1,089.1	1,095.1
Additions to capital assets (thousands)	\$ 228,169	\$ 182,880	\$ 152,528	\$ 131,054	\$ 125,374	\$ 93,421	\$ 128,277	\$ 113,071	\$ 125,816	\$ 103,146
Total long-term debt ⁵ (thousands)	\$ 615,945	\$ 642,877	\$ 463,553	\$ 416,196	\$ 418,200	\$ 414,013	\$ 434,945	\$ 415,644	\$ 449,828	\$ 392,659

¹ Population estimated based on treated water customers only. Revised population from 2009 and 2010 is based on 2010 Census information.

² Denver Water has three water treatment facilities.

³ Denver Water has 13 raw water reservoirs.

⁴ Supply includes effluent exchanges.

⁵ Long-term debt consists of current and long-term portions of bonds payable and obligations under capital lease, net of discounts and premiums, plus notes payable. Effective in 2012, deferred amounts on refunding are no longer included.

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A - FINANCIAL TRENDS INFORMATION

These schedules contain trend information to help the reader understand how Denver Water's financial performance and well-being have changed over time.

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NET POSITION BY COMPONENT^{1,2}: 2009 - 2018

	(amounts expressed in thousands)									
	2018	Restated 2017 ⁴	2016	2015	Restated 2014 ³	2013	2012	2011	2010	2009
NET POSITION:										
Net investment in capital assets	\$ 1,946,849	\$ 1,803,684	\$ 1,788,250	\$ 1,735,020	\$ 1,641,601	\$ 1,579,642	\$ 1,513,582	\$ 1,454,710	\$ 1,401,820	\$ 1,363,848
Restricted for debt service reserve funds	14,038	12,743	14,005	12,047	12,375	12,327	12,274	13,746	18,912	13,233
Other restricted	56	400	500	-	-	-	-	-	-	-
Unrestricted	233,678	263,856	202,692	170,963	171,648	230,159	217,297	169,602	162,077	174,279
Total net position	\$ 2,194,621	\$ 2,080,683	\$ 2,005,447	\$ 1,918,030	\$ 1,825,624	\$ 1,822,128	\$ 1,743,153	\$ 1,638,058	\$ 1,582,809	\$ 1,551,360

¹ Accounting standards require that net position be reported in three components in the financial statements: net investment in capital assets, restricted, and unrestricted. Net position is considered restricted when constraints placed on net position use are either: (a) externally imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments, or (b) imposed by law through constitutional provisions or enabling legislation.

² The above data was extracted from the audited financial statements of Denver Water.

³ The 2014 financial statements were restated as part of the implementation of GASB Statement No. 68 *Accounting and Financial Reporting for Pensions*.

⁴ The 2017 financial statements were restated as part of the implementation of GASB Statement No. 74 *Financial Reporting for Postemployment Benefit Plans other than Pension Plans*.

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION^{1,2}: 2009 - 2018

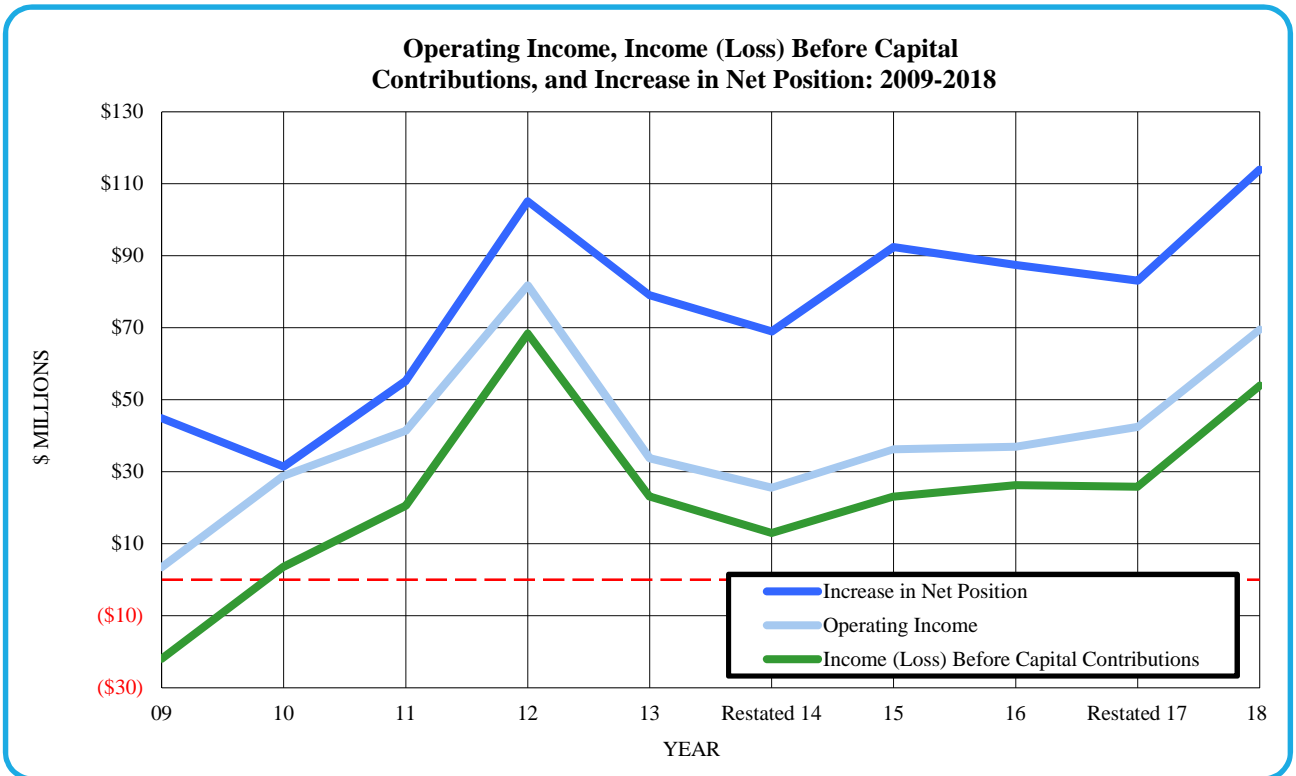
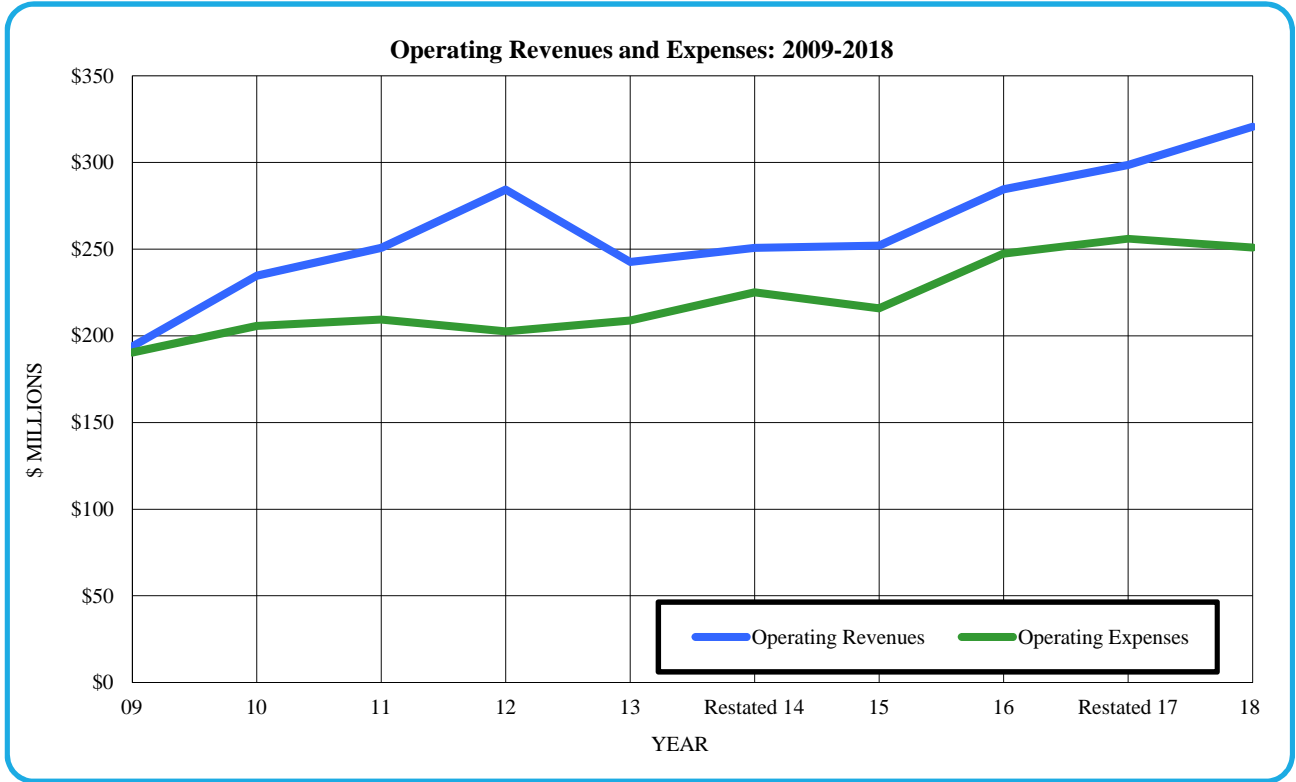
	(amounts expressed in thousands)									
	2018	Restated 2017 ⁴	2016	2015	Restated 2014 ³	2013	2012	2011	2010	2009
OPERATING REVENUES:										
Water	\$ 307,743	\$ 286,139	\$ 273,238	\$ 241,836	\$ 239,288	\$ 230,482	\$ 271,575	\$ 239,186	\$ 224,489	\$ 184,396
Power generation and other	12,813	12,366	11,216	10,224	11,380	12,141	12,764	11,481	10,187	9,432
Total operating revenues	320,556	298,505	284,454	252,060	250,668	242,623	284,339	250,667	234,676	193,828
OPERATING EXPENSES:										
Source of supply, pumping, treatment and distribution	88,231	84,733	82,418	75,972	83,091	68,722	75,846	79,881	79,400	68,275
General and administrative	99,469	97,926	103,380	81,994	85,347	81,494	66,433	66,077	73,926	72,487
Customer service	11,660	11,001	11,370	9,962	10,851	12,894	13,929	14,394	14,150	13,022
Depreciation and amortization	51,667	62,348	50,352	47,897	45,772	45,805	46,363	48,961	38,322	36,582
Total operating expenses	251,027	256,008	247,520	215,825	225,061	208,915	202,571	209,313	205,798	190,366
OPERATING INCOME	69,529	42,497	36,934	36,235	25,607	33,708	81,768	41,354	28,878	3,462
NONOPERATING REVENUES (EXPENSES):										
Investment income	6,219	2,140	1,603	1,479	1,552	1,488	1,451	1,201	1,336	948
Interest expense, less capitalized interest	(22,093)	(12,711)	(11,446)	(13,049)	(12,664)	(13,602)	(14,217)	(17,719)	(16,630)	(17,547)
Gain (loss) on disposition of capital assets	(2,823)	(11,443)	(6,348)	(4,720)	(5,394)	(2,171)	(4,331)	(6,011)	(15,533)	(8,168)
Other income	6,982	7,996	7,426	5,595	6,143	6,606	5,882	6,147	7,931	1,881
Other expense	(3,869)	(2,657)	(1,861)	(2,499)	(2,252)	(2,939)	(2,164)	(4,408)	(2,336)	(2,483)
Total nonoperating expenses, net	(15,584)	(16,675)	(10,626)	(13,194)	(12,615)	(10,618)	(13,379)	(20,790)	(25,232)	(25,369)
INCOME (LOSS) BEFORE CAPITAL CONTRIBUTIONS	53,945	25,822	26,308	23,041	12,992	23,090	68,389	20,564	3,646	(21,907)
CAPITAL CONTRIBUTIONS:										
Contributions in aid of construction	19,113	14,781	22,147	33,256	23,190	21,424	17,163	17,239	10,861	41,443
System development charges	40,880	42,486	38,962	36,109	32,736	34,461	19,543	17,446	16,942	25,308
Total capital contributions	59,993	57,267	61,109	69,365	55,926	55,885	36,706	34,685	27,803	66,751
INCREASE IN NET POSITION	113,938	83,089	87,417	92,406	68,918	78,975	105,095	55,249	31,449	44,844
NET POSITION:										
Beginning of year	2,080,683	2,005,447	1,918,030	1,825,624	1,822,128	1,743,153	1,638,058	1,582,809	1,551,360	1,506,516
Cumulative effect of new GASB implementations		(7,853)			(65,422)					
Restated beginning net position		1,997,594			1,756,706					
End of year	\$ 2,194,621	\$ 2,080,683	\$ 2,005,447	\$ 1,918,030	\$ 1,825,624	\$ 1,822,128	\$ 1,743,153	\$ 1,638,058	\$ 1,582,809	\$ 1,551,360

¹ The above data was extracted from the audited financial statements of Denver Water.

² Certain reclassifications have been made to prior years' information to conform to the current year presentation.

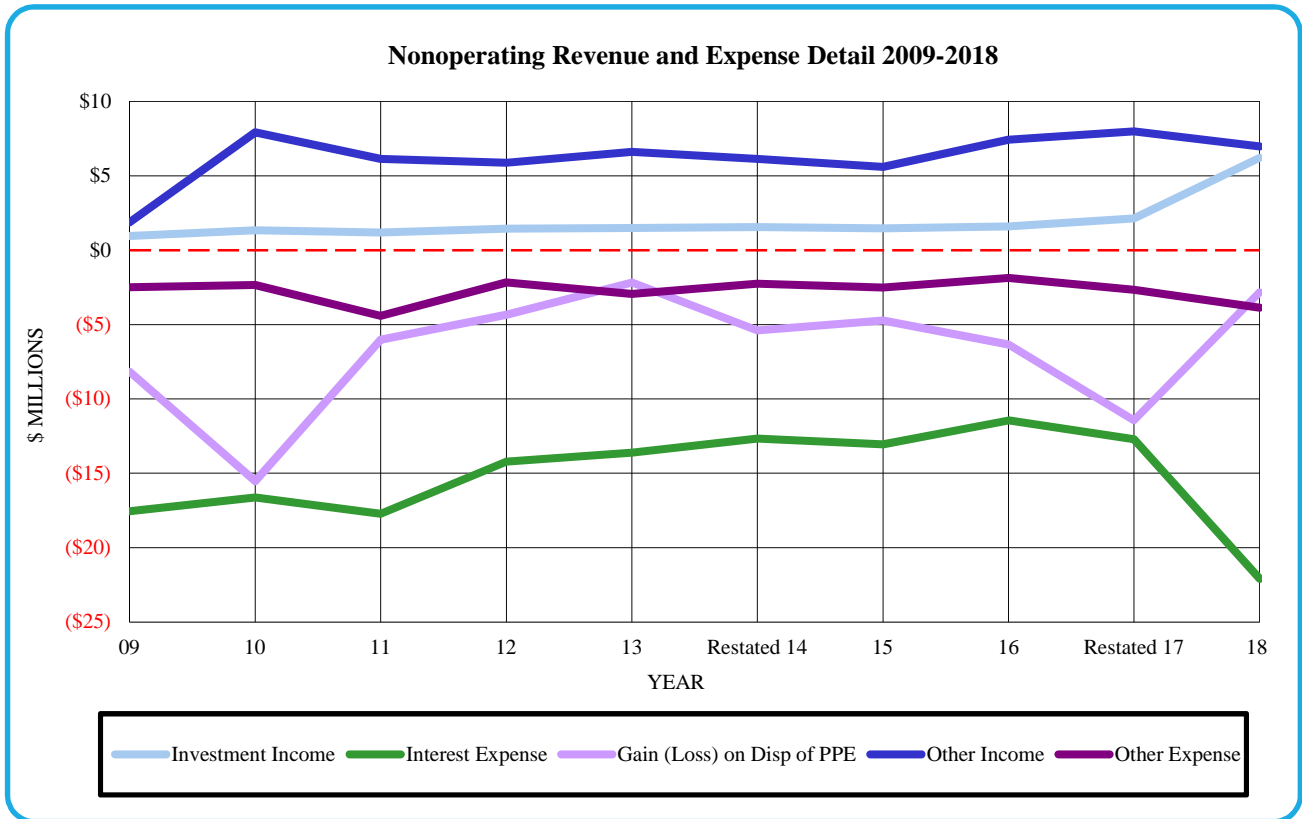
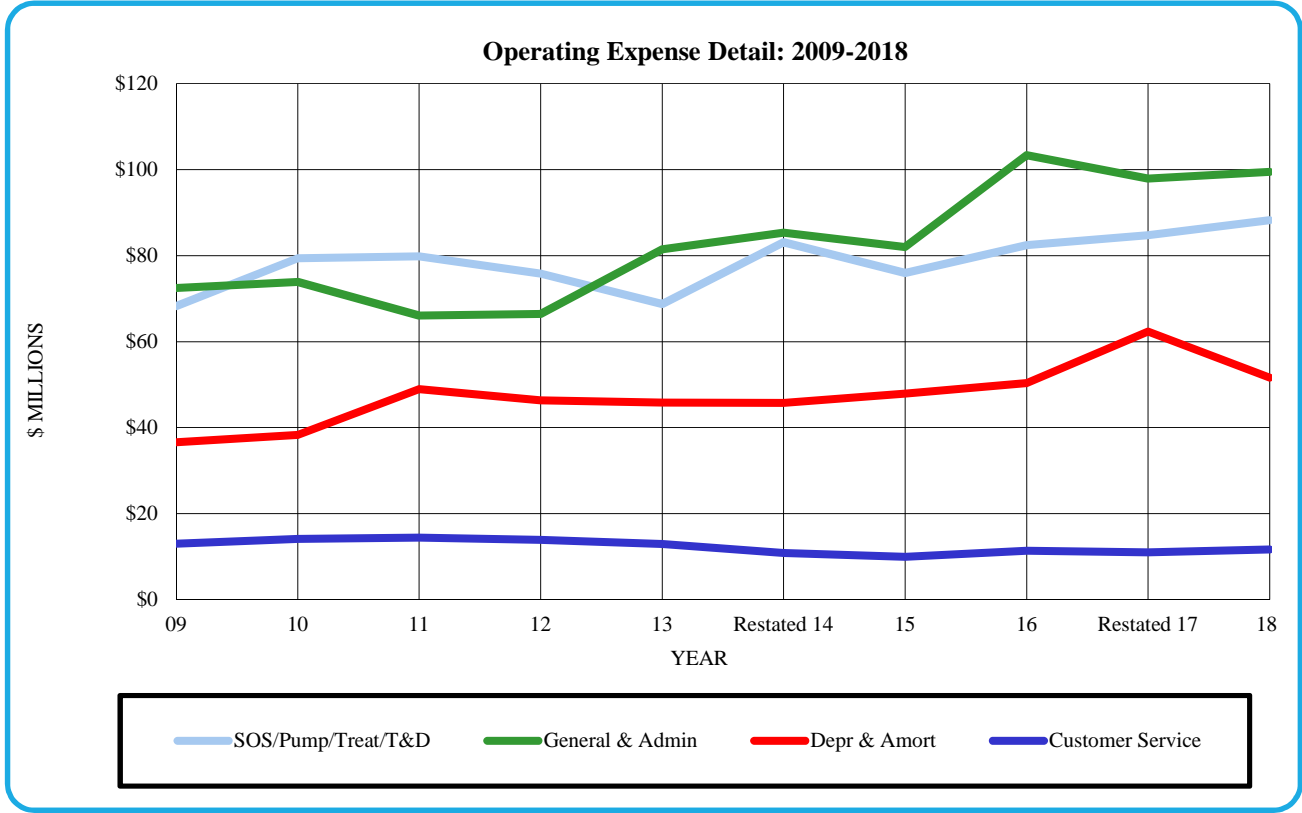
³ The 2014 financial statements were restated as part of the implementation of GASB Statement No. 68 *Accounting and Financial Reporting for Pensions*.

