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# 2016 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the years ended December 31, 2016 and 2015  
Denver, Colorado

Prepared by  
Finance Division



**RECEIVED**

*By the Office of the State Auditor at 3:50 pm, May 17, 2017*



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April 28, 2017

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, 2016.

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, 2016 and 2015. The independent auditor’s 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, organization 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, Management’s Discussion and Analysis, 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 buy the Denver Union Water Company’s water system for about \$14 million,

creating Denver Water. A 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 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 provide water to more than a million people. Three major treatment plants – Marston, Moffat, and Foothills - maintain water quality under the watchful eye of the Denver Water Quality Control Laboratory.

The mission of Denver Water is as follows:

*Denver Water will be a responsible steward of the resources, assets and natural environments entrusted to us in order to provide a high-quality water supply, a resilient and reliable system, and excellent customer service.*

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:

- Long Range Planning  
Denver Water maintains long-range capital, operation and maintenance, and financial plans that are updated annually. The Capital Plan projects additions, improvements, and replacements to water system facilities, based on projected demands for water, federal and state regulations, and ongoing system requirements. The Operation and Maintenance Plan includes the ongoing costs of operating and maintaining the water system and the impact of the Capital Plan on operations. The Financial Plan considers compliance with debt covenants and the year-end target cash reserve.
- Annual Work Plan Budgets  
The detailed annual work plan budgets for operation and maintenance activities, debt, and capital projects are developed during the budget process each year. These budgets are substantially based on the budget year projections provided by the long-range plans. These work plans itemize the cost of activities and projects within each program.
- Annual Budget Preparation  
The annual budget is prepared on a program budget basis that follows the flow of water from the sources of raw water to customers’ taps and cuts across organizational boundaries. The focus is first on what Denver Water as a whole is doing (what our resources are used for), then on organizational structure (the divisions and sections expending the resources), and then by type of expenditures (what types of resources – payroll, services, etc., are being used). The intent of this particular format is to facilitate the reader’s understanding of how we are accomplishing our mission to serve our customers’ needs in the past, present and future.

## 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 region, serving as a business, recreational, higher educational and cultural hub. Major features of the economy include the central business district, state capital, Denver International Airport, extensive library facilities, several professional sports teams, institutions of higher learning, and numerous museums and other cultural facilities. The economy of the metropolitan area generally mirrors that of the state. An overview of the general demographic and economic conditions in the Denver metropolitan area can be found in Section D, *Demographic and Economic Information*, in the Statistical Section.

## Long-Term Financial Planning – Future Initiatives

A representation of capital projects included in the long range planning process are as follows:

- Approximately \$380 million in total project costs for Denver Water's Gross Reservoir Expansion Project, previously known as the Moffat Collection System Project, for the evaluation, permitting, mitigation, and construction process to augment our supply to the northern service area.
- The Operations Complex Redevelopment (OCR) project will include construction of a new consolidated trades shop, a warehouse, fleet maintenance and operations, a parking structure, and a new administration building. In addition to the new construction, the Three Stone Building, the T & D Warehouse and Credit Union, and Building 5 will be remodeled. It is expected the project will be completed in the 1<sup>st</sup> quarter of 2020. The projected budget impact for this project is \$195.8 million.
- Approximately \$400 million is budgeted in capital cost for Denver Water's Northwater Treatment Plant (NTP), for the planning, design, and construction of a new 150-million gallon per day Water Treatment Plant (WTP). Upon completion, the NTP will replace the existing Moffat WTP with a state-of-the-art facility designed to improve redundancy and operational flexibility. The project includes improvements at the Moffat WTP site to convert the facility to a treated water storage site.

Revenue adjustments identified in the 2017 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 2017 was effective beginning April 1, 2017. This adjustment is expected to produce 3.0% of additional revenue over a 12-month period, assuming normal weather and consumption. In addition, annual revenue adjustments of 3.0% are projected in 2018 through 2026. 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 2017 with an actual cash and investment balance of \$287 million, at cost. The 2017 budget projects this balance to increase by receipts of \$529 million and decrease by expenditures of \$432 million, resulting in a projected 2017 ending balance of \$385 million (see page III-58 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.

### **Major Initiatives**

- **Improve top-box customer satisfaction score by 10 percent from 2013 scores.**
  - Customer Care’s top-box satisfaction has increased eight points over the last two years. Not only are these satisfied customers, but top-box satisfaction indicates these are customers who are willing to advocate on behalf of Denver Water.

- Street Maintenance’s overall satisfaction on work performed was 74 percent, a 1-percentage-point decrease from the same time frame in 2015. We expanded outreach into specific neighborhoods through the “NextDoor” online application to include engineering and pipe replacement projects. We added maps of our pipe replacement projects to DenverWater.org to keep customers informed of project schedules.
- Field Interaction’s overall satisfaction on work performed was 95 percent, a 7-percentage-point increase from the same time frame in 2015. We began to distribute small toilet repair kits to customers who could benefit from repairing leaks. We are also improving the dispatch process so technicians can better meet commitments for customer appointments.
- We established a 2016 stretch-goal for customer outage hours of less than 30,000 hours. Actual outage hours were 43,524. This is consistent with the downward trend from 2011 outage hours of 54,144. We continue to evaluate processes to reduce customer outage hours.
- **Achieve full alignment of budget development and execution with strategic priorities and True North metrics; incorporate processes to control spending.**
  - Denver Water deployed Phase One of the Organizational Reporting and Communications Alignment (ORCA) project to provide consistent, accurate, timely budget and actual financial information to everyone at Denver Water who is accountable for budgeting and spending. We now have budget and accounting data that uses a consistent data structure, in one system.
  - We continue making improvements to budget development and management processes, using visual management, weekly standup meetings, budget calendars published early in the year, standard formatting for financial reporting and revisions to budget development and management standard work.
- **Become the Employer of the Future, one that retains and attracts top talent through integrated procedures, policies, benefits and philosophies that create a unique, diverse and energizing culture.**
  - **Compensation:** We completed a compensation study, which aligns jobs to the market and creates a salary structures conducive to a pay-for-performance model.  
We completed the conversion to a Paid Time Off (PTO) benefit program, saving Denver Water \$5 million in liability moving forward.  
We amended changes to our pension plan for 2018, to support full funding of the plan in 15 years.
  - **Community outreach and diversity/inclusion:** HR focused efforts in improving diversity in our candidate pools. Denver Water strives for equal opportunity in all hiring practices. HR has also partnered with multiple external stakeholders to improve our hiring diversity.
- **Transform to a true culture of safety with no lost-work-day injuries by 2017.**
  - Many of the injuries in 2016 were caused by slips/falls, strain/overexertion and injuries getting in and out of vehicles. We hired an industrial ergonomist to work with field crews and provide recommendations to reduce injuries throughout 2017.

- We are also working to reduce vehicle accidents by hosting safety-immersion sessions focusing on safe driving.
- **Redevelop the Operations Complex** in a way that is fiscally responsible, integrates field and administrative staff, creates a public presence, celebrates water and the history of Denver Water, is sustainable, allows for future flexibility, is safe and efficient and promotes retention and recruitment.
  - The project is on time and on budget, with construction on a new Warehouse, Meter Shop, Fleet and Trades buildings. We plan to occupy those buildings in mid-2017
- **Create a water supply, treatment and delivery strategy for the future.** Initiate a new Integrated Resource Plan (IRP) that expands on the prior IRP by integrating the planning of our entire system with all stakeholders, driving capital spending and embracing a vision for urban water efficiency, including drinking water, wastewater and stormwater.
  - We completed research of other utility planning methods. We also formulated the IRP's two-year planning process, project objectives and formed a scope of work, budget and project schedule. We also contracted with a technical consultant and a strategy consultant. The project is on schedule and on budget.
  - The project team has nearly completed the first four major tasks of the IRP including work-plan development, service-level assumptions documentation, planning-futures creation and current system-assessment documentation. The next step is to develop a gaps-and-opportunities analysis for each planning future.
- **Become a sustainable organization** by managing and reducing our environmental impact, measured by becoming a Gold Leader in Colorado's Environmental Leadership Program.
  - Denver Water hired a sustainability program manager to develop Denver Water's first Sustainability Plan. We also helped with development of an Environmental Stewardship Statement, Denver Water's 2015 Greenhouse Gas Inventory, and coordinated with our Green Team and Environmental Compliance to study best sustainability practices at other organizations.
  - We also developed new policies to support LEED and WELL goals associated with the OCR project, wrote language for Green Bonds that will be issued in 2017 and evaluated contracts with sustainability implications.
  - The Environmental Compliance team developed environmental management systems for the four water treatment plants and trained staff at those locations. In addition, Denver Water achieved Silver Partner certification from the Colorado Department of Public Health and Environment's Environmental Leadership Program.

## Conclusion

Denver Water adopted our current Strategic Plan five years ago, and we achieved many of our key priorities. Now we have refreshed our Strategic Plan for the next five years to help the organization set 2018 organizational initiatives and divisional goals.

This is another example of how we must be nimble and adaptable in an ever-changing environment full of challenges. You can count on our organization of passionate, dedicated experts to meet those challenges head on in 2017.

## 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<sup>®</sup>) 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                                    | Page I-2  |
| Audited Financial Statements                          | Section II - Financial Section                            |
| Total Outstanding Indebtedness                        | Section II - Notes 6, 7, 9,<br>Exhibits II-A through II-D |
| The Service Area                                      | Page III-13   |
| Number of Customer Accounts                           | Page III-24   |
| System Development Charges and Participation Receipts | Page III-35   |
| Receipts and Expenditures                             | Page III-58   |
| Total Treated Water Delivered/Consumption             | Page III-80   |

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

## Awards, Recognition and Acknowledgements

### Awards

**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, 2015. This was the 28th 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.** In addition, Denver Water also received the GFOA's Distinguished Budget Presentation Award for its annual budget document for the fiscal year beginning January 1, 2016. This is the 25th consecutive year Denver Water has received this award. In order 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.





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denverwater.org

### Acknowledgments

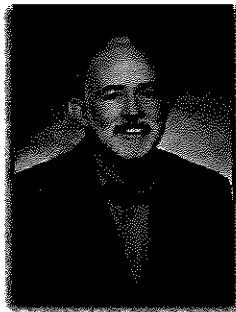
We wish to express our appreciation to all members of Denver Water who assisted and contributed to the preparation of this report. Credit must also be given to the Board of Water Commissioners for their unfailing support for maintaining the highest standards of professionalism in the management of Denver 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, Thomas A. Gougeon, Penfield W. Tate III**

Paula Herzmark, President  
Executive Director, Denver Health Foundation

*Commissioner since April 2009;  
Term expires July 2019.*

John R. Lucero, First Vice President  
Formerly Deputy Director, Mayor's Office of Economic Dev.  
Currently Principal, Lucero Development Services

*Commissioner since July 2007;  
Term expires July 2021.*

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

*Commissioner since July 2009;  
Term expires July 2019.*

Thomas A. Gougeon, Vice President  
President, Gates Family Foundation

*Commissioner since August 2004;  
Term expires July 2017.*

Penfield W. Tate III, Vice President  
Attorney, Kutak Rock LLP

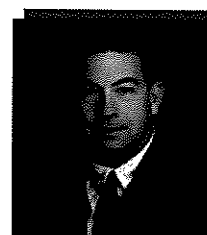
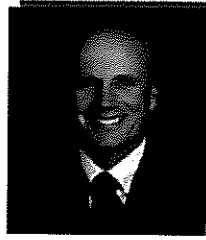
*Commissioner since October 2005;  
Term expires July 2017.*

## LAST 20 COMMISSIONERS

|                        |                      |
|------------------------|----------------------|
| Charles G. Jordan      | Sep 1983 to Jun 1985 |
| D. Dale Shaffer        | Aug 1978 to Jul 1985 |
| John A. Yelenick       | Jul 1969 to Aug 1987 |
| Marguerite S. Pugsley  | May 1978 to Aug 1987 |
| Elizabeth A. Hennessey | Nov 1985 to Jul 1989 |
| Malcolm M. Murray      | Aug 1987 to Jul 1993 |
| Donald L. Kortz        | Aug 1987 to Jul 1993 |
| Monte Pascoe           | Sep 1983 to Jul 1995 |
| Romaine Pacheco        | Jul 1989 to Jul 1995 |
| Hubert A. Farbes, Jr.  | Jul 1985 to Jul 1997 |

|                     |                      |
|---------------------|----------------------|
| Ronald L. Lehr      | Jul 1993 to Apr 1999 |
| Joe Shoemaker       | Jul 1995 to Jul 2001 |
| Andrew D. Wallach   | Jul 2001 to Aug 2003 |
| Daniel E. Muse      | Feb 2000 to Nov 2003 |
| Richard A. Kirk     | Jul 1993 to Oct 2005 |
| William R. Roberts  | Jul 1997 to Oct 2005 |
| Harris D. Sherman   | Dec 2005 to Feb 2007 |
| Denise S. Maes      | Jul 1995 to Jul 2007 |
| Susan D. Daggett    | Nov 2007 to Jan 2009 |
| George B. Beardsley | Feb 2004 to Mar 2009 |

## MANAGER AND STAFF



**Top: Jim Lochhead, CEO/Manager;**

**Second row from left: Julie Anderson, Chief of Staff; Angela Bricmont, Chief Finance Officer;**

**Sally Covington, Chief Public Affairs 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 Planning Officer; Robert J. Mahoney, Chief Engineering Officer; Tom Roode,**

**Chief Operations & Maintenance Officer; Patricia L. Wells, General Counsel**

## DISCRETIONARY PERSONNEL

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

### Manager and Senior Staff

Jim Lochhead, CEO/Manager

Julie Anderson, Chief of Staff

Angela Bricmont, Chief Finance Officer

Sally Covington, Chief Public Affairs Officer

Christopher R. Dermody, Chief Information Officer

Gail Cagle, Chief Human Resources Officer

Brian Good, Chief Administrative Officer

Mike King, Chief Planning Officer

Robert J. Mahoney, Chief Engineering Officer

Tom Roode, Chief Operations & Maintenance Officer

Patricia L. Wells, General Counsel

### Other Staff

Terri Bryant CPA, Controller

Prescott B. Coleman, Chief Internal Auditor

Melissa E. Elliot, Director of Stakeholder Relations

Trina L. McGuire-Collier, Director of Comm & Marketing

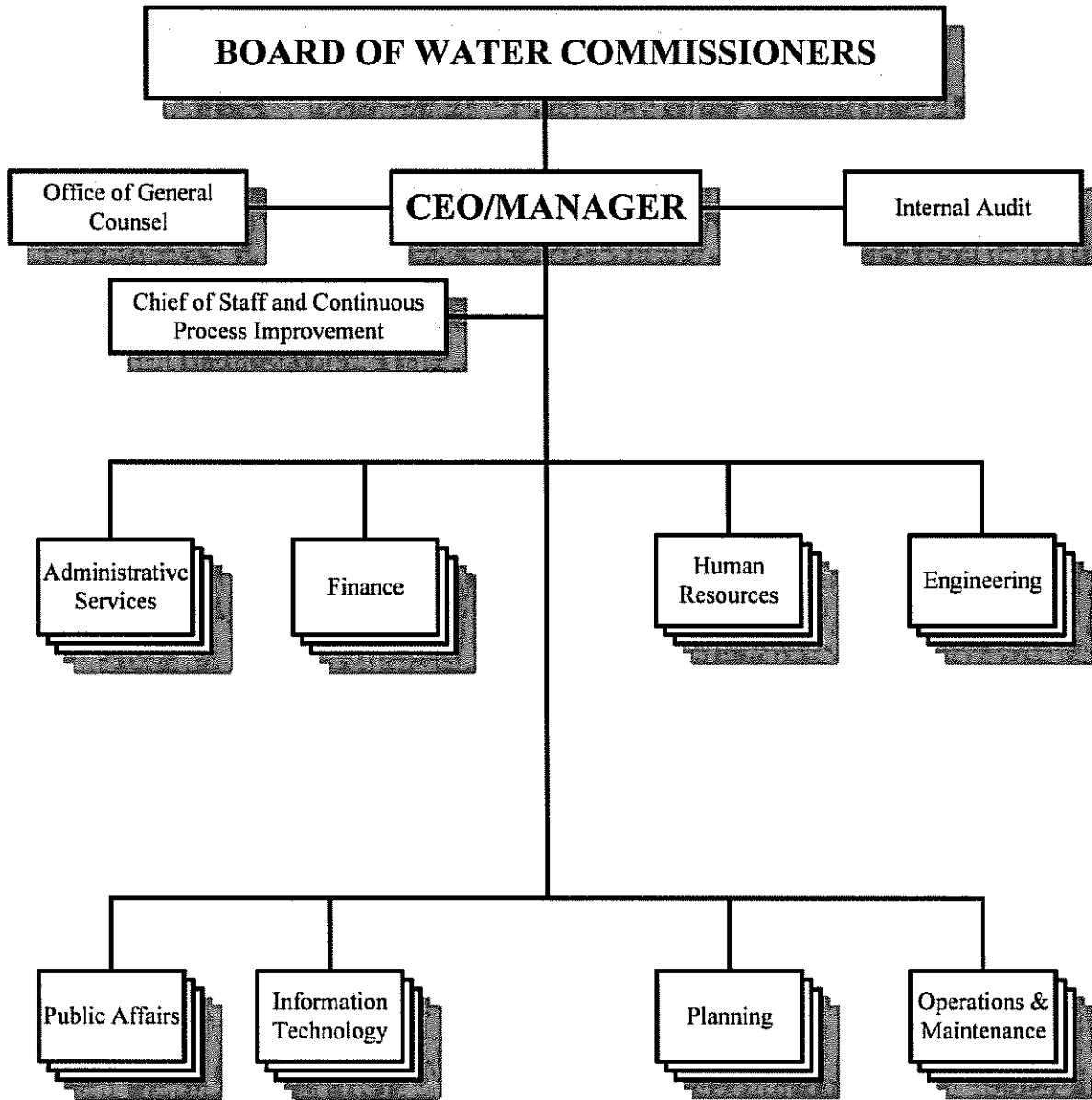
Stephen Reum, Director of Engineering

Usha Sharma, Treasurer

Stephanie M Abram, Budget Manager

Fletcher Davis, Rates Manager

ORGANIZATION 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, 2015**

Executive Director/CEO

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

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**CliftonLarsonAllen**

CliftonLarsonAllen LLP  
CLAAconnect.com

## **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 Board of Water Commissioners, City and County of Denver, Colorado (the Board), as of and for the years ended December 31, 2016 and 2015, 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 an opinion 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 opinion.

### ***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, 2016 and 2015, and the changes in its financial position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

**Other Matters**

*Required Supplementary Information*

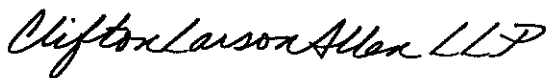
Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Board Pension Contributions, and Schedule of OPEB Funding Progress as listed in the table of contents 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 audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Board's basic financial statements. The Other Supplemental Information 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 28, 2017

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

Management's Discussion and Analysis (Unaudited)

December 31, 2016 and 2015

The following is management's discussion and analysis ("MD&A") of the financial activities of the Board of Water Commissioners (the "Board") for the years ended December 31, 2016 and 2015. This information should be read in conjunction with the basic financial statements which follow.

**FINANCIAL HIGHLIGHTS**

The Board's financial position, measured by the change in net position, improved 5% during 2016, compared to 5% during 2015. The 2014 financial statements were restated from published due to the implementation of GASB Statement No. 68 *Accounting and Financial Reporting for Pensions*.

- **Operating income** was \$36.9 million in 2016 compared to \$36.2 million in 2015, an increase of 2%.
- **Income before capital contributions** was \$26.3 million in 2016 compared to \$23.0 million in 2015, an increase of 14%.
- **Capital contributions** were \$61.1 million in 2016 and \$69.4 million in 2015, a decrease of 12%.
- **Net position** increased \$87.4 million, or 5%, in 2016 compared to \$92.4 million, or 5%, in 2015.
- **Capital asset additions** were \$152.5 million in 2016 compared to \$131.1 million in 2015, an increase of 16%.

**OVERVIEW OF THE BASIC FINANCIAL STATEMENTS**

This MD&A is intended to serve as an introduction to the Board'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. The Board 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 the Board'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 the Board is improving or declining.

The **statements of revenues, expenses, and changes in net position** present information showing how the Board'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 vacation leave) or that may have occurred in the past (e.g., amortization of debt premiums or discount and prepaid contributed capital). This statement measures the financial outcomes of the Board's

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activities and can be used to determine whether the Board 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 the Board's accounting policies, significant account balances and activities, material risks, obligations, commitments, contingencies and subsequent events, if any.

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

**Supplemental information** provides details of the Board's bonded debt.

**FINANCIAL ANALYSIS**

In 2016, the Board re-implemented the financial system and overhauled the accounting structure to improve financial reporting and management. The restructure of the accounts resulted in reclassifications within the financial statements, variations in certain comparative data, and a shift in how indirect costs are allocated to functions.

**NET POSITION**

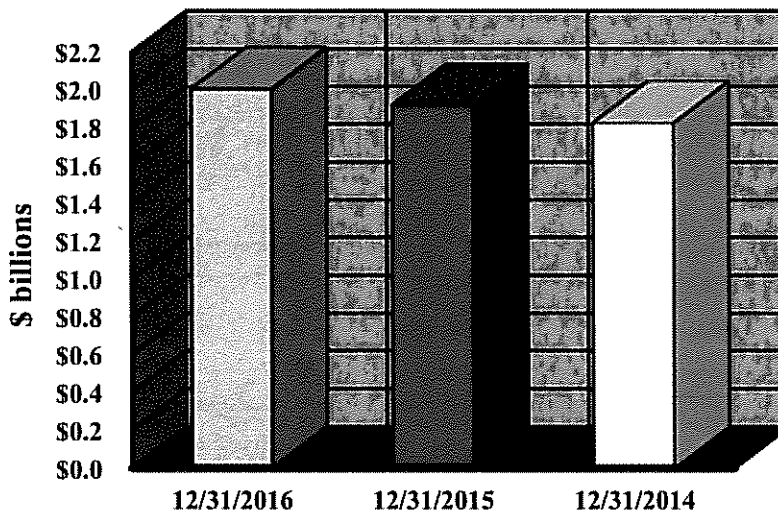
As discussed above, net position may serve over time as a useful indicator of the Board's financial position. The Board's net position was \$2.0 billion at December 31, 2016, an increase of \$87.4 million, or 5%, from December 31, 2015. The Board's net position was \$1.9 billion at December 31, 2015, an increase of \$92.4 million, or 5%, from December 31, 2014 (see Figures 1 and 2 and Table 1).

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December 31, 2016 and 2015

**Figure 1 - Net Position**



|   | As of December 31,       |              |              | 2016 - 2015            |             | 2015 - 2014            |             |
|---|--------------------------|--------------|--------------|------------------------|-------------|------------------------|-------------|
|   | 2016                     | 2015         | 2014         | Increase<br>(Decrease) | %<br>Change | Increase<br>(Decrease) | %<br>Change |
|   | Current and other assets | \$ 333,653   | \$ 285,587   | \$ 280,894             | \$ 48,066   | 17%                    | \$ 4,693    |
| Capital assets, net                     | 2,244,862                | 2,146,900    | 2,069,581    | 97,962                 | 5           | 77,319                 | 4           |
| Total assets                            | 2,578,515                | 2,432,487    | 2,350,475    | 146,028                | 6           | 82,012                 | 3           |
| Deferred outflows of resources          | 41,109                   | 20,295       | 20,910       | 20,814                 | 103         | (615)                  | (3)         |
| Total assets and deferred outflows      | 2,619,624                | 2,452,782    | 2,371,385    | 166,842                | 7           | 81,397                 | 3           |
| Current liabilities                     | 76,467                   | 57,181       | 67,949       | 19,286                 | 34          | (10,768)               | (16)        |
| Noncurrent liabilities                  | 537,710                  | 467,905      | 461,733      | 69,805                 | 15          | 6,172                  | 1           |
| Total liabilities                       | 614,177                  | 525,086      | 529,682      | 89,091                 | 17          | (4,596)                | (1)         |
| Deferred inflows of resources           | -                        | 9,666        | 16,079       | (9,666)                | (100)       | (6,413)                | (40)        |
| Total liabilities and deferred outflows | 614,177                  | 534,752      | 545,761      | 79,425                 | 15          | (11,009)               | (2)         |
| <b>Net position:</b>                    |                          |              |              |                        |             |                        |             |
| Net investment in capital assets        | 1,788,250                | 1,735,020    | 1,641,601    | 53,230                 | 3           | 93,419                 | 6           |
| Restricted                              | 14,505                   | 12,047       | 12,375       | 2,458                  | 20          | (328)                  | (3)         |
| Unrestricted                            | 202,692                  | 170,963      | 171,648      | 31,729                 | 19          | (685)                  | (0.4)       |
| Total net position                      | \$ 2,005,447             | \$ 1,918,030 | \$ 1,825,624 | \$ 87,417              | 5%          | \$ 92,406              | 5%          |

The largest portion of the Board's net position reflects its investment in capital assets; less any related debt used to acquire those assets. The Board uses these capital assets to provide water; consequently,

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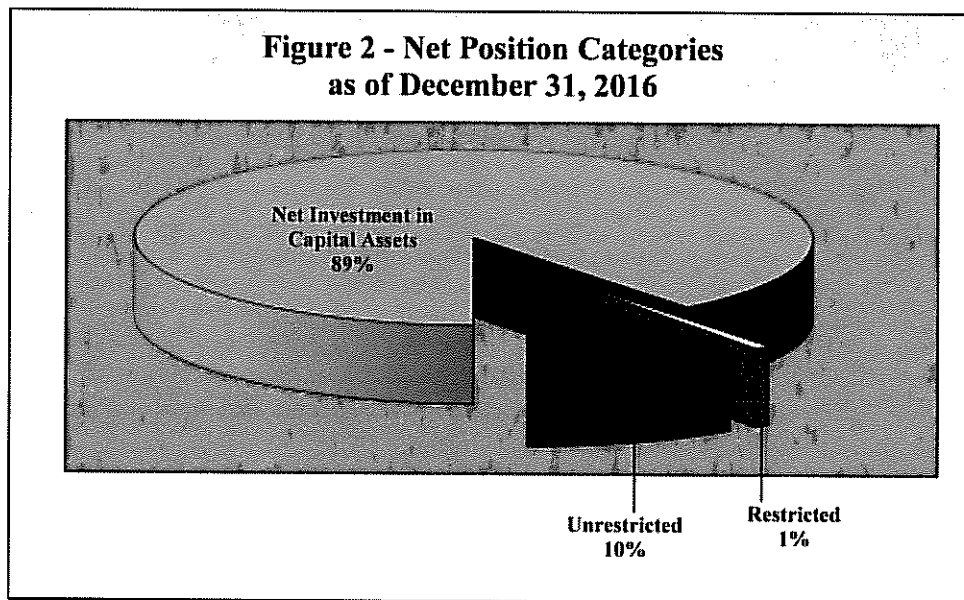
Management's Discussion and Analysis (Unaudited)

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these assets are not available for future spending. Although the Board'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 the Board's net position represents resources that are subject to external restrictions on how they may be used. The Board's 2016, 2015, and 2014 restricted net positions consisted of debt service reserve and debt reserve funds for revenue bonds. In 2016, amounts were also restricted for grants supporting the System Conservation Pilot Program.

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



The Board's increase in net position during 2016 of \$87.4 million or 5% indicates an improved financial position.

Other changes in the statements of net position were as follows:

- **CURRENT AND OTHER ASSETS** in 2016 increased \$48.1 million, or 17% from 2015. They increased \$4.7 million, or 2% between 2015 and 2014 (see Table 1). The increase in 2016 was primarily due to an increase in investments from the 2016 bond issuance funds reimbursing 2015 capital project costs and the related increase in restricted investments from that issuance, and funds being held for the Walton Family Foundation grant. The increase in 2015 was primarily due to prepaid capacity use and an increase in investments.
- **CAPITAL ASSETS, NET** in 2016 increased \$98.0 million, or 5% from 2015. They increased \$77.3 million, or 4% between 2015 and 2014. The increase in both years was due to additions, offset by increased accumulated depreciation and asset retirements. See Table 8 for current year additions.

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- **DEFERRED OUTFLOWS OF RESOURCES** represents the difference between the reacquisition price and the net carrying amount of defeased debt ("deferred amount on refunding") resulting from the Series 2012B, Series 2014A and Series 2016B water refunding bonds, and pension related outflows including economic/demographic losses, changes in the pension plan assumptions, net investment losses associated with differences between the expected and actual earnings on pension plan investments and amounts contributed to the pension plan after the net pension liability measurement date. They increased \$20.8 million or 103% in 2016. \$2.6M of this increase is a result of the 2016B refunding and \$18.2M is due to pension related deferred outflows associated with economic/demographic losses, changes in plan assumptions, and the change in the net between projected and actual plan earnings, offset by the amortization of pension plan economic /demographic losses into pension expense and the amortization of the deferred amount on refunding as a component of interest expense. They decreased \$0.6 million or 3% in 2015 as a result of the amortization of pension plan economic /demographic losses into pension expense and the amortization of the deferred amount on refunding as a component of interest expense.
- **CURRENT LIABILITIES** in 2016 increased \$19.3 million, or 34% from 2015. They decreased \$10.8 million, or 16% between 2015 and 2014. The increase in 2016 was primarily a result of an increase in construction contract accruals, increased accounts payable accruals, and an increase in the payroll and other benefits accrual due to the paid time off (PTO) conversion payout scheduled for 2017. The decrease in 2015 was primarily a result of a reduction in construction contract accruals and changes in the current portion of revenue bonds payable due to varying debt maturities, offset by an increase in accrued payroll.
- **NONCURRENT LIABILITIES** in 2016 increased \$69.8 million, or 15% from 2015. They increased \$6.2 million, or 1% between 2015 and 2014. The increase in 2016 was primarily the result of the 2016A and 2016B bond issuance and the recalculation of the pension liability incorporating changes in plan assumptions and investment experience, offset by the 2007A refunding and payment of the line of credit. The increase in 2015 was primarily a result of a line of credit draw offset by a reduction in long-term debt.
- **DEFERRED INFLOWS OF RESOURCES** represents net investment gains associated with differences between the expected and actual earnings on pension plan investments used in the calculation of the net pension liability. They decreased \$9.6 million or 100% in 2016 and \$6.4 million or 40% in 2015 as a 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 the Board's assets, liabilities and net position at year-end, the statements of revenues, expenses, and changes in net position provide information on the source of the change in net position during the year. Net position increased \$87.4 million in 2016 consisting of income before capital contributions of \$26.3 million and capital contributions of \$61.1 million. Net position increased \$92.4 million in 2015 consisting of income before capital contributions of \$23.0 million and capital contributions of \$69.4 million (see Table 2).

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|                                     | Years Ended December 31, |                     |                     | 2016 - 2015            |             | 2015 - 2014            |             |
|-------------------------------------|--------------------------|---------------------|---------------------|------------------------|-------------|------------------------|-------------|
|                                     | 2016                     | 2015                | 2014                | Increase<br>(Decrease) | %<br>Change | Increase<br>(Decrease) | %<br>Change |
|                                     |                          |                     |                     |                        |             |                        |             |
| Operating revenues                  | \$ 284,454               | \$ 252,060          | \$ 250,668          | \$ 32,394              | 13%         | \$ 1,392               | 1%          |
| Nonoperating revenues               | 9,029                    | 7,074               | 7,695               | 1,955                  | 28          | (621)                  | (8)         |
| Total revenues                      | <u>293,483</u>           | <u>259,134</u>      | <u>258,363</u>      | <u>34,349</u>          | <u>13</u>   | <u>771</u>             | <u>0.3</u>  |
| Operating expenses                  | 247,520                  | 215,825             | 225,061             | 31,695                 | 15          | (9,236)                | (4)         |
| Nonoperating expenses               | 19,655                   | 20,268              | 20,310              | (613)                  | (3)         | (42)                   | (0.2)       |
| Total expenses                      | <u>267,175</u>           | <u>236,093</u>      | <u>245,371</u>      | <u>31,082</u>          | <u>13</u>   | <u>(9,278)</u>         | <u>(4)</u>  |
| Income before capital contributions | 26,308                   | 23,041              | 12,992              | 3,267                  | 14          | 10,049                 | 77          |
| Capital contributions               | 61,109                   | 69,365              | 55,926              | (8,256)                | (12)        | 13,439                 | 24          |
| Increase in net position            | 87,417                   | 92,406              | 68,918              | (4,989)                | (5)         | 23,488                 | 34          |
| Beginning net position              | 1,918,030                | 1,825,624           | 1,822,128           | 92,406                 | 5           | 3,496                  | 0.2         |
| GASB 68 implementation              |                          |                     | (65,422)            |                        |             |                        |             |
| Restated beginning net position     |                          |                     | <u>1,756,706</u>    |                        |             |                        |             |
| Ending net position                 | <u>\$ 2,005,447</u>      | <u>\$ 1,918,030</u> | <u>\$ 1,825,624</u> | <u>\$ 87,417</u>       | <u>5%</u>   | <u>\$ 92,406</u>       | <u>5%</u>   |

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 \$36.9 million in 2016, compared to \$36.2 million in 2015 and \$25.6 million in 2014 (see Figure 3).

There was *income before capital contributions* of \$26.3 million in 2016 compared to \$23.0 million in 2015 and \$13.0 million in 2014 (see Figure 4).

BOARD OF WATER COMMISSIONERS  
CITY AND COUNTY OF DENVER, COLORADO

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Figure 3 - Operating Income

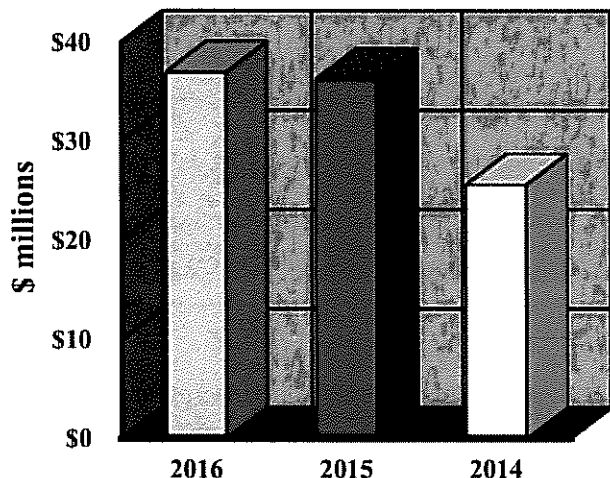
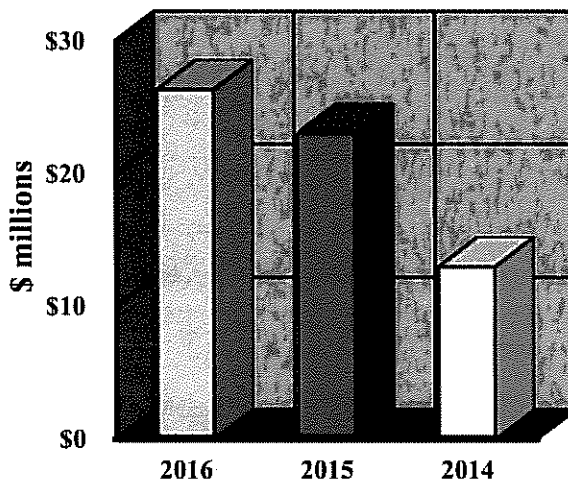


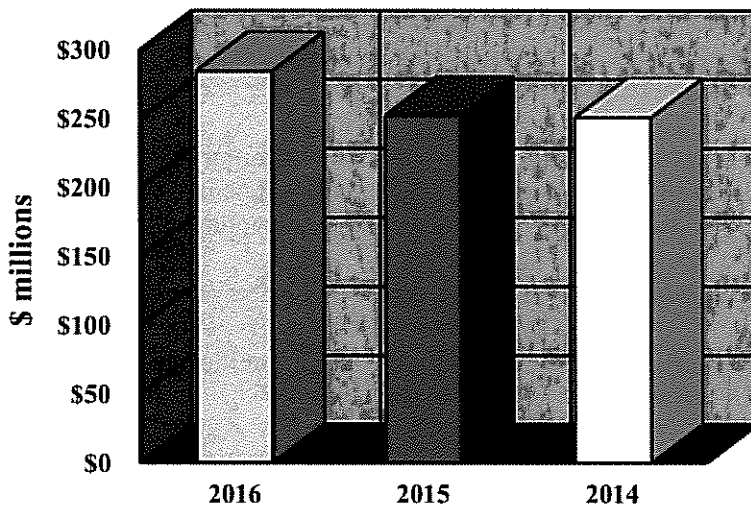
Figure 4 - Income before Capital Contributions



Specifically, major changes in the statements of revenues, expenses and changes in net position were as follows:

- **OPERATING REVENUES** in 2016 increased \$32.4 million, or 13% from 2015. They increased \$1.4 million, or 1% between 2015 and 2014 (see Figure 5 and Table 3).

Figure 5 - Operating Revenues



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|                             | Years Ended December 31, |                   |                   | 2016 - 2015            |             | 2015 - 2014            |             |
|-----------------------------|--------------------------|-------------------|-------------------|------------------------|-------------|------------------------|-------------|
|                             | 2016                     | 2015              | 2014              | Increase<br>(Decrease) | %<br>Change | Increase<br>(Decrease) | %<br>Change |
|                             | Water:                   |                   |                   |                        |             |                        |             |
| Water sales                 | \$ 273,238               | \$ 241,836        | \$ 239,288        | \$ 31,402              | 13%         | \$ 2,548               | 1%          |
| Power generation and other: |                          |                   |                   |                        |             |                        |             |
| Power sales                 | 4,009                    | 3,606             | 4,390             | 403                    | 11          | (784)                  | (18)        |
| Special assessments         | 6,844                    | 3,839             | 4,320             | 3,005                  | 78          | (481)                  | (11)        |
| Other                       | 363                      | 2,779             | 2,670             | (2,416)                | (87)        | 109                    | 4           |
|                             | <u>11,216</u>            | <u>10,224</u>     | <u>11,380</u>     | <u>992</u>             | <u>10</u>   | <u>(1,156)</u>         | <u>(10)</u> |
| Total operating revenues    | <u>\$ 284,454</u>        | <u>\$ 252,060</u> | <u>\$ 250,668</u> | <u>\$ 32,394</u>       | <u>13%</u>  | <u>\$ 1,392</u>        | <u>1%</u>   |

**Water sales** in 2016 increased due to a rate increase effective April 1, 2016, designed to increase overall system water rate revenue by 3.8% as well as an increase in water sold (71.7 billion gallons sold in 2016 compared to 65.6 billion gallons sold in 2015). 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 conservation habits on the part of consumers and changes in the customer base.

Water sales in 2015 increased due to a rate increase effective February 1, 2015, designed to achieve a 2.2% increase in revenue and a slight increase in water sold (65.6 billion gallons sold in 2015 compared to 65.5 billion gallons sold in 2014).

**Power Sales** consist of sales of electricity to Xcel Energy and Tri-State Generation and Transmission Associates 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** in 2016 increased \$2.0 million, or 28% from 2015. They decreased \$0.6 million, or 8% between 2015 and 2014 (see Table 4).

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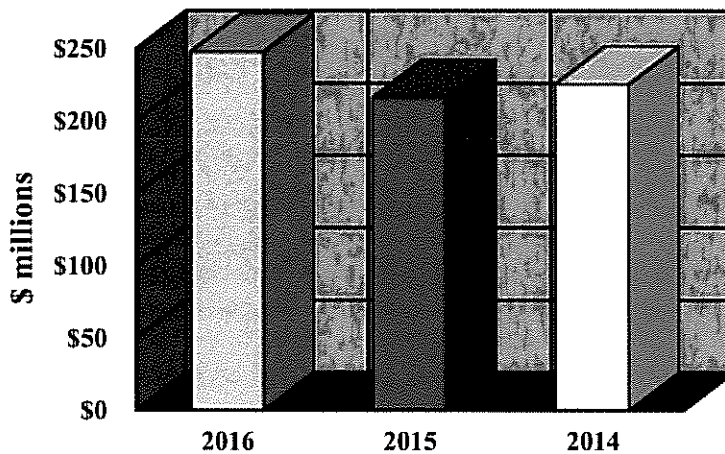
|                                    | Years Ended December 31, |                 |                 | 2016 - 2015            |             | 2015 - 2014            |             |
|------------------------------------|--------------------------|-----------------|-----------------|------------------------|-------------|------------------------|-------------|
|                                    | 2016                     | 2015            | 2014            | Increase<br>(Decrease) | %<br>Change | Increase<br>(Decrease) | %<br>Change |
|                                    | Investment income        | \$ 1,603        | \$ 1,479        | \$ 1,552               | \$ 124      | 8%                     | \$ (73)     |
| Other nonoperating income          | 7,426                    | 5,595           | 6,143           | 1,831                  | 33          | (548)                  | (9)         |
| <b>Total nonoperating revenues</b> | <b>\$ 9,029</b>          | <b>\$ 7,074</b> | <b>\$ 7,695</b> | <b>\$ 1,955</b>        | <b>28%</b>  | <b>\$ (621)</b>        | <b>(8)%</b> |

*Investment income* changes from year to year are due to a combination of changes in interest rates earned on assets, changes in fair market values of financial assets, and changes in average investment balances.

*Other nonoperating income* varied from year to year primarily due to external grant funds which were higher in 2016 and 2014.

- **OPERATING EXPENSES** in 2016 increased \$31.7 million, or 15% from 2015. They decreased \$9.2 million, or 4% between 2015 and 2014 (see Figures 6, 7, 8 and Table 5).

**Figure 6 - Total Operating Expenses**



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|                                 | Years Ended December 31, |                   |                   | 2016 - 2015            |            | 2015 - 2014            |             |
|---------------------------------|--------------------------|-------------------|-------------------|------------------------|------------|------------------------|-------------|
|                                 | 2016                     | 2015              | 2014              | Increase<br>(Decrease) | %          | Increase<br>(Decrease) | %           |
|                                 |                          |                   |                   |                        |            |                        |             |
| SOS, Treatment, T&D             | \$ 82,418                | \$ 75,972         | \$ 83,091         | \$ 6,446               | 8%         | \$ (7,119)             | (9)%        |
| General and administrative      | 103,380                  | 81,994            | 85,347            | 21,386                 | 26         | (3,353)                | (4)         |
| Customer service                | 11,370                   | 9,962             | 10,851            | 1,408                  | 14         | (889)                  | (8)         |
| Depreciation and amortization   | 50,352                   | 47,897            | 45,772            | 2,455                  | 5          | 2,125                  | 5           |
| <b>Total operating expenses</b> | <b>\$ 247,520</b>        | <b>\$ 215,825</b> | <b>\$ 225,061</b> | <b>\$ 31,695</b>       | <b>15%</b> | <b>\$ (9,236)</b>      | <b>(4)%</b> |

Major changes were as follows:

**2016**

Operating expenses increased in 2016 as compared to 2015. The increase was primarily due to operating costs associated with several large projects including flood repairs from the 2013 flood, cathodic protection expenses, the Aquifer Storage and Recovery Pilot, the reimplementation of the financial system, the Integrated Resource Plan (IRP), and costs associated with pollution remediation identified in the Operations Complex Redevelopment project. Operating expenses were also higher than 2015 as a result of a higher pension expense and the compensation study.

**2015**

Operating expenses decreased in 2015 as compared to 2014 primarily as a result of higher 2014 expenses for repairs at Dillon Reservoir and Cheesman Lake, expenses associated with the removal of sedimentation at Strontia Springs, and other repair costs associated with the 2013 flood. Additionally, expenses in 2014 were higher than 2015 because of repairs and maintenance at the Foothills Treatment Plant, an adjustment to the closure and postclosure care costs for the landfill and drying beds resulting from an updated cost study, and payments made as part of the Colorado River Cooperative Agreement.

The overall decrease in 2015 operating expenses was offset slightly by higher engineering and labor expenses associated with ongoing conduits, mains, and hydrants maintenance and repair, costs associated with the tear down of equipment at the Hillcrest Hydro Plant, and an increased payroll accrual for 2015.

- **NONOPERATING EXPENSES** in 2016 decreased \$0.60 million, or 3% from 2015. They decreased \$0.04 million, or 0.2% between 2015 and 2014 (see Table 6).

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|                                       | Years Ended December 31, |                  |                  | 2016 - 2015            |             | 2015 - 2014            |               |
|---------------------------------------|--------------------------|------------------|------------------|------------------------|-------------|------------------------|---------------|
|                                       | 2016                     | 2015             | 2014             | Increase<br>(Decrease) | %           | Increase<br>(Decrease) | %             |
|                                       |                          |                  |                  |                        | Change      |                        | Change        |
| Interest expense                      | \$ 11,446                | \$ 13,049        | \$ 12,664        | \$ (1,603)             | (12)%       | \$ 385                 | 3%            |
| Loss on disposition of capital assets | 6,348                    | 4,720            | 5,394            | 1,628                  | 34          | (674)                  | (12)          |
| Other nonoperating expense            | 1,861                    | 2,499            | 2,252            | (638)                  | (26)        | 247                    | 11            |
| Total nonoperating expenses           | <u>\$ 19,655</u>         | <u>\$ 20,268</u> | <u>\$ 20,310</u> | <u>\$ (613)</u>        | <u>(3)%</u> | <u>\$ (42)</u>         | <u>(0.2)%</u> |

*Interest expense* changes from year to year are due to a combination of differences in the amount of debt, interest rates paid on the debt, and interest expense capitalized for construction projects. When interest is capitalized, the interest is added to the cost of the project and deducted from interest expense.