⁴ The 2017 financial statements were restated as part of the implementation of GASB Statement No. 74 *Financial Reporting for Postemployment Benefit Plans other than Pension Plans*.



¹ Operating expenses, operating income, income before contributions and net position were restated for 2014 and 2017 as part of the implementation of new GASB Statements.

(continued)



¹ Operating expenses, operating income, income before contributions and net position were restated for 2014 and 2017 as part of the implementation of new GASB Statements.

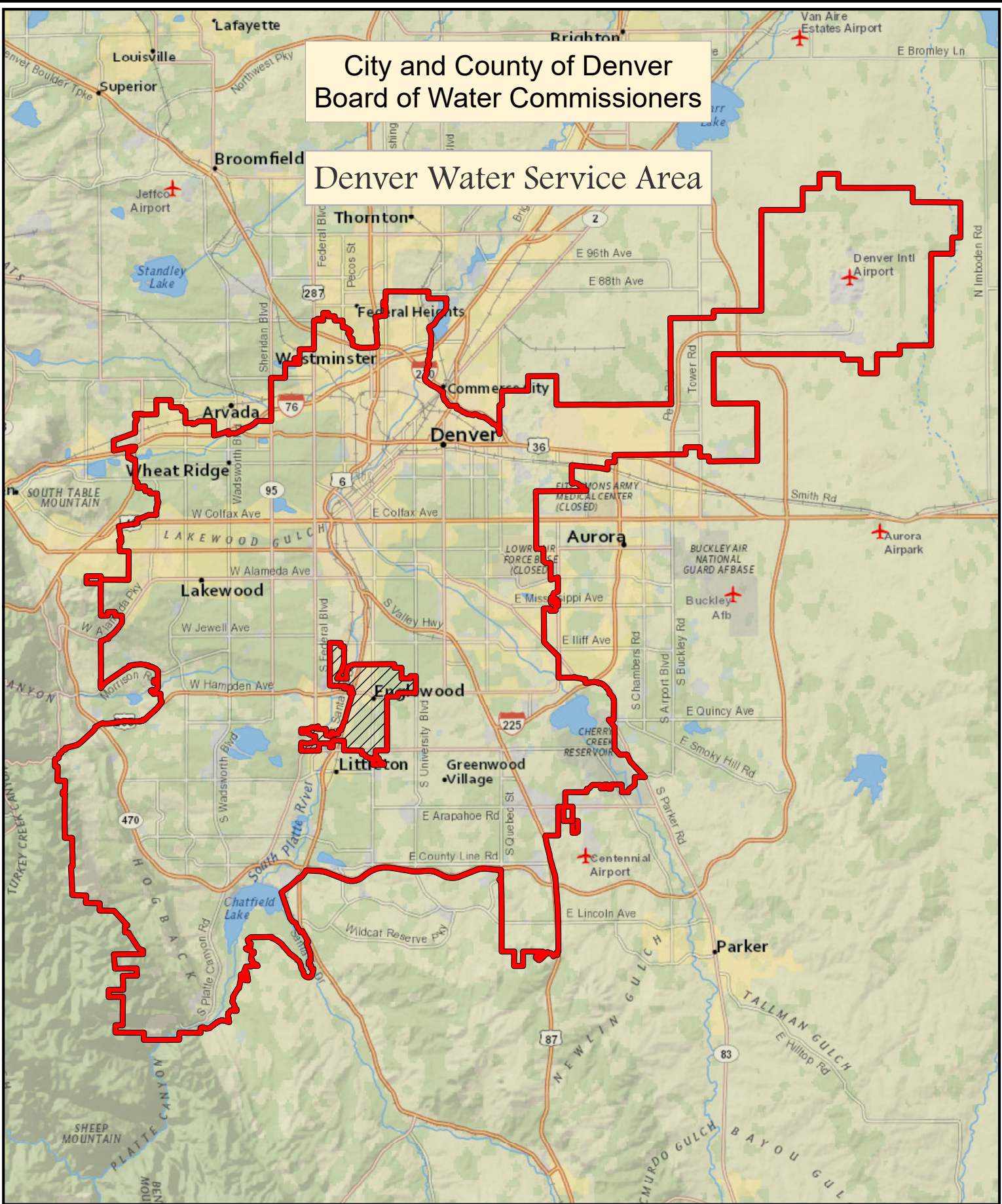
B - REVENUE CAPACITY INFORMATION

*These schedules contain information to help the reader assess
Denver Water's primary revenue sources.*

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City and County of Denver
Board of Water Commissioners

Denver Water Service Area



Legend

-  Denver Water Service Area
-  Not served by Denver Water



Map Date: 4/3/2018
Author: ARG-MLF
Source(s):

This Geographic Information Systems (GIS) map and information shown is provided "AS IS" with no claim by the Denver Water Board as to the completeness, usefulness or accuracy of its contents. Any sale, reproduction, or distribution of this information, or products derived therefrom, in any format is expressly prohibited. © 2014 Denver Water.

CUSTOMER SERVICE DATA: 2009 - 2018

	2018	2017	2016	2015	2014	2013	2012	2011 ⁵	2010	2009 ⁶
Active Taps:¹										
Beginning of Year	312,746	312,876	312,653	312,908	312,228	310,463	309,272	309,562	310,068	309,373
Activated During Year	887	992	1,139	1,105	1,250	2,377	1,539	23	886	979
Discontinued During Year	(942)	(1,122)	(916)	(1,360)	(570)	(612)	(348)	(313)	(1,392)	(284)
Net Increase During Year	(55)	(130)	223	(255)	680	1,765	1,191	(290)	(506)	695
Total Active Taps - End of Year	312,691	312,746	312,876	312,653	312,908	312,228	310,463	309,272	309,562	310,068
Active Taps:¹										
Inside City	161,670	161,746	161,816	161,611	161,997	161,668	160,205	159,302	159,592	161,611
City and County	1,201	1,215	1,225	1,229	1,236	1,334	1,218	1,204	1,277	1,272
Outside City - Read and Bill	37,048	37,050	37,051	37,020	36,911	36,795	36,637	36,542	36,477	35,760
Outside City - Total Service	36,504	36,466	36,462	36,452	36,408	36,473	36,318	36,270	36,376	36,140
Outside City - Master Meter	76,268	76,269	76,322	76,341	76,356	75,958	76,085	75,954	75,840	75,285
Total Active Taps - End of Year	312,691	312,746	312,876	312,653	312,908	312,228	310,463	309,272	309,562	310,068
Stub-Ins on System ²	1,807	2,203	1,179	766	1,146	811	514	651	367	275
Fire Hydrant Use Permits	741	708	730	673	631	550	518	527	439	485
AMR (Automatic Meter Reading) Installations ³	-	-	-	-	-	-	-	895	886	742
Turn-Offs Due to Delinquent Accounts	8,169	7,287	6,275	4,996	5,630	4,746	5,463	6,125	6,687	8,913
In-Home Water Audits ⁸	119	1,170	1,172	1,005	1,162	976	609	480	409	349
Call Center Calls ⁴	215,766	218,411	230,002	231,620	214,867	227,736	231,533	221,291	213,065	229,979
Water Quality Calls:										
Taste and Odor	226	176	214	213	180	219	212	169	221	194
Dirty Water	382	359	296	335	300	326	289	333	309	356
Illness Concerns	49	57	49	56	47	50	48	46	51	56
Other ⁷	2,650	1,279	654	94	89	192	99	89	128	63
New Taps Made	2,242	2,806	2,710	2,165	2,289	1,941	950	906	583	679

¹ An active tap is defined as a metered connection to the distribution main that has had all fees paid, and is either currently using water, or has used water at any time during the last five consecutive years.

Does not include taps sold to raw water customers.

² A stub-in is a connection made solely to extend the service line from the main to the valve at the property line prior to the paving of the street and is not considered a tap.

³ AMR represents large capital investments to replace old batteries in the AMRs, not day to day replacements of meters.

⁴ Call Center Calls include calls offered, plus calls handled through the Interactive Voice Response (IVR).

⁵ In 2011, there were 895 taps activated during the year. 875 change over taps were double counted in prior years which were corrected in 2011.

⁶ In 2009, a new customer information system was implemented and data produced from that system may not be strictly comparable to prior years.

⁷ Starting in 2016, customers were given the opportunity to request lead test kits to test lead levels in the water in their homes. These calls are tracked in the "other" category.

⁸ Water audits decreased significantly due to conservation program changes where the focus has shifted to efficiency and using benchmarks for water use. Going forward, water audits will occur for customers who meet efficiency improvement guidelines.

WATER SOLD IN DOLLARS BY TYPE OF CUSTOMER: 2009 - 2018

		(non-accrual basis) ¹ (amounts expressed in thousands)									
		2018	2017	2016 ²	2015	2014	2013	2012	2011	2010	2009
SALES OF TREATED WATER											
A. METERED GENERAL CUSTOMERS 2016 - 2018											
Residential -	Inside City	\$ 66,793	\$ 61,877	\$ 58,477	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Outside City-Read and Bill	22,205	20,948	21,461	-	-	-	-	-	-	-
	Outside City-Total Service	32,219	27,509	27,095	-	-	-	-	-	-	-
Irrigation -	Inside City	5,746	4,681	4,430	-	-	-	-	-	-	-
	Outside City-Read and Bill	3,327	2,830	3,056	-	-	-	-	-	-	-
	Outside City-Total Service	5,062	3,873	4,129	-	-	-	-	-	-	-
Non-Residential -	Inside City	56,978	53,396	47,711	-	-	-	-	-	-	-
	Outside City-Read and Bill	12,409	12,583	12,214	-	-	-	-	-	-	-
	Outside City-Total Service	14,383	12,595	11,750	-	-	-	-	-	-	-
		219,122	200,292	190,323	-	-	-	-	-	-	-
A. METERED GENERAL CUSTOMERS 2009-2015											
Residential -	Inside City	-	-	-	49,842	49,114	48,057	57,504	49,853	46,658	34,776
	Outside City-Read and Bill	-	-	-	17,623	16,938	16,893	20,726	17,739	17,547	13,016
	Outside City-Total Service	-	-	-	21,943	22,113	22,168	28,464	23,923	24,172	17,921
Residential Irrigation -	Inside City	-	-	-	1,044	1,028	995	1,363	1,128	1,044	707
	Outside City-Read and Bill	-	-	-	770	753	725	1,002	819	798	609
	Outside City-Total Service	-	-	-	682	661	602	766	632	617	468
Small multi-family -	Inside City	-	-	-	4,974	4,932	4,780	5,281	4,735	4,285	3,657
	Outside City-Read and Bill	-	-	-	477	484	476	505	437	370	331
	Outside City-Total Service	-	-	-	785	781	748	813	714	606	552
Commercial -	Inside City	-	-	-	36,651	35,883	33,834	37,074	33,705	31,454	29,121
	Outside City-Read and Bill	-	-	-	8,940	9,010	8,501	9,585	8,557	8,069	8,163
	Outside City-Total Service	-	-	-	9,284	9,434	8,744	9,691	8,821	8,285	8,040
Industrial -	Inside City	-	-	-	3,033	3,090	3,139	3,212	2,995	2,820	2,896
	Outside City-Read and Bill	-	-	-	1,102	1,121	1,028	1,624	2,239	2,101	2,016
	Read and Bill Winter/Summer Adj	-	-	-	-	-	-	(1,644)	-	-	-
Other Irrigation -	Outside City-Total Service	-	-	-	154	143	148	164	167	184	120
	Inside City	-	-	-	2,567	2,629	2,494	3,709	3,190	2,889	1,815
	Outside City-Read and Bill	-	-	-	1,674	1,584	1,535	2,095	1,736	1,757	1,182
	Outside City-Total Service	-	-	-	2,510	2,426	2,300	3,077	2,688	2,567	1,697
		-	-	-	164,055	162,124	157,167	185,011	164,078	156,223	127,087

See accompanying footnotes on final page of report.

(continued)

WATER SOLD IN DOLLARS BY TYPE OF CUSTOMER: 2009 - 2018 (continued)

		(non-accrual basis) ¹ (amounts expressed in thousands)									
		2018	2017	2016 ²	2015	2014	2013	2012	2011	2010	2009
B.	PRIVATE FIRE PROTECTION SERVICE 2016-2018										
	Sprinklers - Inside City	\$ 955	\$ 928	\$ 895	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Outside City-Read and Bill	92	93	88	-	-	-	-	-	-	-
	Outside City-Total Service	163	153	146	-	-	-	-	-	-	-
		1,210	1,174	1,129	-	-	-	-	-	-	-
B.	PRIVATE FIRE PROTECTION SERVICE 2009-2015										
	Sprinklers - Inside City	-	-	-	868	840	827	1,015	985	928	925
	Outside City-Read and Bill	-	-	-	86	84	71	65	51	49	52
	Outside City-Total Service	-	-	-	142	139	133	122	73	70	71
		-	-	-	1,096	1,063	1,031	1,202	1,109	1,047	1,048
C.	OTHER SALES TO PUBLIC AUTHORITIES 2016-2018										
	City & County of Denver - Irrigation	3,946	3,336	3,452	-	-	-	-	-	-	-
	Non-Irrigation	2,402	2,349	2,298	-	-	-	-	-	-	-
		6,348	5,685	5,750	-	-	-	-	-	-	-
C.	OTHER SALES TO PUBLIC AUTHORITIES 2009-2015										
	City & County of Denver - Irrigation	-	-	-	2,626	2,707	2,686	4,087	3,148	3,616	2,441
	Non-Irrigation	-	-	-	2,078	1,927	1,717	1,880	1,583	1,584	1,772
	Other County Agencies - Inside City	-	-	-	1,016	971	1,003	1,476	1,136	1,040	950
	Outside City-Read and Bill	-	-	-	608	768	625	743	757	891	458
	Outside City-Total Service	-	-	-	750	736	708	964	852	839	674
	State Agencies - Inside City	-	-	-	361	361	354	393	375	362	352
	Outside City-Read and Bill	-	-	-	51	46	38	42	39	37	35
	Outside City-Total Service	-	-	-	5	6	7	6	4	5	4
	Federal Agencies - Inside City	-	-	-	54	127	133	168	198	92	357
	Outside City-R&B at Denver Rates	-	-	-	31	9	26	26	67	31	35
	Outside City-Read and Bill	-	-	-	44	49	37	48	62	530	118
	Total Service	-	-	-	1	2	2	2	2	1	2
		-	-	-	7,625	7,709	7,336	9,835	8,223	9,028	7,198

See accompanying footnotes on final page of report.

(continued)

WATER SOLD IN DOLLARS BY TYPE OF CUSTOMER: 2009 - 2018 (continued)

	(non-accrual basis) ¹ (amounts expressed in thousands)									
	2018	2017	2016 ²	2015	2014	2013	2012	2011	2010	2009
D. SALES OF TREATED WATER FOR RESALE 2016-2018										
Outside City - Master Meter	\$ 66,910	\$ 64,604	\$ 65,479	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Outside the Combined Service Area	4,283	4,545	3,704	-	-	-	-	-	-	-
	71,193	69,149	69,183	-	-	-	-	-	-	-
D. SALES OF TREATED WATER FOR RESALE 2009-2015										
Outside City - Master Meter	-	-	-	48,906	48,371	47,550	62,968	47,483	43,196	38,192
Outside the Combined Service Area	-	-	-	13,034	13,598	10,729	4,064	9,886	9,552	8,954
	-	-	-	61,940	61,969	58,279	67,032	57,369	52,748	47,146
TOTAL SALES OF TREATED WATER	297,873	276,300	266,385	234,716	232,865	223,813	263,080	230,780	219,046	182,479
<u>SALES OF NONPOTABLE WATER</u>	9,143	8,735	8,133	7,509	5,912	7,043	8,271	7,039	6,189	5,587
TOTAL SALES OF WATER	\$ 307,016	\$ 285,035	\$ 274,518	\$ 242,225	\$ 238,777	\$ 230,856	\$ 271,351	\$ 237,819	\$ 225,235	\$ 188,066

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

² 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.