*Loss on disposition of capital assets* in 2016 was primarily due to fleet equipment sold, write-offs of assets associated with the OCR project, and assets previously recorded in construction work in progress deemed to be not capital. The loss in 2015 was primarily due to fleet equipment sold and write-offs of mains, hydrants, and assets associated with the Ashland Reservoir tank replacement project.

*Other nonoperating expense* decreased \$0.6 million, or 26% in 2016 primarily as a result of the reallocation of indirect costs between operating and nonoperating expenses offset by the write off of a prepaid long-term disability asset maintained under a self-insured plan that was sold to Unum. It increased \$0.2 million, or 11% in 2015 primarily as a result of increased maintenance along the Highline Canal.

- **CAPITAL CONTRIBUTIONS** in 2016 decreased \$8.3 million, or 12% from 2015. They increased \$13.4 million, or 24% between 2015 and 2014 (see Table 7).

|                                      | Years Ended December 31, |                  |                  | 2016 - 2015            |              | 2015 - 2014            |            |
|--------------------------------------|--------------------------|------------------|------------------|------------------------|--------------|------------------------|------------|
|                                      | 2016                     | 2015             | 2014             | Increase<br>(Decrease) | %            | Increase<br>(Decrease) | %          |
|                                      |                          |                  |                  |                        | Change       |                        | Change     |
| Contributions in aid of construction | \$ 22,147                | \$ 33,256        | \$ 23,190        | \$ (11,109)            | (33)%        | \$ 10,066              | 43%        |
| System development charges           | 38,962                   | 36,109           | 32,736           | 2,853                  | 8            | 3,373                  | 10         |
| Total capital contributions          | <u>\$ 61,109</u>         | <u>\$ 69,365</u> | <u>\$ 55,926</u> | <u>\$ (8,256)</u>      | <u>(12)%</u> | <u>\$ 13,439</u>       | <u>24%</u> |

*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

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benefit from such facilities. Normally, differences from year to year are caused by the general level of construction activity in the Denver metropolitan area.

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

**CAPITAL ASSET ACTIVITY**

The Board's capital assets at December 31, 2016 and 2015 amounted to \$2.2 billion and \$2.1 billion, net of accumulated depreciation and amortization, respectively. Capital asset additions in 2016 and 2015 were \$152.5 million and \$131.1 million, respectively, an increase of \$21.4 million or 16%. Major projects were as follows (see Table 8):

| <b>Table 8 - Capital Additions</b>       |                   |
|--|-------------------|
| <b>Year Ended December 31, 2016</b>      |                   |
| <b>(amounts expressed in thousands)</b>  |                   |
| Operations Complex Redevelopment Project | \$ 47,158         |
| Distribution Mains & Hydrants            | 31,903            |
| Hillcrest Pump Station                   | 16,341            |
| North Water Treatment Plant              | 7,647             |
| Motor Vehicles and Heavy Equipment       | 7,442             |
| Ashland Pump Station                     | 7,132             |
| Antero Reservoir                         | 6,651             |
| Strontia Springs                         | 4,349             |
| Downstream Reservoirs                    | 3,958             |
| Treated Water Conduits                   | 2,521             |
| Moffat Tunnel                            | 2,218             |
| Highline Canal                           | 1,890             |
| Gross Reservoir                          | 1,889             |
| Other New Facilities                     | 1,684             |
| Recycled Water Conduits                  | 1,672             |
| Harvard Gulch                            | 1,180             |
| Foothills Treatment Plant                | 1,133             |
| Treated Water Conduits                   | 1,124             |
| Cherry Hills Pump Station                | 1,013             |
| Other                                    | 3,623             |
| <b>Total</b>                             | <b>\$ 152,528</b> |

Information on the Board's capital assets can be found in Note 4 to the basic financial statements.

**LONG-TERM DEBT ACTIVITY**

On November 20, 2013, the Board executed a credit agreement with Bank of America, N.A., to provide a variable rate revolving line of credit for a maximum initial principal amount of \$30.0 million as an interim source of financing for capital improvements to the water works system. The agreement has the option to increase the commitment amount to a maximum of \$50.0 million, subject to lender approval. The revolving agreement was amended in 2016 extending the termination date to November 15, 2018. In addition, certain terms of the agreement were amended to reflect market conditions present at the time of the amendment.

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The Board drew \$30.0 million on the line of credit in 2015 and paid the balance outstanding with proceeds from the Series 2016A bond issuance.

In 2016, the Board issued the Master Resolution Water Revenue Bonds Series 2016A and Series 2016B with principal amounts of \$94.8 million and \$63.5 million, respectively. After the payoff of the line of credit, the remaining proceeds from the Series 2016A bonds were used to fund capital improvements to the water works system. Proceeds from the Series 2016B bonds were placed in escrow with U.S. Bank, N.A. to advance refund \$66.2 million in principal of the Master Resolution Water Revenue Bonds Series 2007A issue and to achieve a present value savings.

**RATE CHANGE**

Denver Water's previous rate structure had been in place for 20 years and in 2016 was updated to balance three objectives: affordability, conservation and revenue stability. The rate changes went into effect April 1, 2016. The new structure will begin to shift the Board's revenue from such a heavy reliance on usage to a more stable fixed fee over the next few years, which means that future rate increases will be less subject to bigger jumps because of unpredictable weather.

**REQUESTS FOR INFORMATION**

This financial report is designed to provide a general overview of the Board's finances for all those with an interest in the Board'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. 12<sup>th</sup> Ave.  
Denver, CO 80204-3412

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

Statements of Net Position  
December 31, 2016 and 2015  
(Amounts expressed in thousands)

| <u>ASSETS</u>  | <u>2016</u>      | <u>2015</u>      |
|--|------------------|------------------|
| <b>CURRENT ASSETS:</b>   |                  |                  |
| Cash   | \$ 21,277        | \$ 21,490        |
| Short-term investments, at fair value, including<br>accrued interest                                       | 232,590          | 172,065          |
| Restricted investments - debt service  | 14,005           | 12,047           |
| Restricted investments - other   | 500              | -                |
| Accounts receivable  | 21,261           | 20,633           |
| Materials and supplies inventory, at weighted average cost   | 5,668            | 5,793            |
| Prepaid expenses   | 456              | 543              |
| Total current assets   | <u>295,757</u>   | <u>232,571</u>   |
| <b>NONCURRENT ASSETS:</b>  |                  |                  |
| Capital assets:  |                  |                  |
| Capital depreciable  | 2,593,735        | 2,553,862        |
| Capital non-depreciable  | 204,893          | 204,883          |
|  | <u>2,798,628</u> | <u>2,758,745</u> |
| Less accumulated depreciation and amortization   | (844,614)        | (806,830)        |
|  | <u>1,954,014</u> | <u>1,951,915</u> |
| Utility plant under capital lease, less accumulated<br>amortization of \$11,822 and \$11,261, respectively | 31,158           | 31,719           |
| Construction in progress   | 259,690          | 163,266          |
| Net capital assets   | <u>2,244,862</u> | <u>2,146,900</u> |
| Other noncurrent assets:   |                  |                  |
| Long-term investments  | 19,022           | 33,558           |
| Prepaid expenses and other assets  | 4,684            | 4,084            |
| Long-term receivable   | 14,190           | 15,374           |
| Total other noncurrent assets  | <u>37,896</u>    | <u>53,016</u>    |
| Total noncurrent assets  | <u>2,282,758</u> | <u>2,199,916</u> |
| Total assets   | <u>2,578,515</u> | <u>2,432,487</u> |
| <br><u>DEFERRED OUTFLOWS OF RESOURCES</u>  |                  |                  |
| Deferred amount on refunding   | 6,941            | 4,316            |
| Pension-related deferred outflows of resources   | 34,168           | 15,979           |
| Total deferred outflows of resources   | <u>41,109</u>    | <u>20,295</u>    |
| Total assets and deferred outflow of resources   | <u>2,619,624</u> | <u>2,452,782</u> |

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

Statements of Net Position  
December 31, 2016 and 2015  
(Amounts expressed in thousands)

|  | 2016         | 2015         |
|--|--------------|--------------|
| <u>LIABILITIES</u>   |              |              |
| CURRENT LIABILITIES:   |              |              |
| Accounts payable   | \$ 20,313    | \$ 11,936    |
| Payroll and other employee benefits  | 17,344       | 14,017       |
| Construction contracts (including retainages of<br>\$5,224 and \$2,911 respectively) | 13,951       | 6,243        |
| Accrued interest on long-term debt   | 2,620        | 1,157        |
| Unearned revenue   | 226          | -            |
| Current portion of revenue bonds payable   | 19,595       | 21,565       |
| Current portion of obligation under capital lease                                    | 2,418        | 2,263        |
|  | 76,467       | 57,181       |
| NONCURRENT LIABILITIES:  |              |              |
| Notes payable  | -            | 30,000       |
| Revenue bonds payable, net   | 434,743      | 353,153      |
| Obligation under capital lease   | 6,797        | 9,215        |
| Customer advances for construction   | 3,402        | 7,676        |
| Compensated absences   | 3,463        | 4,577        |
| Net pension liability  | 72,856       | 46,255       |
| Other postemployment benefits  | 10,149       | 10,799       |
| Waste disposal closure and postclosure care  | 6,300        | 6,230        |
|  | 537,710      | 467,905      |
|  | 614,177      | 525,086      |
| <u>DEFERRED INFLOWS OF RESOURCES</u>   |              |              |
| Pension-related deferred inflows of resources  | -            | 9,666        |
| Total deferred inflows of resources  | -            | 9,666        |
|  | 614,177      | 534,752      |
| <u>NET POSITION</u>  |              |              |
| Net investment in capital assets   | 1,788,250    | 1,735,020    |
| Restricted for debt service  | 14,005       | 12,047       |
| Other Restricted   | 500          | -            |
| Unrestricted   | 202,692      | 170,963      |
|  | \$ 2,005,447 | \$ 1,918,030 |

See accompanying notes to basic financial statements.

**BOARD OF WATER COMMISSIONERS**  
**CITY AND COUNTY OF DENVER, COLORADO**  
 Statements of Revenues, Expenses, and Changes in Net Position  
 Years Ended December 31, 2016 and 2015  
 (Amounts expressed in thousands)

|   | <u>2016</u>         | <u>2015</u>         |
|---|---------------------|---------------------|
| <b>OPERATING REVENUES:</b>  |                     |                     |
| Water   | \$ 273,238          | \$ 241,836          |
| Power generation and other  | <u>11,216</u>       | <u>10,224</u>       |
| Total operating revenues  | <u>284,454</u>      | <u>252,060</u>      |
| <b>OPERATING EXPENSES:</b>  |                     |                     |
| Source of supply, pumping, treatment and distribution                               | 82,418              | 75,972              |
| General and administrative  | 103,380             | 81,994              |
| Customer service  | 11,370              | 9,962               |
| Depreciation and amortization   | <u>50,352</u>       | <u>47,897</u>       |
| Total operating expenses  | <u>247,520</u>      | <u>215,825</u>      |
| <b>OPERATING INCOME</b>   | <u>36,934</u>       | <u>36,235</u>       |
| <b>NONOPERATING REVENUES (EXPENSES):</b>  |                     |                     |
| Investment income   | 1,603               | 1,479               |
| Interest expense, less capitalized interest of \$4,193<br>and \$3,084, respectively | (11,446)            | (13,049)            |
| Loss on disposition of capital assets   | (6,348)             | (4,720)             |
| Other income  | 7,426               | 5,595               |
| Other expense   | <u>(1,861)</u>      | <u>(2,499)</u>      |
| Total nonoperating expenses, net  | <u>(10,626)</u>     | <u>(13,194)</u>     |
| <b>INCOME BEFORE CAPITAL CONTRIBUTIONS</b>  | <u>26,308</u>       | <u>23,041</u>       |
| <b>CAPITAL CONTRIBUTIONS:</b>   |                     |                     |
| Contributions in aid of construction  | 22,147              | 33,256              |
| System development charges  | <u>38,962</u>       | <u>36,109</u>       |
| Total capital contributions   | <u>61,109</u>       | <u>69,365</u>       |
| <b>INCREASE IN NET POSITION</b>   | 87,417              | 92,406              |
| <b>NET POSITION:</b>  |                     |                     |
| Beginning of year   | <u>1,918,030</u>    | <u>1,825,624</u>    |
| End of year   | <u>\$ 2,005,447</u> | <u>\$ 1,918,030</u> |

See accompanying notes to basic financial statements.

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

Statements of Cash Flows  
Years Ended December 31, 2016 and 2015  
(Amounts expressed in thousands)

|  | 2016                    | 2015                    |
|--|-------------------------|-------------------------|
| <b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>                                       |                         |                         |
| Receipts from customers  | \$ 285,261              | \$252,149               |
| Payments to employees  | (120,539)               | (100,210)               |
| Payments to suppliers  | (68,298)                | (71,434)                |
| Other receipts   | 7,401                   | 5,622                   |
| Other payments   | (5,869)                 | (4,382)                 |
|  | <u>97,956</u>           | <u>81,745</u>           |
| <br>   |                         |                         |
| <b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING<br/>ACTIVITIES:</b>               |                         |                         |
| Proceeds from contributions in aid of construction ("CIAC") and prepaid CIAC       | 2,335                   | 8,713                   |
| Proceeds from system development charges ("SDC") and prepaid SDC                   | 38,752                  | 36,109                  |
| Proceeds from sales of capital assets  | 2,143                   | 1,117                   |
| Proceeds from notes payable  | -                       | 30,000                  |
| Proceeds from long-term revenue bonds, plus premium, less issuance costs           | 70,363                  | -                       |
| Acquisition of capital assets  | (124,842)               | (106,672)               |
| Principal payments for long-term bonds   | (21,565)                | (27,000)                |
| Principal payments for capital lease obligations                                   | (2,263)                 | (2,117)                 |
| Interest paid (includes capitalized interest of \$4,193 and \$3,084, respectively) | (16,248)                | (18,802)                |
|  | <u>(51,325)</u>         | <u>(78,652)</u>         |
| <br>   |                         |                         |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>                                       |                         |                         |
| Proceeds from sales and maturities of investments                                  | 250,540                 | 122,892                 |
| Interest received from investments   | 1,373                   | 1,648                   |
| Purchases of investments   | (298,757)               | (134,255)               |
|  | <u>(46,844)</u>         | <u>(9,715)</u>          |
| <br>   |                         |                         |
| <b>NET INCREASE (DECREASE) IN CASH</b>   | <b>(213)</b>            | <b>(6,622)</b>          |
| <br>   |                         |                         |
| <b>CASH, AT BEGINNING OF YEAR</b>  | <b>21,490</b>           | <b>28,112</b>           |
| <br>   |                         |                         |
| <b>CASH, AT END OF YEAR</b>  | <b><u>\$ 21,277</u></b> | <b><u>\$ 21,490</u></b> |

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

Statements of Cash Flows  
Years Ended December 31, 2016 and 2015  
(Amounts expressed in thousands)

|   | 2016      | 2015      |
|---|-----------|-----------|
| <b>RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:</b> |           |           |
| Operating income  | \$ 36,934 | \$ 36,235 |
| Adjustments to reconcile operating income to net cash provided by operating activities- |           |           |
| Other revenues  | 7,426     | 5,595     |
| Other expenses  | (5,869)   | (2,499)   |
| Depreciation and amortization of capital assets   | 50,352    | 47,897    |
| Change in assets and liabilities-   |           |           |
| Accounts receivable and long-term receivable  | 556       | 116       |
| Materials and supplies inventory  | 88        | 605       |
| Prepaid expenses - current  | 87        | (109)     |
| Prepaid expenses and other assets - noncurrent  | (600)     | (1,009)   |
| Deferred outflows of resources - pension related  | (18,189)  | 279       |
| Accounts payable  | 8,377     | 1,380     |
| Payroll and other employee benefits   | 2,213     | 1,532     |
| Unearned revenue  | 226       | -         |
| Net pension liability   | 26,601    | (1,764)   |
| Other postemployment benefits   | (650)     | (191)     |
| Waste disposal closure and postclosure care   | 70        | 91        |
| Deferred inflows of resources - pension related   | (9,666)   | (6,413)   |
| Net cash provided by operating activities   | \$ 97,956 | \$ 81,745 |
| <b>NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES:</b>                                |           |           |
| Assets acquired through contributions in aid of construction                            | \$ 19,812 | \$ 24,543 |
| Assets acquired through system development charges                                      | \$ 210    | \$ -      |
| Increase (decrease) in fair value of investments  | (34)      | (106)     |
| Loss on disposition of capital assets   | (6,348)   | (4,720)   |
| Deferred loss on refunding  | 2,625     | (336)     |

See accompanying notes to basic financial statements.

**BOARD OF WATER COMMISSIONERS  
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Notes to Basic Financial Statements

December 31, 2016 and 2015

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
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  - I. Capital Assets
  - J. Capital Contributions
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  - L. Pension Plan
  - M. Operating Revenues and Expenses
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  - O. Financial System Reimplementation and Revised Chart of Accounts
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## (1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### A. Reporting Entity

The Board of Water Commissioners (the “Board”) was created under the Charter of the City and County of Denver, Colorado (the “City”) as an independent, nonpolitical board. The Board 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. Also, as a byproduct of water operations, the Board 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.

The Board 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, an amendment of GASB Statement No. 14*, and No. 61, *The Financial Reporting Entity: Omnibus*, the Board 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.

The Board 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.

The Board has no component units as defined in GASB Statements No. 14, 39, and 61.

### B. Measurement Focus and Basis of Accounting

The Board, 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. The Board’s basic financial statements 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, the Board funds certain programs using a combination of cost-reimbursement grants and general revenues. It is the Board’s policy to first apply cost-reimbursement grant resources to such programs, followed by general revenues.

### C. Accounting Standards

The Board 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 and amounts restricted for grants 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 that 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

The Board'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 fair market 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>Depreciation Lives by Asset Class</u> |              |
|--|--------------|
|  | <u>Years</u> |
| Buildings and components                 | 10 - 80      |
| Machinery and equipment                  | 5 - 80       |
| Furniture and office equipment           | 10 - 20      |
| Motor vehicles and motorized equipment   | 10 - 15      |

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).

Interest during the construction period is capitalized on major construction projects.

Beginning in 2015, process or system assets were capitalized rather than individual component units. Because the process or system asset may be made up of many component assets, the capitalization threshold was adjusted from \$5,000 to \$50,000.

#### 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. Depreciation applicable to such assets is computed using the straight-line method over the useful life associated with the contributed asset, and is included in operating expenses (see Note 14, *Capital Contributions*).

#### K. Employee Compensated Absences

The Board's policy is to accrue as an expense and liability employee vacation, sick leave and other compensated absences, including related payroll taxes. At the end of 2016, compensated absences were accrued at 100%, in preparation of the conversion to paid time off (PTO) in 2017.

#### 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 they are 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.

#### 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.

The Board 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, the Board 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 December 14, 2016, the Board approved a water rate increase, effective April 1, 2017. The rate increase is designed to increase overall total system water rate revenue by 3.0%.

On December 16, 2015, the Board approved a water rate increase and rate structure change, effective April 1, 2016. The rate increase is designed to increase overall total system water rate revenue by 3.8%. The rate structure change is designed to make water rate revenues more stable and better reflect modern demands.

On October 8, 2014, the Board approved a water rate increase, effective February 1, 2015, designed to increase overall total system water rate revenue by 2.2%.

### System Development Charges (“SDC”)

There was no SDC adjustment made in 2015 or 2016.

#### O. Financial System Reimplementation and Revised Chart of Accounts

In 2016, the Board completed phase one of the Organizational Reporting and Communication Alignment (ORCA) project. As part of phase one, the financial structure and chart of accounts were completely overhauled resulting in certain variances in year over year comparisons, and a shift in how indirect costs are allocated to functions. In addition, certain reclassifications have been made to prior year’s information to conform to the current year presentation.

#### P. Recently Issued Accounting Standards

There were no new GASB statements that impacted the Board in 2016.

In 2015, the Board implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, and GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date*, and restated the 2014 financial statements. The primary effect was to record the Board’s net pension liability of \$46.3 million and \$48.0 million on the Statements of Net Position as of December 31, 2015 and 2014, respectively. The cumulative effect of applying these statements was reported as a restatement of beginning 2014 net position in the amount of \$65.4 million. See Note 10, *Pension Plan*.

In 2015, the Board early implemented GASB Statement No. 72, *Fair Value Measurement and Application*. Because the Board was already reporting investments at fair value, the primary effect of the implementation was additional note disclosures. See Note 2, *Deposits and Investments*.

## (2) DEPOSITS AND INVESTMENTS

### A. 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, the Board’s deposits may not be returned to it. All of the Board’s cash deposits are 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 the Board's name. All of the deposits of the Board at December 31, 2016 and 2015 were either insured by FDIC or collateralized under the Colorado Public Depository Act and are therefore not exposed to custodial credit risk.

B. 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>             |                  |
|---|---|------------------|
|   | <u>(amounts expressed in thousands)</u> |                  |
|   | December 31,                            |                  |
|   | 2016                                    | 2015             |
| Cash  | \$ 21,277                               | \$ 21,490        |
| Short-term investments, at fair value, including accrued interest | 232,590                                 | 172,065          |
| Restricted investments - debt service                             | 14,005                                  | 12,047           |
| Restricted investments - other                                    | 500                                     | -                |
| Long-term investments   | 19,022                                  | 33,558           |
| Total investments   | <u>266,117</u>                          | <u>217,670</u>   |
| Total cash and investments  | <u>\$287,394</u>                        | <u>\$239,160</u> |

Colorado statutes and the City Charter authorize the Board to expend funds for the operation of the Board, including the purchase of investments. It is the policy of the Board to invest funds in priority order to preserve principal, provide sufficient liquidity, and to obtain a market rate of return within the constraints of the Board's investment policy. Operational needs and prevailing market conditions affect the investment portfolio allocation at year-end. The table below identifies the investment types that are authorized by the Board'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 the Board's Investment Policy

December 31, 2016 and 2015

| <u>Authorized Investment Type</u> | <u>Maximum Maturity</u> | <u>Minimum Issuer Credit Quality<sup>1</sup></u> | <u>Maximum in Portfolio<sup>2</sup></u> | <u>Maximum Investment One Issuer<sup>2</sup></u> |
|-----------------------------------|-------------------------|--|---|--|
| U.S. Treasury securities          | 5 years                 | Not applicable                                   | No limit                                | No limit   |
| U.S. agency securities            | 4 years                 | AA- / Aa3  | 50%                                     | 15%  |
| Commercial paper                  | 270 days                | A-1 / P-1  | 25% <sup>3</sup>                        | 5% <sup>4</sup>                                  |
| Corporate fixed income securities | 3 years                 | AA- / Aa3  | 25% <sup>3</sup>                        | 5% <sup>4</sup>                                  |
| Money market mutual funds         | Not applicable          | AAAm   | 25%                                     | 5%   |
| Local government investment pools | Not applicable          | AAAm   | 10%                                     | 5%   |
| Certificates of deposit           | 180 days                | AA- / Aa3  | 15%                                     | 10%  |
| Bankers' acceptances              | 180 days                | A-1 / P-1  | 25% <sup>3</sup>                        | 5% <sup>4</sup>                                  |
| Repurchase agreements             | Overnight               | AA- / Aa3  | 25%                                     | 25%  |
| Municipal bonds                   | 5 years                 | AA- / Aa3  | 15%                                     | 5%   |

<sup>1</sup>Investments must meet minimum credit quality at time of purchase. Investments that fall below minimum credit quality may be sold or held to maturity at the discretion of the Board. Ratings are S&P first and Moody's second.

<sup>2</sup>Calculated as a percentage of book value of the aggregate cash and investment portfolio at purchase.

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

<sup>4</sup>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. The Board 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 3 years to 25% of the portfolio and limiting the maximum maturity of investments by type of investment.

Investments with call features increase the sensitivity of their fair values to increasing interest rates. The Board's portfolio of U.S. agency securities includes callable securities. At December 2016 and 2015, the Board owned callable securities with a fair value of \$3.0 million and \$2.0 million, respectively. The Board's callable securities are categorized in accordance with their final maturity dates in the tables below.

The Board's cash and investments at December 31, 2016 and 2015, and their maturities were as follows:

| <u>Cash, Current and Long-Term Investments</u> |                                       |                   |                                     |                    |             |
|--|---------------------------------------|-------------------|-------------------------------------|--------------------|-------------|
| <u>December 31, 2016</u>                       |                                       |                   |                                     |                    |             |
| <u>(amounts expressed in thousands)</u>        |                                       |                   |                                     |                    |             |
| Investment type                                | Percent of<br>Investment<br>Portfolio | Fair<br>Value     | Investment Maturities<br>(in years) |                    |             |
|  |                                       |                   | 1 or less                           | 1 - 3              | 3 - 5       |
| U.S. Treasury securities                       | 47.7%                                 | \$ 126,946        | \$ 122,921                          | \$ 4,025           | \$ -        |
| U.S. agency securities                         | 28.0%                                 | 74,524            | 71,550                              | 2,974 <sup>1</sup> | -           |
| Commercial paper                               | 3.8%                                  | 9,983             | 9,983                               | -                  | -           |
| Corporate fixed income securities              | 7.0%                                  | 18,609            | 6,586                               | 12,023             | -           |
| Money market funds                             | 11.7% <sup>2</sup>                    | 31,051            | 31,051                              | -                  | -           |
| Local government investment pools              | 1.9%                                  | 5,004             | 5,004                               | -                  | -           |
| Total investments                              | <u>100.0%</u>                         | <u>266,117</u>    | <u>\$ 247,095</u>                   | <u>\$ 19,022</u>   | <u>\$ -</u> |
| Cash   |                                       | <u>21,277</u>     |                                     |                    |             |
| Total cash and investments                     |                                       | <u>\$ 287,394</u> |                                     |                    |             |

<sup>1</sup> \$3.0 million in corporate fixed income securities are callable beginning in 2017.

<sup>2</sup> The Board'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, 2015

(amounts expressed in thousands)

| Investment type                   | Percent of<br>Investment<br>Portfolio | Fair<br>Value    | Investment Maturities<br>(in years) |                     |             |
|-----------------------------------|---------------------------------------|------------------|-------------------------------------|---------------------|-------------|
|                                   |                                       |                  | 1 or less                           | 1 - 3               | 3 - 5       |
| U.S. Treasury securities          | 35.7%                                 | \$ 77,613        | \$ 60,577                           | \$ 17,036           | \$ -        |
| U.S. agency securities            | 41.1%                                 | 89,570           | 73,048                              | 16,522 <sup>1</sup> | -           |
| Commercial paper                  | 4.1%                                  | 8,996            | 8,996                               | -                   | -           |
| Corporate fixed income securities | 1.2% <sup>2</sup>                     | 2,510            | 2,510                               | -                   | -           |
| Money market funds                | 17.9%                                 | 38,981           | 38,981                              | -                   | -           |
| Total investments                 | <u>100.0%</u>                         | <u>217,670</u>   | <u>\$184,112</u>                    | <u>\$ 33,558</u>    | <u>\$ -</u> |
| Cash                              |                                       | <u>21,490</u>    |                                     |                     |             |
| Total cash and investments        |                                       | <u>\$239,160</u> |                                     |                     |             |

<sup>1</sup> \$2.0 million in agency securities are callable beginning in 2016.

<sup>2</sup> The Board'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. U.S. agency securities held in the portfolio are securities issued by government sponsored enterprises. These securities are not explicitly guaranteed by the federal government. Presented below are the lowest credit ratings at December 31, 2016 and 2015, for each investment type.

| <u>Investment Ratings</u><br><u>December 31, 2016</u><br><u>(amounts expressed in thousands)</u> |                             |                              |                     |   |                                 |  |                   |
|--|-----------------------------|------------------------------|---------------------|---|---------------------------------|--|-------------------|
| S&P/Moody's<br>Ratings <sup>1</sup>  | U.S. Treasury<br>Securities | U.S.<br>Agency<br>Securities | Commercial<br>Paper | Corporate<br>Fixed Income<br>Securities | Money<br>Market<br>Mutual Funds | Local<br>Government<br>Investment<br>Pools | Total             |
| AAA/Aaa  | \$ -                        | \$ 8,985                     | \$ -                | \$ 5,188                                | \$ -                            | \$ -                                       | \$ 14,173         |
| AAAm   | -                           | -                            | -                   | -                                       | 31,051                          | 5,004                                      | \$ 36,055         |
| A-1/P-1  | -                           | 38,427                       | 9,983               | -                                       | -                               | -  | \$ 48,410         |
| AA/Aa  | 126,946                     | 27,112                       | -                   | 13,421                                  | -                               | -  | \$ 167,479        |
| A/A  | -                           | -                            | -                   | -                                       | -                               | -  | \$ -              |
|  | <u>\$ 126,946</u>           | <u>\$ 74,524</u>             | <u>\$ 9,983</u>     | <u>\$ 18,609</u>                        | <u>\$ 31,051</u>                | <u>\$ 5,004</u>                            | <u>\$ 266,117</u> |

<sup>1</sup>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 the Board.

| <u>Investment Ratings</u><br><u>December 31, 2015</u><br><u>(amounts expressed in thousands)</u> |                             |                              |                     |   |                                 |                   |
|--|-----------------------------|------------------------------|---------------------|---|---------------------------------|-------------------|
| S&P/Moody's<br>Ratings <sup>1</sup>  | U.S. Treasury<br>Securities | U.S.<br>Agency<br>Securities | Commercial<br>Paper | Corporate<br>Fixed Income<br>Securities | Money<br>Market<br>Mutual Funds | Total             |
| AAAm   | \$ -                        | \$ -                         | \$ -                | \$ -                                    | \$ 38,981                       | \$ 38,981         |
| A-1/P-1  | -                           | 55,441                       | 8,996               | -                                       | -                               | 64,437            |
| AA/Aa  | 77,613                      | 34,129                       | -                   | 2,510                                   | -                               | 114,252           |
| A/A  | -                           | -                            | -                   | -                                       | -                               | -                 |
|  | <u>\$ 77,613</u>            | <u>\$ 89,570</u>             | <u>\$ 8,996</u>     | <u>\$ 2,510</u>                         | <u>\$ 38,981</u>                | <u>\$ 217,670</u> |

<sup>1</sup>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 the Board.

### Concentration of Credit Risk

The Board's investments comply with the requirements of the investment policy. Specific limitations within the investment policy are displayed in the schedule titled *Investments Authorized by the Board'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 the Board's total investments at December 31, 2016 and 2015:

| Concentration of Credit Risk<br>(amounts expressed in thousands) |                   |                   |
|--|-------------------|-------------------|
| Issuer   | December 31,      |                   |
|  | 2016              | 2015              |
|  | <u>Fair Value</u> | <u>Fair Value</u> |
| Federal Farm Credit Bank - (FFCB)                                | \$ -              | \$ 14,552         |
| Federal Home Loan Bank - (FHLB)                                  | 17,988            | 12,999            |
| Federal Home Loan Mortgage Corporation - (FHLMC)                 | 16,504            | 27,493            |
| Federal National Mortgage Association - (FNMA)                   | 19,001            | 34,526            |

Fair Value

The Board 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 is used to value securities based on the securities' relationship to benchmark quoted process; Level 3 inputs are significant unobservable inputs.

The Board has the following recurring fair value measurements as of December 31, 2016 and 2015:

| <u>Investments Measured at Fair Value</u>      |                   |                                      |                   |                |
|--|-------------------|--------------------------------------|-------------------|----------------|
| <u>December 31, 2016</u>                       |                   |                                      |                   |                |
| <u>(amounts expressed in thousands)</u>        |                   |                                      |                   |                |
|  | <u>12/31/2016</u> | <u>Fair Value Measurements Using</u> |                   |                |
|  |                   | <u>Level 1</u>                       | <u>Level 2</u>    | <u>Level 3</u> |
| Investments by fair value level:               |                   |                                      |                   |                |
| U.S. Treasury securities                       | \$ 126,946        | \$ 126,946                           | \$ -              | \$ -           |
| U.S. agency securities                         | 74,524            | -                                    | 74,524            | -              |
| Commercial paper                               | 9,983             | -                                    | 9,983             | -              |
| Corporate fixed income securities              | 18,609            | -                                    | 18,609            | -              |
| Total investments by fair value level          | <u>230,062</u>    | <u>\$ 126,946</u>                    | <u>\$ 103,116</u> | <u>\$ -</u>    |
| Investments measured at net asset value (NAV): |                   |                                      |                   |                |
| Local government investment pools              | 5,004             |                                      |                   |                |
| Money market funds                             | 31,051            |                                      |                   |                |
| Total investments by NAV                       | <u>\$ 36,055</u>  |                                      |                   |                |
| Total investments                              | <u>\$ 266,117</u> |                                      |                   |                |

| <u>Investments Measured at Fair Value</u>        |                   |                                      |                   |                |
|--|-------------------|--------------------------------------|-------------------|----------------|
| <u>December 31, 2015</u>                         |                   |                                      |                   |                |
| <u>(amounts expressed in thousands)</u>          |                   |                                      |                   |                |
|  | <u>12/31/2015</u> | <u>Fair Value Measurements Using</u> |                   |                |
|  |                   | <u>Level 1</u>                       | <u>Level 2</u>    | <u>Level 3</u> |
| Investments by fair value level:                 |                   |                                      |                   |                |
| U.S. Treasury securities                         | \$ 77,613         | \$ 77,613                            | \$ -              | \$ -           |
| U.S. agency securities                           | 89,570            | -                                    | 89,570            | -              |
| Commercial paper                                 | 8,996             | -                                    | 8,996             | -              |
| Corporate fixed income securities                | 2,510             | -                                    | 2,510             | -              |
| Total investments by fair value level            | <u>178,689</u>    | <u>\$ 77,613</u>                     | <u>\$ 101,076</u> | <u>\$ -</u>    |
| Money market funds (measured at net asset value) | <u>38,981</u>     |                                      |                   |                |
| Total investments                                | <u>\$ 217,670</u> |                                      |                   |                |

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

| <u>Investments Measured at NAV</u>      |                   |                             |                             |                                 |
|---|-------------------|-----------------------------|-----------------------------|---------------------------------|
| <u>December 31, 2016</u>                |                   |                             |                             |                                 |
| <u>(amounts expressed in thousands)</u> |                   |                             |                             |                                 |
|   | <u>Fair Value</u> | <u>Unfunded Commitments</u> | <u>Redemption Frequency</u> | <u>Redemption Notice Period</u> |
| Local government investment pools       | \$ 5,004          | \$ -                        | Daily                       | same day                        |
| Money market funds                      | 31,051            | -                           | Daily                       | same day                        |
|   | <u>\$ 36,055</u>  | <u>\$ -</u>                 |                             |                                 |

| <u>Investments Measured at NAV</u>      |                   |                             |                             |                                 |
|---|-------------------|-----------------------------|-----------------------------|---------------------------------|
| <u>December 31, 2015</u>                |                   |                             |                             |                                 |
| <u>(amounts expressed in thousands)</u> |                   |                             |                             |                                 |
|   | <u>Fair Value</u> | <u>Unfunded Commitments</u> | <u>Redemption Frequency</u> | <u>Redemption Notice Period</u> |
| Money market funds                      | \$ 38,981         | \$ -                        | Daily                       | same day                        |

The Colorado Local Government Liquid Asset Trust (COLOTRUST) (the Trust), is an investment vehicle established for local government entities in Colorado to pool surplus funds. The State Securities Commissioner administers and enforces all State statutes governing the Trust. The Trust operates similarly to a money market fund and each share is equal in value to \$1.00. The Trust offers shares in two portfolios, COLOTRUST PRIME and COLOTRUST PLUS+. Both portfolios may invest in U.S. Treasury securities

and repurchase agreements collateralized by U.S. Treasury securities. COLOTRUST PLUS+ may also invest in certain obligations of U.S. government agencies, highest rated commercial paper and any security allowed under CRS 24-75-601. A designated custodial bank serves as custodian for the Trust's portfolios pursuant to a custodian agreement. The custodian acts as safekeeping agent for the Trust's investment portfolios and provides services as the depository in connection with direct investments and withdrawals. The custodian's internal records segregate investments owned by the Trust. COLOTRUST is rated AAAM by Standard & Poor's. There are no unfunded commitments, the redemption frequency is daily and there is no redemption notice period.

The money market funds include four money market funds that invest in U.S. Treasury securities, federal instrumentality securities, and agency securities. Unitized 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.

(3) ACCOUNTS RECEIVABLE

Current and long-term accounts receivable at December 31, 2016 and 2015 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. The Board 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. A \$150,000 allowance for uncollectible accounts was established in 2016 to recognize the potential of uncollectible amounts in non-water sales receivables.

| <u>Accounts Receivable</u><br>(amounts expressed in thousands) |                  |             |                  |             |
|--|------------------|-------------|------------------|-------------|
| December 31,   |                  |             |                  |             |
| 2016   |                  |             |                  |             |
| 2015   |                  |             |                  |             |
| <u>Total Accounts Receivable</u>                               |                  |             |                  |             |
| <u>Current</u>   |                  |             |                  |             |
| Water sales  | \$ 16,783        | 79%         | \$ 16,412        | 80%         |
| Other  | 4,478            | 21          | 4,221            | 20          |
| <i>Total Current</i>   | <u>\$ 21,261</u> | <u>100%</u> | <u>\$ 20,633</u> | <u>100%</u> |
| <u>Long-term</u>   |                  |             |                  |             |
|  | <u>\$ 14,190</u> |             | <u>\$ 15,374</u> |             |
| <u>From the City and County of Denver (included above)</u>     |                  |             |                  |             |
| <u>Current</u>   |                  |             |                  |             |
| Water sales  | \$ 195           |             | \$ 284           |             |
| Other  | -                |             | 9                |             |
| <i>Total Current</i>   | <u>195</u>       |             | <u>293</u>       |             |
| <u>Long-term</u>   |                  |             |                  |             |
|  | <u>-</u>         |             | <u>-</u>         |             |
| Total from City and County of Denver                           | <u>\$ 195</u>    |             | <u>\$ 293</u>    |             |

(4) CAPITAL ASSETS

Capital asset activity for the years ended December 31, 2016 and 2015 were as follows:

| <u>Capital Assets</u><br><u>Year Ended December 31, 2016</u><br><u>(amounts expressed in thousands)</u> |                                    |  |  |                                    |
|---|------------------------------------|--|--|------------------------------------|
|   | <u>December 31,</u><br><u>2015</u> | <u>Additions</u><br><u>&amp; Transfers</u> | <u>Sales &amp;</u><br><u>Retirements</u> | <u>December 31,</u><br><u>2016</u> |
| <u>Capital assets not being depreciated:</u>  |                                    |  |  |                                    |
| Land and land rights  | \$ 99,098                          | \$ 10                                      | \$ -                                     | \$ 99,108                          |
| Water rights and other  | 105,785                            | -  | -  | 105,785                            |
| Construction in progress  | 163,266                            | 96,424                                     | -  | 259,690                            |
| Total capital assets not being depreciated  | <u>368,149</u>                     | <u>96,434</u>                              | <u>-</u>                                 | <u>464,583</u>                     |
| <u>Capital assets being depreciated:</u>  |                                    |  |  |                                    |
| Buildings and improvements  | 201,538                            | 2,733                                      | (4,942)                                  | 199,329                            |
| Improvements other than buildings   | 2,002,297                          | 42,961                                     | (835)                                    | 2,044,423                          |
| Machinery and equipment   | 393,007                            | 10,400                                     | (10,444)                                 | 392,963                            |
| Total capital assets being depreciated  | <u>2,596,842</u>                   | <u>56,094</u>                              | <u>(16,221)</u>                          | <u>2,636,715</u>                   |
| <u>Less accumulated depreciation:</u>   |                                    |  |  |                                    |
| Buildings and improvements  | (47,372)                           | (3,959)                                    | 2,878                                    | (48,453)                           |
| Improvements other than buildings   | (570,105)                          | (27,209)                                   | 727                                      | (596,587)                          |
| Machinery and equipment   | (200,614)                          | (19,184)                                   | 8,402                                    | (211,396)                          |
| Total accumulated depreciation  | <u>(818,091)</u>                   | <u>(50,352)</u>                            | <u>12,007</u>                            | <u>(856,436)</u>                   |
| Total capital assets being depreciated, net   | <u>1,778,751</u>                   | <u>5,742</u>                               | <u>(4,214)</u>                           | <u>1,780,279</u>                   |
| Total capital assets, net   | <u>\$ 2,146,900</u>                | <u>\$ 102,176</u>                          | <u>\$ (4,214)</u>                        | <u>\$ 2,244,862</u>                |

| <u>Capital Assets</u>   |                                    |  |  |   |                                    |
|---|------------------------------------|--|--|---|------------------------------------|
| <u>Year Ended December 31, 2015</u>   |                                    |  |  |   |                                    |
| <u>(amounts expressed in thousands)</u>   |                                    |  |  |   |                                    |
|   | <u>December 31,</u><br><u>2014</u> | <u>Additions</u><br><u>&amp; Transfers</u> | <u>Sales &amp;</u><br><u>Retirements</u> | <u>Category</u><br><u>Reclass<sup>1</sup></u> | <u>December 31,</u><br><u>2015</u> |
| <b><u>Capital assets not being depreciated:</u></b>   |                                    |  |  |   |                                    |
| Land and land rights  | \$ 115,291                         | \$ 14,042                                  | \$ -                                     | \$ (30,235)                                   | \$ 99,098                          |
| Water rights and other  | 75,550                             | -  | -  | 30,235  | 105,785                            |
| Construction in progress  | 171,215                            | (7,949)                                    | -  | -   | 163,266                            |
| Total capital assets not being depreciated  | <u>362,056</u>                     | <u>6,093</u>                               | <u>-</u>                                 | <u>-</u>                                      | <u>368,149</u>                     |
| <b><u>Capital assets being depreciated:</u></b>   |                                    |  |  |   |                                    |
| Buildings and improvements  | 281,772                            | 442  | (184)                                    | (80,492)                                      | 201,538                            |
| Improvements other than buildings   | 1,955,572                          | 106,645                                    | (4,858)                                  | (55,062)                                      | 2,002,297                          |
| Machinery and equipment   | 246,368                            | 17,874                                     | (6,789)                                  | 135,554                                       | 393,007                            |
| Total capital assets being depreciated  | <u>2,483,712</u>                   | <u>124,961</u>                             | <u>(11,831)</u>                          | <u>-</u>                                      | <u>2,596,842</u>                   |
| <b><u>Less accumulated depreciation:</u></b>  |                                    |  |  |   |                                    |
| Buildings and improvements  | (76,257)                           | (4,056)                                    | 138                                      | 32,803  | (47,372)                           |
| Improvements other than buildings   | (578,572)                          | (31,684)                                   | 2,252                                    | 37,899  | (570,105)                          |
| Machinery and equipment   | (121,358)                          | (14,040)                                   | 5,486                                    | (70,702)                                      | (200,614)                          |
| Total accumulated depreciation  | <u>(776,187)</u>                   | <u>(49,780)</u>                            | <u>7,876</u>                             | <u>-</u>                                      | <u>(818,091)</u>                   |
| Total capital assets being depreciated, net   | <u>1,707,525</u>                   | <u>75,181</u>                              | <u>(3,955)</u>                           | <u>-</u>                                      | <u>1,778,751</u>                   |
| Total capital assets, net   | <u>\$ 2,069,581</u>                | <u>\$ 81,274</u>                           | <u>\$ (3,955)</u>                        | <u>\$ -</u>                                   | <u>\$ 2,146,900</u>                |
| <sup>1</sup> In 2015, assets were transferred between previous asset categories into functional program asset categories. |                                    |  |  |   |                                    |

Depreciation and amortization for the years ended December 31, 2016 and 2015 were as follows:

| <u>Depreciation and Amortization</u>    |                                 |                  |
|---|---------------------------------|------------------|
| <u>(amounts expressed in thousands)</u> |                                 |                  |
|   | <u>Years Ended December 31,</u> |                  |
|   | <u>2016</u>                     | <u>2015</u>      |
| Operating expenses, water service       | \$ 50,352                       | \$ 47,897        |
| Nonoperating expenses                   | -                               | 130              |
| Other, as allocated                     | -                               | 1,753            |
| Total depreciation and amortization     | <u>\$ 50,352</u>                | <u>\$ 49,780</u> |

Major retirements during 2016 were primarily the result of assets disposed of as part of the Operations Complex Redevelopment (OCR) project and fleet equipment sold. Major retirements during 2015 were primarily the result of fleet equipment sold and write-offs of mains, hydrants, and assets associated with the Ashland Reservoir tank replacement project.

(5) RISK MANAGEMENT

The Board is exposed to various risks of losses 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. The Board has a risk management program that includes self-insurance for liability, employee medical (including stop-loss coverage), dental, and vision. The Board 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. The Board also carries commercial insurance for life, accident, short and long term disability, employee dishonesty, and fiduciary exposure.