TREATED WATER SOLD IN GALLONS BY TYPE OF CUSTOMER: 2009 - 2018

SALES OF TREATED WATER		(non-accrual basis) ¹ (amounts expressed in thousands of gallons)									
		2018	2017	2016 ²	2015	2014	2013	2012	2011	2010	2009
A. METERED GENERAL CUSTOMERS 2016-2018											
Residential -	Inside City	12,874,463	12,330,988	12,435,755	-	-	-	-	-	-	-
	Outside City-Read and Bill	4,172,241	4,056,528	4,231,865	-	-	-	-	-	-	-
	Outside City-Total Service	4,798,720	4,390,838	4,533,837	-	-	-	-	-	-	-
Irrigation -	Inside City	1,030,278	895,806	911,999	-	-	-	-	-	-	-
	Outside City-Read and Bill	573,435	509,332	554,832	-	-	-	-	-	-	-
	Outside City-Total Service	679,961	559,663	624,619	-	-	-	-	-	-	-
Non-Residential -	Inside City	15,824,790	15,520,778	15,543,153	-	-	-	-	-	-	-
	Outside City-Read and Bill	2,944,739	3,030,397	3,073,586	-	-	-	-	-	-	-
	Outside City-Total Service	2,801,073	2,568,339	2,570,546	-	-	-	-	-	-	-
		45,699,700	43,862,669	44,480,192	-	-	-	-	-	-	-
A. METERED GENERAL CUSTOMERS 2009-2015											
Residential -	Inside City	-	-	-	11,359,464	11,603,885	11,629,361	14,052,609	13,098,298	13,601,820	12,075,102
	Outside City-Read and Bill	-	-	-	3,714,016	3,722,505	3,839,625	4,750,696	4,399,807	4,593,122	4,114,005
	Outside City-Total Service	-	-	-	3,957,317	4,051,615	4,150,654	5,225,688	4,794,193	4,959,464	4,388,923
Residential Irrigation -	Inside City	-	-	-	215,336	209,084	202,587	283,485	248,861	261,019	190,264
	Outside City-Read and Bill	-	-	-	144,812	145,195	139,779	198,236	173,346	186,694	139,916
	Outside City-Total Service	-	-	-	105,991	107,181	101,655	140,407	121,065	124,574	94,358
Small multi-family -	Inside City	-	-	-	1,355,336	1,386,032	1,370,868	1,560,394	1,495,266	1,525,150	1,437,136
	Outside City-Read and Bill	-	-	-	120,007	123,537	125,029	135,850	125,757	118,190	114,740
	Outside City-Total Service	-	-	-	160,073	162,590	163,553	184,925	172,393	156,313	149,255
Commercial -	Inside City	-	-	-	11,877,715	11,865,891	11,407,418	12,522,805	12,157,287	12,398,800	12,069,634
	Outside City-Read and Bill	-	-	-	2,232,004	2,257,606	2,208,047	2,524,765	2,384,164	2,370,656	2,390,356
	Outside City-Total Service	-	-	-	2,032,945	2,071,909	2,033,840	2,323,899	2,223,111	2,248,376	2,160,037
Industrial -	Inside City	-	-	-	1,061,877	1,116,290	1,145,795	1,188,635	1,185,642	1,220,187	1,286,307
	Outside City-Read and Bill	-	-	-	300,802	306,221	297,504	521,752	690,755	685,581	696,547
	Read and Bill Winter/Summer Adj	-	-	-	-	-	-	(519,142)	-	-	-
	Outside City-Total Service	-	-	-	33,596	31,138	33,138	38,090	40,772	49,246	33,022
Other Irrigation -	Inside City	-	-	-	543,870	550,833	514,946	786,154	719,221	747,524	574,776
	Outside City-Read and Bill	-	-	-	318,000	307,594	296,929	417,375	370,134	416,362	300,627
	Outside City-Total Service	-	-	-	398,268	396,232	391,745	567,216	520,659	525,479	391,178
		-	-	-	39,931,429	40,415,338	40,052,473	46,903,839	44,920,731	46,188,557	42,606,183

See accompanying footnotes on final page of report.

(continued)

TREATED WATER SOLD IN GALLONS BY TYPE OF CUSTOMER: 2009 - 2018 (continued)

		(non-accrual basis) ¹									
		(amounts expressed in thousands of gallons)									
<u>SALES OF TREATED WATER</u>		2018	2017	2016 ²	2015	2014	2013	2012	2011	2010	2009
B. OTHER SALES TO PUBLIC AUTHORITIES 2016-2018											
City & County of Denver -	Irrigation	1,513,942	1,166,206	1,266,661	-	-	-	-	-	-	-
	Non-Irrigation	921,556	909,091	914,444	-	-	-	-	-	-	-
		2,435,498	2,075,297	2,181,105	-	-	-	-	-	-	-
B. OTHER SALES TO PUBLIC AUTHORITIES 2009-2015											
City & County of Denver -	Irrigation	-	-	-	978,144	1,026,040	1,008,417	1,565,859	1,230,115	1,594,390	1,036,056
	Non-Irrigation	-	-	-	843,730	802,951	763,591	829,144	763,595	790,149	888,372
Other County Agencies -	Inside City	-	-	-	302,066	291,796	309,260	445,947	368,139	363,214	358,456
	Outside City-Read and Bill	-	-	-	160,303	190,837	160,096	191,100	213,673	261,631	135,817
	Outside City-Total Service	-	-	-	149,410	146,595	148,160	210,913	195,617	208,405	166,629
State Agencies -	Inside City	-	-	-	116,022	117,316	118,520	130,365	130,345	140,865	147,880
	Outside City-Read and Bill	-	-	-	11,139	10,783	9,299	10,205	9,724	10,112	9,857
	Outside City-Total Service	-	-	-	1,088	1,225	1,622	1,557	1,081	1,370	1,177
Federal Agencies -	Inside City	-	-	-	20,840	40,390	48,534	60,751	83,863	38,759	55,456
	Outside City-R&B at Denver Rates	-	-	-	6,991	5,341	6,238	6,245	8,244	12,116	195,924
	Outside City-Read and Bill	-	-	-	10,166	11,486	8,493	11,156	22,629	152,973	38,949
	Total Service	-	-	-	296	451	457	367	375	384	443
		-	-	-	2,600,195	2,645,211	2,582,687	3,463,609	3,027,400	3,574,368	3,035,016
C. SALES OF TREATED WATER FOR RESALE 2016-2018											
Outside City - Master Meter		15,877,990	15,481,203	15,767,447	-	-	-	-	-	-	-
Outside the Combined Service Area		914,992	995,827	828,540	-	-	-	-	-	-	-
		16,792,982	16,477,030	16,595,987	-	-	-	-	-	-	-
C. SALES OF TREATED WATER FOR RESALE 2009-2015											
Outside City - Master Meter		-	-	-	12,130,614	12,264,584	12,574,045	15,050,805	14,109,526	14,352,778	12,824,666
Outside the Combined Service Area		-	-	-	3,147,757	3,326,368	2,743,233	3,558,092	2,767,464	3,021,344	2,902,470
		-	-	-	15,278,371	15,590,952	15,317,278	18,608,897	16,876,990	17,374,122	15,727,136
TOTAL SALES OF TREATED WATER		64,928,180	62,414,996	63,257,284	57,809,995	58,651,501	57,952,438	68,976,345	64,825,121	67,137,047	61,368,335

See accompanying footnotes on final page of report.

(continued)

TREATED WATER SOLD IN GALLONS BY TYPE OF CUSTOMER: 2009 - 2018 (continued)

<u>SALES OF TREATED WATER</u>	(non-accrual basis) ¹									
	(amounts expressed in thousands of gallons)									
	2018	2017	2016 ²	2015	2014	2013	2012	2011	2010	2009
<u>Reconciliation of Water Treated, Delivered, Consumption, Sales and Non-revenue Water:</u>										
Total Water Treated (Production)	67,103,210	63,837,010	64,963,810	60,140,870	61,177,090	60,195,400	71,960,650	68,257,000	69,713,070	62,089,800
(Increase) Decrease in Clear Water Storage	46,270	(28,370)	40,020	(24,900)	8,180	17,040	8,050	3,800	(17,670)	17,100
Treated Water Delivered	67,149,480	63,808,640	65,003,830	60,115,970	61,185,270	60,212,440	71,968,700	68,260,800	69,695,400	62,106,900
Water Purchased	-	-	-	-	-	-	-	-	-	-
Treated Water Available (Consumption)	67,149,480	63,808,640	65,003,830	60,115,970	61,185,270	60,212,440	71,968,700	68,260,800	69,695,400	62,106,900
Less Sales of Treated Water	(64,928,180)	(62,414,996)	(63,257,284)	(57,809,995)	(58,651,501)	(57,952,438)	(68,976,345)	(64,825,121)	(67,137,047)	(61,368,335)
Less Load Shifted Treated Water	-	-	-	-	-	-	-	-	-	-
Non-revenue Water	2,221,300	1,393,644	1,746,546	2,305,975	2,533,769	2,260,002	2,992,355	3,435,679	2,558,353	738,565
% Non-revenue Water	3.31%	2.18%	2.69%	3.84%	4.14%	3.75%	4.16%	5.03%	3.67%	1.19%

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

² During 2016, 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.

OPERATING REVENUE AND RELATED WATER CONSUMPTION: 2018

		(non-accrual basis) ¹			
		Revenue	Gallons Sold	Number of	Revenue per
		(thousands)	(thousands)	Customers ²	1,000 Gallons
I. SALES OF TREATED WATER					
A. METERED GENERAL CUSTOMERS					
Residential	Inside City	\$ 66,793	12,874,463	139,156	\$ 5.1880
	Outside City-Read and Bill	22,205	4,172,241	32,469	5.3221
	Outside City-Total Service	32,219	4,798,720	33,710	6.7141
Irrigation	Inside City	5,746	1,030,278	1,462	5.5771
	Outside City-Read and Bill	3,327	573,435	454	5.8019
	Outside City-Total Service	5,062	679,961	619	7.4445
Non-Residential	Inside City	56,978	15,824,790	25,228	3.6006
	Outside City-Read and Bill	12,409	2,944,739	3,063	4.2140
	Outside City-Total Service	14,383	2,801,073	3,863	5.1348
		<u>219,122</u>	<u>45,699,700</u>	<u>240,024</u>	<u>4.7948</u>
B. PRIVATE FIRE PROTECTION SERVICE³					
Sprinklers -	Inside City	955	-		
	Outside City-Read and Bill	92	-		
	Outside City-Total Service	163	-		
		<u>1,210</u>	<u>-</u>		
C. OTHER SALES TO PUBLIC AUTHORITIES					
City & County of Denver	Irrigation	3,946	1,513,942	714	2.6064
	Non-Irrigation	2,402	921,556	424	2.6065
		<u>6,348</u>	<u>2,435,498</u>	<u>1,138</u>	<u>2.6064</u>
D. SALES OF TREATED WATER FOR RESALE⁴					
Outside City - Master Meter		66,910	15,877,990	76,268	4.2140
Outside the Combined Service Area		4,283	914,992	-	4.6809
		<u>71,193</u>	<u>16,792,982</u>	<u>76,268</u>	<u>4.2394</u>
TOTAL SALES OF TREATED WATER⁵		<u>297,873</u>	<u>64,928,180</u>	<u>317,430</u>	<u>4.5877</u>
II. SALES OF NON-POTABLE WATER⁶					
Inside City		1,139	1,336,035	106	0.8525
Outside City		6,521	6,607,684	22	0.9869
Outside the Combined Service Area		1,483	1,210,398	12	1.2252
		<u>9,143</u>	<u>9,154,117</u>	<u>140</u>	<u>0.9988</u>
TOTAL SALES OF WATER		<u>\$ 307,016</u>	<u>74,082,297</u>	<u>317,570</u>	<u>\$ 4.1443</u>
III. OTHER NON-POTABLE WATER DELIVERIES⁶			<u>1,669,066</u>		
TOTAL GALLONS SOLD			<u><u>75,751,363</u></u>		

See accompanying footnotes on final page of report.

(continued)

OPERATING REVENUE AND RELATED WATER CONSUMPTION: 2018 (continued)

(non-accrual basis)¹

	Revenue (thousands)	Gallons Sold (thousands)	Number of Customers ²	Revenue per 1,000 Gallons
IV. OTHER OPERATING REVENUE				
A. POWER SALES REVENUE⁷				
Foothills Treatment Plant	\$ 424			
Strontia Springs	338			
Dillon Dam	194			
Roberts Tunnel	1,155			
Hillcrest	362			
Williams Fork	171			
Gross Reservoir	1,300			
	<u>3,944</u>			
B. SPECIAL ASSESSMENTS				
Administrative Fees	3,569			
Penalty Fees	133			
Stub-in, Taps and Meter Fees	2,081			
Hydrant Fees	1,870			
Plan Review, Easement, Distribution Inspection	839			
Other Assessments	(1,174)			
	<u>7,318</u>			
TOTAL OTHER OPERATING REVENUE	<u>11,262</u>			
TOTAL OPERATING REVENUE	<u>\$ 318,278</u>			

¹ This schedule represents actual billings made for treated water during the year. No accruals for treated water were made for revenue earned on unbilled accounts. Therefore, amounts on this schedule do not agree with amounts on the Statements 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 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.

⁴ See "Sales of Treated Water for Resale".

⁵ See "Sales of Treated Water Between Denver and Outside City".

⁶ See "Sales of Non-Potable Water Between Denver and Outside City".

⁷ 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: 2018

(non-accrual basis)¹

	<u>Revenue</u>		<u>Gallons Sold</u>		Number of Customers
	Amounts (thousands)	% of Total	Amounts (thousands)	% of Total	
I. <u>INSIDE CITY</u>					
A. METERED GENERAL CUSTOMERS					
Residential	\$ 66,793	22.42%	12,874,463	19.83%	139,156
Irrigation	5,746	1.93%	1,030,278	1.59%	1,462
Non-Residential	56,978	19.13%	15,824,790	24.37%	25,228
	<u>129,517</u>	<u>43.48%</u>	<u>29,729,531</u>	<u>45.79%</u>	<u>165,846</u>
B. PRIVATE FIRE PROTECTION SERVICE²					
Sprinklers	<u>955</u>	<u>0.32%</u>	<u>-</u>		
C. OTHER SALES TO PUBLIC AUTHORITIES					
City And County of Denver-Irrigation	3,946	1.32%	1,513,942	2.33%	714
City and County of Denver-Non-Irrigation	2,402	0.81%	921,556	1.42%	424
	<u>6,348</u>	<u>2.13%</u>	<u>2,435,498</u>	<u>3.75%</u>	<u>1,138</u>
TOTAL SALES OF TREATED WATER					
DENVER	<u>136,820</u>	<u>45.93%</u>	<u>32,165,029</u>	<u>49.54%</u>	<u>166,984</u>
Revenue per 1,000 Gallons - Denver			<u>\$ 4,2537</u>		
II. <u>OUTSIDE CITY</u>					
A. METERED GENERAL CUSTOMERS					
Residential - Read & Bill	22,205	7.45%	4,172,241	6.43%	32,469
Irrigation - Read & Bill	3,327	1.12%	573,435	0.88%	454
Non-Residential - Read & Bill	12,409	4.17%	2,944,739	4.54%	3,063
Residential - Total Service	32,219	10.82%	4,798,720	7.39%	33,710
Irrigation - Total Service	5,062	1.70%	679,961	1.05%	619
Non-Residential - Total Service	14,383	4.83%	2,801,073	4.31%	3,863
	<u>89,605</u>	<u>30.08%</u>	<u>15,970,169</u>	<u>24.60%</u>	<u>74,178</u>

See accompanying footnotes on final page of report.

(Continued)

SALES OF TREATED WATER BETWEEN DENVER AND OUTSIDE CITY: 2018 (continued)

(non-accrual basis)¹

	<u>Revenue</u>		<u>Gallons Sold</u>		Number of Customers
	Amounts (thousands)	% of Total	Amounts (thousands)	% of Total	
II. OUTSIDE CITY (Continued)					
B. PRIVATE FIRE PROTECTION SERVICE ²					
Sprinklers	\$ 92	0.03%	-		
Sprinklers - Total Service	163	0.05%	-		
	<u>255</u>	<u>0.09%</u>	<u>-</u>		
C. SALES OF TREATED WATER FOR RESALE ³					
Master Meter Distributors	66,910	22.46%	15,877,990	24.45%	76,268
Outside CSA-Fixed Limit Contracts	4,283	1.44%	914,992	1.41%	-
	<u>71,193</u>	<u>23.90%</u>	<u>16,792,982</u>	<u>25.86%</u>	<u>76,268</u>
TOTAL SALES OF TREATED WATER					
OUTSIDE CITY	<u>161,053</u>	<u>54.07%</u>	<u>32,763,151</u>	<u>50.46%</u>	<u>150,446</u>
Revenue per 1,000 Gallons - Outside City			<u>\$ 4.9157</u>		
TOTAL SALES OF TREATED WATER					
	<u>\$ 297,873</u>	<u>100.00%</u>	<u>64,928,180</u>	<u>100.00%</u>	<u>317,430</u>
Revenue per 1,000 Gallons - Total			<u>\$ 4.5877</u>		
RECONCILIATION/CALCULATION OF NON-REVENUE WATER					
Total Water Treated (Production) - Water Treated Monthly			67,103,210		
(Increase) Decrease in Clear Water Storage - Water Treated Monthly			<u>46,270</u>		
Total Treated Water Delivered - Water Treated Monthly			67,149,480		
Water Purchased			<u>-</u>		
Total Treated Water Available (Consumption) - Water Treated Monthly			67,149,480	100.00%	
Less Sale of Treated Water			(64,928,180)	(96.69%)	
Less Load Shifted Treated Water			<u>-</u>	<u>0.00%</u>	
Non-revenue Water			<u>2,221,300</u>	<u>3.31%</u>	

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".

SALES OF NON-POTABLE WATER BETWEEN DENVER AND OUTSIDE CITY: 2018

(non-accrual basis) ¹ (amounts expressed in thousands)						
	Revenue		Gallons Sold		Number of Customers ²	Revenue per 1,000 Gallons
	Amount (thousands)	% of Total	Amount (thousands)	% of Total		
I. <u>INSIDE CITY</u>						
Raw Water Sales						
City & County of Denver	\$ 72	0.79%	217,103	2.37%	2	\$ 0.3316
All Other	82	0.90%	58,729	0.64%	7	1.3962
	154	1.68%	275,832	3.01%	9	0.5583
Effluent Sales						
City & County of Denver	19	0.21%	58,676	0.64%	1	0.3238
All Other	0	0.00%	-	0.00%	1	-
	19	0.21%	58,676	0.64%	2	0.3238
Recycle Sales						
City & County of Denver	103	1.13%	454,460	4.96%	10	0.2266
All Other	863	9.44%	547,067	5.98%	85	1.5775
	966	10.57%	1,001,527	10.94%	95	0.9645
Total Denver	1,139	12.46%	1,336,035	14.59%	106	0.8525
II. <u>OUTSIDE CITY, WITHIN COMBINED SERVICE AREA</u>						
Raw Water Sales-All Others	6,494	71.03%	6,580,528	71.89%	17	0.9869
Effluent Sales-All Others	27	0.30%	27,156	0.30%	5	0.9943
Total Outside City, Within Combined Service Area	6,521	71.32%	6,607,684	72.18%	22	0.9869
III. <u>OUTSIDE COMBINED SERVICE AREA</u>						
Raw Water Sales	668	7.31%	497,589	5.44%	11	1.3425
Recycle Sales	815	8.91%	712,809	7.79%	1	1.1434
Total Outside Combined Service Area	1,483	16.22%	1,210,398	13.22%	12	1.2252
TOTAL SALES OF NON-POTABLE WATER	\$ 9,143	100.00%	9,154,117	100.00%	140	\$ 0.9988
IV. <u>OTHER NON-POTABLE WATER DELIVERIES</u>						
City Ditch at Washington Park			818,246			
City of Englewood (Cabin-Meadow Exchange)			850,820			
Total Other Non-Potable Water Deliveries			1,669,066			
TOTAL NON-POTABLE WATER DELIVERIES			10,823,183			

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

² If the customer uses both raw and effluent water it will be included in both customer counts.

ANALYSIS OF CUSTOMER ACCOUNTS FOR TREATED WATER - 2018

		Number of Customers ^{1,2}		
		12/31/2018	12/31/2017	Increase (Decrease)
METERED GENERAL CUSTOMERS				
Residential	Denver	139,156	137,627	1,529
	Outside City	32,469	32,390	79
	Total Service	33,710	33,579	131
Non-Residential	Denver	25,228	25,083	145
	Outside City	3,063	3,058	5
	Total Service	3,863	3,849	14
Irrigation	Denver	1,462	1,434	28
	Outside City	454	447	7
	Total Service	619	616	3
TOTAL METERED GENERAL CUSTOMERS		240,024	238,083	1,941
PUBLIC AUTHORITIES				
City & County of Denver	Irrigation	714	707	7
	Non-Irrigation	424	421	3
TOTAL PUBLIC AUTHORITIES		1,138	1,128	10
RESALE ACCOUNTS (MASTER METER) ³		76,268	76,269	(1)
TOTAL TREATED WATER CUSTOMERS		317,430	315,480	1,950

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 See "Sales of Treated Water for Resale".

WATER RATE SCHEDULES - 2018

Rate Schedule - 1

Treated Water Rates

For Meters Read On or After March 1, 2018

A. Monthly Fixed Charges, \$ per Bill

Meter Size inches	Inside City of Denver	Outside City		
		Read & Bill	Total Service	Wholesale
5/8" & 3/4"	\$15.39	\$15.39	\$15.39	15.39
1"	21.44	21.44	21.44	21.44
1 1/2"	40.16	40.16	40.16	40.16
2"	66.14	66.14	66.14	66.14
3"	139.84	139.84	139.84	139.84
4"	243.14	243.14	243.14	243.14
6"	539.15	539.15	539.15	539.15
8"	952.97	952.97	952.97	952.97
10"	1,485.18	1,485.18	1,485.18	1,485.18
12"	2,136.45	2,136.45	2,136.45	2,136.45

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)	\$2.29	\$2.52	\$3.33	N/A
Tier 2	AWC + 15	4.12	4.54	5.99	
Tier 3	Greater than AWC + 15	5.50	6.05	7.99	
Nonresidential (note D.4, D.5)					
Tier 1	0 to AWC	\$2.60	\$3.12	\$3.78	N/A
Tier 2	AWC to 4 x AWC	3.64	4.37	5.29	
Tier 3	Greater than 4 x AWC	4.16	4.99	6.05	
Irrigation					
Winter (Nov. 1 through Apr 30)		\$1.34	\$1.42	\$1.85	N/A
Summer (May 1 through Oct 31)		5.36	5.68	7.40	
Wholesale					
Master Meter					\$4.09
Outside the Combined Service Area					4.55

C. Private Fireline

Fireline Size inches	Inside City of Denver	Outside City		
		Read & Bill	Total Service	Wholesale
1"	\$3.78	\$2.55	\$3.90	N/A
2"	6.31	4.26	6.51	
4"	9.74	6.58	10.06	
6"	13.92	9.41	14.37	
8"	24.36	16.46	25.14	
10"	34.80	23.51	35.92	
12"	55.68	37.62	57.47	
16"	139.20	94.06	143.68	
Fire Hydrants	\$13.92	\$9.41	\$14.37	

D. Notes

- Applicability:** See Chapter 2 of Denver Water's Operating Rules.
- 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.
- 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.
- 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.
- Small Multifamily:** For 2016, the small multifamily class (duplex through 5-plex) is now included in the nonresidential class.

(continued)

WATER RATE SCHEDULES - 2018 (continued)

Rate Schedule - 2

Nonpotable Water Rates

For Meters Read On or After March 1, 2018

A. Monthly Fixed Charges, \$ per Bill

Meter Size inches	Inside City of Denver	Outside City	Outside Combined Service Area
5/8" & 3/4"	\$15.39	\$15.39	\$15.39
1"	21.44	21.44	21.44
1 1/2"	40.16	40.16	40.16
2"	66.14	66.14	66.14
3"	139.84	139.84	139.84
4"	243.14	243.14	243.14
6"	539.15	539.15	539.15
8"	952.97	952.97	952.97
10"	1,485.18	1,485.18	1,485.18
12"	2,136.45	2,136.45	2,136.45

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	N/A	\$1.11
\$ per Acre-Foot	322.59		361.69
Raw Water (Monthly Fixed Charges Not Applicable)			
\$ per 1,000 gallons	\$0.67	\$0.98	\$1.05
\$ per Acre-Foot	218.32	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 policy.

(continued)

WATER RATE SCHEDULES - 2018 (continued)

Rate Schedule - 3
 City and County of Denver Governmental Rates
 For Meters Read On or After March 1, 2018

A. Monthly Fixed Charges, \$ per Bill

Meter Size inches	Fixed Charge
5/8" & 3/4"	\$15.39
1"	21.44
1 1/2"	40.16
2"	66.14
3"	139.84
4"	243.14
6"	539.15
8"	952.97
10"	1,485.18
12"	2,136.45

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

Domestic	
Year-Round	\$2.10
Irrigation	
Winter (Nov. 1 through Apr 30)	\$0.93
t	2.33

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

Raw	\$0.33
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 - 2018 (continued)

Rate Schedule - 4

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

	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)			<u>Treated Water</u>	
Multifamily component			<u>Inside City</u>	<u>Outside City</u>
Nonresidential component			As set forth in Section III of this schedule	
\$ per sq. ft. of nonresidential gross floor area irrigation, if applicable			\$ 2.91	\$ 4.08
			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 two inches are determined on an individual basis using peak demand requirements.

⁵ Development containing two or more different principal or primary uses such as residential, office, manufacturing, retail, public or entertainment uses.

SUMMARY OF WATER RATES: 2009 - 2018

City of Denver - Schedule - 1	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009 ¹
<u>Residential - Consumption Charge per 1,000 Gallons</u>										
0 to AWC ²	\$ 2.29	\$ 2.55	\$ 2.60	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AWC + 15	4.12	4.59	4.68	-	-	-	-	-	-	-
Greater than AWC + 15	5.50	6.12	6.24	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
First 11,000 Gallons	-	-	-	2.75	2.68	2.59	2.54	2.41	2.11	1.91
12,000 - 30,000 Gallons	-	-	-	5.50	5.36	5.18	5.09	4.82	4.22	3.82
31,000 - 40,000 Gallons	-	-	-	8.25	8.04	7.77	7.63	7.23	6.33	5.73
Over 40,000 Gallons	-	-	-	11.00	10.72	10.36	10.17	9.64	8.44	7.64
<u>Residential Irrigation - Consumption Charge per 1,000 Gallons</u>										
Winter - All Consumption	-	-	-	-	-	-	-	-	1.00	0.92
Summer - All Consumption	-	-	-	-	-	-	-	-	4.00	3.68
<u>Small Multi-Family - Consumption Charge per 1,000 Gallons</u> (Duplexes through Five-Plexes with a Single Meter)										
0 to AWC ^{3,4}	2.60	2.71	2.68	-	-	-	-	-	-	-
AWC to 4 x AWC	3.64	3.79	3.75	-	-	-	-	-	-	-
Greater than 4 x AWC	4.16	4.34	4.29	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
First 15,000 Gallons ⁵	-	-	-	3.02	2.93	2.83	2.82	2.67	2.33	2.17
Over 15,000 Gallons	-	-	-	3.62	3.52	3.40	3.38	3.20	2.80	2.60
<u>All Other Retail - Consumption Charge per 1,000 Gallons</u>										
0 to AWC ³	2.60	2.71	2.68	-	-	-	-	-	-	-
-	3.64	3.79	3.75	-	-	-	-	-	-	-
Greater than 4 x AWC	4.16	4.34	4.29	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Winter - All Consumption	-	-	-	1.88	1.84	1.78	1.78	1.69	1.54	1.48
Summer - All Consumption	-	-	-	3.76	3.68	3.57	3.57	3.38	3.08	2.96
<u>Irrigation Only- Consumption Charge per 1,000 Gallons</u>										
Winter - All Consumption	1.34	1.27	1.22	1.20	1.20	1.20	1.20	1.14	1.00	1.49
Summer - All Consumption	5.36	5.08	4.88	4.81	4.81	4.81	4.81	4.56	4.00	3.17
<u>Service Charge/Meter Charge</u>										
Monthly 5/8" & 3/4"	15.39	11.86	8.79	-	-	-	-	-	-	-
Monthly 1"	21.44	15.13	10.13	-	-	-	-	-	-	-
Monthly 1 1/2"	40.16	25.28	14.27	-	-	-	-	-	-	-
Monthly 2"	66.14	39.35	20.02	-	-	-	-	-	-	-
Monthly 3"	139.84	79.29	36.33	-	-	-	-	-	-	-
Monthly 4"	243.14	135.26	59.20	-	-	-	-	-	-	-
Monthly 6"	539.15	295.65	124.71	-	-	-	-	-	-	-
Monthly 8"	952.97	519.87	216.30	-	-	-	-	-	-	-
Monthly 10"	1,485.18	808.25	334.09	-	-	-	-	-	-	-
Monthly 12"	2,136.45	1,161.14	478.22	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Monthly Service Charge	-	-	-	6.74	6.58	6.33	6.33	6.00	5.58	4.41

See accompanying footnotes on final page of report.

(continued)

SUMMARY OF WATER RATES: 2009 - 2018 (continued)

Outside City Read and Bill - Schedule - 1 (continued)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009 ¹
<u>Residential - Consumption Charge per 1000 Gallons</u>										
0 to AWC ²	\$ 2.52	\$ 2.68	\$ 2.80	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AWC + 15	4.54	4.82	5.04	-	-	-	-	-	-	-
Greater than AWC + 15	6.05	6.43	6.72	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
First 11,000 Gallons	-	-	-	2.82	2.73	2.61	2.49	2.36	2.20	2.00
12,000 - 30,000 Gallons	-	-	-	5.64	5.46	5.22	4.98	4.72	4.40	4.00
31,000 - 40,000 Gallons	-	-	-	8.46	8.19	7.83	7.47	7.08	6.60	6.00
Over 40,000 Gallons	-	-	-	11.28	10.92	10.44	9.96	9.44	8.80	8.00
<u>Residential Irrigation - Consumption Charge per 1,000 Gallons</u>										
Winter - All Consumption	-	-	-	-	-	-	-	-	1.09	1.08
Summer - All Consumption	-	-	-	-	-	-	-	-	4.36	4.32
<u>Small Multi-Family - Consumption Charge per 1000 Gallons</u>										
0 to AWC ^{3,4}	3.12	3.25	3.32	-	-	-	-	-	-	-
AWC to 4 x AWC	4.37	4.55	4.65	-	-	-	-	-	-	-
Greater than 4 x AWC	4.99	5.20	5.31	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
(Duplexes through Five-Plexes with a Single Meter)										
First 15,000 Gallons ⁵	-	-	-	3.43	3.39	3.30	3.21	3.04	2.71	2.57
Over 15,000 Gallons	-	-	-	4.12	4.07	3.96	3.85	3.65	3.25	3.08
<u>All Other Retail - Consumption Charge per 1000 Gallons</u>										
0 to AWC ³	3.12	3.25	3.32	-	-	-	-	-	-	-
AWC to 4 x AWC	4.37	4.55	4.65	-	-	-	-	-	-	-
Greater than 4 x AWC	4.99	5.20	5.31	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Winter - All Consumption	-	-	-	2.36	2.35	2.26	2.20	2.09	1.99	1.99
Summer - All Consumption	-	-	-	4.72	4.70	4.52	4.41	4.18	3.98	3.98
<u>Irrigation Only - Consumption Charge per 1000 Gallons</u>										
Winter - All Consumption	1.42	1.38	1.40	1.35	1.31	1.29	1.29	1.22	1.09	1.78
Summer - All Consumption	5.68	5.52	5.60	5.40	5.24	5.15	5.15	4.88	4.36	3.94
<u>Service Charge/Meter Charge</u>										
Monthly 5/8" & 3/4"	15.39	11.86	8.79	-	-	-	-	-	-	-
Monthly 1"	21.44	15.13	10.13	-	-	-	-	-	-	-
Monthly 1 1/2"	40.16	25.28	14.27	-	-	-	-	-	-	-
Monthly 2"	66.14	39.35	20.02	-	-	-	-	-	-	-
Monthly 3"	139.84	79.29	36.33	-	-	-	-	-	-	-
Monthly 4"	243.14	135.26	59.20	-	-	-	-	-	-	-
Monthly 6"	539.15	295.65	124.71	-	-	-	-	-	-	-
Monthly 8"	952.97	519.87	216.30	-	-	-	-	-	-	-
Monthly 10"	1,485.18	808.25	334.09	-	-	-	-	-	-	-
Monthly 12"	2,136.45	1,161.14	478.22	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Monthly Service Charge	-	-	-	6.74	6.58	6.33	6.33	6.00	5.58	4.41

See accompanying footnotes on final page of report.

(continued)

SUMMARY OF WATER RATES: 2009 - 2018 (continued)

Outside City Total Service - Schedule - 1 (continued)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009 ¹
<u>Residential - Consumption Charge per 1000 Gallons</u>										
0 to AWC ²	\$ 3.33	\$ 3.30	\$ 3.28	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AWC + 15	5.99	5.94	5.90	-	-	-	-	-	-	-
Greater than AWC + 15	7.99	7.92	7.87	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
First 11,000 Gallons	-	-	-	3.04	3.02	2.93	2.85	2.70	2.59	2.43
12,000 - 30,000 Gallons	-	-	-	6.08	6.04	5.86	5.70	5.40	5.18	4.86
31,000 - 40,000 Gallons	-	-	-	9.12	9.06	8.79	8.55	8.10	7.77	7.29
Over 40,000 Gallons	-	-	-	12.16	12.08	11.72	11.39	10.80	10.36	9.72
<u>Gallons</u>										
Winter - All Consumption	-	-	-	-	-	-	-	-	1.26	1.24
Summer - All Consumption	-	-	-	-	-	-	-	-	5.04	4.96
<u>Small Multi-Family - Consumption Charge per 1,000 Gallons</u>										
(Duplexes through Five-Plexes with a Single Meter)										
0 to AWC ^{3,4}	3.78	3.77	3.76	-	-	-	-	-	-	-
AWC to 4 x AWC	5.29	5.28	5.26	-	-	-	-	-	-	-
Greater than 4 x AWC	6.05	6.03	6.02	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
First 15,000 Gallons ⁵	-	-	-	4.29	4.21	3.99	3.84	3.64	3.39	3.31
Over 15,000 Gallons	-	-	-	5.15	5.05	4.79	4.61	4.37	4.07	3.97
<u>All Other Retail - Consumption Charge per 1,000 Gallons</u>										
0 to AWC ³	3.78	3.77	3.76	-	-	-	-	-	-	-
AWC to 4 x AWC	5.29	5.28	5.26	-	-	-	-	-	-	-
Greater than 4 x AWC	6.05	6.03	6.02	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Winter - All Consumption	-	-	-	2.72	2.70	2.54	2.44	2.31	2.16	2.16
Summer - All Consumption	-	-	-	5.44	5.40	5.08	4.87	4.62	4.32	4.32
<u>Irrigation Only - Consumption Charge per 1000 Gallons</u>										
Winter - All Consumption	1.85	1.74	1.69	1.64	1.56	1.47	1.39	1.32	1.26	2.02
Summer - All Consumption	7.40	6.96	6.76	6.56	6.24	5.88	5.57	5.28	5.04	4.33
<u>Service Charge/Meter Charge</u>										
Monthly 5/8" & 3/4"	15.39	11.86	8.79	-	-	-	-	-	-	-
Monthly 1"	21.44	15.13	10.13	-	-	-	-	-	-	-
Monthly 1 1/2"	40.16	25.28	14.27	-	-	-	-	-	-	-
Monthly 2"	66.14	39.35	20.02	-	-	-	-	-	-	-
Monthly 3"	139.84	79.29	36.33	-	-	-	-	-	-	-
Monthly 4"	243.14	135.26	59.20	-	-	-	-	-	-	-
Monthly 6"	539.15	295.65	124.71	-	-	-	-	-	-	-
Monthly 8"	952.97	519.87	216.30	-	-	-	-	-	-	-
Monthly 10"	1,485.18	808.25	334.09	-	-	-	-	-	-	-
Monthly 12"	2,136.45	1,161.14	478.22	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Monthly Service Charge	-	-	-	6.74	6.58	6.33	6.33	6.00	5.58	4.41

See accompanying footnotes on final page of report.