The Board is self-insured for workers' compensation and carries an excess liability (stop loss) policy for individual claims exceeding \$500,000. Prior to February 1, 2016 the Board was insured for Workers' compensation insurance by a large deductible policy whereby the Board was responsible for the first \$250,000 per claim with a maximum aggregate cost of \$2.6 million. In addition, the Board 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). At December 31, 2016 and 2015 IBNR claims, consisting of workers compensation, and medical and dental benefits, were \$1.3 million and \$1.0 million, respectively. There were no legal claims outstanding at year-end. Changes in the balances of these liabilities during 2016 and 2015 were as follows:

| <u>Claims Liabilities</u><br>(amounts expressed in thousands) |   |   |                           |                                |
|---|---|---|---------------------------|--------------------------------|
|   | <u>Beginning-<br/>of-Year<br/>Liability</u> | <u>Current-Year<br/>Claims and<br/>Changes in<br/>Estimates</u> | <u>Claim<br/>Payments</u> | <u>Balance at<br/>Year-End</u> |
| 2016  | \$ 1,041                                    | \$ 12,938   | \$ (12,636)               | \$ 1,343                       |
| 2015  | \$ 919                                      | \$ 11,778   | \$ (11,656)               | \$ 1,041                       |

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

(6) NOTES AND BONDS PAYABLE

A. Notes Payable

On November 20, 2013, the Board 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 as an interim source of financing for capital improvements to the water works system. It was the intention of the Board

to periodically pay down the note payable by issuing revenue bonds. The revolving credit facility is payable solely from net revenue and is subordinate to the lien on the Board's outstanding revenue bonds. The credit facility was amended in 2016 extending the maturity to November 2018 and adjusting applicable margins. The credit facility contains an option to increase the credit amount to \$50.0 million. The funds drawn on the line of credit are 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, 2016 and 2015 was as follows:

| <u>Notes Payable</u>                    |                  |              |                   |                |
|---|------------------|--------------|-------------------|----------------|
| <u>(amounts expressed in thousands)</u> |                  |              |                   |                |
|   | <u>Beginning</u> |              |                   | <u>Ending</u>  |
|   | <u>Balance</u>   | <u>Draws</u> | <u>Repayments</u> | <u>Balance</u> |
| 2016                                    | \$ 30,000        | \$ -         | \$ 30,000         | \$ -           |
| 2015                                    | \$ -             | \$30,000     | \$ -              | \$30,000       |

**B. Revenue Bonds Payable**

Revenue Bonds payable consists of water revenue improvement and refunding bonds of the Board. The Board 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, 2016 and 2015 ranged from 0.75% to 6.15% each year. The weighted average yield to maturity at issue for outstanding bonds was 2.73% and 3.24% for the years ended December 31, 2016 and 2015, respectively. The weighted average yield is calculated net of Build America Bond subsidy of 35% for the Series 2009A and Series 2010B revenue bonds adjusted in 2016 by 6.9% and in 2015 by 6.8% for the congressional sequestration. In accordance with the issuing bond resolutions, the Board has established a reserve fund for the revenue bonds totaling \$14.0 and \$12.0 million at December 31, 2016 and 2015, respectively.

The Board issued the Series 2016A and 2016B master resolution water revenue bonds on May 10, 2016 in an aggregate principal amount of \$94.8 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 the Board and to pay down \$30 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 \$1,045,000 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 \$6.9 million and \$4.3 million at December 31, 2016 and 2015, respectively.

The Board 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.

A summary of debt maturity for the revenue bonds as of December 31, 2016 is as follows:

| <u>Revenue Bonds</u>                    |                   |                             |                   |
|---|-------------------|-----------------------------|-------------------|
| <u>December 31, 2016</u>                |                   |                             |                   |
| <u>(amounts expressed in thousands)</u> |                   |                             |                   |
| <u>Year of Maturity:</u>                | <u>Principal</u>  | <u>Interest<sup>1</sup></u> | <u>Total</u>      |
| Current:                                | \$ 19,595         | \$ 18,452                   | \$ 38,047         |
| Long-term:                              |                   |                             |                   |
| 2018                                    | 19,925            | 17,546                      | 37,471            |
| 2019                                    | 19,390            | 16,615                      | 36,005            |
| 2020                                    | 16,190            | 15,725                      | 31,915            |
| 2021                                    | 16,910            | 14,964                      | 31,874            |
| 2022-2026                               | 72,620            | 64,064                      | 136,684           |
| 2027-2031                               | 72,780            | 49,477                      | 122,257           |
| 2032-2036                               | 86,380            | 34,031                      | 120,411           |
| 2037-2041                               | 71,590            | 16,213                      | 87,803            |
| 2042-2045                               | 43,200            | 3,425                       | 46,625            |
|   | 418,985           | 232,060                     | 651,045           |
| Plus premium                            | 15,758            | -                           | 15,758            |
| Total long-term                         | 434,743           | 232,060                     | 666,803           |
|   | <u>\$ 454,338</u> | <u>\$ 250,512</u>           | <u>\$ 704,850</u> |

<sup>1</sup>Excludes Build America Bonds interest subsidy. Amounts received during 2016 and 2015 were \$2,184,000 and \$2,179,000, respectively. The Board is eligible to receive approximately \$33.3 million over the remaining life of the bonds, subject to appropriations by Congress.

(7) LEASES

A. Capital Lease

On July 21, 1992, the Board 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 the Board 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 the Board 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><br>(amounts expressed in thousands) |                  |                  |
|--|------------------|------------------|
|  | December 31,     |                  |
|  | 2016             | 2015             |
| Improvements other than buildings  | \$ 42,980        | \$ 42,980        |
| Less: accumulated amortization   | (11,822)         | (11,261)         |
|  | <u>\$ 31,158</u> | <u>\$ 31,719</u> |

Minimum capital lease payments were \$3.0 million during both 2016 and 2015. 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, 2016:

| <u>Obligation Under Capital Lease - Wolford Mountain</u><br><u>As of December 31, 2016</u><br>(amounts expressed in thousands) |                 |
|--|-----------------|
| <u>Year Ending December 31:</u>  |                 |
| 2017   | 3,000           |
| 2018   | 3,000           |
| 2019   | 3,000           |
| 2020   | 1,500           |
| Total minimum lease payments   | 10,500          |
| Less interest at 6.75%   | (1,285)         |
| Present value of minimum lease payments<br>(obligation under capital lease)  | 9,215           |
| Less current portion   | (2,418)         |
| Total long-term  | <u>\$ 6,797</u> |

#### B. Operating Leases

The Board is committed under various cancellable operating leases for property and equipment. Lease expenses for the years ended December 31, 2016 and 2015 were \$1.2 million and \$1.0 million, respectively. The Board expects these leases to be replaced in the ordinary course of business with similar leases. Future lease payments should approximate the amount expensed in 2016.

#### (8) WASTE DISPOSAL CLOSURE AND POSTCLOSURE CARE

The Board 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 41<sup>st</sup> 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 the Board 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”), the Board 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 41<sup>st</sup> 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 \$767,000 and \$760,000, respectively, has been included in 2016 and 2015 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, the Board 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 *Statement of Net Position* date. The Board reports the entire liability for closure costs for the Foothills, Ralston, and 41<sup>st</sup> and Independence residual drying beds since they are not “filled” like a landfill, but are reusable.

Approximately \$6.3 million and \$6.2 million was reported as *Waste Disposal Closure and Postclosure Care* liability in the *Statements of Net Position*, at December 31, 2016 and 2015, respectively, for the sites as follows:

| <u>Waste Disposal Closure and Postclosure Care Liability</u> |                  |                 |                                |                 |
|--|------------------|-----------------|--------------------------------|-----------------|
| <u>(amounts expressed in thousands)</u>                      |                  |                 |                                |                 |
|  | <u>Foothills</u> | <u>Ralston</u>  | <u>41st &amp; Independence</u> | <u>Total</u>    |
| <u>2016</u>  |                  |                 |                                |                 |
| Closure Costs  | \$ 2,470         | \$ 2,142        | \$ 634                         | \$ 5,246        |
| Postclosure Care Costs                                       | 287              | 767             | -                              | 1,054           |
|  | <u>\$ 2,757</u>  | <u>\$ 2,909</u> | <u>\$ 634</u>                  | <u>\$ 6,300</u> |
| <u>2015</u>  |                  |                 |                                |                 |
| Closure Costs  | \$ 2,446         | \$ 2,120        | \$ 628                         | \$ 5,194        |
| Postclosure Care Costs                                       | 276              | 760             | -                              | 1,036           |
|  | <u>\$ 2,722</u>  | <u>\$ 2,880</u> | <u>\$ 628</u>                  | <u>\$ 6,230</u> |

These costs are based on the use of 24.8% and 24.1% of the active portion of the Foothills landfill at December 31, 2016 and 2015, respectively, and 100% of the Foothills, Ralston, and 41<sup>st</sup> and Independence drying beds. The Board will recognize the remaining estimated cost of the Foothills postclosure care of

\$868,000 as the remaining capacity is filled. These amounts are based on what it would cost to perform all closure and postclosure care in 2016. 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 72.5 years for the active disposal area of 61.7 acres. In addition, there is expansion capability of 62 acres with an indefinite life. The Foothills, Ralston, and 41<sup>st</sup> and Independence drying beds have an indefinite life.

The Board 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. The Board 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, 2016 and 2015 were as follows:

| <u>Long-Term Liabilities</u>            |                            |                   |                     |                            |                        |
|---|----------------------------|-------------------|---------------------|----------------------------|------------------------|
| <u>Year Ended December 31, 2016</u>     |                            |                   |                     |                            |                        |
| <u>(amounts expressed in thousands)</u> |                            |                   |                     |                            |                        |
|   | December 31,               | 2016              |                     | December 31,               | Due Within<br>One Year |
|   | 2015                       | Additions         | Reductions          | 2016                       |                        |
|   | (Current and<br>Long-Term) |                   |                     | (Current and<br>Long-Term) |                        |
| Notes Payable                           | \$ 30,000                  | \$ -              | \$ (30,000)         | \$ -                       | \$ -                   |
| Revenue bonds payable, net              | 374,718                    | 172,365           | (92,745)            | 454,338                    | 19,595                 |
| Obligation under capital lease          | 11,478                     | -                 | (2,263)             | 9,215                      | 2,418                  |
| Customer advances for construction      | 7,676                      | 21,883            | (26,157)            | 3,402                      | -                      |
| Compensated absences                    | 7,421                      | 13,412            | (4,859)             | 15,974                     | 12,511 <sup>1</sup>    |
| Net Pension Liability                   | 46,255                     | 26,601            | -                   | 72,856                     | -                      |
| Other postemployment benefits           | 10,799                     | 1,605             | (2,255)             | 10,149                     | -                      |
| Waste disposal closure                  | 6,230                      | 70                | -                   | 6,300                      | -                      |
|   | <u>494,577</u>             | <u>\$ 235,936</u> | <u>\$ (158,279)</u> | <u>572,234</u>             | <u>\$ 34,524</u>       |
| Less current portion                    | <u>(26,672)</u>            |                   |                     | <u>(34,524)</u>            |                        |
| Total long-term liabilities             | <u>\$ 467,905</u>          |                   |                     | <u>\$ 537,710</u>          |                        |

<sup>1</sup>Included in Payroll and Other Employee Benefits in the Statements of Net Position.

Long-Term Liabilities  
Year Ended December 31, 2015  
(amounts expressed in thousands)

|   | December 31,<br>2014<br>(Current and<br>Long-Term) | 2015             |                    | December 31,<br>2015<br>(Current and<br>Long-Term) | Due Within<br>One Year |
|---|--|------------------|--------------------|--|------------------------|
|   |  | Additions        | Reductions         |  |                        |
| Notes Payable                             | \$ -   | \$ 30,000        | \$ -               | \$ 30,000  | \$ -                   |
| Revenue bonds payable, net                | 404,605  | -                | (29,887)           | 374,718  | 21,565                 |
| Obligation under capital lease            | 13,595   | -                | (2,117)            | 11,478   | 2,263                  |
| Customer advances for construction        | 3,010  | 11,126           | (6,460)            | 7,676  | -                      |
| Compensated absences (accrued sick leave) | 7,417  | 554              | (550)              | 7,421  | 2,844 <sup>1</sup>     |
| Net Pension Liability                     | 48,019   | -                | (1,764)            | 46,255   | -                      |
| Other postemployment benefits             | 10,990   | 2,722            | (2,913)            | 10,799   | -                      |
| Waste disposal closure                    | 6,139  | 91               | -                  | 6,230  | -                      |
|   | 493,775  | <u>\$ 44,493</u> | <u>\$ (43,691)</u> | 494,577  | <u>\$ 26,672</u>       |
| Less current portion                      | (32,042)   |                  |                    | (26,672)   |                        |
| Total long-term liabilities               | <u>\$ 461,733</u>                                  |                  |                    | <u>\$ 467,905</u>                                  |                        |

<sup>1</sup>Included in Payroll and Other Employee Benefits in the Statements of Net Position.

(10) PENSION PLAN

The Board implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, and GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date* in 2015 and restated 2014 financial statements.

General Information about the Pension Plan

Plan Description

The Board 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 the Board. Article X, Section 10.1.6 of the Charter of the City assigns the authority to establish and amend benefit provisions to the Board. 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, MC 210, 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 the Board 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, 2015 and 2014, the valuation date, the following employees were covered by the benefit terms:

| <u>Employees Covered by Pension Plan Benefit Terms</u>           |              |              |
|--|--------------|--------------|
|  | <u>2015</u>  | <u>2014</u>  |
| Inactive employees or beneficiaries currently receiving benefits | 587          | 558          |
| Inactive employees entitled to but not yet receiving benefits    | 90           | 91           |
| Active employees   | <u>1,034</u> | <u>1,023</u> |
|  | <u>1,711</u> | <u>1,672</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 the Board. The Board's funding policy is established and may be amended by the Board, which acts as trustee of the Plan. The Board 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, the Board adopted the Employees' Retirement Plan Funding Policy effective for 2014 and future years. The Policy defines the objectives of the Board in funding the Plan. In accordance with the policy, the Board 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 and specified in the funding policy. The primary objective of the Policy is to provide sufficient assets to pay all benefits promised under the Plan and to minimize the volatility of contribution payments from year to year. Plan members are not allowed to make contributions. For the years ended December 31, 2016 and 2015, the Board contributed \$14.5 million to the Plan.

## Net Pension Liability

The Board 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, 2016 was measured as of December 31, 2015, and the net pension liability reported as of December 31, 2015 was measured as of December 31, 2014. The total pension liability used to calculate the net pension liability for 2016 and 2015 was determined by an actuarial valuation performed as of January 1, 2015 and January 1, 2014.

### Actuarial Assumptions

The Entry Age Normal actuarial cost method was used to measure the total pension liability. The actuarial assumptions for 2016 included (a) 7.25% investment rate of return, (b) age based salary increases ranging from 6.25% to 3.35% per year for funding, and (c) 2.75% inflation factor. The actuarial assumptions for 2015 included (a) 7.50% investment rate of return, (b) projected salary increases ranging from 6.1% to 3.6% per year, and (c) 3.0% 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 2016 were based on the RP-2000 Combined Healthy Mortality Table, projected to 2020 using Scale BB. Mortality rates used for 2015 were based on the RP-2000 Combined Healthy Mortality Table, blended 50% blue collar adjusted and 50% white collar adjusted, and projected to 2021 using Scale AA.

The actuarial assumptions that determined the total pension liability as of January 1, 2015 and January 1 2014, were based on the results of an actuarial experience study for the period 2005 through 2009.

### Discount Rate

The discount rate used to measure the total pension liability for 2016 was 7.25% and 7.50% for 2015. The projection of cash flows used to determine the discount rate assumed that Board 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 30-year geometric mean return for each major asset class are summarized in the following table:

| <u>Target Asset Allocation and Long-Term Expected Return</u> |                          |   |
|--|--------------------------|---|
| <u>As of January 1, 2015</u>                                 |                          |   |
| <u>Asset Class</u>   | <u>Target Allocation</u> | <u>Long-Term Expected Real Rate of Return</u> |
| Domestic equity  | 32.5%                    | 5.1%  |
| International equity   | 20.0%                    | 5.0%  |
| Domestic fixed income  | 15.0%                    | 0.8%  |
| Hedge funds  | 10.0%                    | 3.0%  |
| Public real assets   | 5.0%                     | 3.8%  |
| Real estate  | 17.5%                    | 3.8%  |
|  | <u>100.0%</u>            |   |

*Sensitivity of the Net Pension Liability to Changes in Discount Rate*

The following presents the net pension liability of the Board, calculated using the discount rate of 7.25% for 2016 and 7.50% for 2015, as well as what the Board'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:

| <u>Sensitivity of the Net Pension Liability to Changes in Discount Rate</u> |                            |                                      |                            |
|---|----------------------------|--------------------------------------|----------------------------|
| <u>As of December 31, 2016</u>  |                            |                                      |                            |
| <u>(amounts expressed in thousands)</u>                                     |                            |                                      |                            |
|   | <u>1% Decrease (6.25%)</u> | <u>Current Discount Rate (7.25%)</u> | <u>1% Increase (8.25%)</u> |
| Net pension liability   | <u>\$ 114,468</u>          | <u>\$ 72,856</u>                     | <u>\$ 37,689</u>           |

| <u>Sensitivity of the Net Pension Liability to Changes in Discount Rate</u> |                           |                                     |                           |
|---|---------------------------|-------------------------------------|---------------------------|
| <u>As of December 31, 2015</u>  |                           |                                     |                           |
| <u>(amounts expressed in thousands)</u>                                     |                           |                                     |                           |
|   | <u>1% Decrease (6.5%)</u> | <u>Current Discount Rate (7.5%)</u> | <u>1% Increase (8.5%)</u> |
| Net pension liability   | <u>\$ 84,924</u>          | <u>\$ 46,255</u>                    | <u>\$ 13,420</u>          |

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

| <u>Changes in Net Pension Liability</u>        |                                   |                                       |                                       |
|--|-----------------------------------|---------------------------------------|---------------------------------------|
| <u>As of December 31, 2016</u>                 |                                   |                                       |                                       |
| <u>(amounts expressed in thousands)</u>        |                                   |                                       |                                       |
|  | Increase (Decrease)               |                                       |                                       |
|  | Total Pension<br>Liability<br>(a) | Plan Fiduciary<br>Net Position<br>(b) | Net Pension<br>Liability<br>(a) - (b) |
| Balances at 12/31/15                           | \$ 348,594                        | \$ 302,339                            | \$ 46,255                             |
| Changes for the year:                          |                                   |                                       |                                       |
| Service cost                                   | 6,757                             | -                                     | 6,757                                 |
| Interest on total pension liability            | 25,820                            | -                                     | 25,820                                |
| Effect of plan changes                         | -                                 | -                                     | -                                     |
| Effect of economic/demographic gains or losses | 801                               | -                                     | 801                                   |
| Effect of assumptions changes or inputs        | 10,152                            | -                                     | 10,152                                |
| Benefit payments                               | (20,693)                          | (20,693)                              | -                                     |
| Employer contributions                         | -                                 | 14,500                                | (14,500)                              |
| Member contributions                           | -                                 | -                                     | -                                     |
| Net investment income                          | -                                 | 2,473                                 | (2,473)                               |
| Administrative expenses                        | -                                 | (44)                                  | 44                                    |
| Net changes                                    | 22,837                            | (3,764)                               | 26,601                                |
| Balances at 12/31/16                           | \$ 371,431                        | \$ 298,575                            | \$ 72,856                             |

| <u>Changes in Net Pension Liability</u>        |                                   |                                       |                                       |
|--|-----------------------------------|---------------------------------------|---------------------------------------|
| <u>As of December 31, 2015</u>                 |                                   |                                       |                                       |
| <u>(amounts expressed in thousands)</u>        |                                   |                                       |                                       |
|  | Increase (Decrease)               |                                       |                                       |
|  | Total Pension<br>Liability<br>(a) | Plan Fiduciary<br>Net Position<br>(b) | Net Pension<br>Liability<br>(a) - (b) |
| Balances at 12/31/14                           | \$ 337,844                        | \$ 289,825                            | \$ 48,019                             |
| Changes for the year:                          |                                   |                                       |                                       |
| Service cost                                   | 6,071                             | -                                     | 6,071                                 |
| Interest on total pension liability            | 25,044                            | -                                     | 25,044                                |
| Effect of plan changes                         | -                                 | -                                     | -                                     |
| Effect of economic/demographic gains or losses | -                                 | -                                     | -                                     |
| Effect of assumptions changes or inputs        | -                                 | -                                     | -                                     |
| Benefit payments                               | (20,365)                          | (20,365)                              | -                                     |
| Employer contributions                         | -                                 | 14,500                                | (14,500)                              |
| Member contributions                           | -                                 | -                                     | -                                     |
| Net investment income                          | -                                 | 18,523                                | (18,523)                              |
| Administrative expenses                        | -                                 | (144)                                 | 144                                   |
| Net changes                                    | 10,750                            | 12,514                                | (1,764)                               |
| Balances at 12/31/15                           | \$ 348,594                        | \$ 302,339                            | \$ 46,255                             |

For the years ended December 31, 2016 and 2015, the Board recognized pension expense of \$13.2 million and \$ 6.6 million, respectively. At December 31, 2016 and 2015, the Board reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

| <u>Deferred Outflows and Inflows of Resources Related to Pensions</u> |                                     |                                      |
|---|-------------------------------------|--------------------------------------|
| <u>As of December 31, 2016</u>  |                                     |                                      |
| <u>(amounts expressed in thousands)</u>                               |                                     |                                      |
|   | Deferred<br>Inflows<br>of Resources | Deferred<br>Outflows<br>of Resources |
| Economic/demographic gains or losses                                  | \$ -                                | \$ 1,883                             |
| Net difference between projected and actual earnings                  | -                                   | 9,132                                |
| Assumption changes  | -                                   | 8,653                                |
| Contributions made subsequent to measurement date                     | -                                   | 14,500                               |
| Total   | \$ -                                | \$ 34,168                            |

| <u>Deferred Outflows and Inflows of Resources Related to Pensions</u> |  |   |
|---|--|---|
| <u>As of December 31, 2015</u>  |  |   |
| <u>(amounts expressed in thousands)</u>                               |  |   |
|   | <u>Deferred<br/>Inflows<br/>of Resources</u> | <u>Deferred<br/>Outflows<br/>of Resources</u> |
| Economic/demographic gains or losses                                  | \$ -   | \$ 1,479                                      |
| Net difference between projected and actual earnings                  | (9,666)                                      | -   |
| Contributions made subsequent to measurement date                     | -  | 14,500  |
| Total   | <u>\$ (9,666)</u>                            | <u>\$ 15,979</u>                              |

The \$14.5 million reported as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, as of December 31, 2015, was recognized as a reduction of the net pension liability in the year ended December 31, 2016. The \$14.5 million reported as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, as of December 31, 2016, will be recognized as a reduction of the net pension liability in the year ended December 31, 2017.

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

| <u>Amortization of Deferred Outflows and Inflows of Resources Related to Pensions</u> |       |
|---|-------|
| <u>As of December 31, 2016</u>  |       |
| <u>(amounts expressed in thousands)</u>   |       |
| Year ended December 31,   |       |
| 2017  | 2,319 |
| 2018  | 2,319 |
| 2019  | 6,339 |
| 2020  | 5,741 |
| 2021  | 1,702 |
| Thereafter  | 1,248 |

| <u>Amortization of Deferred Outflows and Inflows of Resources Related to Pensions</u> |            |
|---|------------|
| <u>As of December 31, 2015</u>  |            |
| <u>(amounts expressed in thousands)</u>   |            |
| Year ended December 31,   |            |
| 2016  | \$ (3,142) |
| 2017  | (3,143)    |
| 2018  | (3,143)    |
| 2019  | 878        |
| 2020  | 279        |
| Thereafter  | 84         |

(11) OTHER RETIREMENT PLANS

The Board sponsors and administers the 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 the Board. All regular and discretionary employees are eligible to participate in the plan. Under the terms of the plan, the Board 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 2016 and 2015, the Board made contributions totaling approximately \$2.0 million in both years, respectively and members contributed approximately \$4.5 million in both years, respectively, to the SRSP. Employee rollovers from other plans to the SRSP were \$1.2 million in 2016 and \$1.3 million in 2015.

The Board sponsors and administers a deferred compensation plan that is available for its employees, created in accordance with Internal Revenue Code Section 457. The plan, available to all regular and discretionary employees, 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. The Board 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

Plan Description

The Board provides two types of other postemployment benefits (“OPEB”) as follows:

*a. Postemployment Healthcare Benefits*

For employees hired before January 16, 2012, the Board provides a postemployment healthcare benefit through a single-employer, defined benefit plan. The benefit is in the form of partially subsidized health care costs, until the retiree attains age 65. The benefit is provided through the Board’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 the Board’s defined benefit pension plan, taking an immediate distribution of pension benefits, 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 the Board's defined benefit retirement plan and is not paid out of retirement plan funds. Currently, 155 retirees are receiving this benefit. The Board 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 provisions to the Board. In January 2012, the Board 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, the Board changed the benefit for those hired after January 16, 2012, by increasing the minimum age from 55 to 60, with some transition options.

#### *b. Long-Term Disability*

A long-term disability ("LTD") insured plan is provided for each employee who attains regular status. Prior to 2007, this benefit was self-insured. Beginning January 2016, Unum took over the remainder of the self-insured plan. Any employee who becomes disabled on or after January 1, 2007, is covered under the terms of an insured plan. The insured plan is 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. Under the insured plan, the obligation for the payment of benefits has been effectively transferred to the insurance company. The Board has guaranteed benefits in the event of the insurance company's insolvency.

Neither OPEB plan issues a separate report.

#### Funding Policy

The Board's funding policy is established and may be amended by the Board. The Board is not required to establish an irrevocable trust fund to accumulate assets for payment of future OPEB benefits, and has elected not to do so. Payments of OPEB benefits are made on a pay-as-you-go basis in amounts necessary to provide current benefits to recipients. For the year ended December 31, 2016, the Board contributed \$2.3 million to the postemployment healthcare benefits plan (approximately 74% of estimated premium equivalent costs). Retirees receiving benefits contributed \$800,000, or approximately 26% of the estimated premium equivalent costs. The Board paid \$1,000 in LTD benefits in 2016 and \$240,000 in LTD insurance premiums. For the year ended December 31, 2015, the Board contributed \$2.0 million to the postemployment healthcare benefits plan (approximately 71% of estimated premium equivalent costs). Retirees receiving benefits contributed \$798,000, or approximately 29% of the estimated premium equivalent costs. The Board paid \$28,000 in LTD benefits in 2015 and \$462,000 in LTD insurance premiums.

#### Annual OPEB Cost and Net OPEB Obligation

The Board's annual OPEB cost (expense) is calculated based on the annual required contribution of the employer ("ARC"), an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed thirty years. As of January 2016, all long term disability benefits are maintained in an insured plan. As such, long term disability benefits are no longer considered when calculating the annual OPEB cost and net OPEB obligation. The following tables show the components of the Board's annual OPEB costs, the amount

actually contributed to the OPEB plan, and changes in the Board's net OPEB obligation for the years ended December 31, 2016 and 2015:

| <u>Annual OPEB Cost and Net OPEB Obligation</u> |                   |                        |                  |
|---|-------------------|------------------------|------------------|
| <u>Year Ended December 31, 2016</u>             |                   |                        |                  |
| <u>(amounts expressed in thousands)</u>         |                   |                        |                  |
|   | <u>Healthcare</u> | <u>LTD<sup>1</sup></u> | <u>Total</u>     |
| Annual required contribution (ARC)              | \$ 1,773          | \$ -                   | \$ 1,773         |
| Interest on net OPEB obligation (asset)         | 432               | -                      | 432              |
| Adjustment to ARC                               | (600)             | -                      | (600)            |
| Annual OPEB cost                                | 1,605             | -                      | 1,605            |
| Contributions made                              | (2,255)           | (1)                    | (2,256)          |
| Increase in net OPEB obligation (asset)         | (650)             | (1)                    | (651)            |
| Net OPEB obligation (asset) - beginning of year | 10,799            | (568)                  | 10,231           |
| Write off of LTD prepaid asset                  |                   | 569                    | 569              |
| Net OPEB obligation (asset) - end of year       | <u>\$ 10,149</u>  | <u>\$ -</u>            | <u>\$ 10,149</u> |

<sup>1</sup>Denver Water no longer has a self insured long-term disability plan.

| <u>Annual OPEB Cost and Net OPEB Obligation</u> |                   |                        |                  |
|---|-------------------|------------------------|------------------|
| <u>Year Ended December 31, 2015</u>             |                   |                        |                  |
| <u>(amounts expressed in thousands)</u>         |                   |                        |                  |
|   | <u>Healthcare</u> | <u>LTD<sup>1</sup></u> | <u>Total</u>     |
| Annual required contribution (ARC)              | \$ 1,974          | \$ 13                  | \$ 1,987         |
| Interest on net OPEB obligation (asset)         | 439               | (22)                   | 417              |
| Adjustment to ARC                               | (611)             | 31                     | (580)            |
| Annual OPEB cost                                | 1,802             | 22                     | 1,824            |
| Contributions made                              | (1,993)           | (28)                   | (2,021)          |
| Increase in net OPEB obligation (asset)         | (191)             | (6)                    | (197)            |
| Net OPEB obligation (asset) - beginning of year | 10,990            | (562)                  | 10,428           |
| Net OPEB obligation (asset) - end of year       | <u>\$ 10,799</u>  | <u>\$ (568)</u>        | <u>\$ 10,231</u> |

<sup>1</sup>This is the self-insured portion only. The LTD asset is recorded in *Prepaid Expenses and Other Assets* in the Statements of Net Position.

The Board's annual OPEB cost, the percentage of annual OPEB cost contributed to the OPEB plan, and the net OPEB obligation for 2016 and the two preceding years were as follows:

| <u>Annual OPEB Cost and Percentage of Required Contribution</u><br>(amounts expressed in thousands) |                         |                           |   |                            |
|---|-------------------------|---------------------------|---|----------------------------|
| <u>Year Ended December 31,</u>  | <u>Annual OPEB Cost</u> | <u>Contributions Made</u> | <u>Percentage of Annual OPEB Cost Contributed</u> | <u>Net OPEB Obligation</u> |
| 2016  | \$ 1,605                | \$ 2,256                  | 140.6%  | \$ 10,149                  |
| 2015  | 1,824                   | 2,021                     | 110.8   | 10,231                     |
| 2014  | 2,044                   | 1,972                     | 96.5  | 10,428                     |

### Funded Status and Funding Progress

As of January 1, 2016 the most recent actuarial valuation date, the plan was 0% funded. The actuarial accrued liability for benefits was \$19.2 million, and the actuarial value of assets was \$0, resulting in an unfunded actuarial accrued liability (UAAL) of \$19.2 million. The covered payroll (annual payroll of active employees covered by the OPEB plan) was \$75.7 million, and the ratio of the UAAL to the covered payroll was 25.4%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. A schedule of funding progress, presented as required supplementary information, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits. See Exhibit I-C *OPEB Plan Schedule of Funding Progress*.

### Actuarial Methods and Assumptions

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the January 1, 2016 actuarial valuation, the projected unit credit with 30-year open, level dollar amortization, actuarial cost method was used. The actuarial assumptions included a 4.00 percent investment rate of return (net of administrative expenses and including an inflation component of 2.75%). The annual healthcare cost trend rate based on the Getzen Trend Model smoothed each year out to 2030 is 4.50 percent. The actuarial value of assets was not determined as the Board has not advanced funded the obligation. The amortization period of the UAAL is a level dollar amount over 30 years on an open basis.

### (13) POLLUTION REMEDIATION LIABILITY

In 2016, as part of the Operations Complex Redevelopment 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 \$890,000 was expended in 2016 for the disposal of the contaminated soil. At the end of 2016, a liability was accrued for \$500,000 to cover the estimated costs to dispose of the remaining identified contaminated soil during 2017. This liability is shown in Accounts Payable on the Statements of Net Position. The assumptions used to estimate the remaining liability were 1) the estimated area to be disturbed of 392,526 square feet, 2) exploratory boring results indicating that approximately two-thirds of that area will need remediation, and 3) the average cost of the previous remediation work was \$1.80 per square foot. The actual cost could vary depending on depth and the soil conditions discovered once the work commences.

(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:

| <u>Capital Contributions</u>                  |                   |                   |
|---|-------------------|-------------------|
| <u>Years Ended December 31, 2016 and 2015</u> |                   |                   |
| <u>(amounts expressed in thousands)</u>       |                   |                   |
|   | <u>CIAC</u>       | <u>SDC</u>        |
| Inception through December 31, 2014           | \$ 488,622        | \$ 708,802        |
| 2015 Additions                                | <u>33,256</u>     | <u>36,109</u>     |
| Inception through December 31, 2015           | 521,878           | 744,911           |
| 2016 Additions                                | <u>22,147</u>     | <u>38,962</u>     |
| Inception through December 31, 2016           | <u>\$ 544,025</u> | <u>\$ 783,873</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 the Board’s financial statements.

(16) CONTRACT COMMITMENTS

Contractual commitments as of December 31, 2016 for construction and other purposes are estimated at \$306.5 million.

Organizational Reporting and Communication Alignment

The Organizational Reporting and Communication Alignment (ORCA) project is a multi-year, multi-phase effort to re-implement and rebuild the financial structure and chart of accounts in the enterprise financial system. Phase one of the project was completed mid-year 2016. Phase two, beginning in 2017, expands

the utilization of the enterprise financial system to include procurement and expense management, and changes to time and attendance reporting. The total estimated budget for the project is \$7 million.

#### Northwater Treatment Plant

The Northwater Treatment Plant (NTP) is a new 150 million gallons per day (MGD) facility to be constructed on Denver Water's Ralston Reservoir property north of Golden on Colorado State Highway 93. The new facility will replace the Moffat Water Treatment Plant, which is approaching the end of its useful life. The new treatment plant is expected to increase system reliability and flexibility with its modern design. The design of the NTP will be split into several different packages allowing for various components to be conducted by different prime consultants. The design execution will be completed by seven prime consultants and multiple subconsultants. There is an Owner's Representative (OR) that is responsible for the oversight and delivery of the Project. The OR will be part of an integrated team including Denver Water's Project Manager and the Construction Manager at Risk (CMAR) Project Manager. Early phases of construction are estimated to begin in 2018. The preliminary budget for the project is estimated at \$400 million.

#### Operations Complex Redevelopment

A new campus master plan was approved by the Board in 2013. Design started in 2014, with construction expected to be complete by December 2019. The plan includes two phases of construction. Phase 1 includes the operations buildings and site work, with Phase 2 including the administration and wellness buildings, and parking structure. Construction commenced at the end of 2015 and into 2016 with all Phase 1 design components under construction. The meter shop is nearly 70% complete, the warehouse, fleet and trades buildings are roughly 68%, 50%, and 45% complete respectively. Design efforts are underway for Phase 2 with the issuance of the construction documents for the parking structure in December and the March release of the construction documents for the administration building. The goal is to build a modern site that improves the efficiency, functionality, security and safety of the Board's operations. Many of the current buildings are more than 50 years old and are 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 has been set at \$195.8 million.

#### (17) SUBSEQUENT EVENTS

The Board has evaluated subsequent events through April 28, 2017 which is the date the basic financial statements were available to be issued and has identified the following subsequent event:

The Board is planning to issue approximately \$205 million in Series 2017A-B capital improvement revenue bonds on May 10 and May 11, 2017 with an expected close date of May 24, 2017. The Series 2017A bonds, in the amount of \$160 million will be designated "Green Bonds" and the Series 2017B bonds, in the amount of \$45 million will be designated water revenue bonds.

The term "Green Bonds" is used to describe bonds that are issued specifically to finance environmentally beneficial projects. Proceeds from the Series 2017A will be used to partially finance the redevelopment of Denver Water's main operating and administrative complex (the "Operations Complex Redevelopment Project"). Proceeds from the Series 2017B will be used to fund other large capital projects such as the Hillcrest Reservoir Tank Replacement project and Denver Water's Northwater Treatment Plant design.

REQUIRED SUPPLEMENTARY INFORMATION

BOARD OF WATER COMMISSIONERS  
CITY AND COUNTY OF DENVER, COLORADO

REQUIRED SUPPLEMENTARY INFORMATION  
Schedule of Changes in the Net Pension Liability and Related Ratios  
2007 - 2016  
(amounts expressed in thousands)

|   | 2016             | 2015             | 2014             | 2013        | 2012        | 2011        | 2010        | 2009        | 2008        | 2007        |
|---|------------------|------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Total pension liability</b>  |                  |                  |                  |             |             |             |             |             |             |             |
| Service cost  | \$ 6,757         | \$ 6,071         | \$ 6,046         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -        | \$ -        | \$ -        |
| Interest  | 25,820           | 25,044           | 24,051           | -           | -           | -           | -           | -           | -           | -           |
| Effect of plan changes  | -                | -                | -                | -           | -           | -           | -           | -           | -           | -           |
| Effect of economic/demographic (gains) or losses                                  | 801              | -                | 2,037            | -           | -           | -           | -           | -           | -           | -           |
| Effect of changes of assumptions  | 10,152           | -                | -                | -           | -           | -           | -           | -           | -           | -           |
| Benefit payments  | (20,693)         | (20,365)         | (17,850)         | -           | -           | -           | -           | -           | -           | -           |
| <b>Net change in pension liability</b>  | <b>22,837</b>    | <b>10,750</b>    | <b>14,284</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| <b>Total pension liability-beginning</b>  | <b>348,594</b>   | <b>337,844</b>   | <b>323,560</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| <b>Total pension liability-ending (a)</b>   | <b>371,431</b>   | <b>348,594</b>   | <b>337,844</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| <b>Plan fiduciary net position</b>  |                  |                  |                  |             |             |             |             |             |             |             |
| Employer contributions  | 14,500           | 14,500           | 15,000           | -           | -           | -           | -           | -           | -           | -           |
| Member contributions  | -                | -                | -                | -           | -           | -           | -           | -           | -           | -           |
| Net investment income   | 2,473            | 18,523           | 39,023           | -           | -           | -           | -           | -           | -           | -           |
| Benefit payments  | (20,693)         | (20,365)         | (17,850)         | -           | -           | -           | -           | -           | -           | -           |
| Administrative expense  | (44)             | (144)            | (116)            | -           | -           | -           | -           | -           | -           | -           |
| <b>Net change in plan fiduciary net position</b>                                  | <b>(3,764)</b>   | <b>12,514</b>    | <b>36,057</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| <b>Plan fiduciary net position-beginning</b>                                      | <b>302,339</b>   | <b>289,825</b>   | <b>253,768</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| <b>Plan fiduciary net position-ending (b)</b>                                     | <b>298,575</b>   | <b>302,339</b>   | <b>289,825</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| <b>Net pension liability-ending (a)-(b)</b>                                       | <b>\$ 72,856</b> | <b>\$ 46,255</b> | <b>\$ 48,019</b> | <b>\$ -</b> | <b>\$ -</b> | <b>\$ -</b> | <b>\$ -</b> | <b>\$ -</b> | <b>\$ -</b> | <b>\$ -</b> |
| <b>Plan fiduciary net position as a percentage of the total pension liability</b> | 80.39%           | 86.73%           | 85.79%           | -           | -           | -           | -           | -           | -           | -           |
| <b>Covered-employee payroll</b>   | \$ 75,990        | \$ 71,847        | \$ 71,940        | \$ -        | \$ -        | \$ -        | \$ -        | \$ -        | \$ -        | \$ -        |
| <b>Net position liability as a percentage of covered-employee payroll</b>         | 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 page II-57.

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

**REQUIRED SUPPLEMENTARY INFORMATION**  
Schedule of Board Pension Contributions

2007 - 2016

(amounts expressed in thousands)

|  | 2016      | 2015      | 2014      | 2013       | 2012       | 2011       | 2010      | 2009       | 2008      | 2007      |
|--|-----------|-----------|-----------|------------|------------|------------|-----------|------------|-----------|-----------|
| Actuarially determined contribution                                  | \$ 14,017 | \$ 14,068 | \$ 13,532 | \$ 11,958  | \$ 12,256  | \$ 12,414  | \$ 12,639 | \$ 11,872  | \$ 7,233  | \$ 6,982  |
| Contributions in relation to the actuarially determined contribution | 14,500    | 14,500    | 14,500    | 15,000     | 14,300     | 15,400     | 12,639    | 14,500     | 7,590     | 7,277     |
| Contribution deficiency (excess)                                     | \$ (483)  | \$ (432)  | \$ (968)  | \$ (3,042) | \$ (2,044) | \$ (2,986) | \$ -      | \$ (2,628) | \$ (357)  | \$ (295)  |
| Covered-employee payroll   | \$ 75,740 | \$ 75,990 | \$ 71,847 | \$ 71,940  | \$ 71,172  | \$ 69,927  | \$ 70,372 | \$ 65,721  | \$ 60,347 | \$ 58,579 |
| Contributions as a percentage of covered-employee payroll            | 19.14%    | 19.08%    | 20.18%    | 20.85%     | 20.09%     | 22.02%     | 17.96%    | 22.06%     | 12.58%    | 12.42%    |

**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 7.25% investment rate of return (net of administrative expenses and including an inflation component of 3.0%)
- Retirement age Experience based table of rates that are specific to the type of eligibility condition.
- Mortality Mortality rates were based on the RP-2000 Combined Healthy Mortality Table projected to 2020 using Scale BB.

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

**REQUIRED SUPPLEMENTARY INFORMATION**  
Other Post-Employment Benefits Plan Schedule of Funding Progress  
(amounts expressed in thousands)

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b - a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll [(b-a)/c] |
|--------------------------|-------------------------------|---------------------------------------|-----------------------------|--------------------|---------------------|---|
| 1/1/16                   | \$ -                          | \$ 19,208                             | \$ 19,208                   | -                  | \$ 75,740           | 25.4%   |
| 1/1/15                   | \$ -                          | \$ 22,188                             | \$ 22,188                   | -                  | \$ 75,990           | 29.2%   |
| 1/1/14                   | \$ -                          | \$ 24,264                             | \$ 24,264                   | -                  | \$ 71,847           | 33.8%   |

OTHER SUPPLEMENTAL INFORMATION

**BOARD OF WATER COMMISSIONERS  
CITY AND COUNTY OF DENVER, COLORADO**  
Revenue Water Improvement and Refunding Bonds Outstanding  
December 31, 2016  
(amounts expressed in thousands)

| Date of Issue       | Interest Rates on Bonds Outstanding as of December 31, 2016 | Amount            |                    | Bonds Which Are Callable |                       |
|---------------------|---|-------------------|--------------------|--------------------------|-----------------------|
|                     |   | Issued            | Retired            | Callable Amount          | Initial Date Callable |
| Mar 22, 2007A       | 3.00-5.00%  | 100,000           | (77,325)           | 20,110                   | Dec 15, 2017          |
| Jun 23, 2008A       | 0.75%   | 1,800             | (1,080)            | -                        | Not callable          |
| June 2, 2009A       | 4.65-6.15%  | 44,000            | -                  | 40,255                   | Dec 15, 2019          |
| Sep 28, 2010B       | 2.625-5.17%   | 90,000            | -                  | 78,990                   | Dec 15, 2020          |
| May 22, 2012A       | 3.50-5.00%  | 36,555            | -                  | 32,040                   | Dec 15, 2021          |
| Jun 26, 2012B       | 3.00-5.00%  | 108,545           | (68,535)           | 16,315                   | Dec 15, 2021          |
| Sep 16, 2014A       | 3.00-5.00%  | 48,670            | (2,275)            | 43,730                   | Dec 15, 2023          |
| May 24, 2016A       | 2.50-5.00%  | 94,755            | -                  | 59,530                   | Sep 15, 2026          |
| May 24, 2016B       | 2.00-5.00%  | 63,470            | -                  | 33,455                   | Sep 15, 2026          |
| Plus premium        |   | <u>\$ 587,795</u> | <u>\$(149,215)</u> | <u>\$ 438,580</u>        |                       |
| Total Revenue Bonds |   |                   |                    | <u>15,758</u>            |                       |
|                     |   |                   |                    | <u>\$ 454,338</u>        |                       |

See accompanying independent auditors' report.

**BOARD OF WATER COMMISSIONERS**  
**CITY AND COUNTY OF DENVER, COLORADO**  
 Summary of Revenue Bond Debt Service Requirements Outstanding  
 December 31, 2016  
 Years 2017 to 2045, inclusive  
 (amounts expressed in thousands)

| <u>Year</u>  | <u>Rev. Bond<br/>Retirements<br/>(Exhibit II-C)</u> | <u>Rev. Bond<br/>Interest<sup>1</sup><br/>(Exhibit II-D)</u> | <u>Total<br/>Debt Service</u> | <u>Build America<br/>Bonds Interest<br/>Subsidy<sup>2</sup></u> |
|--------------|---|--|-------------------------------|---|
| 2017         | \$ 19,595   | \$ 18,452  | \$ 38,047                     | \$ 2,183  |
| 2018         | 19,925  | 17,546   | 37,471                        | 2,141   |
| 2019         | 19,390  | 16,615   | 36,005                        | 2,096   |
| 2020         | 16,190  | 15,725   | 31,915                        | 2,045   |
| 2021         | 16,910  | 14,964   | 31,874                        | 1,989   |
| 2022         | 16,560  | 14,216   | 30,776                        | 1,931   |
| 2023         | 17,285  | 13,481   | 30,766                        | 1,869   |
| 2024         | 12,585  | 12,709   | 25,294                        | 1,801   |
| 2025         | 12,830  | 12,120   | 24,950                        | 1,858   |
| 2026         | 13,360  | 11,538   | 24,898                        | 1,776   |
| 2027         | 13,915  | 10,932   | 24,847                        | 1,690   |
| 2028         | 14,350  | 10,440   | 24,790                        | 1,651   |
| 2029         | 13,955  | 9,915  | 23,870                        | 1,503   |
| 2030         | 14,965  | 9,392  | 24,357                        | 1,403   |
| 2031         | 15,595  | 8,798  | 24,393                        | 1,297   |
| 2032         | 16,245  | 8,168  | 24,413                        | 1,186   |
| 2033         | 16,930  | 7,509  | 24,439                        | 1,069   |
| 2034         | 17,090  | 6,823  | 23,913                        | 948   |
| 2035         | 17,735  | 6,122  | 23,857                        | 822   |
| 2036         | 18,380  | 5,409  | 23,789                        | 689   |
| 2037         | 19,090  | 4,635  | 23,725                        | 550   |
| 2038         | 13,880  | 3,830  | 17,710                        | 406   |
| 2039         | 14,395  | 3,192  | 17,587                        | 254   |
| 2040         | 11,990  | 2,529  | 14,519                        | 97  |
| 2041         | 12,235  | 2,027  | 14,262                        | -   |
| 2042         | 12,580  | 1,573  | 14,153                        | -   |
| 2043         | 13,050  | 1,107  | 14,157                        | -   |
| 2044         | 13,530  | 624  | 14,154                        | -   |
| 2045         | 4,040   | 121  | 4,161                         | -   |
|              | <u>\$ 438,580</u>                                   | <u>\$ 250,512</u>  | <u>\$ 689,092</u>             | <u>\$ 33,254</u>  |
| Plus premium | <u>15,758</u>                                       | <u>-</u>   | <u>15,758</u>                 | <u>-</u>  |
|              | <u>\$ 454,338</u>                                   | <u>\$ 250,512</u>  | <u>\$ 704,850</u>             | <u>\$ 33,254</u>  |

<sup>1</sup>Excludes Build America Bonds interest subsidy.

<sup>2</sup> Receipt of Build America Bonds interest subsidy is subject to appropriations by Congress.

See accompanying independent auditors' report.

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

December 31, 2016  
Years 2017 to 2045, inclusive  
(amounts expressed in thousands)

| Year         | Series 2007A | Series 2008A | Series 2009A | Series 2010B | Series 2012A | Series 2012B | Series 2014A     | Series 2016A     | Series 2016B | Total      |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|------------------|--------------|------------|
|              | Improvement  | Improvement  | Improvement  | Improvement  | Improvement  | Refunding    | Improvement/Ref. | Improvement/Ref. | Refunding    |            |
| 2017         | \$ 2,565     | \$ 120       | \$ 1,215     | \$ 2,670     | \$ 815       | \$ 6,035     | \$ 2,370         | \$ 3,805         | \$ -         | \$ 19,595  |
| 2018         | -            | 120          | 1,245        | 2,720        | 860          | 5,195        | -                | 6,515            | 3,270        | 19,925     |
| 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        | 16,190     |
| 2021         | -            | 120          | 1,370        | 2,910        | 995          | 5,805        | -                | 2,770            | 2,940        | 16,910     |
| 2022         | -            | 120          | 1,420        | 2,980        | 1,045        | 5,950        | -                | 1,975            | 3,070        | 16,560     |
| 2023         | -            | -            | 1,475        | 3,055        | 1,095        | 6,200        | 295              | 1,965            | 3,200        | 17,285     |
| 2024         | -            | -            | 1,530        | 3,140        | 1,140        | 995          | 330              | 2,105            | 3,345        | 12,585     |
| 2025         | -            | -            | 1,595        | 3,230        | 1,185        | 755          | 360              | 2,210            | 3,495        | 12,830     |
| 2026         | -            | -            | 1,660        | 3,330        | 1,230        | 780          | 390              | 2,300            | 3,670        | 13,360     |
| 2027         | -            | -            | 1,730        | 3,430        | 1,280        | 805          | 420              | 2,395            | 3,855        | 13,915     |
| 2028         | -            | -            | 1,805        | 3,540        | 1,340        | 830          | 450              | 2,455            | 3,930        | 14,350     |
| 2029         | -            | -            | 1,885        | 3,660        | 1,400        | 475          | 505              | 2,515            | 4,020        | 13,955     |
| 2030         | 4,665        | -            | 1,970        | 3,780        | 1,460        | -            | 505              | 2,585            | -            | 14,965     |
| 2031         | 4,900        | -            | 2,065        | 3,910        | 1,530        | -            | 530              | 2,660            | -            | 15,595     |
| 2032         | 5,145        | -            | 2,160        | 4,050        | 1,595        | -            | 560              | 2,735            | -            | 16,245     |
| 2033         | 5,400        | -            | 2,265        | 4,190        | 1,670        | -            | 585              | 2,820            | -            | 16,930     |
| 2034         | -            | -            | 2,370        | 4,340        | 1,745        | -            | 610              | 2,905            | 5,120        | 17,090     |
| 2035         | -            | -            | 2,480        | 4,495        | 1,820        | -            | 640              | 2,990            | 5,310        | 17,735     |
| 2036         | -            | -            | 2,600        | 4,650        | 1,885        | -            | 665              | 3,080            | 5,500        | 18,380     |
| 2037         | -            | -            | 2,720        | 4,815        | 1,960        | -            | 695              | 3,180            | 5,720        | 19,090     |
| 2038         | -            | -            | 2,850        | 4,985        | 2,040        | -            | 720              | 3,285            | -            | 13,880     |
| 2039         | -            | -            | 2,980        | 5,160        | 2,120        | -            | 750              | 3,385            | -            | 14,395     |
| 2040         | -            | -            | -            | 5,340        | 2,205        | -            | 960              | 3,485            | -            | 11,990     |
| 2041         | -            | -            | -            | -            | 2,295        | -            | 6,350            | 3,590            | -            | 12,235     |
| 2042         | -            | -            | -            | -            | -            | -            | 8,885            | 3,695            | -            | 12,580     |
| 2043         | -            | -            | -            | -            | -            | -            | 9,240            | 3,810            | -            | 13,050     |
| 2044         | -            | -            | -            | -            | -            | -            | 9,610            | 3,920            | -            | 13,530     |
| 2045         | -            | -            | -            | -            | -            | -            | -                | 4,040            | -            | 4,040      |
| Plus premium | \$ 22,675    | \$ 720       | \$ 44,000    | \$ 90,000    | \$ 36,555    | \$ 40,010    | \$ 46,395        | \$ 94,755        | \$ 63,470    | \$ 438,580 |
|              |              |              |              |              |              |              |                  |                  |              | 15,758     |
|              |              |              |              |              |              |              |                  |                  |              | \$ 454,338 |

See accompanying independent auditors' report.

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

Schedule of Bond Interest for Revenue Bonds Outstanding<sup>1</sup>  
December 31, 2016  
Years 2017 to 2045, inclusive  
(amounts expressed in thousands)

| Year | Series 2007A<br>Improvement | Series 2008A<br>Improvement | Series 2009A<br>Improvement | Series 2010B<br>Improvement | Series 2012A<br>Improvement | Series 2012B<br>Refunding | Series 2014A<br>Improv/Ref | Series 2016A<br>Improv/Ref | Series 2016B<br>Refunding | Total             |
|------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------|----------------------------|----------------------------|---------------------------|-------------------|
| 2017 | \$ 732                      | \$ 5                        | \$ 2,588                    | \$ 4,109                    | \$ 1,569                    | \$ 1,713                  | \$ 1,818                   | \$ 3,484                   | \$ 2,434                  | \$ 18,452         |
| 2018 | 604                         | 5                           | 2,532                       | 4,039                       | 1,528                       | 1,411                     | 1,700                      | 3,294                      | 2,433                     | 17,546            |
| 2019 | 604                         | 4                           | 2,471                       | 3,961                       | 1,485                       | 1,151                     | 1,700                      | 2,968                      | 2,271                     | 16,615            |
| 2020 | 604                         | 3                           | 2,407                       | 3,867                       | 1,440                       | 1,030                     | 1,699                      | 2,576                      | 2,099                     | 15,725            |
| 2021 | 604                         | 2                           | 2,337                       | 3,768                       | 1,393                       | 853                       | 1,699                      | 2,388                      | 1,920                     | 14,964            |
| 2022 | 603                         | 1                           | 2,262                       | 3,664                       | 1,343                       | 622                       | 1,699                      | 2,250                      | 1,772                     | 14,216            |
| 2023 | 603                         | -                           | 2,182                       | 3,553                       | 1,291                       | 383                       | 1,698                      | 2,152                      | 1,619                     | 13,481            |
| 2024 | 603                         | -                           | 2,097                       | 3,431                       | 1,247                       | 134                       | 1,685                      | 2,053                      | 1,459                     | 12,709            |
| 2025 | 603                         | -                           | 2,009                       | 3,300                       | 1,201                       | 96                        | 1,671                      | 1,948                      | 1,292                     | 12,120            |
| 2026 | 603                         | -                           | 1,913                       | 3,161                       | 1,154                       | 73                        | 1,657                      | 1,860                      | 1,117                     | 11,538            |
| 2027 | 603                         | -                           | 1,813                       | 3,015                       | 1,105                       | 49                        | 1,645                      | 1,768                      | 934                       | 10,932            |
| 2028 | 603                         | -                           | 1,709                       | 2,859                       | 1,047                       | 25                        | 1,633                      | 1,708                      | 856                       | 10,440            |
| 2029 | 603                         | -                           | 1,601                       | 2,694                       | 987                         | -                         | 1,619                      | 1,643                      | 768                       | 9,915             |
| 2030 | 603                         | -                           | 1,488                       | 2,520                       | 924                         | -                         | 1,605                      | 1,574                      | 678                       | 9,392             |
| 2031 | 463                         | -                           | 1,370                       | 2,337                       | 858                         | -                         | 1,589                      | 1,503                      | 678                       | 8,798             |
| 2032 | 317                         | -                           | 1,246                       | 2,141                       | 789                         | -                         | 1,574                      | 1,423                      | 678                       | 8,168             |
| 2033 | 161                         | -                           | 1,116                       | 1,939                       | 718                         | -                         | 1,556                      | 1,341                      | 678                       | 7,509             |
| 2034 | -                           | -                           | 980                         | 1,730                       | 642                         | -                         | 1,537                      | 1,257                      | 677                       | 6,823             |
| 2035 | -                           | -                           | 838                         | 1,510                       | 564                         | -                         | 1,517                      | 1,169                      | 524                       | 6,122             |
| 2036 | -                           | -                           | 686                         | 1,283                       | 500                         | -                         | 1,495                      | 1,080                      | 365                       | 5,409             |
| 2037 | -                           | -                           | 526                         | 1,047                       | 425                         | -                         | 1,473                      | 979                        | 185                       | 4,635             |
| 2038 | -                           | -                           | 360                         | 800                         | 346                         | -                         | 1,448                      | 876                        | -                         | 3,830             |
| 2039 | -                           | -                           | 183                         | 543                         | 265                         | -                         | 1,423                      | 778                        | -                         | 3,192             |
| 2040 | -                           | -                           | -                           | 276                         | 180                         | -                         | 1,397                      | 676                        | -                         | 2,529             |
| 2041 | -                           | -                           | -                           | -                           | 92                          | -                         | 1,363                      | 572                        | -                         | 2,027             |
| 2042 | -                           | -                           | -                           | -                           | -                           | -                         | 1,109                      | 464                        | -                         | 1,573             |
| 2043 | -                           | -                           | -                           | -                           | -                           | -                         | 754                        | 353                        | -                         | 1,107             |
| 2044 | -                           | -                           | -                           | -                           | -                           | -                         | 385                        | 239                        | -                         | 624               |
| 2045 | -                           | -                           | -                           | -                           | -                           | -                         | -                          | 121                        | -                         | 121               |
|      | <u>\$ 9,516</u>             | <u>\$ 20</u>                | <u>\$ 36,714</u>            | <u>\$ 61,547</u>            | <u>\$ 23,093</u>            | <u>\$ 7,540</u>           | <u>\$ 42,148</u>           | <u>\$ 44,497</u>           | <u>\$ 25,437</u>          | <u>\$ 250,512</u> |

<sup>1</sup>Excludes Build America Bonds interest subsidy. See Exhibit II-B.

See accompanying independent auditors' report.

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*This part of Denver Water's comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about Denver Water's overall financial health.*

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

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*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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*Sources* : Unless otherwise noted, the information in these schedules is derived from the comprehensive annual financial reports 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 the way they are displayed, and may not appear to total correctly.

STATISTICAL SUMMARY: 2007 - 2016

|  | 2016       | 2015       | 2014       | 2013       | 2012       | 2011       | 2010       | 2009       | 2008       | 2007       |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Population served <sup>1</sup>   | 1,249,000  | 1,210,000  | 1,172,000  | 1,161,000  | 1,147,000  | 1,135,000  | 1,125,000  | 1,111,000  | 1,093,000  | 1,077,000  |
| Total treated water consumption (million gallons) <sup>2</sup>   | 65,003.83  | 60,115.97  | 61,185.27  | 60,212.44  | 71,968.70  | 68,260.80  | 69,695.40  | 62,106.90  | 71,975.87  | 70,479.84  |
| Average daily consumption (million gallons)  | 178.09     | 164.70     | 167.63     | 165.00     | 196.64     | 187.02     | 190.95     | 170.16     | 196.66     | 193.10     |
| Average daily consumption per capita (gallons) <sup>1</sup>  | 142        | 136        | 143        | 142        | 171        | 165        | 170        | 153        | 180        | 179        |
| Maximum daily consumption (million gallons)  | 355.88     | 344.26     | 335.20     | 355.00     | 398.20     | 366.40     | 365.81     | 341.80     | 426.16     | 425.70     |
| Maximum hour treated water use rate (million gallons per day)  | 592.00     | 499.30     | 603.60     | 591.00     | 628.00     | 546.80     | 577.75     | 516.90     | 670.00     | 660.00     |
| Treated water pumped (million gallons)   | 26,767.23  | 27,677.64  | 36,088.94  | 34,895.00  | 39,484.10  | 36,443.50  | 41,611.30  | 38,198.90  | 50,283.70  | 44,684.79  |
| Raw water storage capacity (acre-feet) <sup>3</sup>  | 568,642    | 569,534    | 569,534    | 569,534    | 569,534    | 569,534    | 561,883    | 561,883    | 561,883    | 561,883    |
| Replacement reservoir storage capacity (acre-feet)   | 122,432    | 122,432    | 122,432    | 122,432    | 122,432    | 122,432    | 122,432    | 122,432    | 122,432    | 122,432    |
| Supply from South Platte River (acre-feet) <sup>4</sup>  | 158,324    | 166,561    | 148,680    | 142,915    | 85,765     | 117,559    | 151,891    | 138,791    | 122,255    | 168,554    |
| Supply from Blue River/Roberts Tunnel system (acre-feet)   | 40,795     | 39,801     | 77,765     | 111,564    | 54,394     | 148,643    | 74,674     | 58,468     | 80,056     | 65,682     |
| Supply from Moffat system (acre-feet)  | 75,551     | 73,016     | 73,585     | 141,159    | 54,523     | 93,763     | 76,318     | 79,636     | 88,842     | 85,444     |
| Treated water pumping capacity (mgd)   | 1,048.4    | 1,048.4    | 1,007.9    | 1,007.9    | 1,003.3    | 1,003.3    | 1,095.9    | 1,095.9    | 1,097.4    | 1,097.4    |
| 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)   | 351.4      | 351.4      | 353.3      | 353.3      | 381.65     | 371.65     | 371.65     | 371.65     | 368.65     | 368.65     |
| Raw water supply mains in miles (mountain collection system)   | 77.3       | 77.4       | 77.4       | 77.4       | 77.5       | 77.5       | 76.9       | 77.5       | 77.5       | 77.6       |
| Raw water supply mains in miles (metropolitan Denver area)   | 54.3       | 54.2       | 54.0       | 52.3       | 47.7       | 47.7       | 47.1       | 46.0       | 40.7       | 40.7       |
| Transmission & distribution mains (miles) - Inside City and Outside City Total Service Contract distributors | 3,109.3    | 3,091.7    | 3,074.2    | 3,058.2    | 3,050.1    | 3,041      | 3,037      | 2,954      | 2,681      | 2,657      |
| Recycled water transmission & distribution mains (miles)   | 73.5       | 67.2       | 67.0       | 63.1       | 49.0       | 45.0       | 44.2       | 35.3       | 36.5       | 36.5       |
| Total active taps - end of year  | 312,876    | 312,653    | 312,908    | 312,228    | 310,463    | 309,269    | 309,562    | 310,068    | 309,373    | 308,079    |
| Fire hydrants operated & maintained  | 20,556     | 20,269     | 20,030     | 19,818     | 19,670     | 19,553     | 19,439     | 19,159     | 19,185     | 15,767     |
| Fire hydrants tested and repaired  | 23,909     | 18,093     | 29,506     | 25,177     | 25,112     | 26,760     | 21,103     | 18,472     | 25,577     | 27,940     |
| Breaks in mains - Denver   | 225        | 262        | 191        | 222        | 232        | 313        | 261        | 220        | 274        | 247        |
| Service leaks  | 503        | 542        | 337        | 719        | 402        | 385        | 287        | 329        | 318        | 879        |
| Total employees (actual)   | 1,058.0    | 1,057.3    | 1,064.6    | 1,064.9    | 1,082.5    | 1,069.8    | 1,089.1    | 1,095.1    | 1,055.0    | 1,010.2    |
| Additions to capital assets (thousands)  | \$ 152,528 | \$ 131,054 | \$ 125,374 | \$ 93,421  | \$ 128,277 | \$ 113,071 | \$ 125,816 | \$ 103,146 | \$ 101,328 | \$ 103,779 |
| Total long-term debt <sup>5</sup> (thousands)  | \$ 463,553 | \$ 416,196 | \$ 418,200 | \$ 414,013 | \$ 434,945 | \$ 415,644 | \$ 449,828 | \$ 392,659 | \$ 381,285 | \$ 410,928 |

<sup>1</sup>Population estimated based on treated water customers only. Revised population from 2005 to 2010 is based on 2010 Census information.

<sup>2</sup>Denver Water has three water treatment facilities. See page III-81, "Water Treated Monthly." Total treated water consumption includes both sales of treated water as well as non-revenue water. See page III-22 "Sales of Treated Water Between Denver and Outside City."

<sup>3</sup>Denver Water has 13 raw water reservoirs. See page III-62, "Source of Supply - Reservoirs and Collection Systems."

<sup>4</sup>Supply includes effluent exchanges.

<sup>5</sup>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<sup>1,2</sup>: 2007 - 2016**

(amounts expressed in thousands)

|   | 2016                | 2015                | Restated 2014 <sup>3</sup> | 2013                | 2012                | 2011                | 2010                | 2009                | 2008                | 2007                |
|---|---------------------|---------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <b>NET POSITION:</b>                      |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |
| Net investment in capital assets          | \$ 1,788,250        | \$ 1,735,020        | \$ 1,641,601               | \$ 1,579,642        | \$ 1,513,582        | \$ 1,454,710        | \$ 1,401,820        | \$ 1,363,848        | \$ 1,319,268        | \$ 1,227,499        |
| Restricted for debt service reserve funds | 14,005              | 12,047              | 12,375                     | 12,327              | 12,274              | 13,746              | 18,912              | 13,233              | 9,005               | 7,661               |
| Other restricted                          | 500                 | -                   | -                          | -                   | -                   | -                   | -                   | -                   | -                   | -                   |
| Unrestricted                              | 202,692             | 170,963             | 171,648                    | 230,159             | 217,297             | 169,602             | 162,077             | 174,279             | 178,243             | 199,493             |
| <b>Total net position</b>                 | <b>\$ 2,005,447</b> | <b>\$ 1,918,030</b> | <b>\$ 1,825,624</b>        | <b>\$ 1,822,128</b> | <b>\$ 1,743,153</b> | <b>\$ 1,638,058</b> | <b>\$ 1,582,809</b> | <b>\$ 1,551,360</b> | <b>\$ 1,506,516</b> | <b>\$ 1,434,653</b> |

<sup>1</sup>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.

<sup>2</sup>The above data was extracted from the audited financial statements of the Board of Water Commissioners.

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

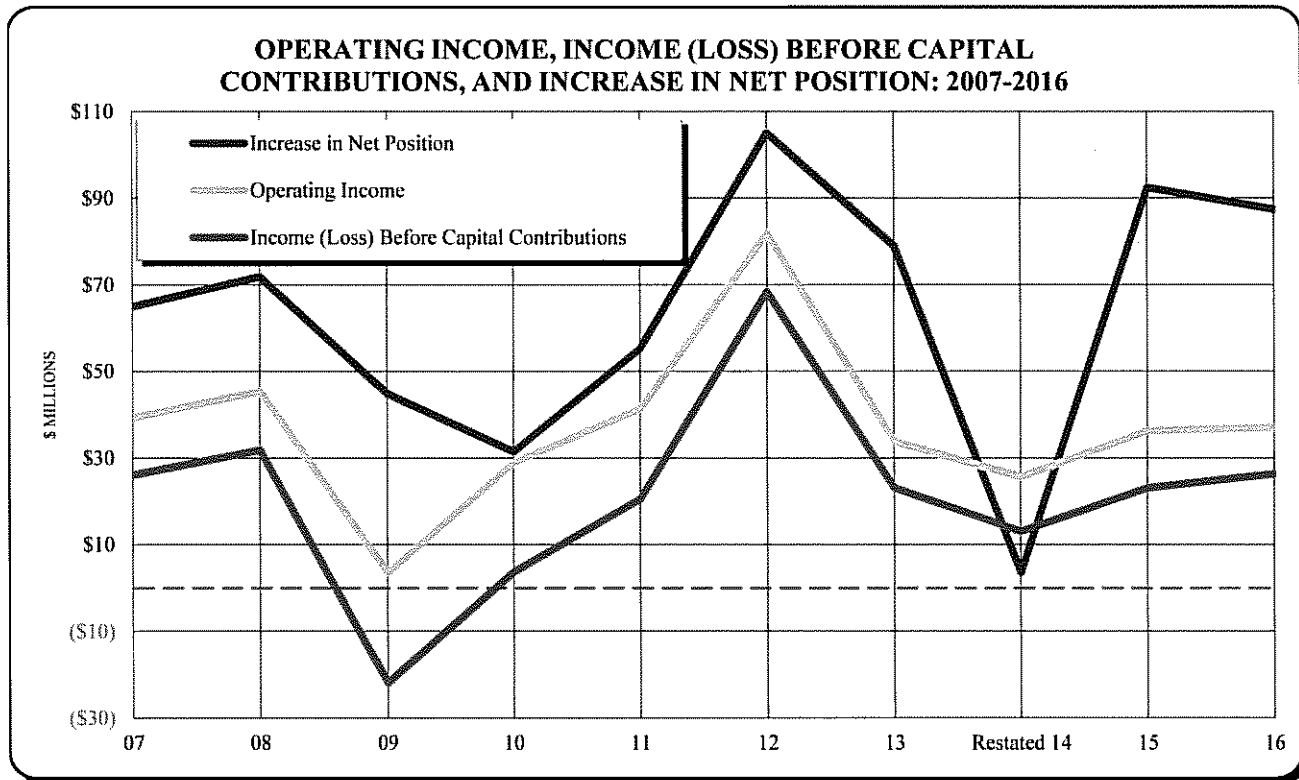
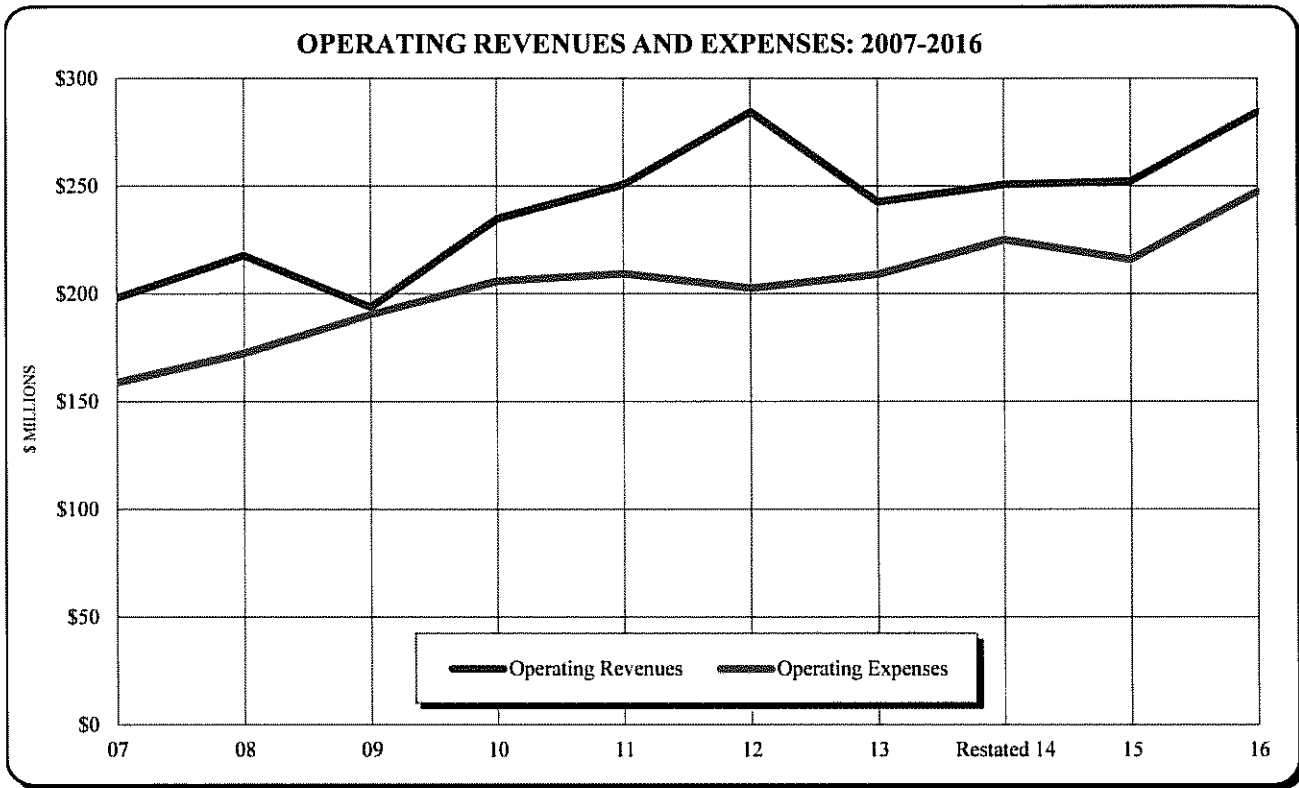
**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION<sup>1,2</sup>: 2007 - 2016**  
(amounts expressed in thousands)

|   | 2016                | 2015                | Restated 2014 <sup>3</sup> | 2013                | 2012                | 2011                | 2010                | 2009                | 2008                | 2007                |
|---|---------------------|---------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <b>OPERATING REVENUES:</b>                            |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |
| Water   | \$ 273,238          | \$ 241,836          | \$ 239,288                 | \$ 230,482          | \$ 271,575          | \$ 239,186          | \$ 224,489          | \$ 184,396          | \$ 205,941          | \$ 188,729          |
| Power generation and other                            | 11,216              | 10,224              | 11,380                     | 12,141              | 12,764              | 11,481              | 10,187              | 9,432               | 11,791              | 9,273               |
| Total operating revenues                              | <u>284,454</u>      | <u>252,060</u>      | <u>250,668</u>             | <u>242,623</u>      | <u>284,339</u>      | <u>250,667</u>      | <u>234,676</u>      | <u>193,828</u>      | <u>217,732</u>      | <u>198,002</u>      |
| <b>OPERATING EXPENSES:</b>                            |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |
| Source of supply, pumping, treatment and distribution | 82,418              | 75,972              | 83,091                     | 68,722              | 75,846              | 79,881              | 79,400              | 68,275              | 66,629              | 59,760              |
| General and administrative                            | 103,380             | 81,994              | 85,347                     | 81,494              | 66,433              | 66,077              | 73,926              | 72,487              | 60,955              | 54,545              |
| Customer service                                      | 11,370              | 9,962               | 10,851                     | 12,894              | 13,929              | 14,394              | 14,150              | 13,022              | 9,407               | 10,208              |
| Depreciation and amortization                         | 50,352              | 47,897              | 45,772                     | 45,805              | 46,363              | 48,961              | 38,322              | 36,582              | 35,382              | 34,238              |
| Total operating expenses                              | <u>247,520</u>      | <u>215,825</u>      | <u>225,061</u>             | <u>208,915</u>      | <u>202,571</u>      | <u>209,313</u>      | <u>205,798</u>      | <u>190,366</u>      | <u>172,373</u>      | <u>158,751</u>      |
| <b>OPERATING INCOME</b>                               | <u>36,934</u>       | <u>36,235</u>       | <u>25,607</u>              | <u>33,708</u>       | <u>81,768</u>       | <u>41,354</u>       | <u>28,878</u>       | <u>3,462</u>        | <u>45,359</u>       | <u>39,251</u>       |
| <b>NONOPERATING REVENUES (EXPENSES):</b>              |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |
| Investment income                                     | 1,603               | 1,479               | 1,552                      | 1,488               | 1,451               | 1,201               | 1,336               | 948                 | 9,141               | 12,201              |
| Interest expense, less capitalized interest           | (11,446)            | (13,049)            | (12,664)                   | (13,602)            | (14,217)            | (17,719)            | (16,630)            | (17,547)            | (17,699)            | (16,305)            |
| Gain (loss) on disposition of capital assets          | (6,348)             | (4,720)             | (5,394)                    | (2,171)             | (4,331)             | (6,011)             | (15,533)            | (8,168)             | (4,426)             | (9,144)             |
| Other income  | 7,426               | 5,595               | 6,143                      | 6,606               | 5,882               | 6,147               | 7,931               | 1,881               | 1,956               | 1,677               |
| Other expense   | (1,861)             | (2,499)             | (2,252)                    | (2,939)             | (2,164)             | (4,408)             | (2,336)             | (2,483)             | (2,459)             | (1,612)             |
| Total nonoperating expenses, net                      | <u>(10,626)</u>     | <u>(13,194)</u>     | <u>(12,615)</u>            | <u>(10,618)</u>     | <u>(13,379)</u>     | <u>(20,790)</u>     | <u>(25,232)</u>     | <u>(25,369)</u>     | <u>(13,487)</u>     | <u>(13,185)</u>     |
| <b>INCOME (LOSS) BEFORE CAPITAL CONTRIBUTIONS</b>     | <u>26,308</u>       | <u>23,041</u>       | <u>12,992</u>              | <u>23,090</u>       | <u>68,389</u>       | <u>20,564</u>       | <u>3,646</u>        | <u>(21,907)</u>     | <u>31,872</u>       | <u>26,068</u>       |
| <b>CAPITAL CONTRIBUTIONS:</b>                         |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |
| Contributions in aid of construction                  | 22,147              | 33,256              | 23,190                     | 21,424              | 17,163              | 17,239              | 10,861              | 41,443              | 21,492              | 12,911              |
| System development charges                            | 38,962              | 36,109              | 32,736                     | 34,461              | 19,543              | 17,446              | 16,942              | 25,308              | 18,499              | 26,023              |
| Total capital contributions                           | <u>61,109</u>       | <u>69,365</u>       | <u>55,926</u>              | <u>55,885</u>       | <u>36,706</u>       | <u>34,685</u>       | <u>27,803</u>       | <u>66,751</u>       | <u>39,991</u>       | <u>38,934</u>       |
| <b>INCREASE IN NET POSITION</b>                       | <u>87,417</u>       | <u>92,406</u>       | <u>68,918</u>              | <u>78,975</u>       | <u>105,095</u>      | <u>55,249</u>       | <u>31,449</u>       | <u>44,844</u>       | <u>71,863</u>       | <u>65,002</u>       |
| <b>NET POSITION:</b>                                  |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |
| Beginning of year                                     | 1,918,030           | 1,825,624           | 1,822,128                  | 1,743,153           | 1,638,058           | 1,582,809           | 1,551,360           | 1,306,516           | 1,434,653           | 1,369,651           |
| Cumulative effect of GASB 68 implementation           |                     |                     | (65,422)                   |                     |                     |                     |                     |                     |                     |                     |
| Restated beginning net position                       |                     |                     | <u>1,756,706</u>           |                     |                     |                     |                     |                     |                     |                     |
| End of year   | <u>\$ 2,005,447</u> | <u>\$ 1,918,030</u> | <u>\$ 1,825,624</u>        | <u>\$ 1,822,128</u> | <u>\$ 1,743,153</u> | <u>\$ 1,638,058</u> | <u>\$ 1,582,809</u> | <u>\$ 1,551,360</u> | <u>\$ 1,506,516</u> | <u>\$ 1,434,653</u> |

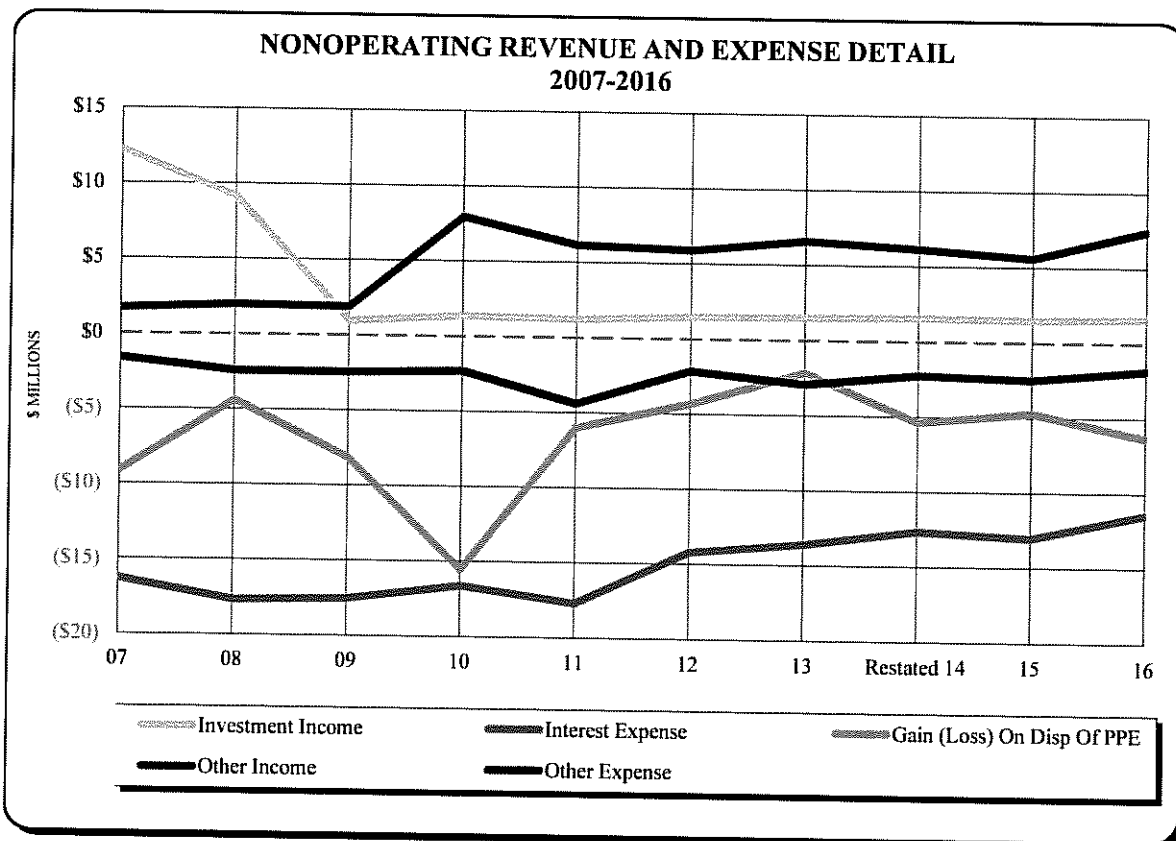
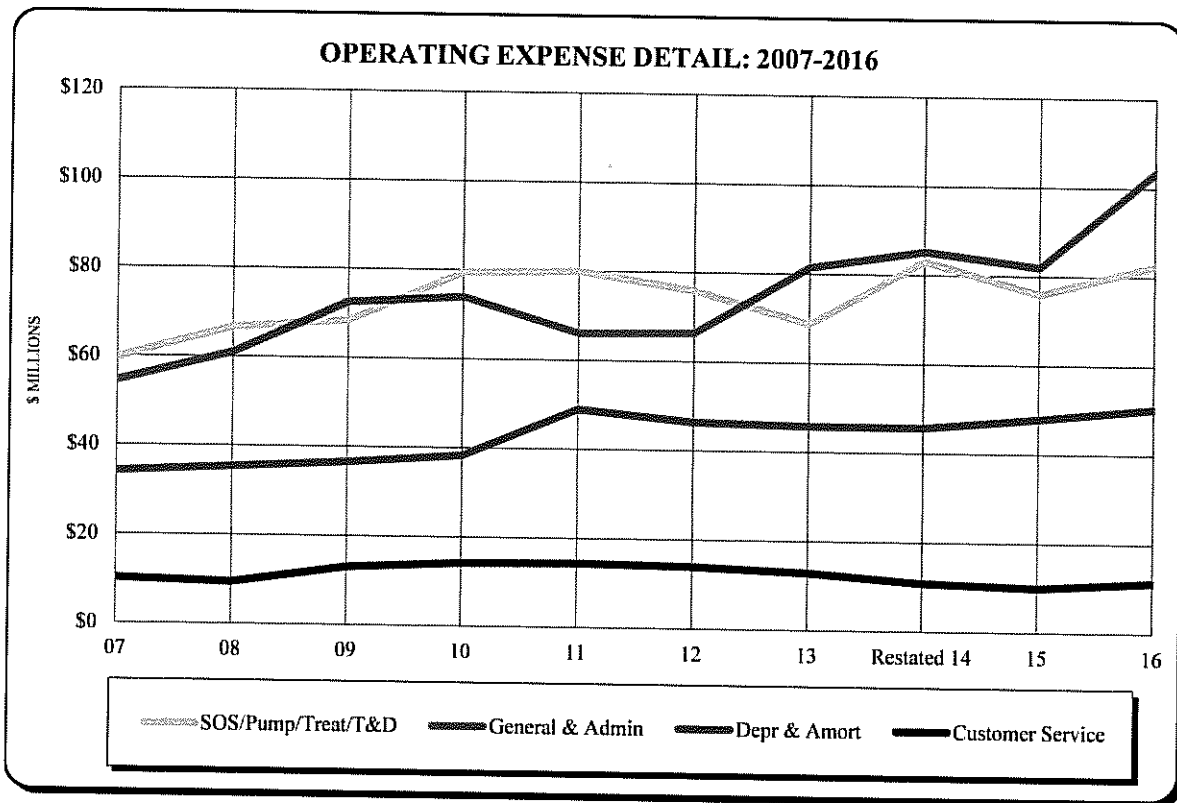
<sup>1</sup>The above data was extracted from the audited financial statements of the Board of Water Commissioners.

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

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



<sup>1</sup>Operating expenses, operating income, income before contributions and net position were restated for 2014 as part of the implementation of GASB Statement No.68 *Accounting and Financial Reporting for Pensions*.



<sup>1</sup>See footnote on page III-9

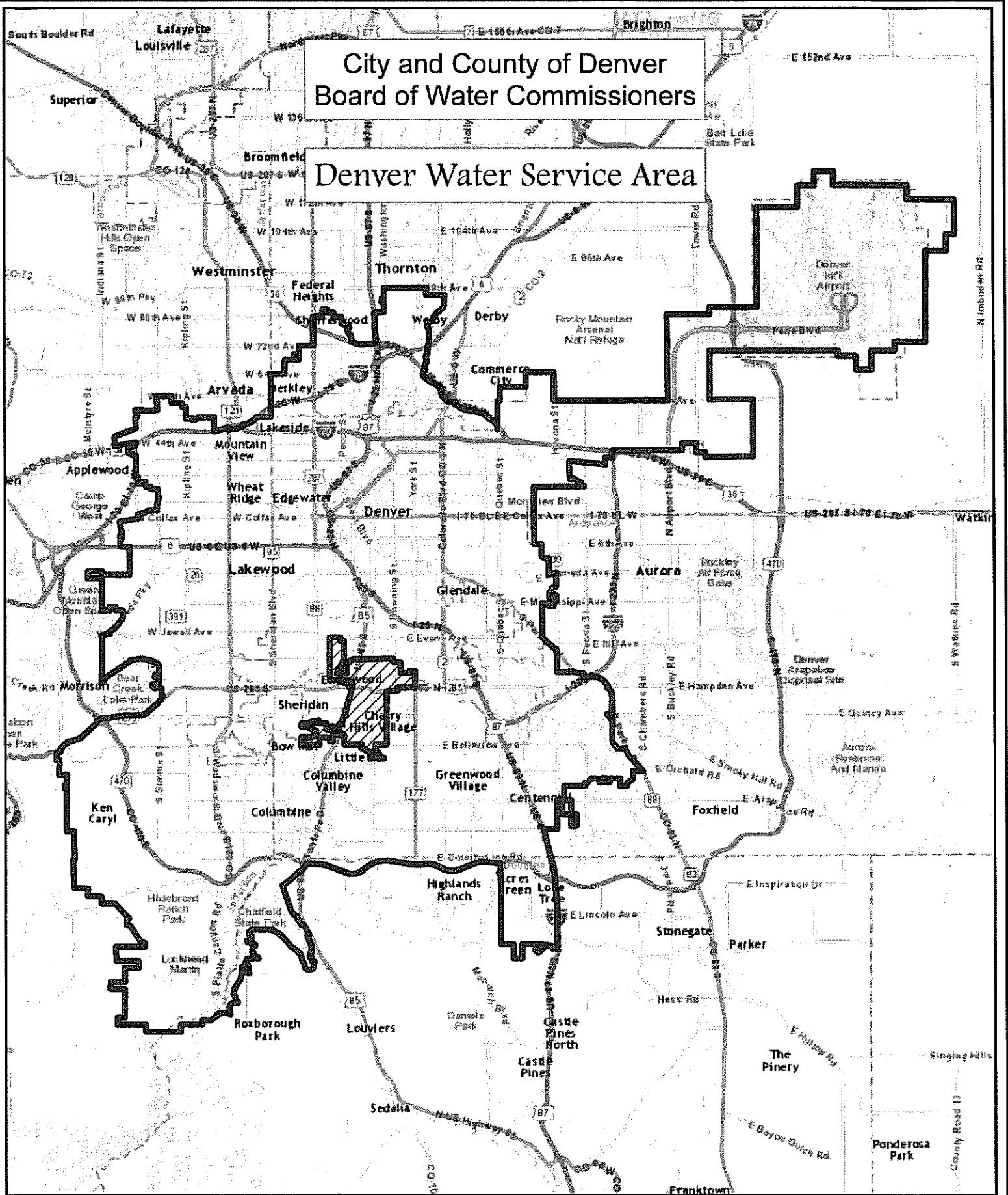
## B - REVENUE CAPACITY INFORMATION

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

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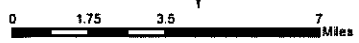
# City and County of Denver Board of Water Commissioners

## Denver Water Service Area



### Legend

-  Denver Water Service Area
-  Not served by Denver Water



Map Date: 4/3/2015  
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.  
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CUSTOMER SERVICE DATA: 2007 - 2016

|  | 2016           | 2015           | 2014           | 2013           | 2012           | 2011 <sup>5</sup> | 2010           | 2009 <sup>6</sup> | 2008           | 2007           |
|--|----------------|----------------|----------------|----------------|----------------|-------------------|----------------|-------------------|----------------|----------------|
| <b>Active Taps:<sup>1</sup></b>                          |                |                |                |                |                |                   |                |                   |                |                |
| Beginning of Year  | 312,653        | 312,908        | 312,228        | 310,463        | 309,272        | 309,562           | 310,068        | 309,373           | 308,079        | 306,901        |
| Activated During Year                                    | 1,139          | 1,105          | 1,250          | 2,377          | 1,539          | 23                | 886            | 979               | 1,919          | 1,826          |
| Discontinued During Year                                 | (916)          | (1,360)        | (570)          | (612)          | (348)          | (313)             | (1,392)        | (284)             | (625)          | (648)          |
| Net Increase During Year                                 | 223            | (255)          | 680            | 1,765          | 1,191          | (290)             | (506)          | 695               | 1,294          | 1,178          |
| Total Active Taps - End of Year                          | <b>312,876</b> | <b>312,653</b> | <b>312,908</b> | <b>312,228</b> | <b>310,463</b> | <b>309,272</b>    | <b>309,562</b> | <b>310,068</b>    | <b>309,373</b> | <b>308,079</b> |
| <b>Active Taps:<sup>1</sup></b>                          |                |                |                |                |                |                   |                |                   |                |                |
| Inside City  | 161,816        | 161,611        | 161,997        | 161,668        | 160,205        | 159,302           | 159,592        | 161,611           | 158,448        | 157,707        |
| City and County  | 1,225          | 1,229          | 1,236          | 1,334          | 1,218          | 1,204             | 1,277          | 1,272             | 1,226          | 1,212          |
| Outside City - Read and Bill                             | 37,051         | 37,020         | 36,911         | 36,795         | 36,637         | 36,542            | 36,477         | 35,760            | 36,420         | 36,278         |
| Outside City - Total Service                             | 36,462         | 36,452         | 36,408         | 36,473         | 36,318         | 36,270            | 36,376         | 36,140            | 36,230         | 36,112         |
| Outside City - Master Meter                              | 76,322         | 76,341         | 76,356         | 75,958         | 76,085         | 75,954            | 75,840         | 75,285            | 77,049         | 76,770         |
| Total Active Taps - End of Year                          | <b>312,876</b> | <b>312,653</b> | <b>312,908</b> | <b>312,228</b> | <b>310,463</b> | <b>309,272</b>    | <b>309,562</b> | <b>310,068</b>    | <b>309,373</b> | <b>308,079</b> |
| Stub-Ins on System <sup>2</sup>                          | 1,179          | 766            | 1,146          | 811            | 514            | 651               | 367            | 275               | 801            | 1,408          |
| Fire Hydrant Use Permits                                 | 730            | 673            | 631            | 550            | 518            | 527               | 439            | 485               | 518            | 546            |
| AMR (Automatic Meter Reading) Installations <sup>3</sup> | -              | -              | -              | -              | -              | 895               | 886            | 742               | 137            | 85             |
| Turn-Offs Due to Delinquent Accounts                     | 6,275          | 4,996          | 5,630          | 4,746          | 5,463          | 6,125             | 6,687          | 8,913             | 13,284         | 12,747         |
| In-Home Water Audits                                     | 1,172          | 1,005          | 1,162          | 976            | 609            | 480               | 409            | 349               | 383            | 169            |
| Call Center Calls <sup>4</sup>                           | 230,002        | 231,620        | 214,867        | 227,736        | 231,533        | 221,291           | 213,065        | 229,979           | 237,047        | 215,457        |
| Water Quality Calls:                                     |                |                |                |                |                |                   |                |                   |                |                |
| Taste and Odor   | 214            | 213            | 180            | 219            | 212            | 169               | 221            | 194               | 161            | 180            |
| Dirty Water  | 296            | 335            | 300            | 326            | 289            | 333               | 309            | 356               | 205            | 221            |
| Illness Concerns   | 49             | 56             | 47             | 50             | 48             | 46                | 51             | 56                | 48             | 50             |
| Other <sup>7</sup>                                       | 654            | 94             | 89             | 192            | 99             | 89                | 128            | 63                | 50             | 40             |
| New Taps Made  | 2,710          | 2,165          | 2,289          | 1,941          | 950            | 906               | 583            | 679               | 1,743          | 1,901          |

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>AMR represents large capital investments to replace old batteries in the AMRs not day to day replacements of meters.