(continued)

SUMMARY OF WATER RATES: 2009 - 2018 (continued)

Outside City Master Meter - Schedule - 1	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009 ¹
Consumption Charge per 1000 Gallons - All Consumptic	\$ 4.09	\$ 4.10	\$ 4.15	\$ 4.04	\$ 3.95	\$ 3.81	\$ 3.64	\$ 3.45	\$ 3.01	\$ 3.01
<u>Service Charge/Meter Charge</u>										
Monthly 5/8" & 3/4"	15.39	11.86	8.79	-	-	-	-	-	-	-
Monthly 1"	21.44	15.13	10.13	-	-	-	-	-	-	-
Monthly 1 1/2"	40.16	25.28	14.27	-	-	-	-	-	-	-
Monthly 2"	66.14	39.35	20.02	-	-	-	-	-	-	-
Monthly 3"	139.84	79.29	36.33	-	-	-	-	-	-	-
Monthly 4"	243.14	135.26	59.20	-	-	-	-	-	-	-
Monthly 6"	539.15	295.65	124.71	-	-	-	-	-	-	-
Monthly 8"	952.97	519.87	216.30	-	-	-	-	-	-	-
Monthly 10"	1,485.18	808.25	334.09	-	-	-	-	-	-	-
Monthly 12"	2,136.45	1,161.14	478.22	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Monthly Service Charge	-	-	-	6.74	6.58	6.33	6.33	6.00	5.58	4.41

Outside City Master Meter Maintenance - Schedule - 1 (continued)

Consumption Charge per 1000 Gallons - All Consumptic	-	-	-	-	-	-	4.96	4.70	4.45	4.31
<u>Service Charge/Meter Charge</u>										
Monthly Service Charge	-	-	-	-	-	-	6.33	6.00	5.58	4.41

Outside Combined Service Area - Schedule - 1 (continued)

Treated Water - Consumption Charge per 1000 Gallons	4.55	4.48	4.44	4.44	4.44	4.25	4.05	3.83	3.36	3.19
<u>Service Charge/Meter Charge</u>										
Monthly 5/8" & 3/4"	15.39	11.86	8.79	-	-	-	-	-	-	-
Monthly 1"	21.44	15.13	10.13	-	-	-	-	-	-	-
Monthly 1 1/2"	40.16	25.28	14.27	-	-	-	-	-	-	-
Monthly 2"	66.14	39.35	20.02	-	-	-	-	-	-	-
Monthly 3"	139.84	79.29	36.33	-	-	-	-	-	-	-
Monthly 4"	243.14	135.26	59.20	-	-	-	-	-	-	-
Monthly 6"	539.15	295.65	124.71	-	-	-	-	-	-	-
Monthly 8"	952.97	519.87	216.30	-	-	-	-	-	-	-
Monthly 10"	1,485.18	808.25	334.09	-	-	-	-	-	-	-
Monthly 12"	2,136.45	1,161.14	478.22	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Monthly Service Charge	-	-	-	6.74	6.58	6.33	6.33	6.00	5.58	4.41

See accompanying footnotes on final page of report.

(continued)

SUMMARY OF WATER RATES: 2009 - 2018 (continued)

Raw and Recycled - Schedule - 2 (continued)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009 ¹
<u>Raw - Consumption Charge per 1000 Gallons</u>										
Inside City - All Consumption	\$0.67	\$0.63	\$0.50	\$0.52	\$0.52	\$0.50	\$0.50	\$0.47	\$0.47	\$0.47
Outside City - All Consumption	0.98	0.98	1.00	0.96	0.91	0.91	0.86	0.81	0.77	0.73
Outside Combined Service Area - All Consumption	1.05	1.05	1.10	1.04	1.04	1.04	1.01	0.95	0.90	0.85
<u>Recycled - Consumption Charge per 1000 Gallons</u>										
Inside City Recycled - All Consumption	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.93	0.89	0.89
Outside Combined Service Area - All Consumption	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.05	0.91	0.90
<u>Recycled Service Meter Charge</u>										
Monthly 5/8" & 3/4"	15.39	11.86	8.79	-	-	-	-	-	-	-
Monthly 1"	21.44	15.13	10.13	-	-	-	-	-	-	-
Monthly 1 1/2"	40.16	25.28	14.27	-	-	-	-	-	-	-
Monthly 2"	66.14	39.35	20.02	-	-	-	-	-	-	-
Monthly 3"	139.84	79.29	36.33	-	-	-	-	-	-	-
Monthly 4"	243.14	135.26	59.20	-	-	-	-	-	-	-
Monthly 6"	539.15	295.65	124.71	-	-	-	-	-	-	-
Monthly 8"	952.97	519.87	216.30	-	-	-	-	-	-	-
Monthly 10"	1,485.18	808.25	334.09	-	-	-	-	-	-	-
Monthly 12"	2,136.45	1,161.14	478.22	-	-	-	-	-	-	-
<u>Prior to April 1, 2016</u>										
Monthly Service Charge	-	-	-	6.74	6.58	6.33	6.33	6.00	5.58	4.41

¹ Effective July 6, 2009 Denver Water customers are billed monthly.

² 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.

³ Small Multifamily: For 2016, the small multifamily class (duplex through 5-plex) is now included in the nonresidential class.

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 Monthly usage amounts increase by 6,000 gallons per additional dwelling unit up to 5 dwelling units.

SALES OF TREATED WATER FOR RESALE - 2018

Treated Water Sold Outside Denver to Municipalities and Distributors through Master Meters²

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

	Revenue	Gallons Sold (000)	Number of Customers
<u>MASTER METER DISTRIBUTORS</u>			
Alameda Water & Sanitation District	\$ 327	71,625	335
Bancroft-Clover Water & Sanitation District	6,223	1,483,618	8,818
Bonvue Water & Sanitation District	61	14,165	169
Bow-Mar Water & Sanitation District	510	117,247	290
Cherry Creek Valley Water & Sanitation District	3,540	830,229	1,972
Cherry Creek Village Water & Sanitation District	609	142,633	476
City of Edgewater	596	133,531	1,482
City of Glendale	1,143	271,708	237
City of Lakewood	829	194,984	724
Consolidated Mutual Water Company	9,805	2,332,832	15,708
Crestview Water & Sanitation District	2,402	575,753	4,491
Green Mountain Water & Sanitation District	6,933	1,671,380	10,113
High View Water District	606	144,202	890
Ken-Caryl Water & Sanitation District	3,287	785,594	3,742
Lakehurst Water & Sanitation District	3,805	887,999	5,519
Meadowbrook Water & Sanitation District	700	158,342	1,321
North Pecos Water & Sanitation District	748	168,767	403
North Washington Street Water & Sanitation District	3,418	809,747	3,636
Northgate Water District	5	514	4
South Adams County Water & Sanitation District	3,985	873,333	166
Valley Water District	2,238	531,458	1,782
Wheat Ridge Water District	3,189	751,566	5,838
Willowbrook Water & Sanitation District	2,080	491,082	3,415
Willows Water District	3,256	773,437	4,737
Chatfield South Water District	64	13,114	-
City and County of Broomfield	6,262	1,511,558	-
East Cherry Creek Valley Water District	1,186	251,365	-
Inverness Water District	668	159,544	-
Rocky Mountain Arsenal	58	7,656	-
Suncor Energy USA	2,660	633,999	-
Total Sales of Treated Water for Resale	<u>\$ 71,193</u>	<u>16,792,982</u>	<u>76,268</u>

¹ This schedule represents actual billings made for treated water during the year. No accruals for treated water were made for revenue earned on unbilled accounts. Therefore, amounts on this schedule do not agree with amounts on the Statements 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.

10 LARGEST RETAIL CUSTOMERS - WATER CONSUMPTION AND REVENUE - 2018

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

<u>Account Type</u>	Consumption		Revenue	
	Gallons Sold (000)	Percent of	Water Revenue ¹	Percent of
		Total Gallons Sold		Total Water Revenue
Oil and Gas Company	649,295	1.00%	\$ 2,720	0.91%
Public School System	534,171	0.82%	1,996	0.67%
Public Utility	503,916	0.78%	2,097	0.70%
Housing Authority	385,302	0.59%	1,498	0.50%
Parks System	253,570	0.39%	1,627	0.55%
Retail Grocer - A	160,505	0.25%	484	0.16%
State Government	143,251	0.22%	494	0.17%
Beverage Company	136,147	0.21%	383	0.13%
Retail Grocer - B	127,906	0.20%	562	0.19%
Hospitals	104,282	0.16%	319	0.11%
Total of the 10 largest customers	2,998,345	4.62%	\$ 12,180	4.09%
Total sales of treated water	64,928,180		\$ 297,873	

¹ This 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 retail accounts listed, Denver Water provided 2,435 million gallons of treated water to the City and County of Denver. Revenues from these sales were \$6.3 million.

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C - DEBT CAPACITY INFORMATION

These schedules present information to help the reader assess the affordability of Denver Water's current levels of outstanding debt and its ability to issue additional debt in the future.

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RATIOS OF TOTAL OUTSTANDING DEBT BY TYPE: 2009 - 2018

(amounts expressed in thousands, except debt per capita)

Total Principal Balance Outstanding Debt by Type ¹													
Year	General Obligation Bonds	Water Revenue Bonds	Revenue Bond Unamortized Premium or (Discount)	Total Water Revenue Bonds	Capital Leases				Total	Gross Revenues ^{2,4}	Ratio of Total Debt to Gross Revenue ¹	Estimated Population Served ³	Debt Per Capita
					Certificates of Participation	Other	Notes Payable ⁵						
2009	\$ 31,170	\$ 309,025	\$ -	\$ 309,025	\$ 27,835	\$ 22,308	\$ -	\$ -	\$ 390,338	\$ 216,557	1.80	1,111,000	\$ 351
2010	28,090	377,665	-	377,665	21,630	20,790	-	-	448,175	259,730	1.73	1,125,000	398
2011	23,825	371,560	-	371,560	-	19,166	-	-	414,551	279,682	1.48	1,135,000	365
2012	500	401,420	15,594	417,014	-	17,431	-	-	434,945	313,093	1.34	1,147,000	379
2013	-	376,965	11,472	388,437	-	15,576	10,000	-	414,013	290,349	1.39	1,161,000	357
2014	-	395,125	9,480	404,605	-	13,595	-	-	418,200	297,768	1.37	1,172,000	357
2015	-	368,125	6,593	374,718	-	11,478	30,000	-	416,196	305,073	1.34	1,210,000	344
2016	-	438,580	15,758	454,338	-	9,215	-	-	463,553	336,713	1.33	1,249,000	371
2017	-	603,415	32,665	636,080	-	6,797	-	-	642,877	365,891	1.67	1,275,000	504
2018	\$ -	\$ 583,490	\$ 28,243	\$ 611,733	\$ -	\$ 4,212	\$ -	\$ -	\$ 615,945	\$ 381,869	1.54	1,306,000	\$ 472

¹ Details regarding outstanding debt can be found in the notes to the financial statements. For presentation purposes, capital leases have been treated as debt. Prior to 2012 the outstanding debt included principal balances only and excluded discounts, premiums, and deferred amounts on advance refundings; therefore, they do not agree with numbers presented in the basic financial statements, exhibits, or the statistical summary. Beginning in 2012 the outstanding debt is net of premiums and discounts. Outstanding debt excluding premiums and discounts is used to calculate the ratio of total debt to gross revenue. All bonded debt is secured by revenues.

² Gross Revenues are defined as operating revenues plus investment income plus proceeds from sales of capital assets plus other income plus cash proceeds from contributions in aid of construction (CIAC) and prepaid CIAC, and cash proceeds from system development charges (SDC) and prepaid SDC.

³ Population estimates are treated water customers only.

⁴ Certain reclassifications have been made to prior years' information to conform to the current year presentation.

⁵ The lien on notes payable is subordinate and junior to the lien on the revenue bonds outstanding and on future revenue bond issues.

PLEDGED-REVENUE COVERAGE: 2009 - 2018

General Obligation Bonds, Water Revenue Bonds, Notes Payable and Obligations under Capital Lease¹

(amounts expressed in thousands)

Year	Gross Revenues ^{2,4,5}	Less Operating Expenses ^{3,4,5}	Net Available Revenue	Total Debt Service ¹			Coverage including Notes Payable Debt ⁶	Coverage not including Notes Payable Debt
				Principal	Interest	Total		
2009	\$ 216,557	\$ 155,127	\$ 61,430	\$ 31,413	\$ 19,204	\$ 50,617	1.21	1.21
2010	259,730	168,501	91,229	32,164	19,065	51,229	1.78	1.78
2011	279,682	164,760	114,922	33,624	22,335	55,959	2.08	2.08
2012	313,093	158,372	154,721	24,715	19,740	44,455	3.48	3.48
2013	290,349	166,049	124,300	26,810	19,410	46,220	2.69	2.69
2014	297,768	181,541	116,227	28,071	18,673	46,744	2.49	2.49
2015	305,073	170,427	134,646	29,117	18,802	47,919	2.81	2.81
2016	336,713	199,029	137,684	23,828	16,248	40,076	3.44	3.45
2017	365,891	196,298	169,593	22,013	21,673	43,686	3.88	3.89
2018	\$ 381,869	\$ 203,229	\$ 178,640	\$ 22,509	\$ 26,256	\$ 48,765	3.66	3.67

¹ Details regarding outstanding debt can be found in the notes to the financial statements. For presentation purposes, capital leases have been treated as debt. All bonded debt is secured by revenue.

² Gross Revenues are defined as operating revenues, plus investment income, plus proceeds from sales of capital assets, plus other income, plus cash proceeds from contributions in aid of construction (CIAC) and prepaid CIAC, and cash proceeds from system development charges (SDC) and prepaid SDC.

³ Operating Expenses are defined as operating expenses plus other expenses minus total depreciation and amortization (as disclosed in Statements of Revenues, Expenses, and Changes in Net Position in the financial statements).

⁴ All items computed as defined in bond covenants. Rate maintenance covenant is 1.10; additional bonds test is 1.2 times average annual debt service. Notes payable debt service and the Capital Lease are not subject to this covenant.

⁵ Certain reclassifications have been made to prior years' information to conform to the current year presentation.

⁶ Notes payable debt has a subordinate lien to the lien on outstanding revenue bonds and future revenue bond issues. Total debt service for notes payable in 2016 was \$0 in principal and \$132 thousand in interest. In 2017 total debt service for notes payable was \$0 in principal and \$60 thousand in interest.

RATIOS OF GENERAL OBLIGATION BONDED DEBT OUTSTANDING: 2009 - 2018

(amounts expressed in thousands, except debt per capita)

Year	General Obligation Bonds ¹	Gross Revenues ^{2,4}	Ratio of General Obligation Debt to Gross Revenue	Estimated Population Served ³	General Obligation Debt per Capita
2009	\$ 31,170	\$ 216,557	0.14	1,111,000	\$ 28
2010	28,090	259,730	0.11	1,125,000	25
2011	23,825	279,682	0.09	1,135,000	21
2012	500	313,093	-	1,147,000	-
2013	-	290,349	-	1,161,000	-
2014	-	297,768	-	1,172,000	-
2015	-	305,073	-	1,210,000	-
2016	-	336,713	-	1,249,000	-
2017	-	365,891	-	1,275,000	-
2018	\$ -	\$ 381,869	-	1,306,000	\$ -

¹ Details regarding outstanding debt can be found in the notes to the financial statements. The Board no longer has authority to issue general obligation bonds of the City.

² Gross Revenues are defined as operating revenues, plus investment income, plus proceeds from sales of capital assets, plus other income, plus cash proceeds from contributions in aid of construction (CIAC) and prepaid CIAC, and cash proceeds from system development charges (SDC) and prepaid SDC.

³ Population estimates are treated water customers only.

⁴ Certain reclassifications have been made to prior years' information to conform to the current year presentation.

RATIOS OF WATER REVENUE BONDED DEBT OUTSTANDING: 2009 - 2018

(amounts expressed in thousands, except debt per capita)

Year	Water Revenue Bonds ¹	Gross Revenues ^{2,4}	Ratio of Water Revenue Debt to Gross Revenue	Estimated Population Served ³	Water Revenue Debt per Capita
2009	\$ 309,025	\$ 216,557	1.43	1,111,000	\$ 278
2010	377,665	259,730	1.45	1,125,000	336
2011	371,560	279,682	1.33	1,135,000	327
2012	401,420	313,093	1.28	1,147,000	350
2013	376,965	290,349	1.30	1,161,000	325
2014	395,125	297,768	1.33	1,172,000	337
2015	368,125	305,073	1.21	1,210,000	304
2016	438,580	336,713	1.30	1,249,000	351
2017	603,415	365,891	1.65	1,275,000	473
2018	\$ 583,490	\$ 381,869	1.53	1,306,000	\$ 447

¹ Details regarding outstanding debt can be found in the notes to the financial statements. The numbers above are principal balances only and exclude discounts, premiums, and deferred amounts on advance refundings; therefore, they do not agree with numbers presented in the basic financial statements, exhibits, or the statistical summary.

² Gross Revenues are defined as operating revenues plus investment income plus proceeds from sales of capital assets plus other income plus cash proceeds from contributions in aid of construction (CIAC) and prepaid CIAC, and cash proceeds from system development charges (SDC) and prepaid SDC.

³ Population estimates are treated water customers only. Population estimates for 2008 through 2019 were revised based on 2010 census.

⁴ Certain reclassifications have been made to prior years' information to conform to the current year presentation.