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

<sup>5</sup>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.

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

<sup>7</sup>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.

WATER SOLD IN DOLLARS BY TYPE OF CUSTOMER: 2007 - 2016

(NON-ACCRUAL BASIS)  
(amounts expressed in thousands)

|   | 2016           | 2015    | 2014    | 2013    | 2012    | 2011    | 2010    | 2009    | 2008    | 2007    |
|---|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>SALES OF TREATED WATER</b>                       |                |         |         |         |         |         |         |         |         |         |
| <b>A. METERED GENERAL CUSTOMERS 2016</b>            |                |         |         |         |         |         |         |         |         |         |
| Residential -                                       |                |         |         |         |         |         |         |         |         |         |
| Inside City   | 58,477         | 49,842  | 49,114  | 48,057  | 57,504  | 49,853  | 46,658  | 34,776  | 39,376  | 36,393  |
| Outside City-Read and Bill                          | 21,461         | 17,623  | 16,938  | 16,893  | 20,726  | 17,739  | 17,547  | 13,016  | 15,970  | 16,255  |
| Outside City-Total Service                          | 27,095         | 21,943  | 22,113  | 22,168  | 28,464  | 23,923  | 24,172  | 17,921  | 22,069  | 19,965  |
| Irrigation -  |                |         |         |         |         |         |         |         |         |         |
| Inside City   | 4,430          | 1,044   | 1,028   | 995     | 1,363   | 1,128   | 1,044   | 707     | 860     | 683     |
| Outside City-Read and Bill                          | 3,056          | 770     | 753     | 725     | 1,002   | 819     | 798     | 609     | 696     | 427     |
| Outside City-Total Service                          | 4,129          | 1,814   | 1,781   | 1,720   | 2,365   | 2,000   | 1,842   | 1,316   | 1,556   | 1,110   |
| Non-Residential -                                   |                |         |         |         |         |         |         |         |         |         |
| Inside City   | 47,711         | 4,974   | 4,932   | 4,780   | 5,281   | 4,735   | 4,285   | 3,657   | 3,735   | 3,464   |
| Outside City-Read and Bill                          | 12,214         | 477     | 484     | 476     | 505     | 437     | 370     | 331     | 291     | 263     |
| Outside City-Total Service                          | 11,750         | 785     | 781     | 748     | 813     | 714     | 606     | 552     | 528     | 464     |
| <b>A. METERED GENERAL CUSTOMERS 2007-2015</b>       | <b>190,321</b> |         |         |         |         |         |         |         |         |         |
| Residential -                                       |                |         |         |         |         |         |         |         |         |         |
| Inside City   | -              | 49,842  | 49,114  | 48,057  | 57,504  | 49,853  | 46,658  | 34,776  | 39,376  | 36,393  |
| Outside City-Read and Bill                          | -              | 17,623  | 16,938  | 16,893  | 20,726  | 17,739  | 17,547  | 13,016  | 15,970  | 16,255  |
| Outside City-Total Service                          | -              | 21,943  | 22,113  | 22,168  | 28,464  | 23,923  | 24,172  | 17,921  | 22,069  | 19,965  |
| Residential Irrigation <sup>1</sup> -               | -              |         |         |         |         |         |         |         |         |         |
| Inside City   | -              | 1,044   | 1,028   | 995     | 1,363   | 1,128   | 1,044   | 707     | 860     | 683     |
| Outside City-Read and Bill                          | -              | 770     | 753     | 725     | 1,002   | 819     | 798     | 609     | 696     | 427     |
| Outside City-Total Service                          | -              | 1,814   | 1,781   | 1,720   | 2,365   | 2,000   | 1,842   | 1,316   | 1,556   | 1,110   |
| Small multi-family -                                | -              |         |         |         |         |         |         |         |         |         |
| Inside City   | -              | 4,974   | 4,932   | 4,780   | 5,281   | 4,735   | 4,285   | 3,657   | 3,735   | 3,464   |
| Outside City-Read and Bill                          | -              | 477     | 484     | 476     | 505     | 437     | 370     | 331     | 291     | 263     |
| Outside City-Total Service                          | -              | 785     | 781     | 748     | 813     | 714     | 606     | 552     | 528     | 464     |
| Commercial -  | -              |         |         |         |         |         |         |         |         |         |
| Inside City   | -              | 36,651  | 35,883  | 33,834  | 37,074  | 33,705  | 31,454  | 29,121  | 29,548  | 28,432  |
| Outside City-Read and Bill                          | -              | 8,940   | 9,910   | 8,501   | 9,585   | 8,557   | 8,069   | 8,163   | 7,164   | 7,645   |
| Outside City-Total Service                          | -              | 9,284   | 9,434   | 8,744   | 9,691   | 8,821   | 8,285   | 8,040   | 7,575   | 8,372   |
| Industrial -  | -              |         |         |         |         |         |         |         |         |         |
| Inside City   | -              | 3,033   | 3,090   | 3,139   | 3,212   | 2,995   | 2,820   | 2,896   | 3,020   | 2,996   |
| Outside City-Read and Bill                          | -              | 1,102   | 1,121   | 1,028   | 1,624   | 2,239   | 2,101   | 2,016   | 2,384   | 2,444   |
| Outside City-Total Service                          | -              | 1,54    | 143     | 148     | 164     | 167     | 184     | 120     | 201     | 161     |
| R&B Winter/Summer Adj                               | -              | 2,567   | 2,629   | 2,494   | 3,709   | 3,190   | 2,889   | 1,815   | 2,017   | -       |
| Other Irrigation <sup>3</sup> -                     | -              |         |         |         |         |         |         |         |         |         |
| Inside City   | -              | 1,674   | 1,584   | 1,535   | 2,095   | 1,757   | 1,757   | 1,812   | 1,246   | -       |
| Outside City-Total Service                          | -              | 2,510   | 2,426   | 2,300   | 3,077   | 2,688   | 2,567   | 1,697   | 1,920   | -       |
|   | -              | 164,055 | 162,124 | 157,167 | 185,911 | 164,078 | 156,223 | 127,087 | 139,959 | 128,332 |
| <b>B. PRIVATE FIRE PROTECTION SERVICE 2016</b>      |                |         |         |         |         |         |         |         |         |         |
| Sprinklers -  |                |         |         |         |         |         |         |         |         |         |
| Inside City   | 895            | -       | -       | -       | -       | -       | -       | -       | -       | -       |
| Outside City-Read and Bill                          | 88             | -       | -       | -       | -       | -       | -       | -       | -       | -       |
| Outside City-Total Service                          | 146            | -       | -       | -       | -       | -       | -       | -       | -       | -       |
|   | 1,129          | -       | -       | -       | -       | -       | -       | -       | -       | -       |
| <b>B. PRIVATE FIRE PROTECTION SERVICE 2007-2015</b> |                |         |         |         |         |         |         |         |         |         |
| Sprinklers -  |                |         |         |         |         |         |         |         |         |         |
| Inside City   | -              | 868     | 840     | 827     | 1,015   | 985     | 928     | 925     | 896     | 879     |
| Outside City-Read and Bill                          | -              | 86      | 84      | 71      | 65      | 51      | 49      | 52      | 45      | 45      |
| Outside City-Total Service                          | -              | 142     | 139     | 133     | 122     | 73      | 70      | 71      | 64      | 62      |
|   | -              | 1,096   | 1,063   | 1,031   | 1,202   | 1,109   | 1,047   | 1,048   | 1,005   | 986     |

<sup>1</sup>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 Statement of Revenues, Expenses and Changes in Net Position. The difference from amounts on an accrual basis is immaterial.

<sup>2</sup>In 2007, a separate rate classification was created for residential irrigation-only customers ("Residential Irrigation"). For years prior to 2007, the revenue earned from the sale of water and the related gallons sold to these customers are included in the amounts shown for regular residential service.

<sup>3</sup>In 2008, a separate rate classification was created for commercial, industrial and governmental irrigation-only customers ("Other Irrigation"). For years prior to 2008, the revenue earned from the sale of water and the related gallons sold to these customers are included in the amounts shown for regular commercial, industrial and local government agency service.

<sup>4</sup>In 2008, a separate rate classification was created for City and County of Denver Irrigation-only customers ("City & County of Denver - Irrigation"). Prior to 2008, the revenue earned from the sale of water and the related gallons sold to these customers are included in "City & County of Denver - Non-Irrigation". Denver Water underwent a significant change in rate structures. As part of this change Denver Water also consolidated various revenue accounts to simplify and streamline financial reporting.

(Continued next page)

**WATER SOLD IN DOLLARS BY TYPE OF CUSTOMER: 2007 - 2016**  
**(NON-ACCRUAL BASIS)<sup>1</sup>**  
 (amounts expressed in thousands)

|  | 2016 <sup>2</sup> | 2015              | 2014              | 2013              | 2012              | 2011              | 2010              | 2009              | 2008              | 2007              |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>C. OTHER SALES TO PUBLIC AUTHORITIES 2007-2015</b>        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| City & County of Denver <sup>3</sup> - Irrigation            | 1,452             | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| City & County of Denver <sup>3</sup> - Non-irrigation        | 2,298             | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
|  | <u>5,750</u>      |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Other County Agencies - Irrigation                           | -                 | 2,626             | 2,707             | 2,686             | 4,087             | 3,148             | 3,616             | 2,441             | 3,394             | -                 |
| Other County Agencies - Non-Irrigation                       | -                 | 2,078             | 1,927             | 1,717             | 1,880             | 1,583             | 1,584             | 1,772             | 1,491             | 3,790             |
| State Agencies - Inside City                                 | -                 | 1,016             | 971               | 1,003             | 1,476             | 1,136             | 1,040             | 958               | 1,153             | 1,102             |
| State Agencies - Outside City-Read and Bill                  | -                 | 608               | 768               | 625               | 743               | 757               | 891               | 458               | 600               | 752               |
| State Agencies - Outside City-Total Service                  | -                 | 750               | 736               | 708               | 964               | 852               | 839               | 674               | 758               | 1,136             |
| Federal Agencies - Inside City                               | -                 | 361               | 361               | 354               | 393               | 375               | 362               | 352               | 469               | 481               |
| Federal Agencies - Outside City-Read and Bill                | -                 | 51                | 46                | 38                | 42                | 39                | 37                | 35                | 29                | 29                |
| Federal Agencies - Outside City-Total Service                | -                 | 5                 | 6                 | 7                 | 6                 | 4                 | 5                 | 4                 | 7                 | 6                 |
| Outside City-R&B at Denver Rates                             | -                 | 54                | 127               | 133               | 168               | 198               | 92                | 357               | 288               | 269               |
| Outside City-Read and Bill                                   | -                 | 31                | 9                 | 26                | 26                | 67                | 31                | 35                | 61                | 17                |
| Total Service  | -                 | 44                | 49                | 37                | 48                | 62                | 530               | 118               | 427               | 297               |
|  |                   | <u>1</u>          | <u>2</u>          | <u>2</u>          | <u>2</u>          | <u>2</u>          | <u>1</u>          | <u>2</u>          | <u>2</u>          | <u>2</u>          |
|  |                   | <u>7,625</u>      | <u>7,709</u>      | <u>7,336</u>      | <u>9,835</u>      | <u>8,223</u>      | <u>9,028</u>      | <u>7,198</u>      | <u>8,679</u>      | <u>7,890</u>      |
| <b>D. SALES OF TREATED WATER FOR RESALE 2016<sup>4</sup></b> |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Outside City - Master Meter                                  | 65,479            | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Outside the Combined Service Area                            | 3,704             | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
|  | <u>69,183</u>     |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| <b>D. SALES OF TREATED WATER FOR RESALE 2007-2015</b>        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Outside City - Master Meter                                  | -                 | 48,906            | 48,371            | 47,550            | 62,968            | 47,483            | 43,196            | 38,192            | 40,909            | 37,611            |
| Outside the Combined Service Area                            | -                 | 13,034            | 13,598            | 10,729            | 4,064             | 9,886             | 9,552             | 8,934             | 8,686             | 9,141             |
|  |                   | <u>61,940</u>     | <u>61,969</u>     | <u>58,279</u>     | <u>67,032</u>     | <u>57,369</u>     | <u>52,748</u>     | <u>47,146</u>     | <u>49,595</u>     | <u>46,752</u>     |
| <b>TOTAL SALES OF TREATED WATER</b>                          | <b>266,385</b>    | <b>234,716</b>    | <b>232,865</b>    | <b>223,813</b>    | <b>263,080</b>    | <b>230,780</b>    | <b>219,046</b>    | <b>182,479</b>    | <b>198,338</b>    | <b>183,980</b>    |
| <b>SALES OF NONROTABLE WATER</b>                             | <b>8,133</b>      | <b>7,509</b>      | <b>5,912</b>      | <b>7,043</b>      | <b>8,271</b>      | <b>7,039</b>      | <b>6,189</b>      | <b>5,487</b>      | <b>7,204</b>      | <b>5,576</b>      |
| <b>TOTAL SALES OF WATER</b>                                  | <b>\$ 274,518</b> | <b>\$ 242,225</b> | <b>\$ 238,777</b> | <b>\$ 230,856</b> | <b>\$ 271,351</b> | <b>\$ 237,819</b> | <b>\$ 225,235</b> | <b>\$ 188,066</b> | <b>\$ 205,542</b> | <b>\$ 189,556</b> |

<sup>1</sup>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 Statement of Revenues, Expenses and Changes in Net Position. The difference from amounts on an accrual basis is immaterial.

<sup>2</sup>In 2007, a separate rate classification was created for residential irrigation-only customers ("Residential Irrigation"). For years prior to 2007, the revenue earned from the sale of water and the related gallons sold to these customers are included in the amounts shown for regular residential service.

<sup>3</sup>In 2008, a separate rate classification was created for commercial, industrial and governmental irrigation-only customers ("Other Irrigation"). For years prior to 2008, the revenue earned from the sale of water and the related gallons sold to these customers are included in the amounts shown for regular commercial, industrial and local government agency service.

<sup>4</sup>In 2008, a separate rate classification was created for City and County of Denver irrigation-only customers ("City & County of Denver - Irrigation"). Prior to 2008, the revenue earned from the sale of water and the related gallons sold to these customers are included in "City & County of Denver - Non-Irrigation."

<sup>5</sup>In 2016, Denver Water underwent a significant change in rate structures. As part of this change Denver Water also consolidated various revenue accounts to simplify and streamline financial reporting.

<sup>6</sup>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: 2007 - 2016

(amounts expressed in thousands of gallons)

| SALES OF TREATED WATER                        |                            | 2016       | 2015              | 2014              | 2013              | 2012              | 2011              | 2010              | 2009              | 2008              | 2007 |
|---|----------------------------|------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| <b>A. METERED GENERAL CUSTOMERS 2016</b>      |                            |            |                   |                   |                   |                   |                   |                   |                   |                   |      |
| Residential -                                 | Inside City                | 12,435,755 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -    |
|   | Outside City-Read and Bill | 4,231,865  | 11,559,464        | 11,629,361        | 14,052,609        | 13,098,298        | 13,601,820        | 12,075,102        | 14,190,479        | 13,788,207        |      |
|   | Outside City-Total Service | 4,533,837  | 3,714,016         | 3,839,625         | 4,750,696         | 4,399,807         | 4,593,122         | 4,114,005         | 4,913,295         | 4,691,563         |      |
| Irrigation -                                  | Inside City                | 911,999    | 3,957,317         | 4,150,654         | 5,225,688         | 4,794,193         | 4,959,464         | 4,388,923         | 5,297,529         | 5,008,534         |      |
|   | Outside City-Read and Bill | 554,832    | 215,336           | 202,587           | 283,485           | 248,861           | 261,019           | 190,264           | 247,163           | 186,902           |      |
|   | Outside City-Total Service | 624,619    | 144,812           | 139,779           | 198,236           | 173,346           | 186,694           | 139,916           | 200,591           | 116,794           |      |
| Non-Residential -                             | Inside City                | 15,543,153 | 105,991           | 107,181           | 140,407           | 121,065           | 124,574           | 94,358            | 125,168           | 89,235            |      |
|   | Outside City-Read and Bill | 3,073,586  | 1,355,336         | 1,370,868         | 1,560,394         | 1,495,266         | 1,437,136         | 1,525,150         | 1,556,375         | 1,544,714         |      |
|   | Outside City-Total Service | 2,570,546  | 120,007           | 123,537           | 135,850           | 125,757           | 118,190           | 114,740           | 113,627           | 108,934           |      |
|   | <b>44,480,192</b>          |            |                   |                   |                   |                   |                   |                   |                   |                   |      |
| <b>A. METERED GENERAL CUSTOMERS 2017-2015</b> |                            |            |                   |                   |                   |                   |                   |                   |                   |                   |      |
| Residential -                                 | Inside City                | -          | 11,603,885        | 11,629,361        | 14,052,609        | 13,098,298        | 13,601,820        | 12,075,102        | 14,190,479        | 13,788,207        |      |
|   | Outside City-Read and Bill | -          | 3,722,505         | 3,839,625         | 4,750,696         | 4,399,807         | 4,593,122         | 4,114,005         | 4,913,295         | 4,691,563         |      |
|   | Outside City-Total Service | -          | 4,051,615         | 4,150,654         | 5,225,688         | 4,794,193         | 4,959,464         | 4,388,923         | 5,297,529         | 5,008,534         |      |
| Residential Irrigation <sup>1</sup> -         | Inside City                | -          | 209,084           | 202,587           | 283,485           | 248,861           | 261,019           | 190,264           | 247,163           | 186,902           |      |
|   | Outside City-Read and Bill | -          | 145,195           | 139,779           | 198,236           | 173,346           | 186,694           | 139,916           | 200,591           | 116,794           |      |
|   | Outside City-Total Service | -          | 107,181           | 101,655           | 140,407           | 121,065           | 124,574           | 94,358            | 125,168           | 89,235            |      |
| Small multi-family -                          | Inside City                | -          | 1,386,032         | 1,370,868         | 1,560,394         | 1,495,266         | 1,437,136         | 1,525,150         | 1,556,375         | 1,544,714         |      |
|   | Outside City-Read and Bill | -          | 120,007           | 123,537           | 135,850           | 125,757           | 118,190           | 114,740           | 113,627           | 108,934           |      |
|   | Outside City-Total Service | -          | 160,073           | 163,553           | 184,925           | 172,393           | 156,313           | 149,255           | 158,912           | 149,588           |      |
| Commercial -                                  | Inside City                | -          | 11,877,715        | 11,407,418        | 12,522,805        | 12,157,287        | 12,398,800        | 12,069,634        | 12,643,141        | 13,060,641        |      |
|   | Outside City-Read and Bill | -          | 2,232,004         | 2,208,047         | 2,524,765         | 2,384,164         | 2,370,656         | 2,390,356         | 2,519,213         | 2,778,664         |      |
|   | Outside City-Total Service | -          | 2,032,945         | 2,033,840         | 2,323,899         | 2,223,111         | 2,248,376         | 2,160,037         | 2,235,147         | 2,544,606         |      |
| Industrial -                                  | Inside City                | -          | 1,061,877         | 1,145,795         | 1,188,635         | 1,185,642         | 1,220,187         | 1,286,307         | 1,328,867         | 1,434,058         |      |
|   | Outside City-Read and Bill | -          | 300,802           | 297,504           | 521,752           | 690,755           | 685,581           | 696,547           | 884,236           | 913,261           |      |
|   | R&B Winter/Summer Adj      | -          | -                 | -                 | (519,142)         | -                 | -                 | -                 | -                 | -                 |      |
|   | Outside City-Total Service | -          | 33,596            | 33,138            | 38,090            | 40,772            | 49,246            | 33,022            | 59,666            | 50,981            |      |
| Other Irrigation <sup>1</sup> -               | Inside City                | -          | 543,870           | 514,946           | 786,154           | 719,221           | 747,524           | 574,776           | 806,722           | -                 |      |
|   | Outside City-Read and Bill | -          | 318,000           | 296,929           | 417,375           | 370,134           | 416,362           | 300,627           | 421,140           | -                 |      |
|   | Outside City-Total Service | -          | 398,268           | 391,745           | 567,216           | 520,659           | 525,479           | 391,178           | 546,971           | -                 |      |
|   | <b>39,931,429</b>          |            | <b>40,415,338</b> | <b>40,052,473</b> | <b>46,903,839</b> | <b>44,920,731</b> | <b>46,188,557</b> | <b>42,606,183</b> | <b>48,248,232</b> | <b>46,465,782</b> |      |

<sup>1</sup>See footnotes on page III-15.

(Continued next page)

TREATED WATER SOLD IN GALLONS BY TYPE OF CUSTOMER: 2007 - 2016  
(amounts expressed in thousands of gallons)

|  | 2016              | 2015         | 2014         | 2013         | 2012         | 2011         | 2010         | 2009         | 2008         | 2007         |
|--|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>SALES OF TREATED WATER</b>  | <b>1</b>          |              |              |              |              |              |              |              |              |              |
| <b>B. OTHER SALES TO PUBLIC AUTHORITIES 2016</b>   |                   |              |              |              |              |              |              |              |              |              |
| City & County of Denver <sup>1</sup> - Irrigation  | 1,266,661         | -            | -            | -            | -            | -            | -            | -            | -            | -            |
| Non-Irrigation   | 914,444           | -            | -            | -            | -            | -            | -            | -            | -            | -            |
|  | <b>2,181,105</b>  |              |              |              |              |              |              |              |              |              |
| <b>B. OTHER SALES TO PUBLIC AUTHORITIES 2007-2015</b>  |                   |              |              |              |              |              |              |              |              |              |
| City & County of Denver <sup>1</sup> - Irrigation  | -                 | 978,144      | 1,026,040    | 1,008,417    | 1,565,859    | 1,230,115    | 1,594,390    | 1,036,056    | 1,951,435    | -            |
| Non-Irrigation   | -                 | 843,730      | 802,951      | 763,591      | 829,144      | 765,595      | 790,149      | 888,372      | 824,476      | 2,415,541    |
| Inside City  | -                 | 302,066      | 291,796      | 309,260      | 445,947      | 368,139      | 363,214      | 358,456      | 478,945      | 500,176      |
| Outside City-Read and Bill   | -                 | 160,303      | 190,837      | 160,096      | 191,100      | 213,673      | 261,631      | 135,817      | 212,370      | 273,868      |
| Outside City-Total Service   | -                 | 149,410      | 146,595      | 148,160      | 210,913      | 195,617      | 208,405      | 166,629      | 219,046      | 338,161      |
| State Agencies -   | -                 | 116,022      | 117,316      | 118,520      | 130,365      | 130,345      | 140,865      | 147,880      | 200,936      | 224,516      |
| Outside City-Read and Bill   | -                 | 11,139       | 10,783       | 9,299        | 10,205       | 9,724        | 10,112       | 9,857        | 9,927        | 10,368       |
| Outside City-Total Service   | -                 | 1,088        | 1,225        | 1,622        | 1,557        | 1,081        | 1,370        | 1,177        | 1,931        | 1,742        |
| Federal Agencies -   | -                 | 20,840       | 40,390       | 48,534       | 60,751       | 83,863       | 38,759       | 55,456       | 84,686       | 133,356      |
| Outside City-R&B at Denver Rates   | -                 | 6,991        | 5,341        | 6,238        | 6,245        | 8,244        | 12,116       | 195,924      | 121,545      | 8,334        |
| Outside City-Read and Bill   | -                 | 10,166       | 11,486       | 8,493        | 11,156       | 22,629       | 152,973      | 38,949       | 149,333      | 107,201      |
| Total Service  | -                 | 296          | 451          | 457          | 367          | 375          | 384          | 443          | 488          | 506          |
|  | -                 | 2,600,195    | 2,645,211    | 2,582,687    | 3,463,609    | 3,027,400    | 3,574,368    | 3,035,016    | 4,255,118    | 4,013,769    |
| <b>C. SALES OF TREATED WATER FOR RESALE 2016</b>   |                   |              |              |              |              |              |              |              |              |              |
| Outside City - Master Meter  | 15,767,447        | -            | -            | -            | -            | -            | -            | -            | -            | -            |
| Outside the Combined Service Area  | 828,540           | -            | -            | -            | -            | -            | -            | -            | -            | -            |
|  | <b>16,595,987</b> |              |              |              |              |              |              |              |              |              |
| <b>C. SALES OF TREATED WATER FOR RESALE 2007-2015</b>  |                   |              |              |              |              |              |              |              |              |              |
| 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   | 15,294,977   | 14,753,753   |
| 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    | 3,008,039    | 3,482,153    |
|  | -                 | 15,278,371   | 15,590,952   | 15,317,278   | 18,608,897   | 16,876,990   | 17,374,122   | 15,727,136   | 18,303,016   | 18,235,906   |
| <b>TOTAL SALES OF TREATED WATER</b>  | <b>63,257,284</b> | 57,809,995   | 58,651,501   | 57,952,438   | 68,976,345   | 64,825,121   | 67,137,047   | 61,368,335   | 70,806,366   | 68,715,457   |
| <b>Reconciliation of Water Treated, Delivered, Consumption, Sales and Non-revenue Water:</b> |                   |              |              |              |              |              |              |              |              |              |
| Total Water Treated (Production) - Page III-81   | 64,963,810        | 60,140,870   | 61,177,090   | 60,195,400   | 71,960,650   | 68,257,000   | 69,713,070   | 62,089,800   | 71,983,540   | 70,474,410   |
| (Increase) Decrease in Clear Water Storage - Page III-81                                     | 40,020            | (24,900)     | 8,180        | 17,040       | 8,050        | 3,800        | (17,670)     | 17,100       | (7,670)      | 5,430        |
| Treated Water Delivered - Page III-74 & III-81   | 65,003,830        | 60,115,970   | 61,185,270   | 60,212,440   | 71,968,700   | 68,260,800   | 69,695,400   | 62,106,900   | 71,975,870   | 70,479,840   |
| Water Purchased - Page III-22  | -                 | -            | -            | -            | -            | -            | -            | -            | -            | -            |
| Treated Water Available (Consumption) - Page III-80  | 65,003,830        | 60,115,970   | 61,185,270   | 60,212,440   | 71,968,700   | 68,260,800   | 69,695,400   | 62,106,900   | 71,975,870   | 70,479,840   |
| Less Sales of Treated Water - Page III-22  | (63,257,284)      | (57,809,995) | (58,651,501) | (57,952,438) | (68,976,345) | (64,825,121) | (67,137,047) | (61,368,335) | (70,806,366) | (68,715,457) |
| Less Lead Shifted Treated Water - Page III-22  | -                 | -            | -            | -            | -            | -            | -            | -            | -            | -            |
| Non-revenue Water - Page III-22  | 1,746,546         | 2,305,975    | 2,533,769    | 2,260,002    | 2,992,355    | 3,435,679    | 2,558,353    | 738,565      | 1,169,504    | 1,764,383    |
| % Non-revenue Water - Page III-22  | 2.69%             | 3.84%        | 4.14%        | 3.75%        | 4.16%        | 5.03%        | 3.67%        | 1.19%        | 1.62%        | 2.50%        |

<sup>1</sup>See footnotes on page III-16.

OPERATING REVENUE AND RELATED WATER CONSUMPTION - 2016

(Page 1 of 2)

(NON-ACCRUAL BASIS)<sup>1</sup>

(amounts expressed in thousands)

|   |                                   | Revenue           | Gallons Sold<br>(000) | Number of<br>Customers <sup>2</sup> | Revenue<br>Per 1,000<br>Gallons |
|---|-----------------------------------|-------------------|-----------------------|-------------------------------------|---------------------------------|
| <b>I. SALES OF TREATED WATER</b>                        |                                   |                   |                       |                                     |                                 |
| <b>A. METERED GENERAL CUSTOMERS<sup>3</sup></b>         |                                   |                   |                       |                                     |                                 |
| Residential   | Inside City                       | \$ 58,477         | 12,435,755            | 135,398                             | \$ 4.7023                       |
|   | Outside City-Read and Bill        | 21,461            | 4,231,865             | 33,261                              | 5.0713                          |
|   | Outside City-Total Service        | 27,095            | 4,533,837             | 32,150                              | 5.9762                          |
| Irrigation  | Inside City                       | 4,430             | 911,999               | 1,390                               | 4.8575                          |
|   | Outside City-Read and Bill        | 3,056             | 554,832               | 443                                 | 5.5080                          |
|   | Outside City-Total Service        | 4,129             | 624,619               | 599                                 | 6.6104                          |
| Non-Residential   | Inside City                       | 47,711            | 15,543,153            | 24,961                              | 3.0696                          |
|   | Outside City-Read and Bill        | 12,214            | 3,073,586             | 3,193                               | 3.9739                          |
|   | Outside City-Total Service        | 11,750            | 2,570,546             | 3,590                               | 4.5710                          |
|   |                                   | <u>190,323</u>    | <u>44,480,192</u>     | <u>234,985</u>                      | <u>4.2788</u>                   |
| <b>B. PRIVATE FIRE PROTECTION SERVICE<sup>4</sup></b>   |                                   |                   |                       |                                     |                                 |
| Sprinklers -  | Inside City                       | 895               | -                     |                                     |                                 |
|   | Outside City-Read and Bill        | 88                | -                     |                                     |                                 |
|   | Outside City-Total Service        | 146               | -                     |                                     |                                 |
|   |                                   | <u>1,129</u>      | <u>-</u>              |                                     |                                 |
| <b>C. OTHER SALES TO PUBLIC AUTHORITIES</b>             |                                   |                   |                       |                                     |                                 |
| City & County of Denver                                 | Irrigation                        | 3,452             | 1,266,661             | 696                                 | 2.7253                          |
|   | Non-Irrigation                    | 2,298             | 914,444               | 409                                 | 2.5130                          |
|   |                                   | <u>5,750</u>      | <u>2,181,105</u>      | <u>1,105</u>                        | <u>2.6363</u>                   |
| <b>D. SALES OF TREATED WATER FOR RESALE<sup>5</sup></b> |                                   |                   |                       |                                     |                                 |
|   | Outside City - Master Meter       | 65,479            | 15,767,447            | 76,322                              | 4.1528                          |
|   | Outside the Combined Service Area | 3,704             | 828,540               | -                                   | 4.4705                          |
|   |                                   | <u>69,183</u>     | <u>16,595,987</u>     | <u>76,322</u>                       | <u>4.1687</u>                   |
| <b>TOTAL SALES OF TREATED WATER<sup>6</sup></b>         |                                   | <u>\$ 266,385</u> | <u>63,257,284</u>     | <u>312,412</u>                      | <u>\$ 4.2111</u>                |

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

<sup>2</sup>Represents the number of active metered services at year-end.

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

<sup>4</sup>Private fire protection consumption is unmetered and is considered part of non-revenue water. See "Sales of Treated Water between Denver and Outside City" on pages III-21 and III-22, for this estimate.

<sup>5</sup>See "Sales of Treated Water for Resale" on page III-33.

<sup>6</sup>See "Sales of Treated Water Between Denver and Outside City" on pages III-21 and III-22.

(Continued next page)

OPERATING REVENUE AND RELATED WATER CONSUMPTION (Continued) - 2016

(Page 2 of 2)

(NON-ACCRUAL BASIS)

(amounts expressed in thousands)

|  | <u>Revenue</u>    | <u>Gallons Sold<br/>(000)</u> | <u>Number of<br/>Customers</u> | <u>Revenue<br/>Per 1,000<br/>Gallons</u> |
|--|-------------------|-------------------------------|--------------------------------|--|
| <b>II. SALES OF NON-POTABLE WATER<sup>7</sup></b>          |                   |                               |                                |  |
| Inside City  | \$ 945            | 1,209,519                     | 92                             | \$ 0.7813                                |
| Outside City   | 5,824             | 6,012,847                     | 23                             | 0.9686                                   |
| Outside the Combined Service Area                          | 1,364             | 1,225,109                     | 8                              | 1.1134                                   |
|  | <u>8,133</u>      | <u>8,447,475</u>              | <u>123</u>                     | <u>0.9628</u>                            |
| <br>   |                   |                               |                                |  |
| TOTAL SALES OF WATER                                       | <u>\$ 274,518</u> | <u>71,704,759</u>             | <u>312,535</u>                 | <u>\$ 3.8284</u>                         |
| <br>   |                   |                               |                                |  |
| <b>III. OTHER NON-POTABLE WATER DELIVERIES<sup>7</sup></b> |                   | <u>1,291,218</u>              |                                |  |
| TOTAL GALLONS SOLD   |                   | <u>72,995,977</u>             |                                |  |
| <br>   |                   |                               |                                |  |
| <b>IV. OTHER OPERATING REVENUE</b>                         |                   |                               |                                |  |
| <b>A. POWER SALES REVENUE<sup>8</sup></b>                  |                   |                               |                                |  |
| Foothills Treatment Plant                                  | \$ 365            |                               |                                |  |
| Strontia Springs   | 199               |                               |                                |  |
| Dillon Dam   | 575               |                               |                                |  |
| Roberts Tunnel   | 651               |                               |                                |  |
| Hillcrest  | 405               |                               |                                |  |
| Williams Fork  | 680               |                               |                                |  |
| Gross Reservoir  | 1,135             |                               |                                |  |
|  | <u>4,010</u>      |                               |                                |  |
| <br>   |                   |                               |                                |  |
| <b>B. SPECIAL ASSESSMENTS</b>                              |                   |                               |                                |  |
| Administrative Fees  | 3,484             |                               |                                |  |
| Penalty Fees   | 39                |                               |                                |  |
| Stub-in, Taps and Meter Fees                               | 1,931             |                               |                                |  |
| Hydrant Fees   | 1,619             |                               |                                |  |
| Plan Review, Easement, Distribution Inspection             | 1,089             |                               |                                |  |
| Other Assessments  | (1,175)           |                               |                                |  |
|  | <u>6,987</u>      |                               |                                |  |
| <br>   |                   |                               |                                |  |
| TOTAL OTHER OPERATING REVENUE                              | <u>10,997</u>     |                               |                                |  |
| <br>   |                   |                               |                                |  |
| TOTAL OPERATING REVENUE                                    | <u>\$ 285,515</u> |                               |                                |  |

<sup>7</sup>See "Sales of Non-Potable Water Between Denver and Outside City" on page III-23.

<sup>8</sup>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 - 2016

(NON-ACCRUAL BASIS)<sup>1</sup>

(Page 1 of 2)

(amounts expressed in thousands)

|   | Revenue        |                  | Gallons Sold      |                  | Number of Customers |
|---|----------------|------------------|-------------------|------------------|---------------------|
|   | Amount         | Percent of Total | Amount (000)      | Percent of Total |                     |
| <b>I. INSIDE CITY</b>                                 |                |                  |                   |                  |                     |
| <b>A. METERED GENERAL CUSTOMERS<sup>2</sup></b>       |                |                  |                   |                  |                     |
| Residential   | \$ 58,477      | 21.95%           | 12,435,755        | 19.66%           | 135,398             |
| Irrigation  | 4,430          | 1.66%            | 911,999           | 1.44%            | 1,390               |
| Non-Residential                                       | 47,711         | 17.91%           | 15,543,153        | 24.57%           | 24,961              |
|   | <u>110,618</u> | <u>41.52%</u>    | <u>28,890,907</u> | <u>45.67%</u>    | <u>161,749</u>      |
| <b>B. PRIVATE FIRE PROTECTION SERVICE<sup>3</sup></b> |                |                  |                   |                  |                     |
| Sprinklers  | 895            | 0.34%            | -                 |                  |                     |
| <b>C. OTHER SALES TO PUBLIC AUTHORITIES</b>           |                |                  |                   |                  |                     |
| City And County of Denver-Irrigation                  | 3,452          | 1.30%            | 1,266,661         | 2.00%            | 696                 |
| City and County of Denver-Non-Irrigation              | 2,298          | 0.86%            | 914,444           | 1.45%            | 409                 |
|   | <u>5,750</u>   | <u>2.16%</u>     | <u>2,181,105</u>  | <u>3.45%</u>     | <u>1,105</u>        |
| <b>TOTAL SALES OF TREATED WATER - DENVER</b>          |                |                  |                   |                  |                     |
|   | <u>117,263</u> | <u>44.02%</u>    | <u>31,072,012</u> | <u>49.12%</u>    | <u>162,854</u>      |
| Revenue per 1,000 Gallons - Denver                    |                |                  | <u>\$ 3.7739</u>  |                  |                     |
| <b>II. OUTSIDE CITY</b>                               |                |                  |                   |                  |                     |
| <b>A. METERED GENERAL CUSTOMERS</b>                   |                |                  |                   |                  |                     |
| Residential - Read & Bill                             | 21,461         | 8.06%            | 4,231,865         | 6.69%            | 33,261              |
| Irrigation - Read & Bill                              | 3,056          | 1.15%            | 554,832           | 0.88%            | 443                 |
| Non-Residential - Read & Bill                         | 12,214         | 4.59%            | 3,073,586         | 4.86%            | 3,193               |
| Residential - Total Service                           | 27,095         | 10.17%           | 4,533,837         | 7.17%            | 32,150              |
| Irrigation - Total Service                            | 4,129          | 1.55%            | 624,619           | 0.99%            | 599                 |
| Non-Residential - Total Service                       | 11,750         | 4.41%            | 2,570,546         | 4.06%            | 3,590               |
|   | <u>79,705</u>  | <u>29.93%</u>    | <u>15,589,285</u> | <u>24.65%</u>    | <u>73,236</u>       |

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

<sup>2</sup>In 2016, Denver Water underwent a significant change in rate structures. As part of this change Denver Water also consolidated various revenue accounts to simplify and streamline financial reporting. The classification of 'Metered General Customers' was modified to reflect this change.

<sup>3</sup> Private fire protection consumption is unmetered and is considered part of non-revenue water. See "Operating Revenue and Related Water Consumption" on pages III-19 and III-20, for this estimate.

(Continued next page)

SALES OF TREATED WATER BETWEEN DENVER AND OUTSIDE CITY - 2016

(NON-ACCRUAL BASIS)

(Page 2 of 2)

(amounts expressed in thousands)

|   | Revenue    |                  | Gallons sold |                  | Number of Customers |
|---|------------|------------------|--------------|------------------|---------------------|
|   | Amount     | Percent of Total | Amount (000) | Percent of Total |                     |
| II. OUTSIDE CITY (Continued)                        |            |                  |              |                  |                     |
| B. PRIVATE FIRE PROTECTION SERVICE <sup>2</sup>     |            |                  |              |                  |                     |
| Sprinklers  | \$ 88      | 0.03%            | -            |                  |                     |
| Sprinklers - Total Service                          | 146        | 0.05%            | -            |                  |                     |
|   | 234        | 0.08%            | -            |                  |                     |
| C. SALES OF TREATED WATER FOR RESALE <sup>3,4</sup> |            |                  |              |                  |                     |
| Master Meter Distributors                           | 65,479     | 24.58%           | 15,767,447   | 24.93%           | 76,322              |
| Outside CSA-Fixed Limit Contracts                   | 3,704      | 1.39%            | 828,540      | 1.31%            | -                   |
|   | 69,183     | 25.97%           | 16,595,987   | 26.24%           | 76,322              |
| TOTAL SALES OF TREATED WATER - OUTSIDE CITY         |            |                  |              |                  |                     |
|   | 149,122    | 55.98%           | 32,185,272   | 50.88%           | 149,558             |
| Revenue per 1,000 Gallons - Outside City            |            |                  | \$ 4.6332    |                  |                     |
| TOTAL SALES OF TREATED WATER                        |            |                  |              |                  |                     |
|   | \$ 266,385 | 100.00%          | 63,257,284   | 100.00%          | 312,412             |
| Revenue per 1,000 Gallons - Total                   |            |                  | \$ 4.2111    |                  |                     |

RECONCILIATION/CALCULATION OF NON-REVENUE WATER

|   |              |         |
|---|--------------|---------|
| Total Water Treated (Production) - Page III-81            | 64,963,810   |         |
| (Increase) Decrease in Clear Water Storage - Page III-81  | 40,020       |         |
| Total Treated Water Delivered - Page III-81               | 65,003,830   |         |
| Water Purchased   | -            |         |
| Total Treated Water Available (Consumption) - Page III-80 | 65,003,830   | 100.00% |
| Less Sale of Treated Water                                | (63,257,284) | -97.31% |
| Less Load Shifted Treated Water                           | -            | 0.00%   |
| Non-revenue Water   | 1,746,546    | 2.69%   |

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

<sup>3</sup>See "Sales of Treated Water For Resale" on page III-33.

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

SALES OF NON-POTABLE WATER BETWEEN DENVER AND OUTSIDE CITY - 2016

(NON-ACCRUAL BASIS)<sup>1</sup>  
 (amounts expressed in thousands)

|  | Revenue         |                  | Gallons Sold     |                  | Number of Customers <sup>3</sup> | Revenue Per 1,000 Gallons |
|--|-----------------|------------------|------------------|------------------|----------------------------------|---------------------------|
|  | Amount          | Percent of Total | Amount (000)     | Percent of Total |                                  |                           |
| <b>I. <u>INSIDE CITY</u></b>                                 |                 |                  |                  |                  |                                  |                           |
| Raw Water Sales  |                 |                  |                  |                  |                                  |                           |
| City & County of Denver                                      | \$ 64           | 0.79%            | 213,834          | 2.53%            | 2                                | \$ 0.2993                 |
| All Other  | 8               | 0.10%            | 5,649            | 0.07%            | 4                                | 1.4162                    |
|  | <u>72</u>       | <u>0.89%</u>     | <u>219,483</u>   | <u>2.60%</u>     | <u>6</u>                         | <u>0.3280</u>             |
| Effluent Sales   |                 |                  |                  |                  |                                  |                           |
| City & County of Denver                                      | 15              | 0.18%            | 50,418           | 0.60%            | 1                                | 0.2975                    |
| All Other  | 11              | 0.14%            | 21,889           | 0.26%            | 2                                | 0.5025                    |
|  | <u>26</u>       | <u>0.32%</u>     | <u>72,307</u>    | <u>0.86%</u>     | <u>3</u>                         | <u>0.3596</u>             |
| Recycle Sales  |                 |                  |                  |                  |                                  |                           |
| City & County of Denver                                      | 113             | 1.39%            | 512,383          | 6.07%            | 12                               | 0.2205                    |
| All Other  | 460             | 5.66%            | 405,346          | 4.79%            | 71                               | 1.1348                    |
|  | <u>573</u>      | <u>7.05%</u>     | <u>917,729</u>   | <u>10.86%</u>    | <u>83</u>                        | <u>0.6244</u>             |
| Minimum Contract Payment <sup>2</sup> - All Other            | 274             | 3.36%            | -                | 0.00%            | -                                | -                         |
| Total Denver   | <u>945</u>      | <u>11.62%</u>    | <u>1,209,519</u> | <u>14.32%</u>    | <u>92</u>                        | <u>0.7813</u>             |
| <b>II. <u>OUTSIDE CITY, WITHIN COMBINED SERVICE AREA</u></b> |                 |                  |                  |                  |                                  |                           |
| Raw Water Sales-All Others                                   | 5,812           | 71.46%           | 6,001,252        | 71.04%           | 16                               | 0.9685                    |
| Effluent Sales-All Others                                    | 12              | 0.15%            | 11,595           | 0.14%            | 7                                | 1.0349                    |
| Total Outside City, Within Combined Service Area             | <u>5,824</u>    | <u>71.61%</u>    | <u>6,012,847</u> | <u>71.18%</u>    | <u>23</u>                        | <u>0.9686</u>             |
| <b>III. <u>OUTSIDE COMBINED SERVICE AREA</u></b>             |                 |                  |                  |                  |                                  |                           |
| Raw Water Sales  |                 |                  |                  |                  |                                  |                           |
| Centennial Water & Sanitation District                       | 289             | 3.55%            | 275,181          | 3.26%            | 1                                | 1.0502                    |
| Consolidated Mutual Water                                    | 151             | 1.86%            | 144,026          | 1.70%            | 1                                | 1.0484                    |
| All Other  | 31              | 0.38%            | 5,359            | 0.06%            | 5                                | 5.7847                    |
|  | <u>471</u>      | <u>5.79%</u>     | <u>424,566</u>   | <u>5.02%</u>     | <u>7</u>                         | <u>1.1094</u>             |
| Recycle Sales  |                 |                  |                  |                  |                                  |                           |
| Total Outside Combined Service Area                          | <u>893</u>      | <u>10.98%</u>    | <u>800,543</u>   | <u>9.48%</u>     | <u>1</u>                         | <u>1.1155</u>             |
|  | <u>1,364</u>    | <u>16.77%</u>    | <u>1,225,109</u> | <u>14.50%</u>    | <u>8</u>                         | <u>1.1134</u>             |
| <b>TOTAL SALES OF NON-POTABLE WATER</b>                      | <u>\$ 8,133</u> | <u>100.00%</u>   | <u>8,447,475</u> | <u>100.00%</u>   | <u>123</u>                       | <u>\$ 0.9628</u>          |

**IV. OTHER NON-POTABLE WATER DELIVERIES**

|   |                  |
|---|------------------|
| City Ditch at Washington Park             | 669,397          |
| City of Englewood (Cabin-Meadow Exchange) | 621,821          |
| Total Other Non-Potable Water Deliveries  | <u>1,291,218</u> |
| <b>TOTAL NON-POTABLE WATER DELIVERIES</b> | <u>9,738,693</u> |

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

<sup>2</sup>The minimum contract payments category reflects contract stipulated payments with the ability to take a quantified amount of water. The payment is made in full regardless of consumption below the quantified amount.

<sup>3</sup>If the customer is reflected in the count of raw water customers, it is excluded from the count of effluent and minimum contract payment customers.

ANALYSIS OF CUSTOMER ACCOUNTS FOR TREATED WATER - 2016<sup>1,2,3</sup>

|   |                | Number of Customers   |                       |                        |
|---|----------------|-----------------------|-----------------------|------------------------|
|   |                | 12/31/2016            | 12/31/2015            | Increase<br>(Decrease) |
| <b>METERED GENERAL CUSTOMERS</b>                  |                |                       |                       |                        |
| Residential                                       | Denver         | 135,398               | 135,020               | 378                    |
|   | Outside City   | 33,261                | 33,245                | 16                     |
|   | Total Service  | 32,150                | 32,158                | (8)                    |
| Non-Residential                                   | Denver         | 24,961                | 24,809                | 152                    |
|   | Outside City   | 3,193                 | 3,148                 | 45                     |
|   | Total Service  | 3,590                 | 3,570                 | 20                     |
| Irrigation  | Denver         | 1,390                 | 1,360                 | 30                     |
|   | Outside City   | 443                   | 439                   | 4                      |
|   | Total Service  | 599                   | 587                   | 12                     |
| <b>TOTAL METERED GENERAL CUSTOMERS</b>            |                | <u>234,985</u>        | <u>234,336</u>        | <u>649</u>             |
| <b>PUBLIC AUTHORITIES</b>                         |                |                       |                       |                        |
| City & County of Denver                           | Irrigation     | 696                   | 723                   | (27)                   |
|   | Non-Irrigation | 409                   | 407                   | 2                      |
| <b>TOTAL PUBLIC AUTHORITIES</b>                   |                | <u>1,105</u>          | <u>1,130</u>          | <u>(25)</u>            |
| <b>RESALE ACCOUNTS (MASTER METER)<sup>4</sup></b> |                | <u>76,322</u>         | <u>76,341</u>         | <u>(19)</u>            |
| <b>TOTAL TREATED WATER CUSTOMERS</b>              |                | <u><u>312,412</u></u> | <u><u>311,807</u></u> | <u><u>605</u></u>      |

<sup>1</sup>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.

<sup>2</sup> Represents the number of active metered services at year-end.

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

<sup>4</sup>See "Sales of Treated Water for Resale" on page III-33.

**A. Monthly Fixed Charges, \$ per Bill**

| Meter Size<br>inches | Schedule 1               | Schedule 2   | Schedule 3    | Schedule 4 |
|----------------------|--------------------------|--------------|---------------|------------|
|                      | Inside City of<br>Denver | Outside City |               |            |
|                      |                          | Read & Bill  | Total Service | Wholesale  |
| 5/8" & 3/4"          | \$8.79                   | \$8.79       | \$8.79        | \$8.79     |
| 1"                   | 10.13                    | 10.13        | 10.13         | 10.13      |
| 1 1/2"               | 14.27                    | 14.27        | 14.27         | 14.27      |
| 2"                   | 20.02                    | 20.02        | 20.02         | 20.02      |
| 3"                   | 36.33                    | 36.33        | 36.33         | 36.33      |
| 4"                   | 59.20                    | 59.20        | 59.20         | 59.20      |
| 6"                   | 124.71                   | 124.71       | 124.71        | 124.71     |
| 8"                   | 216.30                   | 216.30       | 216.30        | 216.30     |
| 10"                  | 334.09                   | 334.09       | 334.09        | 334.09     |
| 12"                  | 478.22                   | 478.22       | 478.22        | 478.22     |

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

| Customer<br>Class                     | Tier Threshold<br>1,000 gallons | Inside City of<br>Denver | Outside City |               |           |
|---------------------------------------|---------------------------------|--------------------------|--------------|---------------|-----------|
|                                       |                                 |                          | Read & Bill  | Total Service | Wholesale |
| <b>Single Family Residential</b>      |                                 |                          |              |               |           |
| Tier 1                                | 0 to AWC (note D.3)             | \$2.60                   | \$2.80       | \$3.28        | N/A       |
| Tier 2                                | AWC + 15                        | 4.68                     | 5.04         | 5.90          |           |
| Tier 3                                | Greater than AWC + 15           | 6.24                     | 6.72         | 7.87          |           |
| <b>Nonresidential (note D.4, D.5)</b> |                                 |                          |              |               |           |
| Tier 1                                | 0 to AWC                        | \$2.68                   | \$3.32       | \$3.76        | N/A       |
| Tier 2                                | AWC to 4 x AWC                  | 3.75                     | 4.65         | 5.26          |           |
| Tier 3                                | Greater than 4 x AWC            | 4.29                     | 5.31         | 6.02          |           |
| <b>Irrigation</b>                     |                                 |                          |              |               |           |
| Winter (Nov. 1 through April 30)      |                                 | \$1.22                   | \$1.40       | \$1.69        | N/A       |
| Summer (May 1 through October 31)     |                                 | 4.88                     | 5.60         | 6.76          |           |
| <b>Wholesale</b>                      |                                 |                          |              |               |           |
| Master Meter                          |                                 |                          |              |               | \$4.15    |
| Outside the Combined Service Area     |                                 |                          |              |               | 4.44      |

**C. Private Fireline**

| Fireline Size<br>inches | Inside City of<br>Denver | Outside City |               |           |
|-------------------------|--------------------------|--------------|---------------|-----------|
|                         |                          | Read & Bill  | Total Service | Wholesale |
| 1"                      | \$3.78                   | \$2.34       | \$3.71        |           |
| 2"                      | 6.31                     | 3.90         | 6.19          |           |
| 4"                      | 9.74                     | 6.03         | 9.56          |           |
| 6"                      | 13.92                    | 8.61         | 13.66         | N/A       |
| 8"                      | 24.36                    | 15.07        | 23.91         |           |
| 10"                     | 34.80                    | 21.53        | 34.15         |           |
| 12"                     | 55.68                    | 34.44        | 54.64         |           |
| 16"                     | 139.20                   | 86.10        | 136.60        |           |
| Fire Hydrants           | \$13.92                  | \$8.61       | \$13.66       |           |

**D. Notes**

1. **Applicability:** See Chapter 2 of Denver Water's Operating Rules

2. **Payment:** Bills are due and payable to Denver Water upon issuance. Monthly bills are delinquent 20 days after the billing date. Late charges will be assessed per Denver Water policy.

3. **Single Family AWC:** A customer's average winter consumption (AWC) is used to determine the tier 1 threshold. The AWC is calculated by averaging each customer's billed monthly water use from January through March, which is a way of determining essential indoor water use. Denver Water has set the tier 1 minimum threshold at 5,000 gallons and a maximum of 15,000 gallons. For example, if the customer's AWC is less than 5,000 gallons, tier 1 is 0 to 5,000 gallons. If the AWC is over 15,000 gallons, tier 1 is 0 to 15,000 gallons. Volume rates are applied to billed monthly usage.

4. **Nonresidential AWC:** The tier 1 threshold is based on each customer's average winter consumption (AWC). This represents demands during the system off-peak period. The AWC is the average of a customer's billed water use for the months of January, February, and March. Volume rates are applied to billed monthly usage. Tier 2 is equal to 4 times the customer's AWC. Tier 3 is for usage in excess of 4 times the AWC.

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

**Schedule 4 Applicability:** Charges for treated water service under this schedule are applicable to entities (i.e. municipalities, quasi-municipal districts and water companies) outside the limits of the City and County of Denver served under distributor agreements whereby the entity operates and maintains water systems to supply individual licensees. Denver Water bills distributors for water delivered through "master meters." Each distributor establishes charges for its individual licensees for water service.

**Schedule 5**  
Raw and Recycled

|   |                          |                      |
|---|--------------------------|----------------------|
| <b>RAW WATER CONSUMPTION (Monthly)</b>                      |                          |                      |
|   | <u>Per 1,000 Gallons</u> | <u>Per Acre Foot</u> |
| Inside City   | \$0.52                   | \$169.44             |
| Outside City  | 0.98                     | 319.33               |
| Outside the Combined Service Area (See Rate Schedule No. 6) | 1.05                     | 342.14               |
| <br>  |                          |                      |
| <b>SERVICE CHARGES FOR RAW WATER BY METER SIZE</b>          |                          |                      |
|   | <u>Monthly</u>           |                      |
|   | Not Applicable           |                      |
| <br>  |                          |                      |
| <b>RECYCLED WATER CONSUMPTION</b>                           |                          |                      |
|   | <u>Per 1,000 Gallons</u> | <u>Per Acre Foot</u> |
| Inside City   | \$0.99                   | \$322.59             |
| Outside City  | n/a                      | n/a                  |
| Outside the Combined Service Area (See Rate Schedule No. 6) | 1.11                     | 361.69               |
| <br>  |                          |                      |
| <b>SERVICE CHARGES FOR RECYCLED WATER BY METER SIZE</b>     |                          |                      |
|   | <u>Monthly</u>           |                      |
| 3/4"  | \$8.79                   |                      |
| 1"  | 10.13                    |                      |
| 1 1/2"  | 14.27                    |                      |
| 2"  | 20.02                    |                      |
| 3"  | 36.33                    |                      |
| 4"  | 59.20                    |                      |
| 6"  | 124.71                   |                      |
| 8"  | 216.30                   |                      |
| 10"   | 334.09                   |                      |
| 12"   | 478.22                   |                      |

Schedule 5 Applicability: Charges under this schedule are applicable to entities (including municipalities, quasi-municipal districts and corporations) with whom Denver Water has contracts to deliver raw or recycled water service at inside city or outside city rates. See Rate Schedule No. 6 for applicability outside the combined service area.

**Schedule 6**  
Outside Combined Service Area

|  |                          |                      |
|--|--------------------------|----------------------|
| <b>TREATED WATER CONSUMPTION (Monthly)</b>             |                          |                      |
|  | <u>Per 1,000 Gallons</u> | <u>Per Acre Foot</u> |
|  | \$4.44                   | \$1,446.77           |
| <br>   |                          |                      |
| <b>SERVICE CHARGE FOR TREATED WATER BY METER SIZE</b>  |                          |                      |
|  | <u>Monthly</u>           |                      |
| 3/4"   | \$8.79                   |                      |
| 1"   | 10.13                    |                      |
| 1 1/2"   | 14.27                    |                      |
| 2"   | 20.02                    |                      |
| 3"   | 36.33                    |                      |
| 4"   | 59.20                    |                      |
| 6"   | 124.71                   |                      |
| 8"   | 216.30                   |                      |
| 10"  | 334.09                   |                      |
| 12"  | 478.22                   |                      |
| <br>   |                          |                      |
| <b>RAW WATER CONSUMPTION</b>                           |                          |                      |
|  | <u>Per 1,000 Gallons</u> | <u>Per Acre Foot</u> |
|  | \$1.05                   | \$342.14             |
| <br>   |                          |                      |
| <b>SERVICE CHARGE FOR RAW WATER BY METER SIZE</b>      |                          |                      |
|  | <u>Monthly</u>           |                      |
|  | Not Applicable           |                      |
| <br>   |                          |                      |
| <b>RECYCLED WATER CONSUMPTION</b>                      |                          |                      |
|  | <u>Per 1,000 Gallons</u> | <u>Per Acre Foot</u> |
|  | \$1.11                   | \$361.69             |
| <br>   |                          |                      |
| <b>SERVICE CHARGE FOR RECYCLED WATER BY METER SIZE</b> |                          |                      |
|  | <u>Monthly</u>           |                      |
| 3/4"   | \$8.79                   |                      |
| 1"   | 10.13                    |                      |
| 1 1/2"   | 14.27                    |                      |
| 2"   | 20.02                    |                      |
| 3"   | 36.33                    |                      |
| 4"   | 59.20                    |                      |
| 6"   | 124.71                   |                      |
| 8"   | 216.30                   |                      |
| 10"  | 334.09                   |                      |
| 12"  | 478.22                   |                      |

Schedule 6 Applicability: Charges under this schedule are applicable to entities (including municipalities, quasi-municipal districts and corporations) with whom Denver Water has contracts to deliver a fixed amount of water each year at Denver Water's outside the combined service area rates. These entities are located outside of Denver Water's combined service area, which is comprised of the City and County of Denver plus the total geographic area of all Total Service, Read and Bill, and Master Meter distributors who rely on Denver Water for their treated water supply. For contracts with entities outside of the combined service area, Denver Water is only obligated to provide specified amounts of treated, raw or recycled water as specified by contract. Denver Water has no relationship with, or obligation to, individual customers of the entity holding the fixed amount contract.

**Schedule 7**  
**City and County of Denver**

|  |                          |
|--|--------------------------|
| TREATED WATER CONSUMPTION CHARGE (Monthly) | <u>Per 1,000 Gallons</u> |
| <u>Domestic - All Consumption</u>          | \$2.39                   |
| <u>Irrigation</u>                          |                          |
| Winter - All Consumption <sup>1</sup>      | 1.06                     |
| Summer - All Consumption                   | 2.66                     |

<sup>1</sup>Winter bills have billing periods ending on October 28 through April 30. Summer bills have billing periods ending on May 1 through October 27.

|                               |                |
|-------------------------------|----------------|
| SERVICE CHARGES BY METER SIZE | <u>Monthly</u> |
| 3/4"                          | \$8.79         |
| 1"                            | 10.13          |
| 1 1/2"                        | 14.27          |
| 2"                            | 20.02          |
| 3"                            | 36.33          |
| 4"                            | 59.20          |
| 6"                            | 124.71         |
| 8"                            | 216.30         |
| 10"                           | 334.09         |
| 12"                           | 478.22         |

|                                 |                          |
|---------------------------------|--------------------------|
| RAW WATER CONSUMPTION (Monthly) | <u>Per 1,000 Gallons</u> |
| Inside City                     | \$0.30                   |

|                               |                |
|-------------------------------|----------------|
| SERVICE CHARGES FOR RAW WATER | <u>Monthly</u> |
|                               | Not Applicable |

|                            |                          |
|----------------------------|--------------------------|
| RECYCLED WATER CONSUMPTION | <u>Per 1,000 Gallons</u> |
| Inside City                | \$0.24                   |

|                                    |                |
|------------------------------------|----------------|
| SERVICE CHARGES FOR RECYCLED WATER | <u>Monthly</u> |
| 3/4"                               | \$8.79         |
| 1"                                 | 10.13          |
| 1 1/2"                             | 14.27          |
| 2"                                 | 20.02          |
| 3"                                 | 36.33          |
| 4"                                 | 59.20          |
| 6"                                 | 124.71         |
| 8"                                 | 216.30         |
| 10"                                | 334.09         |
| 12"                                | 478.22         |

Schedule 7 Applicability: Charges under this schedule are applicable to all licensees for treated water service or private fire protection service outside the limits of the City and County of Denver served under agreements whereby Denver Water operates and maintains the water system used to supply water to the licensee.

|   |  | <b>Schedule 8</b>                 |                     |   |                     |
|---|--|-----------------------------------|---------------------|---|---------------------|
|   |  | <b>System Development Charges</b> |                     |   |                     |
|   |  | <b>Treated Water</b>              |                     |   |                     |
|   |  | <u>Inside City</u>                | <u>Outside City</u> | <u>Inside City</u>                          | <u>Outside City</u> |
| <b>I. SINGLE FAMILY RESIDENTIAL</b>   |  |                                   |                     |   |                     |
| 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 <sup>1</sup>  |  | \$ 1,940                          |                     | \$ 2,710                                    |                     |
| <b>II. RESIDENTIAL MULTIPLEX</b>  |  |                                   |                     |   |                     |
| Base Charge, \$ per unit  |  | \$ 3,030                          |                     | n/a   |                     |
| Lot size charge, \$ per sq. ft.   |  | 0.70                              |                     | n/a   |                     |
| <b>III. MULTIFAMILY RESIDENTIAL</b>   |  |                                   |                     |   |                     |
| 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                                       |                     |
| <b>IV. IRRIGATION-ONLY</b>  |  |                                   |                     |   |                     |
| Minimum charge: first 5,000 sq. ft.   |  | \$ 5,820                          |                     | \$ 8,150                                    |                     |
| Over 5,000 sq. ft., \$ per sq. ft.  |  | 0.87                              |                     | 1.22  |                     |
| <b>V. NON-RESIDENTIAL<sup>2,3,4</sup></b>   |  |                                   |                     |   |                     |
| <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              |
| <b>VI. MIXED USE<sup>5</sup> (sum of the following SDC)</b>                         |  |                                   |                     |   |                     |
| Multifamily component   |  |                                   |                     | <u>Treated Water</u>                        |                     |
| Nonresidential component  |  |                                   |                     | <u>Inside City</u>                          | <u>Outside City</u> |
| \$ per sq. ft. of nonresidential gross floor area irrigation, if applicable         |  |                                   |                     | \$ 2.91                                     | \$ 4.08             |
|   |  |                                   |                     | As set forth in Section IV of this schedule |                     |
| <b>VII. SPECIAL CONTRACTS, FIXED VOLUME CONTRACTS, &amp; LARGE VOLUME CUSTOMERS</b> |  |                                   |                     |   |                     |
| <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> |
| <b>Inside the Combined Service Area</b>   |  |                                   |                     |   |                     |
| 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               |
| <b>Outside the Combined Service Area</b>  |  |                                   |                     |   |                     |
| 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.

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

<sup>2</sup> Includes commercial, industrial, institutional development.

<sup>3</sup> SDC for nonpotable by tap size apply only to recycled water taps.

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

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

|  | 2016    | 2015  | 2014  | 2013  | 2012  | 2011 | 2010 | 2009 <sup>1</sup> | 2008 | 2007 |
|--|---------|-------|-------|-------|-------|------|------|-------------------|------|------|
| <b>City of Denver - Schedule 1</b>   |         |       |       |       |       |      |      |                   |      |      |
| <u>Residential - Consumption Charge per 1,000 Gallons</u>  |         |       |       |       |       |      |      |                   |      |      |
| 0 to AWC <sup>2</sup>  | \$ 2.60 | \$ -  | \$ -  | \$ -  | \$ -  | \$ - | \$ - | \$ -              | \$ - | \$ - |
| AWC + 15   | 4.68    | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Greater than AWC + 15  | 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>Prior to July 6, 2009</u>   |         |       |       |       |       |      |      |                   |      |      |
| First 22,000 Gallons   | -       | -     | -     | -     | -     | -    | -    | -                 | 1.81 | 1.72 |
| 22,000 - 60,000 Gallons  | -       | -     | -     | -     | -     | -    | -    | -                 | 3.62 | 3.44 |
| Over 60,000 Gallons  | -       | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| 60,000 - 80,000 Gallons  | -       | -     | -     | -     | -     | -    | -    | -                 | 5.43 | 5.16 |
| Over 80,000 Gallons  | -       | -     | -     | -     | -     | -    | -    | -                 | 7.24 | 6.88 |
| <u>Residential Irrigation - Consumption Charge per 1,000 Gallons</u>   |         |       |       |       |       |      |      |                   |      |      |
| Winter - All Consumption   | -       | -     | -     | -     | -     | -    | 1.00 | 0.92              | 0.89 | 0.94 |
| Summer - All Consumption   | -       | -     | -     | -     | -     | -    | 4.00 | 3.68              | 3.56 | 3.76 |
| <u>Small Multi-Family - Consumption Charge per 1,000 Gallons</u><br>(Duplexes through Five-Plexes with a Single Meter) |         |       |       |       |       |      |      |                   |      |      |
| 0 to AWC <sup>3,4</sup>  | 2.68    | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| AWC to 4 x AWC   | 3.75    | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Greater than 4 x AWC   | 4.29    | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| <u>Prior to April 1, 2016</u>  |         |       |       |       |       |      |      |                   |      |      |
| First 15,000 Gallons <sup>5</sup>  | -       | 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>Prior to July 6, 2009</u>   |         |       |       |       |       |      |      |                   |      |      |
| First 30,000 Gallons <sup>4</sup>  | -       | -     | -     | -     | -     | -    | -    | -                 | 2.10 | 1.95 |
| Over 30,000 Gallons  | -       | -     | -     | -     | -     | -    | -    | -                 | 2.52 | 2.34 |
| <u>All Other Retail - Consumption Charge per 1,000 Gallons</u>   |         |       |       |       |       |      |      |                   |      |      |
| 0 to AWC <sup>3</sup>  | 2.68    | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| AWC to 4 x AWC   | 3.75    | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Greater than 4 x AWC   | 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              | 2.06 | 1.89 |
| Summer - All Consumption   | -       | 3.76  | 3.68  | 3.57  | 3.57  | 3.38 | 3.08 | 2.96              | 2.47 | 2.27 |
| <u>Irrigation Only - Consumption Charge per 1,000 Gallons</u>  |         |       |       |       |       |      |      |                   |      |      |
| Winter - All Consumption   | 1.22    | 1.20  | 1.20  | 1.20  | 1.20  | 1.14 | 1.00 | 1.49              | 2.02 | -    |
| Summer - All Consumption   | 4.88    | 4.81  | 4.81  | 4.81  | 4.81  | 4.56 | 4.00 | 3.17              | 2.50 | -    |
| <u>Service Charge/Meter Charge</u>   |         |       |       |       |       |      |      |                   |      |      |
| Monthly 5/8" & 3/4"  | 8.79    | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 1"   | 10.13   | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 1 1/2"   | 14.27   | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 2"   | 20.02   | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 3"   | 36.33   | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 4"   | 59.20   | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 6"   | 124.71  | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 8"   | 216.30  | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 10"  | 334.09  | -     | -     | -     | -     | -    | -    | -                 | -    | -    |
| Monthly 12"  | 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              | 3.82 | 3.87 |
| Bimonthly Service Charge   | -       | -     | -     | -     | -     | -    | -    | -                 | 6.07 | 5.98 |

<sup>1</sup>Effective July 6, 2009 Denver Water customers are billed monthly.

<sup>2</sup>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.

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

<sup>4</sup>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.

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

<sup>6</sup>Bimonthly usage amounts increased by 12,000 gallons per additional dwelling unit up to 5 dwelling units.

(Continued next page)

|  | 2016    | 2015  | 2014  | 2013  | 2012 | 2011 | 2010 | 2009 <sup>1</sup> | 2008 | 2007 |
|--|---------|-------|-------|-------|------|------|------|-------------------|------|------|
| <b>Outside City Read and Bill - Schedule 2</b>                       |         |       |       |       |      |      |      |                   |      |      |
| <u>Residential - Consumption Charge per 1000 Gallons</u>             |         |       |       |       |      |      |      |                   |      |      |
| 0 to AWC <sup>2</sup>  | \$ 2.80 | \$ -  | \$ -  | \$ -  | \$ - | \$ - | \$ - | \$ -              | \$ - | \$ - |
| AWC + 15   | 5.04    | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Greater than AWC + 15  | 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>Prior to July 6, 2009</u>   |         |       |       |       |      |      |      |                   |      |      |
| First 22,000 Gallons   | -       | -     | -     | -     | -    | -    | -    | -                 | 1.90 | 2.11 |
| 22,000 - 60,000 Gallons  | -       | -     | -     | -     | -    | -    | -    | -                 | 3.80 | 4.22 |
| Over 60,000 Gallons  | -       | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| 60,000 - 80,000 Gallons  | -       | -     | -     | -     | -    | -    | -    | -                 | 5.70 | 6.33 |
| Over 80,000 Gallons  | -       | -     | -     | -     | -    | -    | -    | -                 | 7.60 | 8.44 |
| <u>Residential Irrigation - Consumption Charge per 1,000 Gallons</u> |         |       |       |       |      |      |      |                   |      |      |
| Winter - All Consumption   | -       | -     | -     | -     | -    | -    | 1.09 | 1.08              | 0.98 | 0.92 |
| Summer - All Consumption   | -       | -     | -     | -     | -    | -    | 4.36 | 4.32              | 3.92 | 3.68 |
| <u>Small Multi-Family - Consumption Charge per 1000 Gallons</u>      |         |       |       |       |      |      |      |                   |      |      |
| 0 to AWC <sup>3,4</sup>  | 3.32    | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| AWC to 4 x AWC   | 4.65    | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Greater than 4 x AWC   | 5.31    | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| <u>Prior to April 1, 2016</u>  |         |       |       |       |      |      |      |                   |      |      |
| (Duplexes through Five-Plexes with a Single Meter)                   |         |       |       |       |      |      |      |                   |      |      |
| First 15,000 Gallons <sup>5</sup>                                    | -       | 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>Prior to July 6, 2009</u>   |         |       |       |       |      |      |      |                   |      |      |
| First 30,000 Gallons <sup>6</sup>                                    | -       | -     | -     | -     | -    | -    | -    | -                 | 2.27 | 2.13 |
| Over 30,000 Gallons  | -       | -     | -     | -     | -    | -    | -    | -                 | 2.72 | 2.56 |
| <u>All Other Retail - Consumption Charge per 1000 Gallons</u>        |         |       |       |       |      |      |      |                   |      |      |
| 0 to AWC <sup>3</sup>  | 3.32    | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| AWC to 4 x AWC   | 4.65    | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Greater than 4 x AWC   | 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              | 2.50 | 2.42 |
| Summer - All Consumption   | -       | 4.72  | 4.70  | 4.52  | 4.41 | 4.18 | 3.98 | 3.98              | 3.00 | 2.90 |
| <u>Irrigation Only - Consumption Charge per 1000 Gallons</u>         |         |       |       |       |      |      |      |                   |      |      |
| Winter - All Consumption   | 1.40    | 1.35  | 1.31  | 1.29  | 1.29 | 1.22 | 1.09 | 1.78              | 2.35 | -    |
| Summer - All Consumption   | 5.60    | 5.40  | 5.24  | 5.15  | 5.15 | 4.88 | 4.36 | 3.94              | 3.08 | -    |
| <u>Service Charge/Meter Charge</u>                                   |         |       |       |       |      |      |      |                   |      |      |
| Monthly 5/8" & 3/4"  | 8.79    | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 1"   | 10.13   | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 1 1/2"   | 14.27   | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 2"   | 20.02   | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 3"   | 36.33   | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 4"   | 59.20   | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 6"   | 124.71  | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 8"   | 216.30  | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 10"  | 334.09  | -     | -     | -     | -    | -    | -    | -                 | -    | -    |
| Monthly 12"  | 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              | 3.82 | 3.87 |
| Bimonthly Service Charge   | -       | -     | -     | -     | -    | -    | -    | -                 | 6.07 | 5.98 |

<sup>1</sup>Effective July 6, 2009 Denver Water customers are billed monthly.

<sup>2</sup>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.

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

<sup>4</sup>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.

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

<sup>6</sup>Bimonthly usage amounts increased by 12,000 gallons per additional dwelling unit up to 5 dwelling units.

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|  | 2016    | 2015  | 2014  | 2013  | 2012  | 2011  | 2010  | 2009 <sup>1</sup> | 2008 | 2007 |
|--|---------|-------|-------|-------|-------|-------|-------|-------------------|------|------|
| <b>Outside City Total Service - Schedule 3</b>   |         |       |       |       |       |       |       |                   |      |      |
| <u>Residential - Consumption Charge per 1,000 Gallons</u>  |         |       |       |       |       |       |       |                   |      |      |
| 0 to AWC <sup>2</sup>  | \$ 3.28 | \$ -  | \$ -  | \$ -  | \$ -  | \$ -  | \$ -  | \$ -              | \$ - | \$ - |
| AWC + 15   | 5.90    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Greater than AWC + 15  | 7.87    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| <u>Prior to April 1, 2016</u>  |         |       |       |       |       |       |       |                   |      |      |
| First 11,000 Gallons   | 3.04    | 3.04  | 3.02  | 2.93  | 2.85  | 2.70  | 2.59  | 2.43              | -    | -    |
| 12,000 - 30,000 Gallons  | 6.08    | 6.08  | 6.04  | 5.86  | 5.70  | 5.40  | 5.18  | 4.86              | -    | -    |
| 31,000 - 40,000 Gallons  | 9.12    | 9.12  | 9.06  | 8.79  | 8.55  | 8.10  | 7.77  | 7.29              | -    | -    |
| Over 40,000 Gallons  | 12.16   | 12.16 | 12.08 | 11.72 | 11.39 | 10.80 | 10.36 | 9.72              | -    | -    |
| <u>Prior to July 6, 2009</u>   |         |       |       |       |       |       |       |                   |      |      |
| First 22,000 Gallons   | -       | -     | -     | -     | -     | -     | -     | -                 | 2.27 | 2.22 |
| 22,000 - 60,000 Gallons  | -       | -     | -     | -     | -     | -     | -     | -                 | 4.54 | 4.44 |
| Over 60,000 Gallons  | -       | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| 60,000 - 80,000 Gallons  | -       | -     | -     | -     | -     | -     | -     | -                 | 6.81 | 6.66 |
| Over 80,000 Gallons  | -       | -     | -     | -     | -     | -     | -     | -                 | 9.08 | 8.88 |
| <u>Residential Irrigation - Consumption Charge per 1,000 Gallons</u>   |         |       |       |       |       |       |       |                   |      |      |
| Winter - All Consumption   | -       | -     | -     | -     | -     | -     | 1.26  | 1.24              | 1.09 | 1.09 |
| Summer - All Consumption   | -       | -     | -     | -     | -     | -     | 5.04  | 4.96              | 4.36 | 4.36 |
| <u>Small Multi-Family - Consumption Charge per 1,000 Gallons</u><br>(Duplexes through Five-Plexes with a Single Meter) |         |       |       |       |       |       |       |                   |      |      |
| 0 to AWC <sup>3,4</sup>  | 3.76    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| AWC to 4 x AWC   | 5.26    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Greater than 4 x AWC   | 6.02    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| <u>Prior to April 1, 2016</u>  |         |       |       |       |       |       |       |                   |      |      |
| First 15,000 Gallons <sup>5</sup>  | -       | 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>Prior to July 6, 2009</u>   |         |       |       |       |       |       |       |                   |      |      |
| First 30,000 Gallons <sup>6</sup>  | -       | -     | -     | -     | -     | -     | -     | -                 | 2.97 | 2.77 |
| Over 30,000 Gallons  | -       | -     | -     | -     | -     | -     | -     | -                 | 3.56 | 3.32 |
| <u>All Other Retail - Consumption Charge per 1,000 Gallons</u>   |         |       |       |       |       |       |       |                   |      |      |
| 0 to AWC <sup>3</sup>  | 3.76    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| AWC to 4 x AWC   | 5.26    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Greater than 4 x AWC   | 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              | 2.98 | 2.89 |
| Summer - All Consumption   | -       | 5.44  | 5.40  | 5.08  | 4.87  | 4.62  | 4.32  | 4.32              | 3.58 | 3.47 |
| <u>Irrigation Only - Consumption Charge per 1,000 Gallons</u>  |         |       |       |       |       |       |       |                   |      |      |
| Winter - All Consumption   | 1.69    | 1.64  | 1.56  | 1.47  | 1.39  | 1.32  | 1.26  | 2.02              | 2.78 | -    |
| Summer - All Consumption   | 6.76    | 6.56  | 6.24  | 5.88  | 5.57  | 5.28  | 5.04  | 4.33              | 3.61 | -    |
| <u>Service Charge/Meter Charge</u>   |         |       |       |       |       |       |       |                   |      |      |
| Monthly 5/8" & 3/4"  | 8.79    | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 1"   | 10.13   | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 1 1/2"   | 14.27   | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 2"   | 20.02   | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 3"   | 36.33   | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 4"   | 59.20   | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 6"   | 124.71  | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 8"   | 216.30  | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 10"  | 334.09  | -     | -     | -     | -     | -     | -     | -                 | -    | -    |
| Monthly 12"  | 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              | 3.82 | 3.87 |
| Bimonthly Service Charge   | -       | -     | -     | -     | -     | -     | -     | -                 | 6.07 | 5.98 |

<sup>1</sup>Effective July 6, 2009 Denver Water customers are billed monthly.<sup>2</sup>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.

<sup>3</sup>Small Multifamily: For 2016, the small multifamily class (duplex through 5-plex) is now included in the nonresidential class.<sup>4</sup>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.<sup>5</sup>Monthly usage amounts increase by 6,000 gallons per additional dwelling unit up to 5 dwelling units.<sup>6</sup>Bimonthly usage amounts increased by 12,000 gallons per additional dwelling unit up to 5 dwelling units.

(Continued next page)

|   | 2016    | 2015    | 2014    | 2013    | 2012    | 2011    | 2010    | 2009 <sup>1</sup> | 2008    | 2007    |
|---|---------|---------|---------|---------|---------|---------|---------|-------------------|---------|---------|
| <b>Outside City Master Meter - Schedule 4</b>             |         |         |         |         |         |         |         |                   |         |         |
| Consumption Charge per 1000 Gallons - All Consumption     | \$ 4.15 | \$ 4.04 | \$ 3.95 | \$ 3.81 | \$ 3.64 | \$ 3.45 | \$ 3.01 | \$ 3.01           | \$ 2.67 | \$ 2.55 |
| <u>Service Charge/Meter Charge</u>                        |         |         |         |         |         |         |         |                   |         |         |
| Monthly 5/8" & 3/4"                                       | 8.79    | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 1"  | 10.13   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 1 1/2"  | 14.27   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 2"  | 20.02   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 3"  | 36.33   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 4"  | 59.20   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 6"  | 124.71  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 8"  | 216.30  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 10"   | 334.09  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 12"   | 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              | 3.82    | 3.87    |
| Bimonthly Service Charge                                  | -       | -       | -       | -       | -       | -       | -       | -                 | 6.07    | 5.98    |
| <b>Outside City Master Meter Maintenance - Schedule 5</b> |         |         |         |         |         |         |         |                   |         |         |
| Consumption Charge per 1000 Gallons - All Consumption     | -       | -       | -       | -       | 4.96    | 4.70    | 4.45    | 4.31              | 3.93    | 3.72    |
| <u>Service Charge/Meter Charge</u>                        |         |         |         |         |         |         |         |                   |         |         |
| Monthly Service Charge                                    | -       | -       | -       | -       | 6.33    | 6.00    | 5.58    | 4.41              | 3.82    | 3.87    |
| Bimonthly Service Charge                                  | -       | -       | -       | -       | -       | -       | -       | -                 | 6.07    | 5.98    |
| <b>Raw and Recycled - Schedule 6</b>                      |         |         |         |         |         |         |         |                   |         |         |
| <u>Raw - Consumption Charge per 1000 Gallons</u>          |         |         |         |         |         |         |         |                   |         |         |
| Inside City - All Consumption                             | 0.50    | 0.52    | 0.52    | 0.50    | 0.50    | 0.47    | 0.47    | 0.47              | 0.47    | 0.47    |
| Outside City - All Consumption                            | 1.00    | 0.96    | 0.91    | 0.91    | 0.86    | 0.81    | 0.77    | 0.73              | 0.67    | 0.67    |
| Outside Combined Service Area - All Consumption           | 1.10    | 1.04    | 1.04    | 1.04    | 1.01    | 0.95    | 0.90    | 0.85              | 0.76    | 0.76    |
| <u>Recycled - Consumption Charge per 1000 Gallons</u>     |         |         |         |         |         |         |         |                   |         |         |
| Inside City Recycled - All Consumption                    | 0.99    | 0.99    | 0.99    | 0.99    | 0.99    | 0.93    | 0.89    | 0.89              | 0.88    | 0.86    |
| Outside City Recycled - All Consumption                   | -       | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Outside Combined Service Area - All Consumption           | 1.11    | 1.11    | 1.11    | 1.11    | 1.11    | 1.05    | 0.91    | 0.90              | 0.76    | 0.77    |
| <u>Recycled Service Meter Charge</u>                      |         |         |         |         |         |         |         |                   |         |         |
| Monthly 5/8" & 3/4"                                       | 8.79    | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 1"  | 10.13   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 1 1/2"  | 14.27   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 2"  | 20.02   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 3"  | 36.33   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 4"  | 59.20   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 6"  | 124.71  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 8"  | 216.30  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 10"   | 334.09  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 12"   | 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              | 3.82    | 3.87    |
| Bimonthly Service Charge                                  | -       | -       | -       | -       | -       | -       | -       | -                 | 6.07    | 5.98    |
| <b>Outside Combined Service Area - Schedule 7</b>         |         |         |         |         |         |         |         |                   |         |         |
| Treated Water - Consumption Charge per 1000 Gallons       | 4.44    | 4.44    | 4.44    | 4.25    | 4.05    | 3.83    | 3.36    | 3.19              | 3.13    | 2.68    |
| <u>Service Charge/Meter Charge</u>                        |         |         |         |         |         |         |         |                   |         |         |
| Monthly 5/8" & 3/4"                                       | 8.79    | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 1"  | 10.13   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 1 1/2"  | 14.27   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 2"  | 20.02   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 3"  | 36.33   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 4"  | 59.20   | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 6"  | 124.71  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 8"  | 216.30  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 10"   | 334.09  | -       | -       | -       | -       | -       | -       | -                 | -       | -       |
| Monthly 12"   | 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              | 3.82    | 3.87    |
| Bimonthly Service Charge                                  | -       | -       | -       | -       | -       | -       | -       | -                 | 6.07    | 5.98    |

<sup>1</sup>Effective July 6, 2009 Denver Water customers are billed monthly.

SALES OF TREATED WATER FOR RESALE - 2016

(NON-ACCRUAL BASIS)<sup>1</sup>

(amounts expressed in thousands)

Treated Water Sold Outside Denver to Municipalities and Distributors through Master Meters<sup>2,3</sup>

|   | Revenue          | Gallons Sold<br>(000) | Number of<br>Customers |
|---|------------------|-----------------------|------------------------|
| <b><u>MASTER METER DISTRIBUTORS</u></b>             |                  |                       |                        |
| Alameda Water & Sanitation District                 | \$ 336           | 79,750                | 335                    |
| Bancroft-Clover Water & Sanitation District         | 6,219            | 1,498,464             | 8,817                  |
| Bonvue Water & Sanitation District                  | 59               | 14,326                | 169                    |
| Bow-Mar Water & Sanitation District                 | 471              | 112,194               | 290                    |
| Cherry Creek Valley Water & Sanitation District     | 3,845            | 925,485               | 1,975                  |
| Cherry Creek Village Water & Sanitation District    | 568              | 136,057               | 475                    |
| City of Edgewater                                   | 832              | 199,138               | 1,483                  |
| City of Glendale                                    | 1,112            | 268,548               | 237                    |
| City of Lakewood                                    | 800              | 192,906               | 732                    |
| Consolidated Mutual Water Company                   | 8,562            | 2,062,821             | 15,702                 |
| Crestview Water & Sanitation District               | 2,343            | 566,548               | 4,528                  |
| Green Mountain Water & Sanitation District          | 6,709            | 1,620,672             | 10,111                 |
| High View Water District                            | 587              | 141,510               | 891                    |
| Ken-Caryl Water & Sanitation District               | 3,278            | 790,056               | 3,742                  |
| Lakehurst Water & Sanitation District               | 3,702            | 889,251               | 5,519                  |
| Meadowbrook Water & Sanitation District             | 649              | 154,821               | 1,321                  |
| North Pecos Water & Sanitation District             | 653              | 156,268               | 404                    |
| North Washington Street Water & Sanitation District | 3,322            | 800,917               | 3,637                  |
| Northgate Water District                            | 20               | 4,496                 | 4                      |
| South Adams County Water & Sanitation District      | 261              | 61,252                | 167                    |
| Valley Water District                               | 2,201            | 529,454               | 1,782                  |
| Wheat Ridge Water District                          | 3,339            | 803,998               | 5,849                  |
| Willowbrook Water & Sanitation District             | 2,032            | 488,137               | 3,415                  |
| Willows Water District                              | 3,180            | 765,428               | 4,737                  |
| Chatfield South Water District                      | 28               | 6,415                 | -                      |
| City and County of Broomfield                       | 6,456            | 1,556,508             | -                      |
| East Cherry Creek Valley Water District             | 876              | 195,590               | -                      |
| GSA   | 352              | 83,581                | -                      |
| Inverness Water District                            | 657              | 157,692               | -                      |
| Rocky Mountain Arsenal                              | 27               | 4,650                 | -                      |
| South Adams County Special Contract Area            | 3,356            | 761,710               | -                      |
| Suncor Energy USA                                   | 2,351            | 567,344               | -                      |
| <b>Total Sales of Treated Water for Resale</b>      | <b>\$ 69,183</b> | <b>16,595,987</b>     | <b>76,322</b>          |

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

<sup>2</sup>Sales on Total Service or Read and Bill Contracts are not included.

<sup>3</sup>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.

10 LARGEST RETAIL CUSTOMERS - WATER CONSUMPTION AND REVENUE - 2016  
(NON-ACCRUAL BASIS)

(amounts expressed in thousands)

| Account Type                      | Consumption           |                                     | Revenue                       |                                      |
|-----------------------------------|-----------------------|-------------------------------------|-------------------------------|--------------------------------------|
|                                   | Gallons Sold<br>(000) | Percent of<br>Total<br>Gallons Sold | Water<br>Revenue <sup>1</sup> | Percent of<br>Total Water<br>Revenue |
| Oil and Gas Company               | 608,901               | 0.96%                               | \$ 2,407                      | 0.90%                                |
| Public School System              | 487,818               | 0.77%                               | 1,661                         | 0.62%                                |
| Public Utility                    | 437,776               | 0.69%                               | 1,535                         | 0.58%                                |
| Housing Authority                 | 345,445               | 0.55%                               | 1,218                         | 0.46%                                |
| Parks System                      | 221,970               | 0.35%                               | 1,348                         | 0.51%                                |
| Retail Grocer - 1                 | 175,190               | 0.28%                               | 481                           | 0.18%                                |
| Beverage Company                  | 145,643               | 0.23%                               | 384                           | 0.14%                                |
| Retail Grocer - 2                 | 129,481               | 0.20%                               | 522                           | 0.20%                                |
| State Government                  | 125,653               | 0.20%                               | 405                           | 0.15%                                |
| Hospitals                         | 114,087               | 0.18%                               | 286                           | 0.11%                                |
| Total of the 10 largest customers | <u>2,791,964</u>      | <u>4.41%</u>                        | <u>\$ 10,247</u>              | <u>3.85%</u>                         |
| Total sales of treated water      | <u>63,257,284</u>     |                                     | <u>\$ 266,385</u>             |                                      |

<sup>1</sup>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 2,181 million gallons of treated water to the City and County of Denver. Revenues from these sales were \$5.8 million. (See pages III-19)

SYSTEM DEVELOPMENT CHARGES AND PARTICIPATION RECEIPTS:  
 1973 - 2016  
 (Cash basis - net of refunds)  
 (amounts expressed in thousands)

|         | <u>System<br/>Development<br/>Charges ("SDC")</u> | <u>Participation<br/>Receipts (aka<br/>Contributions<br/>in Aid of<br/>Construction)</u> |
|---------|---|--|
| 2016    | 38,752  | 2,335  |
| 2015    | 36,109  | 8,713  |
| 2014    | 32,736  | 6,384  |
| 2013    | 34,461  | 4,834  |
| 2012    | 19,543  | 1,297  |
| 2011    | 14,233  | 7,023  |
| 2010    | 14,441  | 1,093  |
| 2009    | 8,118   | 10,908   |
| 2008    | 18,498  | 2,424  |
| 2007    | 26,028  | 3,300  |
| 2006    | 22,305  | 2,730  |
| 2005    | 26,257  | 1,850  |
| 2004    | 24,834  | 2,229  |
| 2003    | 19,615  | 2,831  |
| 2002    | 36,591  | 5,567  |
| 2001    | 22,186  | 7,027  |
| 2000    | 25,525  | 6,392  |
| 1999    | 24,224  | 11,964   |
| 1998    | 33,156  | 8,412  |
| 1997    | 45,058  | 3,733  |
| 1996    | 15,137  | 2,913  |
| 1995    | 15,528  | 3,927  |
| 1994    | 13,536  | 2,882  |
| 1993    | 12,182  | 1,344  |
| 1992    | 10,920  | 1,199  |
| 1991    | 7,530   | 2,331  |
| 1990    | 6,615   | 1,839  |
| 1989    | 6,251   | 4,965  |
| 1988    | 6,085   | 3,068  |
| 1987    | 8,544   | 4,561  |
| 1973-86 | <u>149,475</u>                                    | <u>43,646</u>  |
|         | <u>\$ 774,473</u>                                 | <u>\$ 173,721</u>  |

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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: 2007 - 2016**

(amounts expressed in thousands, except debt per capita)

| Year | Total Principal Balance Outstanding Debt by Type <sup>1</sup> |         |                     |        |                                   |         |                       |        |                |         |                            | Ratio of Total Debt to Gross Revenue <sup>1</sup> | Estimated Population Served <sup>3</sup> | Debt Per Capita |                               |
|------|---|---------|---------------------|--------|-----------------------------------|---------|-----------------------|--------|----------------|---------|----------------------------|---|--|-----------------|-------------------------------|
|      | General Obligation  |         | Water Revenue Bonds |        | Revenue Bond                      |         | Total Water Rev Bonds |        | Capital Leases |         | Notes Payable <sup>5</sup> |   |  |                 | Gross Revenues <sup>2,4</sup> |
|      | Bonds   |         | Revenue Bonds       |        | Unamortized Premium or (Discount) | Total   | Participation         | Other  | Total          |         |                            |   |  |                 |                               |
| 2007 | 61,545  | -       | 280,080             | -      | -                                 | 280,080 | 39,515                | 25,061 | -              | 406,201 | 238,689                    | 1.70  | 1,077,000                                | 377             |                               |
| 2008 | 42,725  | -       | 277,490             | -      | -                                 | 277,490 | 33,805                | 23,731 | -              | 377,751 | 248,074                    | 1.52  | 1,093,000                                | 346             |                               |
| 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   | 15,594  | 401,420             | 11,472 | 15,594                            | 417,014 | -                     | 17,431 | -              | 434,945 | 313,093                    | 1.34  | 1,147,000                                | 379             |                               |
| 2013 | -   | 376,965 | 395,125             | 9,480  | 388,437                           | 404,605 | -                     | 13,595 | 10,000         | 418,200 | 290,349                    | 1.39  | 1,161,000                                | 357             |                               |
| 2014 | -   | 368,125 | 438,580             | 15,758 | 374,718                           | 454,338 | -                     | 11,478 | 30,000         | 416,196 | 297,768                    | 1.37  | 1,172,000                                | 357             |                               |
| 2015 | -   | -       | -                   | -      | -                                 | -       | -                     | 9,215  | -              | 463,553 | 305,073                    | 1.34  | 1,210,000                                | 344             |                               |
| 2016 | -   | -       | -                   | -      | -                                 | -       | -                     | -      | -              | -       | 336,713                    | 1.33  | 1,249,000                                | 371             |                               |

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>Population estimates are treated water customers only. See schedule entitled "Consumption of Treated Water" on page III-80

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

<sup>5</sup>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: 2007 - 2016

General Obligation Bonds, Water Revenue Bonds, Notes Payable and Obligations under Capital Lease<sup>1</sup>  
(amounts expressed in thousands)

| Year | Gross Revenues <sup>2,4,5</sup> | Less Operating Expenses <sup>3,4,5,7</sup> | Net Available Revenue | Total Debt Service <sup>1</sup> |           |           | Coverage including Notes Payable Debt <sup>6</sup> | Coverage not including Notes Payable Debt |
|------|---------------------------------|--|-----------------------|---------------------------------|-----------|-----------|--|---|
|      |                                 |  |                       | Principal                       | Interest  | Total     |  |   |
| 2007 | \$ 238,689                      | \$ 124,170                                 | \$ 114,519            | \$ 32,055                       | \$ 19,683 | \$ 51,738 | 2.21   | 2.21                                      |
| 2008 | 248,074                         | 138,402                                    | 109,672               | 30,250                          | 19,324    | 49,574    | 2.21   | 2.21                                      |
| 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    | 2.05   | 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                                      |

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>Operating Expenses are defined as operating expenses plus other expenses minus total depreciation and amortization (as disclosed in Note 4 to the financial statements).