D - DEMOGRAPHIC AND ECONOMIC INFORMATION

These schedules offer demographic and economic indicators to help the reader understand the environment within which Denver Water's financial activities take place.

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DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA – 2018

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 of the 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. Further, the reported data has not been adjusted to reflect economic trends, notably inflation.

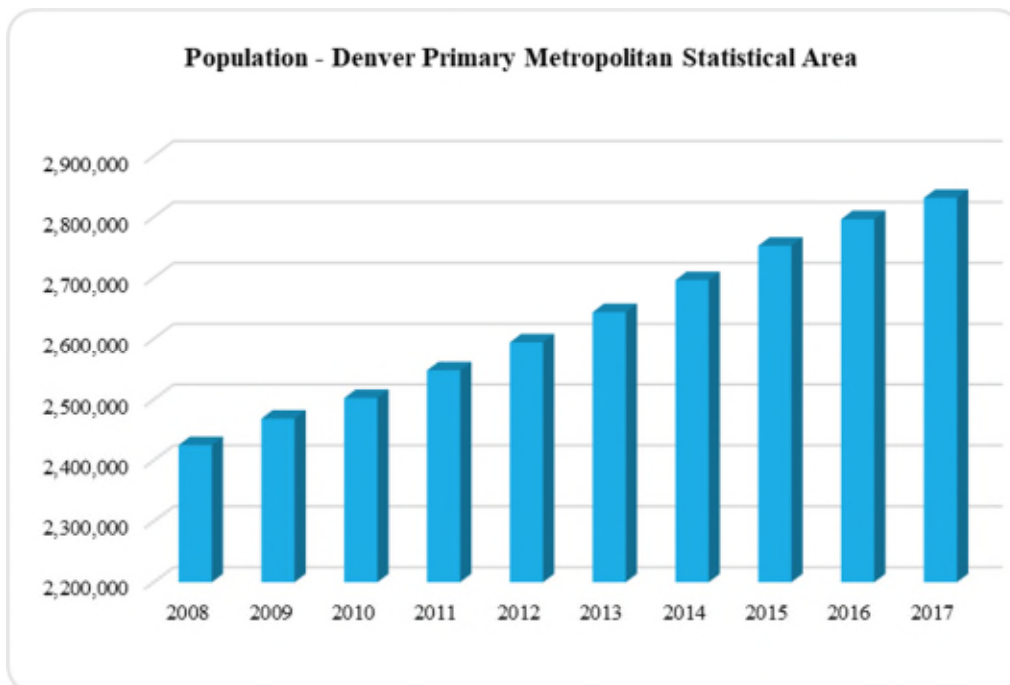
Population

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
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	621,034	2,547,773	5,119,182
2012	635,339	2,594,099	5,189,861
2013	649,478	2,643,834	5,266,317
2014	664,715	2,696,388	5,345,680
2015	683,081	2,752,732	5,444,871
2016	696,347	2,796,333	5,534,240
2017	705,651	2,831,280	5,609,445
2018	n/a	n/a	n/a

(n/a = not available)

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



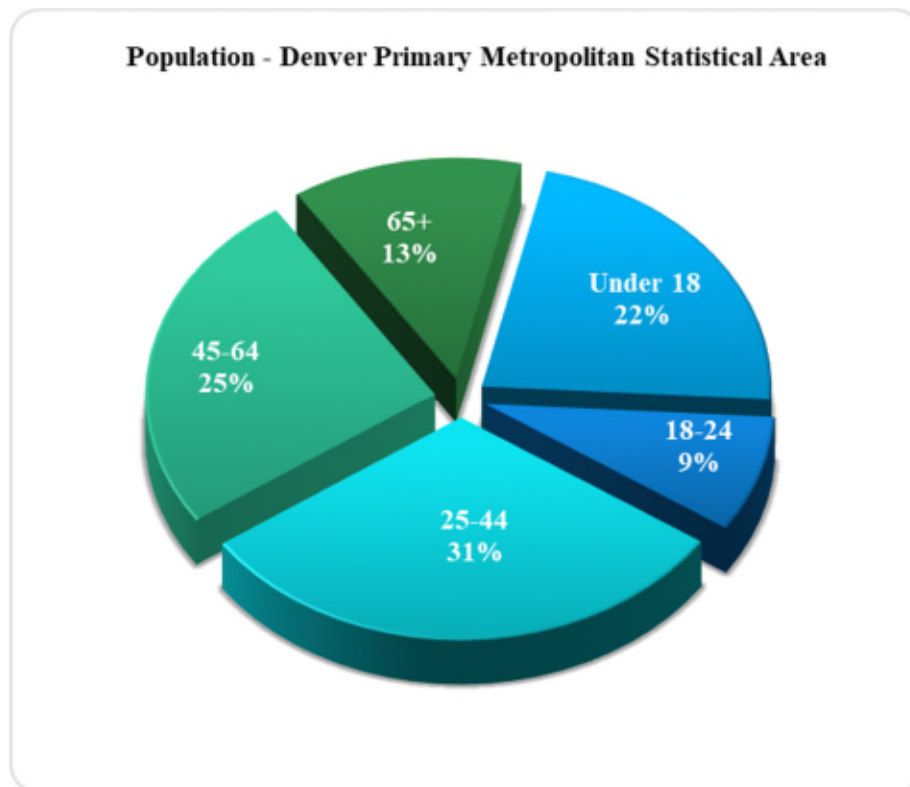
Age Distribution

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	State of
	Denver	PMSA	Colorado
Under 18	19.3%	22.3%	22.2%
18-24	7.8%	8.5%	9.8%
25-44	37.2%	30.9%	28.6%
45-64	23.0%	25.3%	25.2%
65+	12.7%	12.9%	14.2%

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

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



DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA – 2018
(continued)

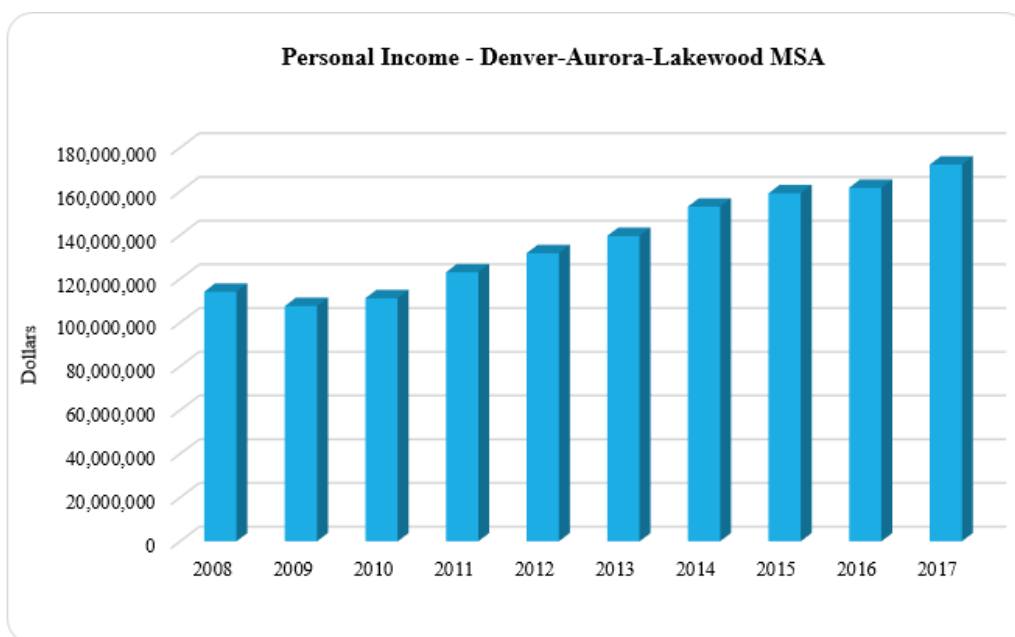
Income

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 2008 through 2017 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	Denver- Aurora- Lakewood MSA	State of Colorado	United States
2008	\$ 31,212,870	\$ 114,199,800	\$ 207,772,729	\$ 12,438,527,000
2009	27,656,231	107,642,100	198,147,196	12,051,307,000
2010	29,470,797	111,188,500	204,691,900	12,541,995,000
2011	33,539,485	123,111,700	222,571,956	13,315,478,000
2012	36,684,271	131,791,100	236,687,388	13,998,383,000
2013	40,024,296	139,679,700	248,958,974	14,175,503,000
2014	45,199,989	153,090,200	271,101,038	14,983,140,000
2015	45,701,316	159,190,300	284,142,915	15,711,634,000
2016	44,486,813	161,732,700	289,620,855	16,115,630,000
2017	49,225,881	172,311,400	306,411,131	16,820,250,000
2018	n/a	n/a	n/a	n/a

(n/a = not available. All dollar estimates are in current dollars not adjusted
Last updated: November 15, 2018 -- new estimates for 2001-2016.)

Source: Colorado Department of Labor and Employment.



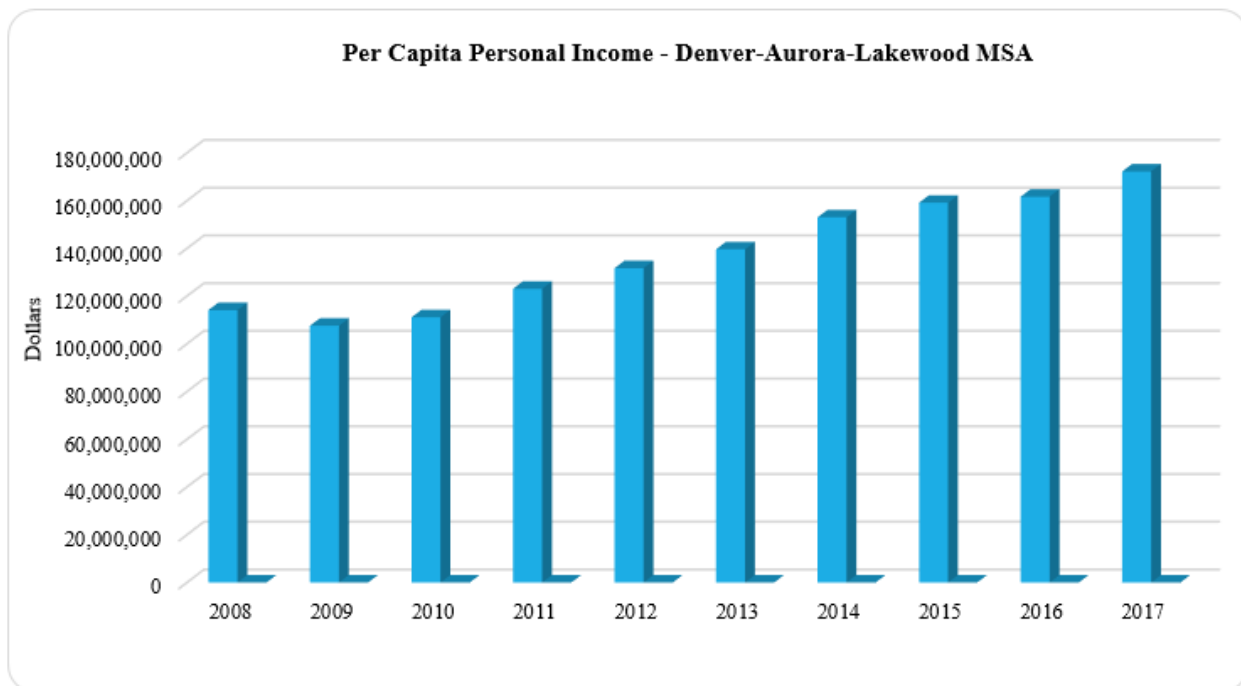
DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA – 2018
(continued)

Per Capita Personal Income

Year	Denver	Denver- Aurora- Lakewood MSA	State of Colorado	United States
2008	\$ 54,215.00	\$ 46,348.00	\$ 42,492.00	\$ 40,904.00
2009	46,954.00	42,895.00	39,851.00	39,284.00
2010	48,856.00	43,528.00	40,549.00	40,545.00
2011	54,152.00	47,805.00	43,502.00	42,727.00
2012	57,880.00	51,804.00	45,637.00	44,582.00
2013	61,761.00	51,804.00	47,308.00	44,826.00
2014	68,147.00	55,673.00	50,746.00	47,025.00
2015	67,048.00	56,708.00	52,228.00	48,940.00
2016	64,004.00	56,712.00	52,372.00	49,831.00
2017	69,862.00	59,660.00	54,646.00	51,640.00
2018	n/a	n/a	n/a	n/a

(n/a = not available. Per capita personal income was computed using Census Bureau mid-year population estimates. Estimates for 2010-2017 reflect county population estimates available as of March 2018. All dollar estimates are in current dollars not adjusted for inflation. Last updated: November 15, 2018 - new estimates for 2001-2016.)

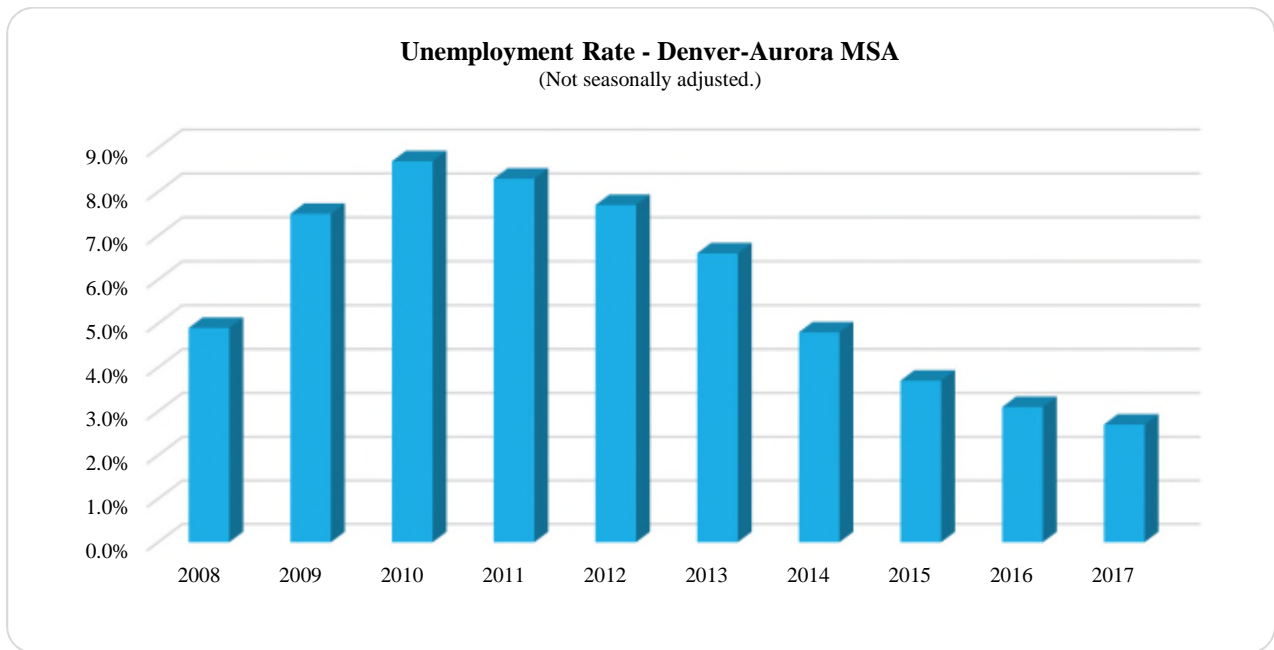
Source: Colorado Department of Labor and Employment.



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 2.7% as of December 2017.

Source: Colorado Department of Labor and Employment.



DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA – 2018
(continued)

Local Area Employment Statistics (Not seasonally adjusted.)				
Denver				
Year	Labor Force (Thousands)	% Change	Unemployed (Thousands)	% Unemployment Rate
2008	323.3	2.70	17.4	5.4
2009	324.3	0.30	26.3	8.1
2010	347.6	7.20	31.7	9.1
2011	352.2	1.30	30.3	8.6
2012	357.7	1.60	28.1	7.9
2013	363.9	1.70	24.1	6.6
2014	369.9	1.70	17.8	4.8
2015	376.6	1.80	14.0	3.7
2016	384.3	2.00	12.1	3.1
2017	397.2	0.03	10.9	2.8
2018	n/a	n/a	n/a	n/a
Denver-Aurora MSA				
Year	Labor Force (Thousands)	% Change	Unemployed (Thousands)	% Unemployment Rate
2008	1,393.4	2.50	68.9	4.9
2009	1,392.7	-0.10	104.2	7.5
2010	1,423.4	2.20	123.6	8.7
2011	1,431.2	0.50	118.8	8.3
2012	1,448.2	1.20	112.0	7.7
2013	1,468.5	1.40	96.9	6.6
2014	1,492.0	1.60	71.7	4.8
2015	1,510.0	1.20	55.9	3.7
2016	1,541.2	0.02	48.2	3.1
2017	1,590.4	0.03	43.4	2.7
2018	n/a	n/a	n/a	n/a
State of Colorado				
Year	Labor Force (Thousands)	% Change	Unemployed (Thousands)	% Unemployment Rate
2008	2,716.6	1.90	131.4	4.8
2009	2,723.0	0.20	198.5	7.3
2010	2,724.4	0.10	238.0	8.7
2011	2,736.1	0.40	228.8	8.4
2012	2,757.2	0.80	217.3	7.9
2013	2,775.7	0.70	189.7	6.8
2014	2,810.4	1.30	140.5	5.0
2015	2,833.5	0.80	110.5	3.9
2016	2,893.3	0.02	94.3	3.3
2017	2,992.3	0.03	84.8	2.8
2018	n/a	n/a	n/a	n/a

Source: Colorado Department of Labor and Employment

DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA – 2018
(continued)

Principal Employers

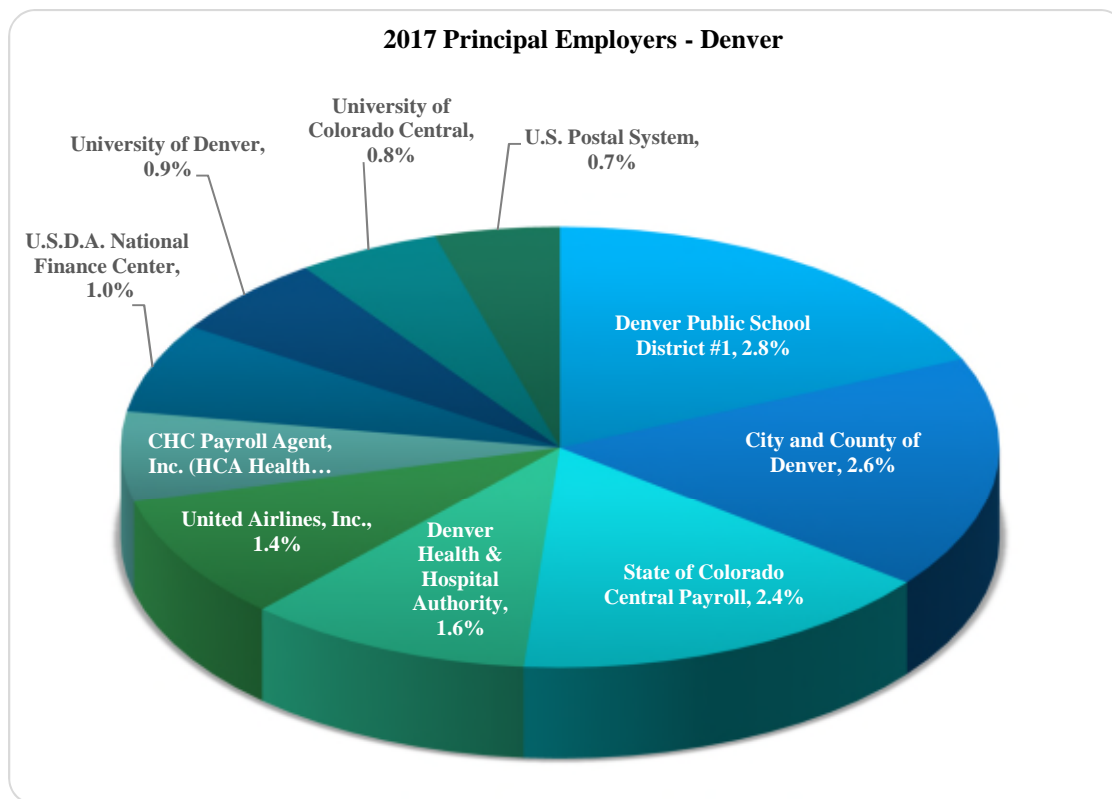
The following table sets forth the ten largest employers in Denver for the current year and the period nine years prior, the number of persons each entity employs, and the percentage of total employment that each represents.

**Principal Employers in Denver
Current Year and Nine Years Ago**

	2017			2008		
	Employees	Rank	% of Total City Employment	Employees	Rank	% of Total City Employment
Denver Public School District #1	12,387	1	2.8%	9,672	3	2.6%
City and County of Denver	11,190	2	2.6%	10,598	1	2.9%
State of Colorado Central Payroll	10,548	3	2.4%	9,082	4	2.5%
Denver Health & Hospital Authority	6,842	4	1.6%	4,305	7	1.2%
United Airlines, Inc.	6,000	5	1.4%	5,473	5	1.5%
CHC Payroll Agent, Inc. (HCA Health One)	4,303	6	1.0%			
U.S.D.A. National Finance Center	4,240	7	1.0%	9,942	2	2.7%
University of Denver	4,009	8	0.9%			
University of Colorado Central	3,399	9	0.8%	5,087	6	1.4%
U.S. Postal System	3,225	10	0.7%	3,750	9	1.0%
Quest Corporation				4,050	8	1.1%
Frontier Airlines Inc.				3,433	10	0.9%
Total	66,143		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.



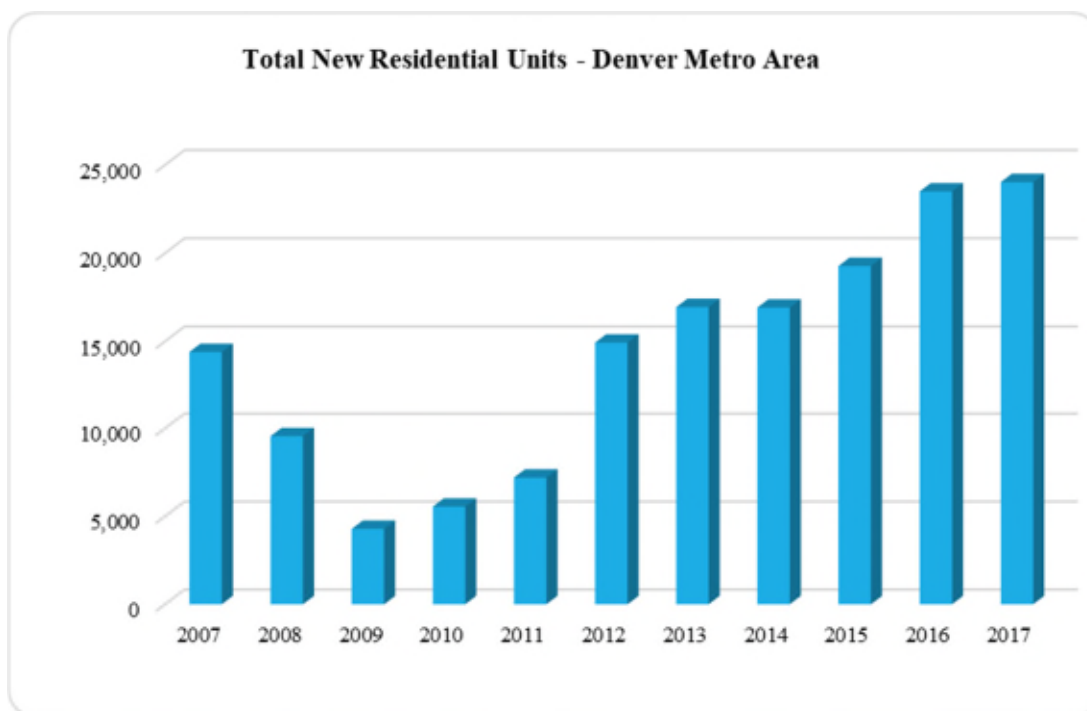
New Residential Building Construction

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								
Denver					Denver Metropolitan Area			
Year	Single-Family Detached	Single-Family Attached	Multi-Family ²	Total	Single-Family Detached	Single-Family Attached	Multi-Family	Total
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	2,370	198	7,957	10,525	11,419	384	12,218	24,021
2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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



E - OPERATING INFORMATION

These schedules contain information about Denver Water's operations and resources to help the reader understand how Denver Water's financial information relates to the services Denver Water provides and the activities it performs.

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EMPLOYEES BY DIVISION¹: 2009 - 2018

	2018	2017 ^{6,7}	2016 ³	2015	2014	2013	2012	2011 ⁴	2010	2009 ⁵
Division/Section²										
Manager & Staff Division	31.3	35.4	25.0	10.0	15.0	11.0	10.0	7.0	7.0	7.0
Human Resources Division	26.0	28.0	31.0	29.0	32.0	25.0	24.8	23.8	23.8	22.8
Information Technology Division	96.3	100.3	104.0	110.4	92.5	80.8	74.5	68.5	68.5	69.0
Public Affairs Division										
Chief Public Affairs Officer	-	-	3.0	3.0	3.0	3.0	2.0	6.0	4.0	4.0
Conservation & Comm. Outreach	-	-	29.0	-	11.0	-	-	8.6	9.6	9.6
Communications and Marketing	-	-	14.0	12.0	-	11.6	10.4	-	-	-
Conservation	-	-	-	17.0	16.0	17.0	15.0	15.0	17.0	17.0
Customer Relations	-	-	-	9.0	7.0	7.0	6.8	-	-	-
Central Services	-	-	-	-	-	-	-	-	3.0	3.0
Customer Care	-	-	31.0	-	-	-	-	-	39.2	41.2
CIS Business Support	-	-	-	-	-	-	-	-	2.0	5.0
Customer Services - Field	-	-	52.0	-	-	-	-	-	70.0	75.0
Meter Inspection Shop	-	-	-	-	-	-	-	-	7.0	5.0
Sales & Support	-	-	16.0	-	-	-	-	-	20.8	16.8
	-	-	145.0	41.0	37.0	38.6	34.2	29.6	172.6	176.6
Customer Relations										
Chief Customer Relations Officer	-	-	-	3.0	2.0	2.0	2.0	2.0	-	-
Central Services	-	-	-	-	2.6	2.6	1.0	3.0	-	-
Customer Care	-	-	-	29.3	30.3	31.3	42.8	42.2	-	-
Quality Assurance & Reporting	-	-	-	8.0	7.0	8.0	-	-	-	-
Customer Services - Field	-	-	-	48.0	49.0	51.0	64.0	66.0	-	-
Meter Inspection Shop	-	-	-	-	-	-	-	7.0	-	-
Sales Administration	-	-	-	9.0	9.0	9.0	13.0	12.8	-	-
	-	-	-	97.3	99.9	103.9	122.8	133.0	-	-
External Affairs										
Chief External Affairs Officer	7.0	6.0	-	-	-	-	-	-	-	-
Conservation & Comm. Outreach	17.0	17.0	-	-	-	-	-	-	-	-
Communications and Marketing	13.0	13.0	-	-	-	-	-	-	-	-
Customer Relations	1.0	1.0	-	-	-	-	-	-	-	-
Customer Care	35.5	37.8	-	-	-	-	-	-	-	-
Customer Services - Field	51.0	52.0	-	-	-	-	-	-	-	-
Sales & Support	17.0	17.0	-	-	-	-	-	-	-	-
Environmental Planning	8.0	8.0	-	-	-	-	-	-	-	-
Raw Water Supply	5.0	4.0	-	-	-	-	-	-	-	-
Water Resources Analysis	6.0	6.0	-	-	-	-	-	-	-	-
Water Resource Planning	7.0	8.0	-	-	-	-	-	-	-	-
Water Rights	7.0	7.0	-	-	-	-	-	-	-	-
	174.5	176.8	-	-	-	-	-	-	-	-

See accompanying footnotes on final page of report.

(continued)

EMPLOYEES BY DIVISION¹: 2009 - 2018, (continued)

	2018	2017 ^{6,7}	2016 ³	2015	2014	2013	2012	2011 ⁴	2010	2009 ⁵
Legal Division	-	-	-	13.0	14.0	14.4	14.6	13.6	13.6	14.6
Finance Division										
Chief Financial Officer	2.0	0.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0
Purchasing & Contracting	-	-	-	12.0	11.0	11.0	11.0	9.0	5.0	9.0
Records & Document Administration	-	-	-	8.8	7.8	8.8	9.0	9.0	9.0	9.0
Treasury	8.0	8.0	8.0	8.0	9.0	9.0	9.0	8.0	7.0	8.0
Controller	0.0	3.0	2.0	1.0	1.0	1.0	-	-	-	-
Finance Computer Support	-	-	-	-	-	1.0	2.0	2.0	2.0	2.0
Budget	5.0	3.0	2.0	4.0	3.0	3.0	3.0	4.0	4.0	5.0
Accounting, Payroll, AP	16.0	18.0	17.0	20.0	20.0	20.0	20.0	20.0	19.0	19.0
Rate Administration	2.0	2.0	-	1.0	3.0	3.0	3.0	3.0	3.0	4.0
	33.0	34.0	31.0	56.8	56.8	57.8	58.0	56.0	50.0	58.0
Engineering Division										
Chief Engineering Officer	12.8	12.8	13.0	7.8	7.8	7.8	7.8	7.8	6.0	6.0
Asset Recording	8.0	8.0	7.0	7.0	8.0	10.0	7.0	7.0	7.0	7.0
Programs & Projects	58.8	56.0	53.0	55.0	58.0	58.0	57.9	53.9	57.0	57.0
Survey	24.0	24.0	26.0	23.0	25.0	25.0	25.0	26.0	26.0	26.0
Hydraulics	7.0	7.0	-	-	-	-	-	-	-	-
Construction Management	23.0	28.0	28.0	27.0	28.0	24.0	25.0	24.0	24.0	23.0
Distribution & Property Mgmt Admin	30.0	29.0	31.0	38.0	37.0	41.0	39.0	40.0	41.0	40.0
	163.6	164.8	158.0	157.8	163.8	165.8	161.7	158.7	161.0	159.0
Planning Division										
Chief Planning Officer	-	-	4.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Environmental Planning	-	-	7.0	6.0	5.6	5.6	5.6	5.6	5.6	5.6
Raw Water Supply	-	-	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Water Resources Analysis	-	-	9.0	10.0	10.0	11.0	11.0	9.0	11.0	11.0
Water Resource Planning	-	-	4.0	4.0	4.0	3.0	3.0	3.0	2.0	2.0
Demand Planning	-	-	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
Treated Water Planning	-	-	9.0	-	-	-	-	-	-	-
Water Rights	-	-	6.0	7.0	6.0	7.0	7.0	7.0	7.0	7.0
Hydraulics	-	-	-	10.0	10.0	10.0	10.0	8.0	8.0	8.0
	-	-	48.0	48.0	48.6	49.6	49.6	45.6	46.6	46.6
Administrative Services Division										
Chief Administrative Officer	38.0	37.0	33.0	-	-	-	-	-	-	-
Safety and Security	12.0	12.0	13.0	-	-	-	-	-	-	-
Recreation Management	6.0	6.0	6.0	-	-	-	-	-	-	-
	56.0	55.0	52.0	-	-	-	-	-	-	-

See accompanying footnotes on final page of report.

(continued)

EMPLOYEES BY DIVISION¹: 2009 - 2018, (continued)

	2018	2017 ^{6,7}	2016 ³	2015	2014	2013	2012	2011 ⁴	2010	2009 ⁵
Operations and Maintenance Division										
Chief OM Officer	5.0	5.0	6.0	7.0	5.0	6.0	3.0	4.0	4.0	4.0
Source of Supply	51.0	52.0	58.0	56.0	58.0	57.0	57.0	59.0	61.0	60.0
Water Quality & Treatment	96.0	102.0	118.0	35.0	44.0	44.0	42.0	37.0	33.0	33.0
Water Treatment	-	-	-	86.0	85.0	87.0	84.0	88.0	89.0	89.0
Treated Water Operations	-	-	-	53.0	55.0	62.0	58.0	59.0	59.0	57.5
Water Distribution	191.0	194.0	190.0	136.0	122.0	132.0	142.0	144.0	157.0	149.0
Emergency Management	-	-	-	4.0	2.0	2.0	2.0	-	-	-
Support Services	77.0	86.0	92.0	-	-	-	-	-	-	-
Safety and Loss Control	-	-	-	11.0	10.0	15.0	15.0	16.0	14.0	16.0
Instrumentation & Ctrl Systems	-	-	-	-	18.0	11.0	14.0	12.0	11.0	12.0
Maintenance and Warehouse	-	-	-	106.0	106.0	102.0	113.0	115.0	118.0	121.0
	420.0	439.0	464.0	494.0	505.0	518.0	530.0	534.0	546.0	541.5
Total All Divisions	1,000.7	1,033.3	1,058.0	1,057.3	1,064.6	1,064.9	1,080.2	1,069.8	1,089.1	1,095.1

¹ Number of employees includes regular and introductory employees. Temporary and project employees are not included. The source of the data is Human Resource employee records.

² Section names may have changed due to business needs.

³ In 2016, the Legal Division was added to the Manager & Staff division. The Customer Relations division was added to the Public Affairs division. The Administrative Services division is new.

⁴ In 2011, the Customer Relations Division was split out from Public Affairs.

⁵ In 2009, Director positions were moved to their respective divisions and manager positions were moved to their respective sections.

⁶ In 2017, Planning and Public Affairs were combined to create a new division External Affairs. Hydraulics Eng. was added to Eng. (formerly was in Planning).

⁷ In 2017, the FTEs for each division's chief were reclassified to Manager and Staff.