<sup>4</sup>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 is not subject to this covenant.

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

<sup>6</sup>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 2015 was \$0 in principal and \$57 thousand in interest. In 2015 \$30 million was drawn on the notes. In 2016 \$30 million in notes payable was paid down with proceeds from the 2016A revenue bond issue. \$132 thousand was paid in interest in 2016 for the notes.

<sup>7</sup>The 2014 financial statements we restated as part of the implementation of GASB Statement No.68 *Accounting and Financial Reporting for Pensions*.

**RATIOS OF GENERAL OBLIGATION BONDED DEBT OUTSTANDING: 2007 - 2016**

(amounts expressed in thousands, except debt per capita)

| Year | General Obligation Bonds <sup>1</sup> |            | Gross Revenues <sup>2,4</sup> | Ratio of General Obligation Debt to Gross Revenue |           | Estimated Population Served <sup>3</sup> | General Obligation Debt per Capita |
|------|---------------------------------------|------------|-------------------------------|---|-----------|--|------------------------------------|
|      | \$                                    |            |                               | General Obligation Debt to Gross Revenue          |           |  |                                    |
| 2007 | \$ 61,545                             | \$ 238,689 | 0.26                          |   | 1,077,000 | 57                                       |                                    |
| 2008 | 42,725                                | 248,074    | 0.17                          |   | 1,093,000 | 39                                       |                                    |
| 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 | -  |                                    |

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>Population estimates are treated water customers only. See schedule entitled "Consumption of Treated Water" on page III-80.

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

**RATIOS OF WATER REVENUE BONDED DEBT OUTSTANDING: 2007 - 2016**  
(amounts expressed in thousands, except debt per capita)

| Year | Water Revenue      |    | Gross Revenues <sup>2,4</sup> | Ratio of                            |  | Estimated Population Served <sup>3</sup> | Water Revenue Debt per Capita |
|------|--------------------|----|-------------------------------|-------------------------------------|--|--|-------------------------------|
|      | Bonds <sup>1</sup> |    |                               | Water Revenue Debt to Gross Revenue |  |  |                               |
| 2007 | \$ 280,080         | \$ | 238,689                       | 1.17                                |  | 1,077,000                                | 260                           |
| 2008 | 277,490            |    | 248,074                       | 1.12                                |  | 1,093,000                                | 254                           |
| 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                           |

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>Population estimates are treated water customers only. See schedule entitled "Consumption of Treated Water" on page III-80. Population estimates for 2005 through 2010 were revised based on 2010 census.

<sup>4</sup>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 - 2016**

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**

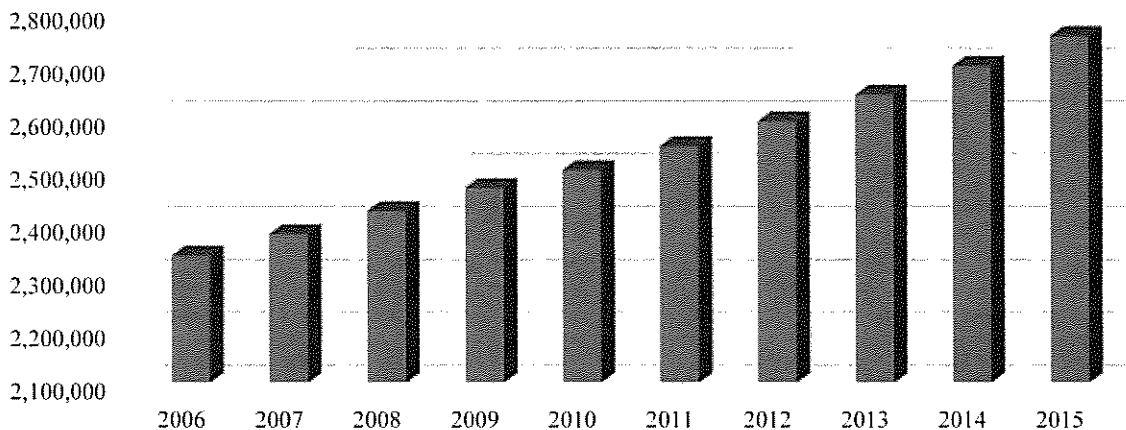
The following table sets forth population statistics for Denver, the Denver Primary Metropolitan Statistical Area (“PMSA”) and the State of Colorado. The Denver PMSA includes the counties of Adams, Arapahoe, Denver, Douglas, and Jefferson.

**Population Estimates** (n/a = not available)

| <u>Year</u> | <u>Denver</u> | <u>Denver PMSA</u> | <u>State of Colorado</u> |
|-------------|---------------|--------------------|--------------------------|
| 2006        | 562,862       | 2,340,064          | 4,745,660                |
| 2007        | 570,437       | 2,381,281          | 4,821,784                |
| 2008        | 581,903       | 2,424,992          | 4,901,938                |
| 2009        | 595,573       | 2,468,523          | 4,976,853                |
| 2010        | 604,879       | 2,502,291          | 5,050,332                |
| 2011        | 620,817       | 2,547,810          | 5,120,686                |
| 2012        | 634,940       | 2,594,563          | 5,193,097                |
| 2013        | 649,214       | 2,645,259          | 5,272,677                |
| 2014        | 664,453       | 2,699,638          | 5,356,626                |
| 2015        | 683,096       | 2,756,524          | 5,456,584                |
| 2016        | n/a           | n/a                | n/a                      |

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

**Population - Denver Primary Metropolitan Statistical Area**



# DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA - 2016

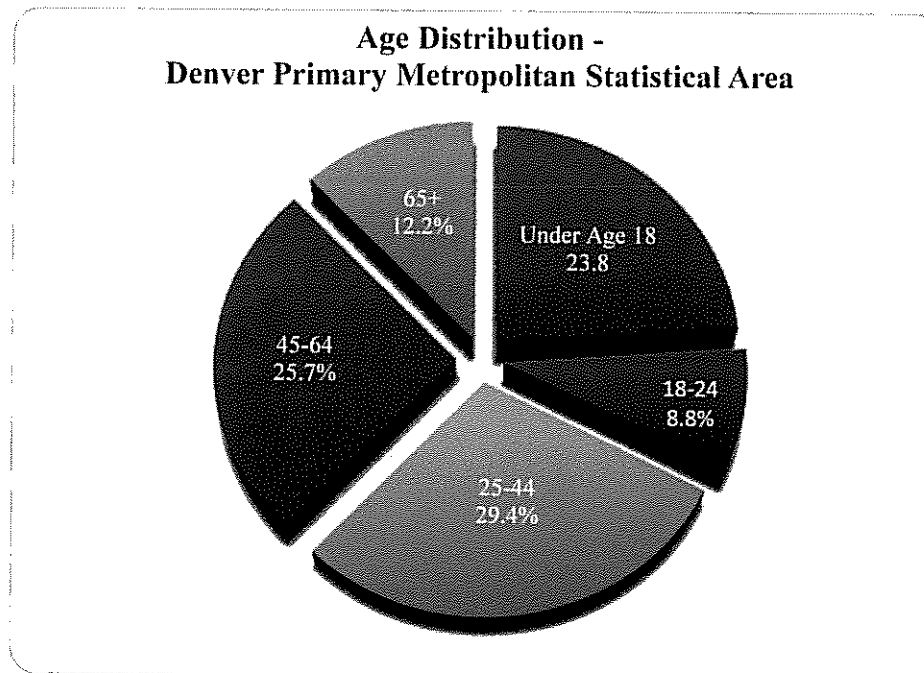
## Age Distribution

The following table sets forth a forecasted age distribution profile for Denver, the Denver PMSA, and the State of Colorado for 2016.

**Forecasted Age Distribution for 2016**  
(Columns may not add to 100% due to rounding)

| <u>Age Groups</u> | <u>Percent of Population</u> |                    |                          |
|-------------------|------------------------------|--------------------|--------------------------|
|                   | <u>Denver</u>                | <u>Denver PMSA</u> | <u>State of Colorado</u> |
| Under 18          | 22.3%                        | 23.8%              | 23.4%                    |
| 18-24             | 8.4                          | 8.8                | 9.8                      |
| 25-44             | 36.3                         | 29.4               | 27.4                     |
| 45-64             | 21.7                         | 25.7               | 26.0                     |
| 65+               | 11.3                         | 12.2               | 13.4                     |

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



# DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA - 2016

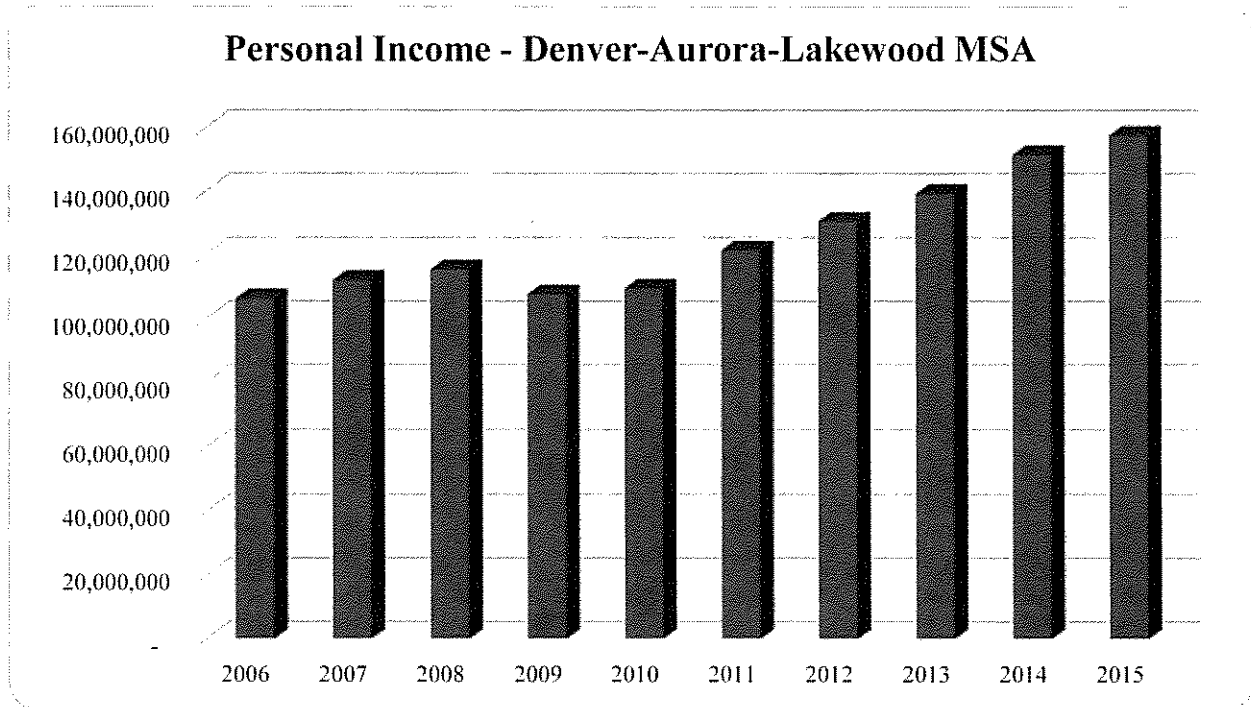
## Income

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 2005 through 2014 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**  
(Current dollars, not adjusted for inflation. Amounts expressed in thousands. n/a = not available)

| <u>Year</u> | <u>Denver</u> | <u>Denver-Aurora-Lakewood MSA</u> | <u>State of Colorado</u> | <u>United States</u> |
|-------------|---------------|-----------------------------------|--------------------------|----------------------|
| 2006        | 28,573,465    | 106,200,622                       | 189,492,643              | 11,381,350,000       |
| 2007        | 29,907,155    | 112,087,470                       | 201,743,269              | 11,995,419,000       |
| 2008        | 31,995,450    | 115,393,714                       | 208,608,111              | 12,492,705,000       |
| 2009        | 27,446,777    | 107,655,385                       | 198,082,468              | 12,079,444,000       |
| 2010        | 28,829,542    | 109,386,712                       | 201,569,924              | 12,459,613,000       |
| 2011        | 32,836,870    | 121,383,631                       | 219,860,916              | 13,233,436,000       |
| 2012        | 36,287,725    | 130,544,627                       | 234,005,901              | 13,904,485,000       |
| 2013        | 40,408,827    | 139,212,185                       | 246,648,165              | 14,068,960,000       |
| 2014        | 45,351,613    | 151,397,505                       | 266,534,568              | 14,801,624,000       |
| 2015        | 46,616,995    | 157,531,669                       | 277,731,754              | 15,463,981,000       |
| 2016        | n/a           | n/a                               | n/a                      | n/a                  |

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

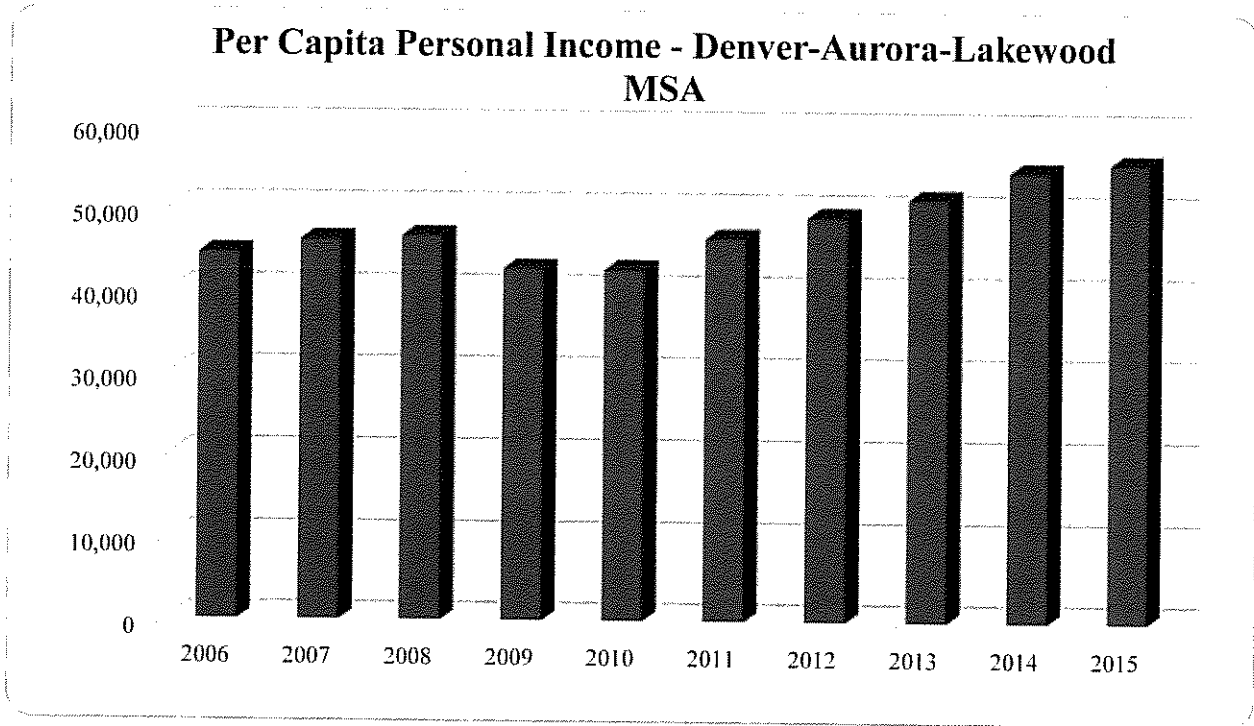


DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA - 2016

**Per Capita Personal Income**  
(Current dollars, not adjusted for inflation. n/a = not available)

| <u>Year</u> | <u>Denver</u> | <u>Denver-Aurora-Lakewood MSA</u> | <u>State of Colorado</u> | <u>United States</u> |
|-------------|---------------|-----------------------------------|--------------------------|----------------------|
| 2006        | 51,309        | 44,731                            | 40,143                   | 38,144               |
| 2007        | 52,990        | 46,342                            | 41,996                   | 39,821               |
| 2008        | 55,575        | 46,832                            | 42,663                   | 41,082               |
| 2009        | 46,598        | 42,901                            | 39,838                   | 39,376               |
| 2010        | 47,786        | 42,822                            | 39,929                   | 40,277               |
| 2011        | 53,016        | 46,666                            | 42,946                   | 42,453               |
| 2012        | 57,238        | 49,290                            | 45,073                   | 44,267               |
| 2013        | 62,320        | 51,558                            | 46,792                   | 44,462               |
| 2014        | 68,304        | 54,937                            | 49,768                   | 46,414               |
| 2015        | 68,299        | 55,975                            | 50,899                   | 48,112               |
| 2016        | n/a           | n/a                               | n/a                      | n/a                  |

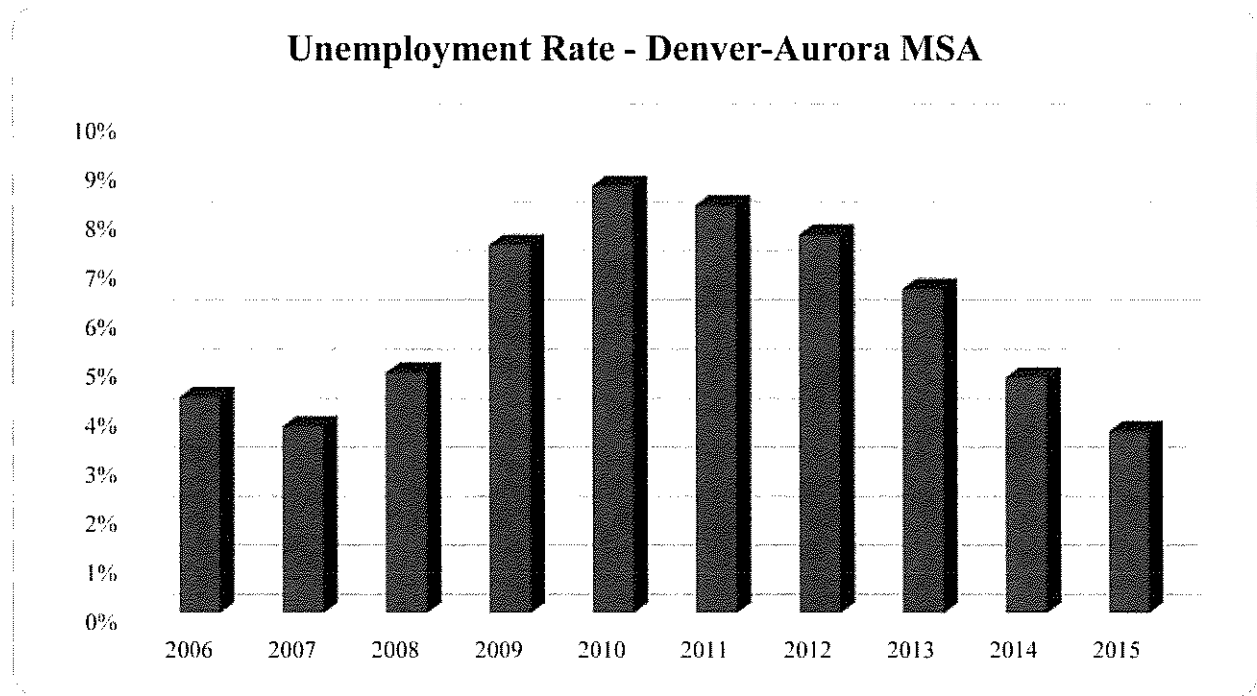
Source: U.S. Department of Commerce, Bureau of Economic Analysis.



# DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA - 2016

## 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 5.0% as of December, 2015.



DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN  
AREA - 2016

**Local Area Employment Statistics**  
(Annual averages, not seasonally adjusted.)

| <b>Denver</b> |                                    |                     |                                   |                              |
|---------------|------------------------------------|---------------------|-----------------------------------|------------------------------|
| <u>Year</u>   | <u>Labor Force<br/>(Thousands)</u> | <u>%<br/>Change</u> | <u>Unemployed<br/>(Thousands)</u> | <u>Unemployment<br/>Rate</u> |
| 2006          | 306.0                              | 1.3                 | 14.7                              | 4.8                          |
| 2007          | 314.8                              | 2.9                 | 13.0                              | 4.1                          |
| 2008          | 323.3                              | 2.7                 | 17.4                              | 5.4                          |
| 2009          | 324.3                              | 0.3                 | 26.3                              | 8.1                          |
| 2010          | 347.6                              | 7.2                 | 31.7                              | 9.1                          |
| 2011          | 352.2                              | 1.3                 | 30.3                              | 8.6                          |
| 2012          | 358.0                              | 1.6                 | 28.1                              | 7.9                          |
| 2013          | 364.6                              | 1.8                 | 24.2                              | 6.6                          |
| 2014          | 370.6                              | 1.6                 | 17.8                              | 4.8                          |
| 2015          | 373.1                              | 0.7                 | 13.8                              | 3.7                          |
| 2016          | n/a                                | n/a                 | n/a                               | n/a                          |

| <b>Denver-Aurora MSA</b> |                                    |                     |                                   |                              |
|--------------------------|------------------------------------|---------------------|-----------------------------------|------------------------------|
| <u>Year</u>              | <u>Labor Force<br/>(Thousands)</u> | <u>%<br/>Change</u> | <u>Unemployed<br/>(Thousands)</u> | <u>Unemployment<br/>Rate</u> |
| 2006                     | 1,338.7                            | 1.9                 | 58.5                              | 4.4                          |
| 2007                     | 1,359.0                            | 1.5                 | 51.8                              | 3.8                          |
| 2008                     | 1,393.4                            | 2.5                 | 68.9                              | 4.9                          |
| 2009                     | 1,392.7                            | (0.1)               | 104.2                             | 7.5                          |
| 2010                     | 1,423.4                            | 2.2                 | 123.6                             | 8.7                          |
| 2011                     | 1,431.2                            | 0.5                 | 118.8                             | 8.3                          |
| 2012                     | 1,449.5                            | 1.3                 | 112.0                             | 7.7                          |
| 2013                     | 1,471.0                            | 1.5                 | 97.0                              | 6.6                          |
| 2014                     | 1,494.5                            | 1.6                 | 71.8                              | 4.8                          |
| 2015                     | 1,504.9                            | 0.7                 | 55.5                              | 3.7                          |
| 2016                     | n/a                                | n/a                 | n/a                               | n/a                          |

| <b>State of Colorado</b> |                                    |                     |                                   |                              |
|--------------------------|------------------------------------|---------------------|-----------------------------------|------------------------------|
| <u>Year</u>              | <u>Labor Force<br/>(Thousands)</u> | <u>%<br/>Change</u> | <u>Unemployed<br/>(Thousands)</u> | <u>Unemployment<br/>Rate</u> |
| 2006                     | 2,622.2                            | 2.3                 | 112.5                             | 4.3                          |
| 2007                     | 2,664.7                            | 1.6                 | 99.5                              | 3.7                          |
| 2008                     | 2,716.6                            | 1.9                 | 131.4                             | 4.8                          |
| 2009                     | 2,723.0                            | 0.2                 | 198.5                             | 7.3                          |
| 2010                     | 2,724.4                            | 0.1                 | 238.0                             | 8.7                          |
| 2011                     | 2,736.1                            | 0.4                 | 228.8                             | 8.4                          |
| 2012                     | 2,759.4                            | 0.9                 | 217.2                             | 7.9                          |
| 2013                     | 2,780.5                            | 0.8                 | 189.9                             | 6.8                          |
| 2014                     | 2,815.2                            | 1.2                 | 140.6                             | 5.0                          |
| 2015                     | 2,828.5                            | 0.5                 | 109.8                             | 3.9                          |
| 2016                     | n/a                                | n/a                 | n/a                               | n/a                          |

Source: Colorado Department of Labor and Employment

DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA - 2016

Principal Employers

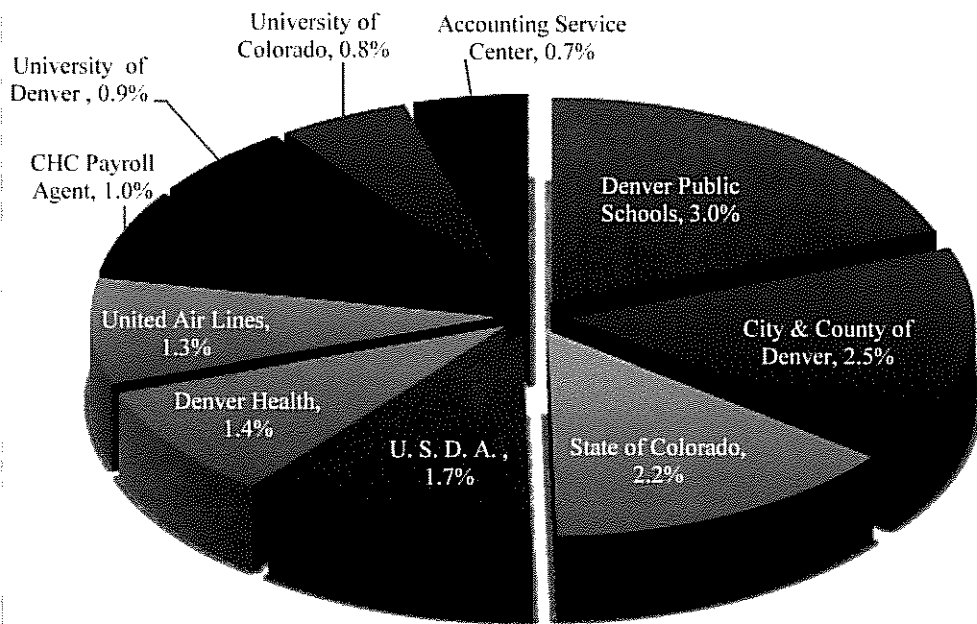
Set forth in the following table are the ten largest employers in Denver for the current year and the period nine years prior, the number of persons each employs, and the percentage of total employment that each represents.

Principal Employers in Denver  
Current Year and Nine Years Ago  
(2016 data not available at time of publication.)

|  | 2015      |      |                            | 2006      |      |                            |
|--|-----------|------|----------------------------|-----------|------|----------------------------|
|  | Employees | Rank | % of Total City Employment | Employees | Rank | % of Total City Employment |
| Denver Public School District #1             | 12,864    | 1    | 3.0%                       | 9,421     | 2    | 2.5%                       |
| City and County of Denver                    | 10,549    | 2    | 2.5                        | 11,322    | 1    | 3.0                        |
| State of Colorado Central Payroll            | 9,401     | 3    | 2.2                        | 8,885     | 3    | 2.4                        |
| U.S.D.A. National Finance Center             | 7,264     | 4    | 1.7                        | 3,933     | 7    | 1.1                        |
| Denver Health & Hospital Authority           | 6,047     | 5    | 1.4                        | -         | -    | -                          |
| United Airlines, Inc.                        | 5,412     | 6    | 1.3                        | 5,805     | 6    | 1.6                        |
| CHC Payroll Agent, Inc. (HCA Health One)     | 4,264     | 7    | 1.0                        | 3,630     | 10   | 1.0                        |
| University of Denver                         | 3,795     | 8    | 0.9                        | -         | -    | -                          |
| University of Colorado Central               | 3,536     | 9    | 0.8                        | 6,113     | 5    | 1.6                        |
| Accounting Service Center (U.S. Postal Svc.) | 2,943     | 10   | 0.7                        | 3,710     | 9    | 1.0                        |
| Frontire Airlines, Inc.                      | -         | -    | -                          | 3,746     | 8    | 1.0                        |
| Defense Civilian Pay System                  | -         | -    | -                          | 8,352     | 4    | 2.2                        |
| Total  | 66,075    |      | 15.5%                      | 64,917    |      | 17.4%                      |

Source: Based on 2015 and 2006 Occupational Privilege Tax Remitters.

2015 Principal Employers - Denver



# DEMOGRAPHIC AND ECONOMIC OVERVIEW OF THE DENVER METROPOLITAN AREA - 2016

## New Residential Building Construction

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

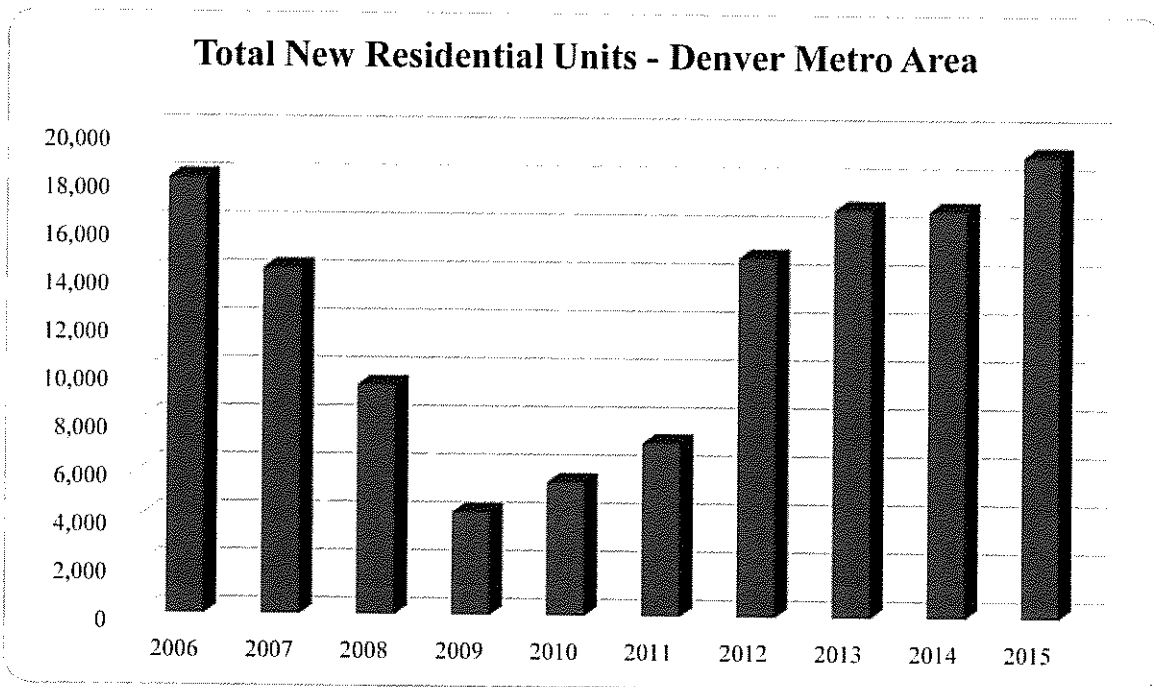
**New Residential Units in Denver and the Denver Metropolitan Area**

| Year | Denver                 |                                     |                           |       | Denver Metropolitan Area |                                     |                           |        |
|------|------------------------|-------------------------------------|---------------------------|-------|--------------------------|-------------------------------------|---------------------------|--------|
|      | Single Family Detached | Single Family Attached <sup>1</sup> | Multi-Family <sup>2</sup> | Total | Single Family Detached   | Single Family Attached <sup>1</sup> | Multi-Family <sup>2</sup> | Total  |
| 2006 | 1,800                  | 170                                 | 1,882                     | 3,852 | 12,938                   | 428                                 | 4,769                     | 18,135 |
| 2007 | 1,215                  | 201                                 | 2,266                     | 3,682 | 7,799                    | 398                                 | 6,195                     | 14,392 |
| 2008 | 837                    | 148                                 | 2,195                     | 3,180 | 4,037                    | 224                                 | 5,296                     | 9,557  |
| 2009 | 485                    | 74                                  | 329                       | 888   | 2,690                    | 133                                 | 1,465                     | 4,288  |
| 2010 | 632                    | 130                                 | 470                       | 1,232 | 3,791                    | 285                                 | 1,478                     | 5,554  |
| 2011 | 703                    | 147                                 | 1,835                     | 2,685 | 3,885                    | 309                                 | 3,005                     | 7,199  |
| 2012 | 1,056                  | 166                                 | 4,356                     | 5,578 | 5,947                    | 299                                 | 8,679                     | 14,925 |
| 2013 | 1,284                  | 256                                 | 4,330                     | 5,870 | 7,396                    | 399                                 | 9,145                     | 16,940 |
| 2014 | 1,710                  | 287                                 | 3,961                     | 5,958 | 8,396                    | 440                                 | 8,074                     | 16,910 |
| 2015 | 1,847                  | 134                                 | 5,920                     | 7,901 | 9,701                    | 442                                 | 9,061                     | 19,184 |
| 2016 | n/a                    | n/a                                 | n/a                       | n/a   | n/a                      | n/a                                 | n/a                       | n/a    |

<sup>1</sup> Generally includes owner occupied residential units such as duplexes, tri-plexes, townhomes and condominiums.

<sup>2</sup> Generally includes non-owner occupied residential units such as apartments.

Source: Metro Denver Economic Development Corporation.



## 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 DIVISION<sup>1</sup>: 2007 - 2016

| Division/Section <sup>2</sup>              | 2016 <sup>3</sup> | 2015   | 2014   | 2013   | 2012   | 2011 <sup>4</sup> | 2010   | 2009 <sup>5</sup> | 2008   | 2007   |
|--|-------------------|--------|--------|--------|--------|-------------------|--------|-------------------|--------|--------|
| <b>Manager &amp; Staff Division</b>        | <b>25.0</b>       | 10.0   | 15.0   | 11.0   | 10.0   | 7.0               | 7.0    | 7.0               | 15.0   | 15.0   |
| <b>Human Resources Division</b>            | <b>31.0</b>       | 29.0   | 32.0   | 25.0   | 24.8   | 23.8              | 23.8   | 22.8              | 20.0   | 19.0   |
| <b>Information Technology Division</b>     | <b>104.0</b>      | 110.4  | 92.5   | 80.8   | 74.5   | 68.5              | 68.5   | 69.0              | 61.0   | 57.8   |
| <b>Public Affairs Division</b>             |                   |        |        |        |        |                   |        |                   |        |        |
| Chief Public Affairs Officer               | 3.0               | 3.0    | 3.0    | 3.0    | 2.0    | 6.0               | 4.0    | 4.0               | 8.0    | 7.0    |
| Conservation & Comm. Outreach              | 29.0              | -      | 11.0   | -      | -      | 8.6               | 9.6    | 9.6               | 6.0    | 5.4    |
| 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              | 15.0   | 12.0   |
| Customer Relations                         | -                 | 9.0    | 7.0    | 7.0    | 6.8    | -                 | -      | -                 | -      | -      |
| Central Services                           | -                 | -      | -      | -      | -      | -                 | 3.0    | 3.0               | 3.0    | 3.0    |
| Customer Care                              | 31.0              | -      | -      | -      | -      | -                 | 39.2   | 41.2              | 43.0   | 39.2   |
| CIS Business Support                       | -                 | -      | -      | -      | -      | -                 | 2.0    | 5.0               | -      | -      |
| Customer Services - Field                  | 52.0              | -      | -      | -      | -      | -                 | 78.0   | 75.0              | 66.0   | 60.0   |
| Meter Inspection Shop                      | -                 | -      | -      | -      | -      | -                 | 7.0    | 5.0               | 8.0    | 7.0    |
| Sales & Support                            | 16.0              | -      | -      | -      | -      | -                 | 20.8   | 16.8              | 12.0   | 15.6   |
|  | <b>145.0</b>      | 41.0   | 37.0   | 38.6   | 34.2   | 29.6              | 172.6  | 176.6             | 161.0  | 149.2  |
| <b>Customer Relations</b>                  |                   |        |        |        |        |                   |        |                   |        |        |
| 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             | -      | -                 | -      | -      |
| <b>Legal Division</b>                      | -                 | 13.0   | 14.0   | 14.4   | 14.6   | 13.6              | 13.6   | 14.6              | 12.0   | 13.8   |
| <b>Finance Division</b>                    |                   |        |        |        |        |                   |        |                   |        |        |
| Chief Financial Officer                    | 2.0               | 2.0    | 2.0    | 1.0    | 1.0    | 1.0               | 1.0    | 2.0               | 9.0    | 9.0    |
| Purchasing & Contracting                   | -                 | 12.0   | 11.0   | 11.0   | 11.0   | 9.0               | 5.0    | 9.0               | 8.0    | 8.0    |
| Records & Document Administration          | -                 | 8.8    | 7.8    | 8.8    | 9.0    | 9.0               | 9.0    | 9.0               | 6.0    | 6.0    |
| Treasury                                   | 8.0               | 8.0    | 9.0    | 9.0    | 9.0    | 8.0               | 7.0    | 8.0               | 7.0    | 7.0    |
| Controller                                 | 2.0               | 1.0    | 1.0    | 1.0    | -      | -                 | -      | -                 | -      | -      |
| Finance Computer Support                   | -                 | -      | -      | 1.0    | 2.0    | 2.0               | 2.0    | 2.0               | -      | -      |
| Budget                                     | 2.0               | 4.0    | 3.0    | 3.0    | 3.0    | 4.0               | 4.0    | 5.0               | 4.0    | 4.0    |
| Accounting, Payroll, AP                    | 17.0              | 20.0   | 20.0   | 20.0   | 20.0   | 20.0              | 19.0   | 19.0              | 19.0   | 18.0   |
| Rate Administration                        | -                 | 1.0    | 3.0    | 3.0    | 3.0    | 3.0               | 3.0    | 4.0               | 3.0    | 2.0    |
|  | <b>31.0</b>       | 56.8   | 56.8   | 57.8   | 58.0   | 56.0              | 50.0   | 58.0              | 56.0   | 54.0   |
| <b>Engineering Division</b>                |                   |        |        |        |        |                   |        |                   |        |        |
| Chief Engineering Officer                  | 13.0              | 7.8    | 7.8    | 7.8    | 7.8    | 7.8               | 6.0    | 6.0               | 3.0    | 6.0    |
| Asset Recording                            | 7.0               | 7.0    | 8.0    | 10.0   | 7.0    | 7.0               | 7.0    | 7.0               | 7.0    | 7.0    |
| Programs & Projects                        | 53.0              | 55.0   | 58.0   | 58.0   | 57.9   | 53.9              | 57.0   | 57.0              | 49.0   | 39.0   |
| Survey                                     | 26.0              | 23.0   | 25.0   | 25.0   | 25.0   | 26.0              | 26.0   | 26.0              | 26.0   | 25.0   |
| Construction Management                    | 28.0              | 27.0   | 28.0   | 24.0   | 25.0   | 24.0              | 24.0   | 23.0              | 21.0   | 23.0   |
| Distribution & Property Mgmt Admin         | 31.0              | 38.0   | 37.0   | 41.0   | 39.0   | 40.0              | 41.0   | 40.0              | 41.0   | 39.0   |
|  | <b>158.0</b>      | 157.8  | 163.8  | 165.8  | 161.7  | 158.7             | 161.0  | 159.0             | 147.0  | 139.0  |
| <b>Planning Division</b>                   |                   |        |        |        |        |                   |        |                   |        |        |
| Chief Planning Officer                     | 4.0               | 2.0    | 3.0    | 3.0    | 3.0    | 3.0               | 3.0    | 3.0               | 2.0    | 2.0    |
| Environmental Planning                     | 7.0               | 6.0    | 5.6    | 5.6    | 5.6    | 5.6               | 5.6    | 5.6               | 5.0    | 4.6    |
| Raw Water Supply                           | 5.0               | 6.0    | 6.0    | 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              | 11.0   | 10.8   |
| Water Resource Planning                    | 4.0               | 4.0    | 4.0    | 3.0    | 3.0    | 3.0               | 2.0    | 2.0               | 2.0    | -      |
| Demand Planning                            | 4.0               | 3.0    | 4.0    | 4.0    | 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               | 7.0    | 7.0    |
| Hydraulics                                 | -                 | 10.0   | 10.0   | 10.0   | 10.0   | 8.0               | 8.0    | 8.0               | 8.0    | 7.0    |
|  | <b>48.0</b>       | 48.0   | 48.6   | 49.6   | 49.6   | 45.6              | 46.6   | 46.6              | 45.0   | 41.4   |
| <b>Administrative Services Division</b>    |                   |        |        |        |        |                   |        |                   |        |        |
| Chief Administrative Officer               | 33.0              | -      | -      | -      | -      | -                 | -      | -                 | -      | -      |
| Safety and Security                        | 13.0              | -      | -      | -      | -      | -                 | -      | -                 | -      | -      |
| Recreation Management                      | 6.0               | -      | -      | -      | -      | -                 | -      | -                 | -      | -      |
|  | <b>52.0</b>       | -      | -      | -      | -      | -                 | -      | -                 | -      | -      |
| <b>Operations and Maintenance Division</b> |                   |        |        |        |        |                   |        |                   |        |        |
| Chief OM Officer                           | 6.0               | 7.0    | 5.0    | 6.0    | 3.0    | 4.0               | 4.0    | 4.0               | 3.0    | 3.0    |
| Source of Supply                           | 58.0              | 56.0   | 58.0   | 57.0   | 57.0   | 59.0              | 61.0   | 60.0              | 60.0   | 53.0   |
| Water Quality & Treatment                  | 118.0             | 35.0   | 44.0   | 44.0   | 42.0   | 37.0              | 33.0   | 33.0              | 32.0   | 32.0   |
| Water Treatment                            | -                 | 86.0   | 85.0   | 87.0   | 84.0   | 88.0              | 89.0   | 89.0              | 92.0   | 90.0   |
| Treated Water Operations                   | -                 | 53.0   | 55.0   | 62.0   | 58.0   | 59.0              | 59.0   | 57.5              | 57.0   | 54.0   |
| Water Distribution                         | 190.0             | 136.0  | 122.0  | 152.0  | 142.0  | 144.0             | 157.0  | 149.0             | 145.0  | 144.0  |
| Emergency Management                       | -                 | 4.0    | 2.0    | 2.0    | 2.0    | -                 | -      | -                 | -      | -      |
| Support Services                           | 92.0              | -      | -      | -      | -      | -                 | -      | -                 | -      | -      |
| Safety and Loss Control                    | -                 | 11.0   | 10.0   | 15.0   | 15.0   | 16.0              | 14.0   | 16.0              | 15.0   | 14.0   |
| Instrumentation & Ctrl Systems             | -                 | -      | 18.0   | 11.0   | 14.0   | 12.0              | 11.0   | 12.0              | 11.0   | 11.0   |
| Maintenance and Warehouse                  | -                 | 106.0  | 106.0  | 102.0  | 113.0  | 115.0             | 118.0  | 121.0             | 123.0  | 120.0  |
|  | <b>464.0</b>      | 494.0  | 505.0  | 518.0  | 530.0  | 534.0             | 546.0  | 541.5             | 538.0  | 521.0  |
| <b>Total All Divisions</b>                 | <b>1058.0</b>     | 1057.3 | 1064.6 | 1064.9 | 1080.2 | 1069.8            | 1089.1 | 1095.1            | 1055.0 | 1010.2 |

<sup>1</sup>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.

<sup>2</sup>Section names may have changed due to business needs.

<sup>3</sup>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.

<sup>4</sup>In 2011, the Customer Relations Division was split out from Public Affairs.