CAPITAL ASSETS BY FUNCTION: 2009 - 2018

(amounts expressed in thousands)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
CAPITAL ASSETS NOT BEING DEPRECIATED										
Land and land rights	\$ 130,445	\$ 129,789	\$ 99,108	\$ 99,098	\$ 115,291	\$ 115,304	\$ 115,107	\$ 114,149	\$ 113,473	\$ 112,348
Water rights and other	70,472	70,472	105,785	105,785	75,550	75,550	74,161	74,100	70,033	66,975
Construction work in progress (CWIP)	340,438	265,757	259,690	163,266	171,215	124,244	117,862	129,770	110,483	77,340
Total capital assets not being depreciated	541,355	466,018	464,583	368,149	362,056	315,098	307,130	318,019	293,989	256,663
CAPITAL ASSETS BEING DEPRECIATED										
Buildings and improvements	413,792	405,375	199,329	201,538	281,772	279,280	254,796	236,538	224,496	217,774
Improvements other than buildings	2,086,796	1,971,680	2,044,423	2,002,297	1,955,572	1,890,470	1,860,363	1,761,486	1,698,311	1,648,231
Machinery and equipment	430,287	412,683	392,963	393,007	246,368	246,433	221,915	222,362	231,107	226,396
Total capital assets being depreciated	2,930,875	2,789,738	2,636,715	2,596,842	2,483,712	2,416,183	2,337,074	2,220,386	2,153,914	2,092,401
Less accumulated depreciation										
Buildings and improvements	(124,083)	(117,420)	(48,453)	(47,372)	(76,257)	(72,278)	(68,216)	(63,781)	(59,093)	(55,819)
Improvements other than buildings	(588,296)	(563,245)	(596,587)	(570,105)	(578,572)	(549,357)	(520,020)	(501,992)	(475,222)	(454,312)
Machinery and equipment	(239,589)	(227,197)	(211,396)	(200,614)	(121,358)	(112,055)	(101,296)	(92,405)	(86,676)	(78,929)
Total accumulated depreciation	(951,968)	(907,862)	(856,436)	(818,091)	(776,187)	(733,690)	(689,532)	(658,178)	(620,991)	(589,060)
Total capital assets being depreciated, net	1,978,907	1,881,876	1,780,279	1,778,751	1,707,525	1,682,493	1,647,542	1,562,208	1,532,923	1,503,341
TOTAL CAPITAL ASSETS, NET	\$ 2,520,262	\$ 2,347,894	\$ 2,244,862	\$ 2,146,900	\$ 2,069,581	\$ 1,997,591	\$ 1,954,672	\$ 1,880,227	\$ 1,826,912	\$ 1,760,004

BUDGET TO ACTUAL - RECEIPTS AND EXPENDITURES

BUDGET TO ACTUAL COMPARISON 2014 - 2018 AND 2019 BUDGET (BUDGET BASIS)

(amounts expressed in thousands)

	<u>2019</u>	<u>2018</u>		<u>2017³</u>		<u>2016²</u>		<u>2015</u>		<u>2014</u>	
	Budget	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
BEGINNING CASH & INVESTMENTS	\$ 364,170	\$ 449,379	\$ 449,379	\$ 287,394	\$ 287,394	\$ 240,889	\$ 240,889	\$ 234,924	\$ 234,924	\$ 219,744	\$ 219,744
RECEIPTS FROM:											
Sale of water	296,208	282,658	306,941	269,481	284,304	273,112	274,299	269,256	242,225	250,376	238,777
Nonoperating, interest & other	26,315	23,524	27,728	20,305	29,456	19,482	19,200	19,951	21,184	19,336	24,026
System development charges	40,058	34,000	41,045	34,035	42,486	20,294	38,752	17,294	36,109	15,294	32,736
Developer participation (new facilities), reimbursements & grants	10,616	4,800	5,756	-	9,640	8,129	3,239	4,415	10,795	2,163	6,384
	373,197	344,982	381,470	323,821	365,886	321,017	335,490	310,916	310,313	287,169	301,923
Sale of bonds or issuance of notes	60,000	60,000	-	205,000	205,864	56,923	71,238	42,000	30,000	36,000	40,102
Total receipts	433,197	404,982	381,470	528,821	571,750	377,940	406,728	352,916	340,313	323,169	342,025
LESS EXPENDITURES FOR:											
Operations, maintenance & refunds	207,617	197,515	207,767	201,270	197,455	196,865	191,060	191,036	185,820	197,662	185,820
Debt service	47,649	49,149	48,765	45,456	43,686	43,835	41,121	48,822	56,742	48,364	46,742
	255,266	246,664	256,532	246,726	241,141	240,700	232,181	239,858	242,562	246,026	232,562
Capital improvements (new facilities)	179,775	137,895	147,012	125,237	117,330	85,758	94,231	29,808	33,011	45,931	44,343
System replacements	69,490	53,148	59,660	53,081	44,651	51,171	44,941	50,125	44,668	59,734	52,153
Equipment	4,302	5,483	5,687	6,507	6,405	7,000	7,548	12,700	10,603	5,813	3,030
	253,567	196,526	212,359	184,825	168,386	143,929	146,720	92,633	88,282	111,478	99,526
Indirects to capital	-	-	-	-	-	-	-	11,527	9,058	13,994	9,585
Total expenditures	508,833	443,190	468,891	431,551	409,527	384,629	378,901	344,018	339,902	371,498	341,673
Cash Balance Adjustment ¹			2,212		(238)		18,678		5,554		14,828
ENDING CASH & INVESTMENTS	\$ 288,534	\$ 411,171	\$ 364,170	\$ 384,664	\$ 449,379	\$ 234,200	\$ 287,394	\$ 243,822	\$ 240,889	\$ 171,415	\$ 234,924

GENERAL EXPLANATION OF VARIANCES:

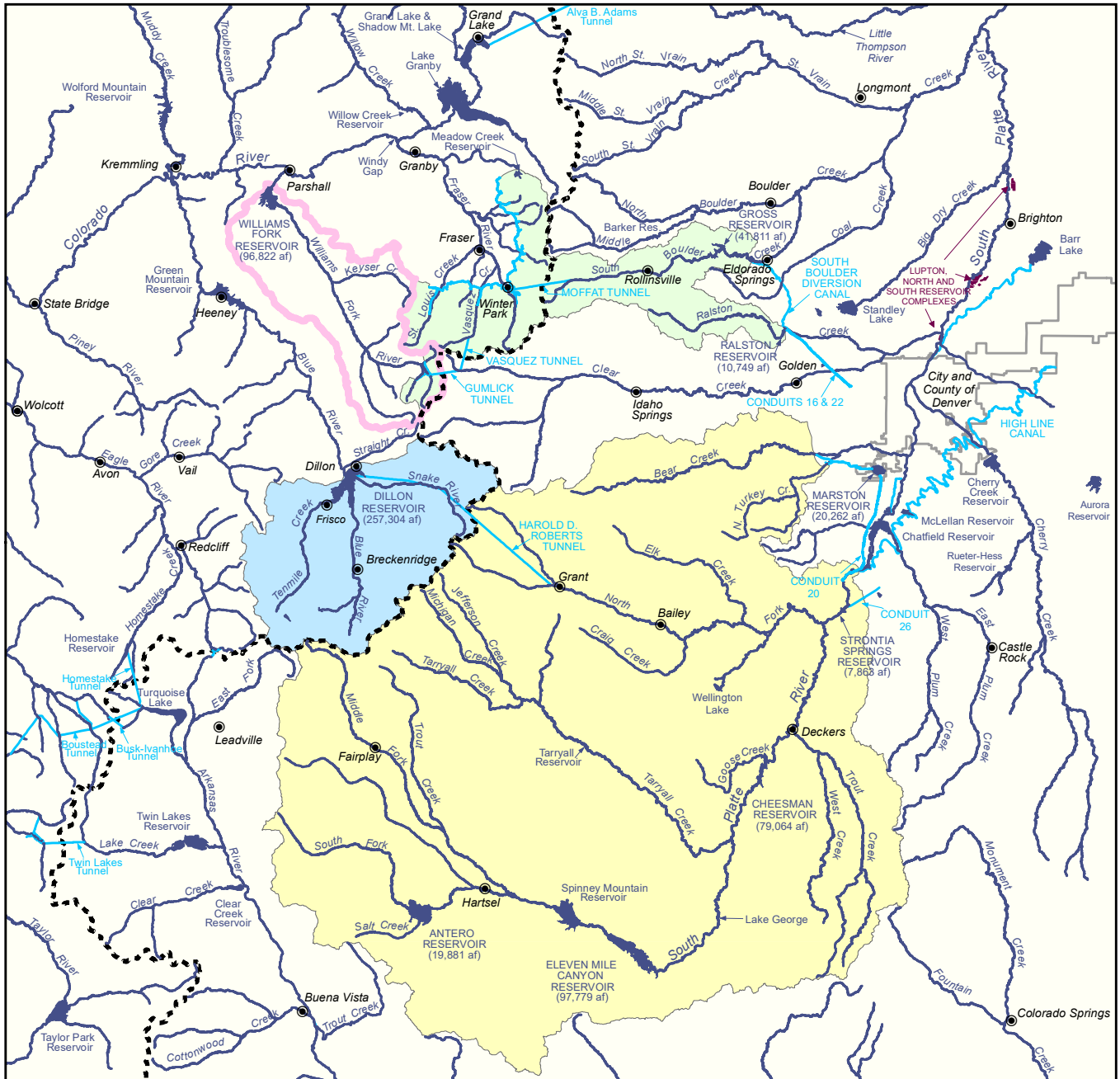
¹ The cash balance adjustment is due to a timing difference between cash payments that were made in January but were accrued for in December.

² In 2016, financial system underwent a significant conversion eliminating the allocation of indirect costs to capital. Totals include Applied Labor. The financial system conversion also resulted in changes to the categorization and inclusion/exclusion of certain budgeted costs for the 2016 budget.

³ Beginning in 2017, totals include Applied Labor. The 2017 budget for Build America Bonds was reclassified from sale of bonds or issuance of notes to nonoperating, interest & other. Variances in operating receipts are generally due to abnormal climatic conditions. Variances in system development charges are generally related to levels of activity in the home building industry. Variances in capital improvements are generally due to changes in project scheduling.

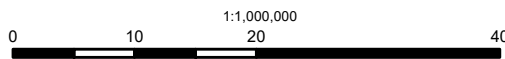
Cash and investments do not agree with amounts on the statements of net position due to differences in valuation methods. Prior year information has been updated to adjust for timing differences the original reporting period.

City and County of Denver Board of Water Commissioners Water Collection System



LEGEND

 South Platte Collection System	 Town
 Roberts Tunnel Collection System	 Continental Divide
 Moffat Collection System	 Major Canal or Aqueduct
 Williams Fork Reservoir Watershed	 Major Stream or River
 Major Lake or Reservoir	



Scale number is accurate when printed at 8.5 x 11 inches in size.



Map Date: 12/27/2018
 Author: GIS - SRS
 Sources: USGS-NHD, DENVER WATER,
 DOLA, NRCS, CDWR

Operating Indicators by Function: 2009 - 2018

Supply Facts:

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Raw water collected in acre feet	221,212	297,878	274,670	279,378	300,030	395,638	194,682	359,965	302,883	276,895
Supply from South Platte River & Effluent Exchange (acre-feet)	78,967	132,115	158,324	166,561	148,680	142,915	85,765	117,559	151,891	138,791
Supply from Roberts Tunnel/Blue River (acre-feet)	56,101	86,124	40,795	39,801	77,765	111,564	54,394	148,643	74,674	58,468
Supply from Moffat System (acre-feet)	86,144	79,639	75,551	73,016	73,585	141,159	54,523	93,763	76,318	79,636
Percent of total water collected in acre - feet:										
Percent from South Platte System	36%	44%	58%	60%	50%	36%	44%	33%	50%	50%
Percent from Roberts Tunnel/Blue River System	25%	29%	15%	14%	26%	28%	28%	41%	25%	21%
Percent from Moffat System	39%	27%	28%	26%	25%	36%	28%	26%	25%	29%
Reservoir storage capacity in acre feet	676,271	676,271	676,271	676,271	676,271	676,271	676,271	676,271	676,271	676,271
Reservoir storage in acre feet, January 1	586,124	568,124	582,015	601,493	611,625	471,380	620,603	598,580	614,044	612,097
Percent of capacity	86.7%	84.0%	86.1%	88.9%	90.4%	69.7%	91.8%	88.5%	90.8%	90.5%
Reservoir storage in acre feet, December 31	520,813	586,617	568,124	582,015	601,493	611,625	471,380	620,603	598,580	614,044
Percent of capacity	77.0%	86.7%	84.0%	86.1%	88.9%	90.4%	69.7%	91.8%	88.5%	90.8%
Power generation in KWH (excluding power purchased)	63,127,191	76,948,391	67,436,291	61,586,646	60,209,003	74,461,486	80,636,429	77,394,064	62,814,395	75,026,392
Value of power generation (excluding power purchased)	\$ 4,420,800	\$ 4,510,456	\$ 4,337,858	\$ 3,913,171	\$ 4,403,373	\$ 4,746,456	\$ 4,757,687	\$ 5,518,440	\$ 4,659,166	\$ 4,531,594

Pumping:

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Treated Water pumped in million gallons- Current year	33,906.5	29,446.8	26,767.2	27,677.6	36,088.9	34,895.4	39,484.1	36,443.5	41,611.3	38,198.9
Treated Water pumped in million gallons- Last year	29,446.8	26,767.2	27,677.6	36,088.9	34,895.4	39,484.1	36,443.5	41,611.3	38,198.9	50,283.7
Percentage increase (decrease) from last year	15%	10%	(3)% ¹	(23)% ¹	3%	(12)%	8%	(12)%	9%	(24)%
Number of treated water pump stations	18	18	18	18	18	18	18	18	18	18
Maximum pumping capacity in million gallons per day	1,048.4	1,048.4	1,048.4	1,048.4	1,007.9	1,007.9	1,003.3	1,003.3	1,095.9	1,095.9
Pumping energy costs (Treated Water) - Current year	\$ 3,135,017	\$ 2,959,900	\$ 2,903,926	\$ 2,816,438	\$ 3,287,803	\$ 2,964,275	\$ 3,040,371	\$ 2,848,293	\$ 2,515,225	\$ 2,414,444

Transmission and Distribution:

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Miles of pipe installed, net of reductions	15.9	33.3	17.6	17.5	16.1	8.1	9.0	4.6	82.4	N/A2
Miles of pipe in system	3,158.5	3,142.6	3,109.3	3,091.7	3,074.2	3,058.2	3,050.1	3,041.0	3,037.0	2,954.0
Miles of recycled water mains in system	71.7	70.4	73.5	67.2	67.0	63.1	49.0	45.0	44.2	35.3
Number of valves operated and maintained	85,565	84,674	83,171	82,250	81,262	80,265	78,889	76,721	76,240	71,893
Number of recycled water valves in system	1,604	1,459	1,538	1,512	1,380	1,188	979	865	778	638
Number of hydrants operated and maintained	21,195	20,967	20,556	20,269	20,030	19,818	19,670	19,553	19,439	19,159
Leak Detection Program:										
Miles of pipe surveyed	660	1,384	922	808	1,290	615	1,022	802	801	606
Visible leaks pinpointed	182	183	134	131	160	116	137	199	43	89
Non-visible leaks detected	58	100	68	62	110	61	93	122	100	145

(continued)

Operating Indicators by Function: 2009 - 2018 (continued)

Treatment and Water Quality:	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Acre-Feet	206,074	195,822	199,489	184,489	187,771	184,785	220,864	209,485	213,887	190,599
Population	1,306,000	1,275,000	1,249,000	1,210,000	1,172,000	1,161,000	1,147,000	1,135,000	1,125,000	1,111,000
Treated water consumption in million gallons	67,149	63,809	65,004	60,116	61,185	60,212	71,969	68,261	69,695	62,107
Average daily consumption in million gallons	184	175	178	165	168	165	197	187	191	170
Maximum daily consumption in million gallons ³	396	365	356	344	335	355	398	366	366	342
Average daily gallons per capita	141	137	142	136	143	142	171	165	170	153
Maximum hour treated water use rate in million gallons per day ³	637	629	592	499	604	591	628	547	578	517
Precipitation in Inches - Year	13	15	14	28	20	22	12	19	14	21
Precipitation in Inches - 4/1 to 9/30	9	12	8	19	15	18	9	14	10	15
Water Quality:										
Watershed	5,222	6,624	6,826	5,544	1,669	1,140	1,243	817	927	922
Treatment plant	2,222	3,233	3,168	4,443	1,358	1,225	1,566	1,073	1,021	974
Distribution system	13,521	15,909	16,575	18,953	11,316	10,674	9,728	10,315	8,059	8,675
Other	7,700	14,890	5,599	6,538	2,258	3,126	1,157	1,680	2,108	2,451
Lead & Copper	7,697	7,570	-	-	-	-	-	-	-	-
Total Samples Collected	36,362	48,226	32,168	35,478	16,601	16,165	13,694	13,885	12,115	13,022
Microbiological analyses completed	15,346	22,568	11,407	11,208	12,070	9,845	9,338	9,735	9,075	9,534
Chemical and Field analyses completed	160,241	147,819	49,829	56,885	54,181	52,554	40,080	40,703	37,066	36,885
Total Analyses Performed	175,587	170,387	61,236	68,093	66,251	62,399	49,418	50,438	46,141	46,419

Treatment Plant Capacity:

Plant	Capacity in MGD	Type
Foothills	280.0	Dual-Media
Marston	250.0	Dual-Media
Moffat	185.0	Rapid-Sand
	715.0	

Chemical Treatment:

Chemicals are used at various points throughout the treatment plants to provide for appropriate water treatment including oxidation, coagulation, pH adjustment, fluoridation and disinfection. The following are total pounds and cost of chemicals used at each treatment plant.

Plant	Total Cost	Pounds of Chemicals Used
Foothills	\$ 2,451,930	21,871,886
Moffat	849,706	7,259,025
Marston	760,248	6,765,422
Recycling	383,085	2,688,265
	\$ 4,444,969	38,584,598

(continued)

Operating Indicators by Function: 2009 - 2018 (continued)

TREATED WATER QUALITY SUMMARY: TREATMENT PLANT EFFLUENT AVERAGES - 2018

Analysis of Effluent Water	Foothills	Marston	Moffat
<u>General</u>			
Alkalinity, Total as CaCO ₃ (mg/L)	61.1	64.5	28.5
Chlorine, Total (mg/L)	1.8	1.8	1.7
Hardness as CaCO ₃ (mg/L)	76.0	84.0	29.0
pH (SU)	7.8	7.8	7.9
Specific Conductance (µS/cm)	324.0	330.0	118.0
Temperature (°C)	12.9	13.1	9.9
Total Dissolved Solids (mg/L)	180.2	180.8	60.9
Turbidity (NTU)	0.1	0.1	0.0
<u>Metals Direct Analyses</u>			
Aluminum (µg/L)	33.9	44.3	16.2
Barium (µg/L)	37.9	39.2	18.6
Boron (µg/L)	9.6	14.1	0.0
Calcium (mg/L)	30.6	32.7	11.9
Magnesium (mg/L)	8.3	8.4	2.2
Manganese (µg/L)	21.4	5.7	0.6
Molybdenum (µg/L)	20.4	20.6	0.6
Potassium (mg/L)	2.2	2.3	0.7
Sodium (mg/L)	19.9	18.8	7.3
Uranium (µg/L)	0.5	0.3	0.0
<u>Ions (mg/L)</u>			
Chloride	24.1	23.3	5.7
Fluoride	0.6	0.6	0.4
Nitrate + Nitrite-Nitrogen	0.1	0.0	0.0
o-Phosphate	0.0	0.0	0.0
Sulfate	61.0	62.2	20.0
<u>Disinfection precursor and By-Products</u>			
Total Organic Carbon (mg/L)	1.6	1.8	1.3
Haloacetic Acids	11.7	9.8	14.8
Total Trihalomethanes	9.9	13.3	10.7

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