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

## ADDITIONS TO CAPITAL ASSETS - 2016

(amounts expressed in thousands)

### NEW FACILITIES

|  |           |                |
|--|-----------|----------------|
| Operations Complex Redevelopment Project   | \$        | 47,158         |
| Distribution Mains & Hydrants              |           | 17,565         |
| Hillcrest Pump Station                     |           | 16,341         |
| North System Renewal Water Treatment Plant |           | 7,647          |
| Ashland Pump Station                       |           | 7,132          |
| Strontia Springs                           |           | 4,349          |
| Downstream Reservoirs                      |           | 3,958          |
| Gross Reservoir                            |           | 1,889          |
| Recycled Water Conduits                    |           | 1,672          |
| Harvard Gulch                              |           | 1,180          |
| Foothills Treatment Plant                  |           | 1,133          |
| Treated Water Conduits                     |           | 1,124          |
| Other New Facilities                       |           | 1,684          |
|  | <b>\$</b> | <b>112,832</b> |

### FACILITY REPLACEMENT AND IMPROVEMENTS

|   |           |               |
|---|-----------|---------------|
| Distribution Mains & Hydrants               | \$        | 14,338        |
| Motor Vehicles and Heavy Equipment          |           | 7,442         |
| Antero Reservoir                            |           | 6,651         |
| Treated Water Conduits                      |           | 2,521         |
| Moffat Tunnel                               |           | 2,218         |
| Highline Canal                              |           | 1,890         |
| Cherry Hills Pump Station                   |           | 1,013         |
| Marston Dam                                 |           | 802           |
| Foothills Treatment Plant                   |           | 755           |
| Hillcrest Pump Station                      |           | 516           |
| Marston Treatment Plant                     |           | 487           |
| Ralston Reservoir                           |           | 376           |
| Kendrick Pump Station                       |           | 272           |
| Other Facility Replacement and Improvements |           | 415           |
|   | <b>\$</b> | <b>39,696</b> |

### TOTAL 2016 CAPITAL ADDITIONS

|  |           |                |
|--|-----------|----------------|
|  | <b>\$</b> | <b>152,528</b> |
|--|-----------|----------------|

**CAPITAL ASSETS BY FUNCTION: 2007 - 2016**  
(amounts expressed in thousands)

|   | 2016                       | 2015                       | 2014                       | 2013                       | 2012                       | 2011                       | 2010                       | 2009                       | 2008                       | 2007                       |
|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>CAPITAL ASSETS NOT BEING DEPRECIATED</b> |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| Land and land rights                        | \$ 99,108                  | \$ 99,098                  | \$ 115,291                 | \$ 115,304                 | \$ 115,107                 | \$ 114,149                 | \$ 113,473                 | \$ 112,348                 | \$ 97,262                  | \$ 93,077                  |
| Water rights and other                      | 105,785                    | 105,785                    | 75,550                     | 75,550                     | 74,161                     | 74,100                     | 70,033                     | 66,975                     | 65,582                     | 63,198                     |
| Construction work in progress (CWIP)        | 259,690                    | 163,266                    | 171,215                    | 124,244                    | 117,862                    | 129,770                    | 110,483                    | 77,340                     | 109,316                    | 155,813                    |
| Total capital assets not being depreciated  | <u>464,583</u>             | <u>368,149</u>             | <u>362,056</u>             | <u>315,098</u>             | <u>307,130</u>             | <u>318,019</u>             | <u>293,989</u>             | <u>256,663</u>             | <u>272,160</u>             | <u>312,088</u>             |
| <b>CAPITAL ASSETS BEING DEPRECIATED</b>     |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| Buildings and improvements                  | 199,329                    | 201,538                    | 281,772                    | 279,280                    | 254,796                    | 236,538                    | 224,496                    | 217,774                    | 212,288                    | 209,195                    |
| Improvements other than buildings           | 2,044,423                  | 2,002,297                  | 1,955,572                  | 1,890,470                  | 1,860,363                  | 1,761,486                  | 1,698,311                  | 1,648,231                  | 1,575,950                  | 1,499,287                  |
| Machinery and equipment                     | 392,953                    | 393,007                    | 246,368                    | 246,433                    | 221,915                    | 222,362                    | 231,107                    | 226,396                    | 210,761                    | 161,442                    |
| Total capital assets being depreciated      | <u>2,636,715</u>           | <u>2,596,842</u>           | <u>2,483,712</u>           | <u>2,416,183</u>           | <u>2,337,074</u>           | <u>2,220,386</u>           | <u>2,153,914</u>           | <u>2,092,401</u>           | <u>1,998,999</u>           | <u>1,869,924</u>           |
| Less accumulated depreciation               |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| Buildings and improvements                  | (48,453)                   | (47,372)                   | (76,257)                   | (72,278)                   | (68,216)                   | (63,781)                   | (59,093)                   | (55,819)                   | (52,176)                   | (49,577)                   |
| Improvements other than buildings           | (596,587)                  | (570,105)                  | (578,572)                  | (549,357)                  | (520,020)                  | (501,992)                  | (475,222)                  | (454,312)                  | (430,600)                  | (408,342)                  |
| Machinery and equipment                     | (211,396)                  | (200,614)                  | (121,358)                  | (112,055)                  | (101,296)                  | (92,405)                   | (86,676)                   | (78,929)                   | (83,382)                   | (76,491)                   |
| Total accumulated depreciation              | <u>(856,436)</u>           | <u>(818,091)</u>           | <u>(776,187)</u>           | <u>(733,690)</u>           | <u>(689,532)</u>           | <u>(658,178)</u>           | <u>(620,991)</u>           | <u>(589,060)</u>           | <u>(566,158)</u>           | <u>(534,410)</u>           |
| Total capital assets being depreciated, net | <u>1,780,279</u>           | <u>1,778,751</u>           | <u>1,707,525</u>           | <u>1,682,493</u>           | <u>1,647,542</u>           | <u>1,562,208</u>           | <u>1,532,923</u>           | <u>1,503,341</u>           | <u>1,432,841</u>           | <u>1,335,514</u>           |
| <b>TOTAL CAPITAL ASSETS, NET</b>            | <u><b>\$ 2,244,862</b></u> | <u><b>\$ 2,146,900</b></u> | <u><b>\$ 2,069,581</b></u> | <u><b>\$ 1,997,591</b></u> | <u><b>\$ 1,954,672</b></u> | <u><b>\$ 1,880,227</b></u> | <u><b>\$ 1,826,912</b></u> | <u><b>\$ 1,760,004</b></u> | <u><b>\$ 1,705,001</b></u> | <u><b>\$ 1,647,602</b></u> |

**RECEIPTS AND EXPENDITURES  
BUDGET TO ACTUAL COMPARISON 2012 - 2016 AND 2017 BUDGET (BUDGET BASIS)**  
(amounts expressed in thousands)

|   | 2017 <sup>2</sup> |            | 2016 <sup>4</sup> |            | 2015       |            | 2014       |            | 2013                |                     | 2012       |                     |
|---|-------------------|------------|-------------------|------------|------------|------------|------------|------------|---------------------|---------------------|------------|---------------------|
|   | Budget            | Actual     | Budget            | Actual     | Budget     | Actual     | Budget     | Actual     | Budget <sup>1</sup> | Actual <sup>3</sup> | Budget     | Actual <sup>3</sup> |
| <b>BEGINNING CASH &amp; INVESTMENTS</b>                           | \$ 287,394        | \$ 240,889 | \$ 240,889        | \$ 234,924 | \$ 234,924 | \$ 234,924 | \$ 219,744 | \$ 219,744 | \$ 222,299          | \$ 222,299          | \$ 187,296 | \$ 187,296          |
| <b>RECEIPTS FROM:</b>   |                   |            |                   |            |            |            |            |            |                     |                     |            |                     |
| Sale of water   | 269,481           | 274,299    | 273,112           | 269,256    | 242,225    | 238,777    | 250,376    | 233,058    | 233,058             | 230,857             | 261,978    | 271,647             |
| Nonoperating, interest & other                                    | 18,120            | 19,200     | 19,482            | 19,951     | 21,184     | 24,026     | 19,336     | 20,502     | 20,502              | 24,946              | 18,783     | 23,606              |
| System development charges  | 34,035            | 38,752     | 20,294            | 17,294     | 36,109     | 32,736     | 15,294     | 8,640      | 8,640               | 34,616              | 10,714     | 19,619              |
| Developer participation (new facilities), reimbursements & grants | -                 | 3,239      | 8,129             | 4,415      | -          | -          | -          | -          | 2,911               | -                   | -          | -                   |
|   | 321,636           | 335,490    | 321,017           | 310,916    | 310,313    | 301,923    | 287,169    | 265,111    | 265,111             | 297,845             | 296,842    | 318,324             |
| Sale of bonds or issuance of notes                                | 207,185           | 71,238     | 56,923            | 42,000     | 30,000     | 40,102     | 36,000     | 25,600     | 25,600              | 10,000              | 38,000     | 40,358              |
| Total receipts  | 528,821           | 406,728    | 377,940           | 352,916    | 340,313    | 342,025    | 323,169    | 290,711    | 290,711             | 307,845             | 334,842    | 358,682             |
| <b>LESS EXPENDITURES FOR:</b>                                     |                   |            |                   |            |            |            |            |            |                     |                     |            |                     |
| Operations, maintenance & refunds                                 | 201,270           | 191,060    | 196,865           | 191,036    | 185,820    | 185,820    | 197,662    | 183,092    | 183,092             | 185,857             | 201,862    | 174,878             |
| Debt service  | 45,456            | 41,121     | 43,835            | 48,822     | 56,742     | 46,742     | 48,364     | 46,752     | 46,752              | 46,218              | 39,853     | 45,089              |
|   | 246,726           | 232,181    | 240,700           | 239,858    | 242,562    | 232,562    | 246,026    | 229,844    | 229,844             | 232,075             | 241,715    | 219,967             |
| Capital improvements (new facilities)                             | 125,237           | 94,231     | 85,758            | 29,808     | 33,011     | 44,343     | 45,931     | 26,958     | 26,958              | 24,471              | 47,343     | 47,465              |
| System replacements   | 53,081            | 44,941     | 51,171            | 50,125     | 44,668     | 52,153     | 59,734     | 42,823     | 42,823              | 35,271              | 37,271     | 32,486              |
| Equipment   | 6,507             | 7,548      | 7,000             | 12,700     | 10,603     | 3,030      | 5,813      | 6,486      | 6,486               | 4,214               | 7,186      | 6,975               |
|   | 184,825           | 146,720    | 143,929           | 92,633     | 88,282     | 99,526     | 111,478    | 76,267     | 76,267              | 63,956              | 91,800     | 86,926              |
| Indirects to capital  | -                 | -          | -                 | 11,527     | 9,058      | 9,585      | 13,994     | 12,735     | 12,735              | 9,954               | 14,265     | 15,176              |
| Total expenditures  | 431,551           | 378,901    | 384,629           | 344,018    | 339,902    | 341,673    | 371,498    | 318,846    | 318,846             | 305,985             | 347,780    | 322,069             |
| Cash Balance Adjustment <sup>5</sup>                              |                   | 18,678     |                   | 5,554      |            | 14,828     |            | 14,828     |                     | (4,415)             |            | (1,610)             |
| <b>ENDING CASH &amp; INVESTMENTS</b>                              | \$ 384,664        | \$ 287,394 | \$ 234,200        | \$ 243,822 | \$ 240,889 | \$ 234,924 | \$ 171,415 | \$ 171,415 | \$ 194,164          | \$ 219,744          | \$ 174,358 | \$ 222,299          |

**GENERAL EXPLANATION OF VARIANCES:**

- <sup>1</sup>The 2013 budget represents the revised budget approved by the Board on April 10, 2013 in response to the drought.
  - <sup>2</sup>The cash balance adjustment is due to a timing difference between cash payments that were made in January but were accrued for in December.
  - <sup>3</sup>In 2014 prior year information was adjusted for 2012 and 2013 due to timing differences after the original reporting period.
  - <sup>4</sup>In 2016, financial system underwent a significant conversion eliminating the allocation of indirect costs to capital. Totals include Applied Labor.
  - <sup>5</sup>2017 totals include Applied Labor.
- Variations in operating receipts are generally due to abnormal climatic conditions.  
 Variations in system development charges are generally related to levels of activity in the home building industry.  
 Variations in capital improvements are generally due to changes in project scheduling.  
 Cash and investments do not agree with amounts on the statements of net assets due to differences in valuation methods.  
 Prior year information has been updated to adjust for timing differences during the original reporting period.

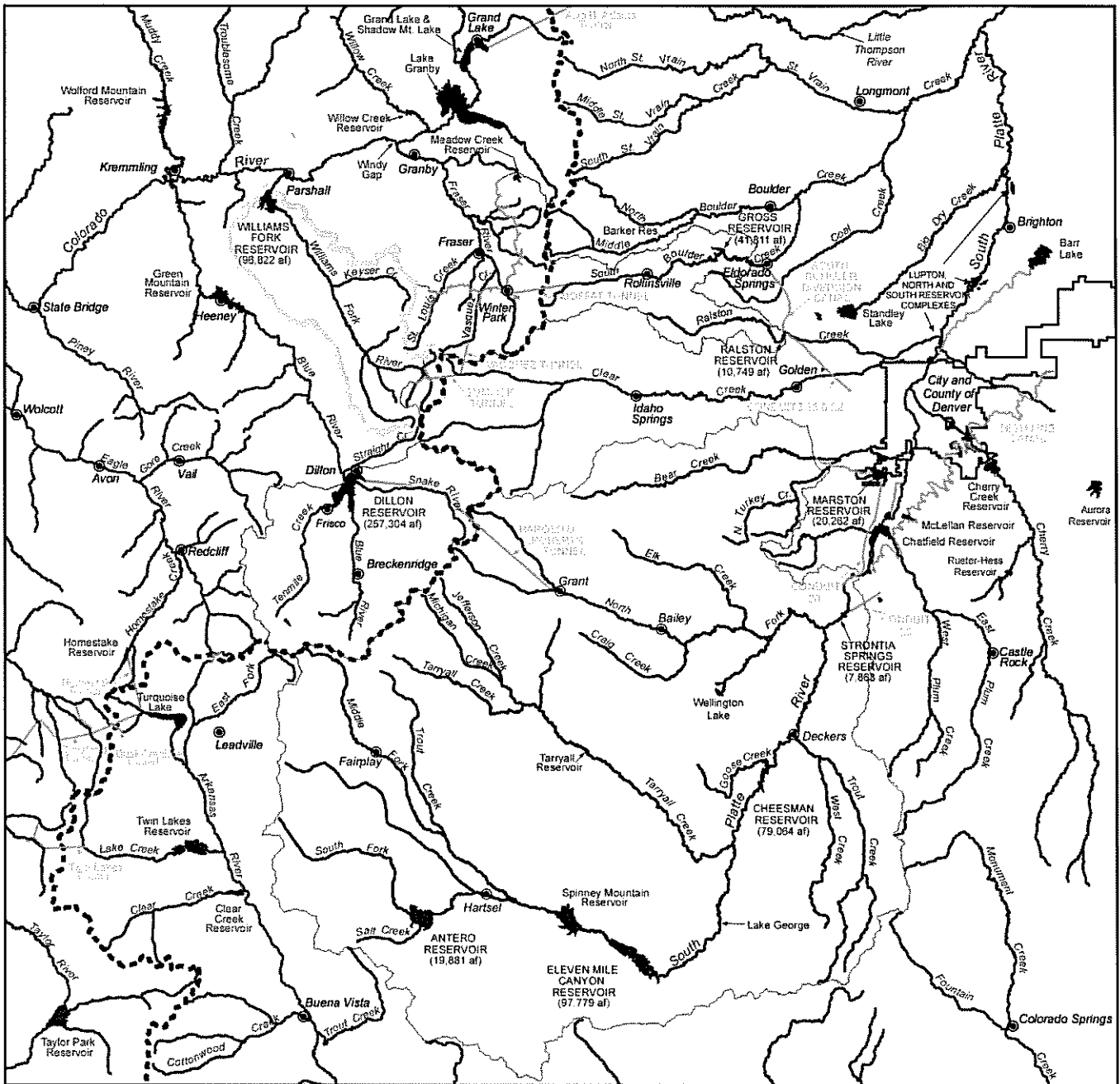
# Supply

## 2016 Facts

|   |             |           |
|---|-------------|-----------|
| Raw water collected .....                               | 274,670     | Acre Feet |
| Percent of average yield-last 10 years .....            | 90%         |           |
| Percent from South Platte System .....                  | 58%         |           |
| Percent from Moffat System .....                        | 28%         |           |
| Percent from Roberts Tunnel System .....                | 15%         |           |
| Reservoir storage, January 1 .....                      | 582,015     | Acre Feet |
| Percent of capacity .....                               | 86.1%       |           |
| Reservoir storage, December 31 .....                    | 568,124     | Acre Feet |
| Percent of capacity .....                               | 84.0%       |           |
| Power generation (excluding power purchased).....       | 67,436,291  | KWH       |
| Value of power generation (excluding power purchased).. | \$4,337,858 |           |

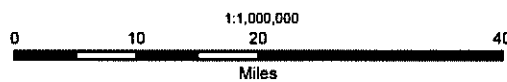
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City and County of Denver  
Board of Water Commissioners  
**Water Collection System**



**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           |  |                         |



Map Date: 12/29/2016  
 Author: Planning WRGIS  
 Sources: USGS-NHD, DOLA,  
 Denver Water,  
 NRCS, CDWR.

SOURCE OF SUPPLY - 2016  
Reservoirs and Collection Systems

|   | Capacity in<br><u>Acre-Feet</u> | Capacity in<br><u>Million Gals.</u> |
|---|---------------------------------|-------------------------------------|
| <b>RAW WATER STORAGE</b>                      |                                 |                                     |
| Storage Reservoirs:                           |                                 |                                     |
| Antero  | 19,881                          | 6,478.2                             |
| Chatfield                                     | 27,076                          | 8,822.7                             |
| Cheesman                                      | 79,064                          | 25,763.1                            |
| Dillon  | 257,304                         | 83,842.8                            |
| Eleven Mile Canyon                            | 97,779                          | 31,861.4                            |
| Gross   | 41,811                          | 13,624.2                            |
| Meadow Creek Reservoir (Denver Water portion) | 4,520                           | 1,472.8                             |
| Soda Lakes (Denver Water portion)             | 615                             | 200.4                               |
| Total Storage Reservoirs                      | <u>528,050</u>                  | <u>172,065.6</u>                    |
| Operating Reservoirs:                         |                                 |                                     |
| Long Lakes                                    | 1,787                           | 582.3                               |
| Marston Lake                                  | 19,256                          | 6,274.6                             |
| Platte Canyon                                 | 910                             | 296.5                               |
| Ralston                                       | 10,776                          | 3,511.4                             |
| Strontia Springs                              | 7,863                           | 2,562.2                             |
| Total Operating Reservoirs                    | <u>40,592</u>                   | <u>13,227.0</u>                     |
| <b>TOTAL RAW WATER STORAGE</b>                | <u><u>568,642</u></u>           | <u><u>185,292.6</u></u>             |
| <br><b>REPLACEMENT RESERVOIRS</b>             |                                 |                                     |
| Williams Fork                                 | 96,822                          | 31,549.5                            |
| Wolford Mountain (Denver Water portion)       | 25,610                          | 8,345.0                             |
| <b>TOTAL REPLACEMENT RESERVOIRS</b>           | <u><u>122,432</u></u>           | <u><u>39,894.5</u></u>              |
| <br><b>MOUNTAIN COLLECTION SYSTEM</b>         |                                 |                                     |
|   | <u>Length in Feet</u>           | <u>Length in Miles</u>              |
| Moffat Collection System:                     |                                 |                                     |
| Concrete and Steel Pipe                       | 101,589                         | 19.2                                |
| Moffat Water Tunnel                           | 32,383                          | 6.1                                 |
| Open Canals                                   | 15,443                          | 2.9                                 |
| Covered Canals                                | 18,041                          | 3.4                                 |
| Other Tunnels                                 | 10,953                          | 2.1                                 |
| Total Moffat Collection System                | <u>178,409</u>                  | <u>33.7</u>                         |
| Williams Fork Collection System:              |                                 |                                     |
| Steel Pipe                                    | 18,939                          | 3.6                                 |
| Vasquez Tunnel                                | 17,874                          | 3.4                                 |
| A. P. Gumlick Tunnel                          | 15,572                          | 2.9                                 |
| Open Canals                                   | 1,795                           | 0.3                                 |
| Total Williams Fork Collection System         | <u>54,180</u>                   | <u>10.2</u>                         |
| Roberts Tunnel                                | <u>122,953</u>                  | <u>23.3</u>                         |
| South Boulder Diversion Conduit:              |                                 |                                     |
| Open Canals                                   | 30,250                          | 5.7                                 |
| Concrete and Steel Pipe                       | 13,948                          | 2.6                                 |
| Tunnels                                       | 7,704                           | 1.5                                 |
| Covered Canals                                | 1,748                           | 0.3                                 |
| Total South Boulder Diversion Conduit         | <u>53,650</u>                   | <u>10.1</u>                         |
| <b>TOTAL MOUNTAIN COLLECTION SYSTEM</b>       | <u><u>409,192</u></u>           | <u><u>77.3</u></u>                  |

SOURCE OF SUPPLY - 2016  
Supply Mains and Wells

(Page 1 of 2)

RAW WATER SUPPLY MAINS

| Conduit 5:              | Size  | Kind of Pipe                      | Length in Feet | Length in Miles | Kind of Pipe                      | Length in Feet | Length in Miles |
|-------------------------|-------|-----------------------------------|----------------|-----------------|-----------------------------------|----------------|-----------------|
|                         | < 20" | No Material breakout <sup>a</sup> | 1,517          | 0.3             | No Material breakout <sup>a</sup> | 562            | 0.1             |
|                         | 24"   | Cast Iron                         | 10             | 0.0             | Steel                             | 22             | 0.0             |
|                         | 24"   | Ductile Iron                      | 58             | 0.0             | Steel                             | 19             | 0.0             |
|                         | 24"   | High Density Polyethylene         | 2,239          | 0.4             | Reinforced Concrete               | 3,071          | 0.6             |
|                         | 24"   | Steel                             | 144            | 0.0             | Reinforced Concrete Cyl           | 40,980         | 7.8             |
|                         | 30"   | Cast Iron                         | 157            | 0.0             | Steel                             | 1,433          | 0.3             |
|                         | 30"   | Concrete                          | 242            | 0.0             | Steel                             | 25             | 0.0             |
|                         | 30"   | Reinforced Concrete Cyl           | 24,485         | 4.6             | Steel                             | 229            | 0.0             |
|                         | 30"   | Steel                             | 87             | 0.0             | Steel                             | 46,341         | 8.8             |
|                         | 36"   | Cast Iron                         | 965            | 0.2             |                                   |                |                 |
|                         | 36"   | Reinforced Concrete Cyl           | 637            | 0.1             |                                   |                |                 |
|                         | 42"   | Steel                             | 204            | 0.0             |                                   |                |                 |
| <b>Total Conduit 5</b>  |       |                                   | <b>30,745</b>  | <b>5.6</b>      |                                   |                |                 |
| <b>Conduit 8:</b>       | < 20" | No Material breakout <sup>a</sup> | 26             | 0.0             | No Material breakout <sup>a</sup> | 285            | 0.1             |
|                         | 36"   | Cast Iron                         | 913            | 0.2             | Concrete                          | 8              | 0.0             |
|                         | 36"   | Concrete                          | 106            | 0.0             | Concrete                          | 6              | 0.0             |
|                         | 36"   | Reinforced Concrete Cyl           | 2,550          | 0.5             | Reinforced Concrete Cyl           | 75             | 0.0             |
|                         | 36"   | Steel                             | 1,109          | 0.2             | Reinforced Concrete Cyl           | 122            | 0.0             |
|                         | 44"   | Cast Iron                         | 15             | 0.0             | Steel                             | 509            | 0.1             |
|                         | 60"   | Steel                             | 541            | 0.1             | Steel                             | 543            | 0.1             |
|                         | 84"   | Steel                             | 15             | 0.0             | Steel                             | 60             | 0.0             |
|                         | 90"   | Steel                             | 10             | 0.0             | Reinforced Concrete Non-Cyl       | 59,904         | 11.3            |
|                         |       |                                   | 5,285          | 1.0             | Steel                             | 3,007          | 0.6             |
| <b>Total Conduit 8</b>  |       |                                   |                |                 |                                   | <b>64,519</b>  | <b>12.2</b>     |
| <b>Conduit 14:</b>      | 24"   | Steel                             | 8              | 0.0             | No Material breakout <sup>a</sup> | 418            | 0.1             |
|                         | 30"   | Reinforced Concrete Cyl           | 69             | 0.0             | Ductile Iron                      | 133            | 0.0             |
|                         | 36"   | Corrugated Metal Pipe             | 104            | 0.0             | Steel                             | 37             | 0.0             |
|                         | 36"   | Concrete                          | 1,381          | 0.3             | Ductile Iron                      | 68             | 0.0             |
|                         | 36"   | Steel                             | 117            | 0.0             | Reinforced Concrete Cyl           | 14             | 0.0             |
|                         | 48"   | Reinforced Concrete Cyl           | 3,322          | 0.6             | Steel                             | 74             | 0.0             |
|                         |       |                                   | 5,001          | 0.9             | Reinforced Concrete Cyl           | 43,519         | 8.2             |
| <b>Total Conduit 14</b> |       |                                   |                |                 | Steel                             | 1,318          | 0.2             |
|                         |       |                                   |                |                 | Steel                             | 51             | 0.0             |
| <b>Conduit 15:</b>      | < 20" | No Material breakout <sup>a</sup> | 410            | 0.1             |                                   |                |                 |
|                         | 24"   | Cast Iron                         | 90             | 0.0             |                                   |                |                 |
|                         | 30"   | Reinforced Concrete Cyl           | 410            | 0.1             |                                   |                |                 |
|                         | 60"   | Reinforced Concrete Cyl           | 8,036          | 1.5             |                                   |                |                 |
|                         | 60"   | Steel                             | 11,235         | 2.1             |                                   |                |                 |
|                         | 72"   | Reinforced Concrete Cyl           | 5,532          | 1.0             |                                   |                |                 |
|                         | 72"   | Steel                             | 6,741          | 1.3             |                                   |                |                 |
|                         | 84"   | Reinforced Concrete Cyl           | 437            | 0.1             |                                   |                |                 |
| <b>Total Conduit 15</b> |       |                                   | <b>32,891</b>  | <b>6.2</b>      |                                   |                |                 |
| <b>Conduit 16:</b>      |       |                                   |                |                 |                                   |                |                 |
| <b>Total Conduit 16</b> |       |                                   |                |                 |                                   |                |                 |
| <b>Conduit 20:</b>      | < 20" | No Material breakout <sup>a</sup> |                |                 | No Material breakout <sup>a</sup> | 285            | 0.1             |
|                         | 30"   | Concrete                          |                |                 | Concrete                          | 8              | 0.0             |
|                         | 36"   | Concrete                          |                |                 | Concrete                          | 6              | 0.0             |
|                         | 40"   | Reinforced Concrete Cyl           |                |                 | Reinforced Concrete Cyl           | 75             | 0.0             |
|                         | 60"   | Reinforced Concrete Cyl           |                |                 | Reinforced Concrete Cyl           | 122            | 0.0             |
|                         | 60"   | Steel                             |                |                 | Steel                             | 509            | 0.1             |
|                         | 84"   | Steel                             |                |                 | Steel                             | 543            | 0.1             |
|                         | 90"   | Steel                             |                |                 | Steel                             | 60             | 0.0             |
|                         | 90"   | Reinforced Concrete Non-Cyl       |                |                 | Reinforced Concrete Non-Cyl       | 59,904         | 11.3            |
|                         | 96"   | Steel                             |                |                 | Steel                             | 3,007          | 0.6             |
| <b>Total Conduit 20</b> |       |                                   |                |                 |                                   | <b>64,519</b>  | <b>12.2</b>     |
| <b>Conduit 22:</b>      | < 20" | No Material breakout <sup>a</sup> |                |                 | No Material breakout <sup>a</sup> | 418            | 0.1             |
|                         | 24"   | Ductile Iron                      |                |                 | Ductile Iron                      | 133            | 0.0             |
|                         | 24"   | Steel                             |                |                 | Steel                             | 37             | 0.0             |
|                         | 36"   | Ductile Iron                      |                |                 | Ductile Iron                      | 68             | 0.0             |
|                         | 42"   | Reinforced Concrete Cyl           |                |                 | Reinforced Concrete Cyl           | 14             | 0.0             |
|                         | 48"   | Steel                             |                |                 | Steel                             | 74             | 0.0             |
|                         | 54"   | Reinforced Concrete Cyl           |                |                 | Reinforced Concrete Cyl           | 43,519         | 8.2             |
|                         | 54"   | Steel                             |                |                 | Steel                             | 1,318          | 0.2             |
|                         | 60"   | Steel                             |                |                 | Steel                             | 51             | 0.0             |
| <b>Total Conduit 22</b> |       |                                   |                |                 |                                   | <b>45,632</b>  | <b>8.5</b>      |

<sup>1</sup>These are raw water supply mains typically on Denver Water property that are not assigned a conduit number.  
<sup>2</sup>Alternative uses for supplies from the Farnell Lane Well Field are presently under study.  
<sup>3</sup>Updates to pipe database in 2014 added 20" and smaller pipe diameter footage totals.

(Continued on the next page)

SOURCE OF SUPPLY - 2016  
Supply Mains and Wells (Continued)

RAW WATER SUPPLY MAINS

| Conduit           | Size  | Kind of Pipe                      | Length<br>in Feet | Length<br>in Miles | Other (no number) <sup>1</sup> : | Size  | Kind of Pipe                      | Length<br>in Feet | Length<br>in Miles |
|-------------------|-------|-----------------------------------|-------------------|--------------------|----------------------------------|-------|-----------------------------------|-------------------|--------------------|
| Conduit 26:       | < 20" | No Material breakout <sup>2</sup> | 50                | 0.0                |                                  | < 20" | No Material breakout <sup>2</sup> | 6,521             | 1.2                |
|                   | 24"   | Ductile Iron                      | 13                | 0.0                |                                  | 24"   | Cast Iron                         | 110               | 0.0                |
|                   | 24"   | Reinforced Concrete Cyl           | 365               | 0.1                |                                  | 24"   | Ductile Iron                      | 24                | 0.0                |
|                   | 24"   | Steel                             | 72                | 0.0                |                                  | 24"   | Steel                             | 68                | 0.0                |
|                   | 36"   | Steel                             | 54                | 0.0                |                                  | 24"   | PVC                               | 101               | 0.0                |
|                   | 60"   | Steel                             | 76                | 0.0                |                                  | 30"   | Cast Iron                         | 12                | 0.0                |
|                   | 72"   | Steel                             | 64                | 0.0                |                                  | 30"   | Steel                             | 797               | 0.2                |
|                   | 78"   | Steel                             | 213               | 0.0                |                                  | 36"   | Cast Iron                         | 1,129             | 0.2                |
|                   | 96"   | Steel                             | 225               | 0.0                |                                  | 36"   | Concrete                          | 1,516             | 0.3                |
|                   | 120"  | Steel                             | 14                | 0.0                |                                  | 36"   | Steel                             | 624               | 0.1                |
|                   | 126"  | Concrete                          | 13,976            | 2.6                |                                  | 42"   | Steel                             | 4,423             | 0.8                |
|                   | 126"  | Steel                             | 5,766             | 1.1                |                                  | 48"   | Cast Iron                         | 157               | 0.0                |
| Total Conduit 26  |       |                                   | 20,888            | 3.8                |                                  | 48"   | Concrete                          | 15                | 0.0                |
|                   |       |                                   |                   |                    |                                  | 48"   | Steel                             | 146               | 0.0                |
| Conduit 155:      | < 20" | No Material breakout <sup>2</sup> | 89                | 0.0                |                                  | 54"   | Steel                             | 2,890             | 0.5                |
|                   | 24"   | Ductile Iron                      | 27                | 0.0                |                                  | 60"   | Steel                             | 1,718             | 0.3                |
|                   | 30"   | Ductile Iron                      | 2,492             | 0.5                |                                  | 66"   | Reinforced Concrete Non-Cyl       | 1,629             | 0.3                |
| Total Conduit 155 |       |                                   | 2,608             | 0.5                |                                  | 72"   | Steel                             | 978               | 0.2                |
| Conduit 157:      | 30"   | Steel                             | 25                | 0.0                |                                  | 90"   | Steel                             | 31                | 0.0                |
|                   | 42"   | Reinforced Concrete Cyl           | 3,044             | 0.6                |                                  | 96"   | Steel                             | -                 | 0.0                |
|                   | 42"   | Steel                             | 468               | 0.1                |                                  | 108"  | Concrete                          | 123               | 0.0                |
|                   | 48"   | Reinforced Concrete Cyl           | 130               | 0.0                |                                  | 108"  | Steel                             | 8,263             | 1.6                |
| Total Conduit 157 |       |                                   | 3,667             | 0.7                |                                  | 120"  | Steel                             | 104               | 0.0                |
| Conduit 160:      | 36"   | Steel                             | 321               | 0.1                |                                  | 132"  | Steel                             | 322               | 0.1                |
|                   |       |                                   |                   |                    |                                  | 144"  | Steel                             | 830               | 0.2                |
|                   |       |                                   |                   |                    |                                  |       |                                   | 32,531            | 6.0                |
|                   |       |                                   |                   |                    |                                  |       |                                   | 290,429           | 54.3               |

INFILTRATION GALLERIES & WELLS

| Well                                 | Capacity<br>in MGD | Well No.           |
|--------------------------------------|--------------------|--------------------|
| Cherry Creek Wells - Well O          | 1.6                | Glendale Well No.2 |
| Cherry Creek Galleries/Conduit No. 5 | 9.06               | Glendale Well No.3 |
| Farnell Lane Well Field              | - <sup>2</sup>     | Glendale Well No.4 |
| Glendale Well No.1                   | 1.15               | Glendale Well No.5 |

<sup>1</sup>These are raw water supply mains typically on Denver Water property that are not assigned a conduit number.  
<sup>2</sup>Alternative uses for supplies from the Farnell Lane Well Field are presently under study.  
<sup>3</sup>Updates to pipe database in 2014 added 20" and smaller pipe diameter footage totals.

## POWER GENERATION, PURCHASE, DISTRIBUTION, AND BANKING

| POWER GENERATION AND PURCHASE                                     | Kilowatt Hours | Value <sup>2</sup> |
|---|----------------|--------------------|
| Net Power Generation: <sup>1</sup>                                |                |                    |
| Dillon  | 13,754,054     | \$ 572,366         |
| Foothills   | 10,283,360     | 610,904            |
| Gross   | 18,031,950     | 1,141,863          |
| Hillcrest   | 8,207,602      | 446,190            |
| Roberts Tunnel  | 709,234        | 699,434            |
| Strontia Springs  | 3,368,187      | 186,842            |
| Williams Fork   | 13,081,904     | 680,259            |
| Total Power Generation  | 67,436,291     | 4,337,858          |
| Power Purchased for Department of Energy (DOE) power interference | 6,799,714      | 299,321            |
| <br>  |                |                    |
| TOTAL POWER GENERATION AND PURCHASE                               | 74,236,005     | 4,637,179          |
| <br>  |                |                    |
| POWER DISTRIBUTION  |                |                    |
| Internal Power Consumption: <sup>1</sup>                          |                |                    |
| Foothills   | 4,137,924      | 245,822            |
| Hillcrest   | 689,904        | 37,508             |
| Total Internal Power Consumption                                  | 4,827,828      | 283,330            |
| <br>  |                |                    |
| Power Deliveries:   |                |                    |
| To Xcel Energy:   |                |                    |
| Dillon  | 13,754,054     | 572,366            |
| Foothills   | 6,145,436      | 365,082            |
| Gross   | 18,031,950     | 1,141,863          |
| Hillcrest   | 7,517,698      | 408,682            |
| Roberts Tunnel  | 709,234        | 699,434            |
| Strontia Springs  | 3,368,187      | 186,842            |
|   | 49,526,559     | 3,374,269          |
| To Tri-State Generation and Transmission Association:             |                |                    |
| Williams Fork   | 13,081,904     | 680,259            |
| Total Power Deliveries to Xcel and Tri-State                      | 62,608,463     | 4,054,528          |
| <br>  |                |                    |
| Total Power Generation  | 67,436,291     | 4,337,858          |
| <br>  |                |                    |
| To DOE for Power Interference:                                    |                |                    |
| Purchased Power   | 6,799,714      | 299,321            |
| Total Power Deliveries to DOE                                     | 6,799,714      | 299,321            |
| <br>  |                |                    |
| TOTAL POWER DISTRIBUTION  | 74,236,005     | 4,637,179          |
| <br>  |                |                    |
| DOE BANKED POWER INTERFERENCE ACCOUNT <sup>3</sup>                |                |                    |
| Balance, Beginning of Year  | 39,978,081     | 1,484,361          |
| Adjustment to Prior Year  | 860            | (284,993)          |
| Adjusted Balance, Beginning of Year                               | 39,978,941     | 1,199,368          |
| Net Interference  | (9,035,989)    | (271,080)          |
| Total Allocation  | 6,799,714      | 299,321            |
| Balance, End of Year  | 37,742,666     | \$ 2,426,977       |

<sup>1</sup>Net Power Generation is total generation less station service (except Foothills and Hillcrest) and transmission wheeling losses. Value of Williams Fork power and that consumed by Foothills and Hillcrest based on PSC tariff schedule TT, June 4, 1988.

<sup>2</sup>Values on this schedule represent the value of power produced and distributed and do not relate to power sales on other schedules.

<sup>3</sup>Value based on 30 mills/kwh (approximate average of PSC and DOE rates).

POWER VALUE, COST, AND RETURN ON INVESTMENT

|  | Power Plant         |                     |                      |                     |                     |                     | Total                |
|--|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|----------------------|
|  | Dillon              | Foothills           | Gross                | Hillcrest           | Roberts Tunnel      | Strontia Springs    |                      |
| Date of Commercial Operation:          | Oct 1, 1987         | May 25, 1985        | Aug 1, 2007          | Jun 30, 1993        | Jan 30, 1988        | Aug 11, 1986        | July 25, 1959        |
| VALUE OF POWER GENERATION <sup>1</sup> |                     |                     |                      |                     |                     |                     |                      |
| Delivered to Xcel Energy               | \$ 572,366          | \$ 365,082          | \$ 1,141,863         | \$ 408,682          | \$ 699,434          | \$ 186,842          | \$ -                 |
| Foothills Internal Consumption         | -                   | 245,822             | -                    | -                   | -                   | -                   | -                    |
| Hillcrest Internal Consumption         | -                   | -                   | -                    | 37,508              | -                   | -                   | -                    |
| Delivered to Tri-State                 | -                   | -                   | -                    | -                   | -                   | -                   | 680,259              |
| TOTAL VALUE                            | <u>572,366</u>      | <u>610,904</u>      | <u>1,141,863</u>     | <u>446,190</u>      | <u>699,434</u>      | <u>186,842</u>      | <u>680,259</u>       |
| COST OF POWER GENERATION               |                     |                     |                      |                     |                     |                     |                      |
| Transmission Wheeling                  | -                   | 18,332              | -                    | -                   | 18,669              | -                   | -                    |
| Operation and Maintenance              | 34,763              | 10,927              | 25,039               | 42,915              | 17,657              | 24,460              | 92,504               |
| Administrative Expense                 | 6,605               | 2,076               | 4,757                | 8,154               | 3,355               | 4,647               | 17,576               |
| Depreciation                           | 80,037              | 74,228              | 760,159              | 114,431             | 105,641             | 33,832              | 838,635              |
| TOTAL COST                             | <u>121,405</u>      | <u>105,563</u>      | <u>789,955</u>       | <u>165,500</u>      | <u>145,322</u>      | <u>62,939</u>       | <u>948,715</u>       |
| Net Return (Loss)                      | <u>\$ 450,961</u>   | <u>\$ 505,341</u>   | <u>\$ 351,908</u>    | <u>\$ 280,690</u>   | <u>\$ 554,112</u>   | <u>\$ 123,903</u>   | <u>\$ (268,456)</u>  |
| Plant Investment (Before Depreciation) | <u>\$ 4,646,727</u> | <u>\$ 2,936,645</u> | <u>\$ 18,685,773</u> | <u>\$ 6,309,868</u> | <u>\$ 6,007,230</u> | <u>\$ 1,733,652</u> | <u>\$ 25,336,393</u> |
| Return on Investment - Current Year    | <u>10%</u>          | <u>17%</u>          | <u>2%</u>            | <u>4%</u>           | <u>9%</u>           | <u>7%</u>           | <u>(1)%</u>          |
| Return on Investment - Cumulative      | <u>185%</u>         | <u>349%</u>         | <u>34%</u>           | <u>25%</u>          | <u>118%</u>         | <u>262%</u>         | <u>10%</u>           |

<sup>1</sup>Values on this schedule represent the value of power produced and distributed and do not relate to power sales on other schedules.

**WATER SUPPLY, USE AND STORAGE: 2007 - 2016**

Values in acre-feet<sup>1</sup>

|  | 2016     | 2015     | 2014     | 2013    | 2012      | 2011    | 2010     | 2009    | 2008    | 2007    |
|--|----------|----------|----------|---------|-----------|---------|----------|---------|---------|---------|
| <b>SUPPLY</b>                              |          |          |          |         |           |         |          |         |         |         |
| South Platte System:                       |          |          |          |         |           |         |          |         |         |         |
| South Platte Direct Rights                 | 96,293   | 110,915  | 108,990  | 72,254  | 46,557    | 75,389  | 94,795   | 84,365  | 67,152  | 103,166 |
| South Platte Storage Rights                | 41,301   | 46,741   | 31,939   | 37,816  | 4,283     | 25,739  | 31,347   | 39,402  | 31,786  | 40,192  |
| Bear Creek Rights                          | -        | -        | -        | 2,067   | 61        | 1,359   | 1,222    | 1,178   | 1,862   | 1,930   |
| Total South Platte System                  | 137,594  | 157,656  | 140,929  | 112,137 | 50,901    | 102,487 | 127,364  | 124,945 | 100,800 | 145,288 |
| Blue River/Roberts Tunnel System           | 40,795   | 39,801   | 77,765   | 111,564 | 54,394    | 148,643 | 74,674   | 58,468  | 80,056  | 65,682  |
| Effluent Exchange <sup>2</sup>             | 20,730   | 8,905    | 7,751    | 30,778  | 34,864    | 15,072  | 24,527   | 13,846  | 21,455  | 23,266  |
| Moffat System:                             |          |          |          |         |           |         |          |         |         |         |
| Fraser Collection System                   | 19,190   | 20,943   | 24,012   | 49,036  | 29,599    | 45,353  | 27,240   | 37,640  | 58,490  | 34,090  |
| Williams Fork Collection System            | 25,393   | 21,288   | 26,680   | 68,483  | 23,275    | 33,565  | 28,362   | 31,138  | 26,268  | 34,608  |
| Cabin-Meadow Creek System                  | 4,217    | 2,271    | 85       | 3,080   | 1,448     | 4,112   | 1,452    | 4,668   | 3,794   | 5,866   |
| South Boulder Creek                        | 21,453   | 22,172   | 19,516   | 7,418   | -         | 9,606   | 15,178   | 4,816   | -       | 7,708   |
| Ralston Creek                              | 5,298    | 6,342    | 3,292    | 13,142  | 401       | 1,127   | 4,086    | 1,374   | 290     | 2,792   |
| Total Moffat System                        | 75,551   | 73,016   | 73,585   | 141,159 | 54,523    | 93,763  | 76,318   | 79,636  | 88,842  | 85,064  |
| Total Water Supply                         | 274,670  | 279,378  | 300,030  | 395,638 | 194,682   | 359,965 | 302,883  | 276,895 | 291,153 | 319,300 |
| <b>USE</b>                                 |          |          |          |         |           |         |          |         |         |         |
| Foothills Filters                          | 125,327  | 113,433  | 101,795  | 116,095 | 155,334   | 137,330 | 142,811  | 117,784 | 117,973 | 141,468 |
| Marston Filters                            | 34,719   | 34,427   | 52,777   | 36,135  | 46,029    | 25,763  | 40,489   | 31,853  | 56,498  | 43,303  |
| Moffat Filters                             | 39,393   | 33,691   | 33,173   | 32,503  | 19,477    | 46,380  | 30,642   | 40,910  | 46,438  | 31,507  |
| Total Water Filtered                       | 199,439  | 181,551  | 187,745  | 184,733 | 220,840   | 209,473 | 213,942  | 190,547 | 220,909 | 216,278 |
| Change in Clear Water Storage              | 123      | (76)     | 26       | 52      | 24        | 12      | (55)     | 52      | (23)    | 17      |
| Total Treated Water Delivered <sup>3</sup> | 199,562  | 181,475  | 187,771  | 184,785 | 220,864   | 209,485 | 213,887  | 190,599 | 220,886 | 216,295 |
| Raw Water Deliveries                       | 21,752   | 26,566   | 19,260   | 24,533  | 31,574    | 27,335  | 24,641   | 25,717  | 30,079  | 26,830  |
| Other Uses <sup>4</sup>                    | 67,247   | 90,815   | 103,131  | 46,075  | 91,467    | 100,922 | 79,819   | 58,632  | 39,620  | 61,234  |
| Total Water Use                            | 288,561  | 298,856  | 310,162  | 255,393 | 343,905   | 337,942 | 318,347  | 274,948 | 290,585 | 304,359 |
| <b>STORAGE</b>                             |          |          |          |         |           |         |          |         |         |         |
| Total Reservoir Storage, December 31       | 568,124  | 582,015  | 601,493  | 611,625 | 471,380   | 620,603 | 598,580  | 614,044 | 612,097 | 611,529 |
| Total Reservoir Storage, January 1         | 582,015  | 601,493  | 611,625  | 471,380 | 620,603   | 598,580 | 614,044  | 612,097 | 611,529 | 596,588 |
| Storage Gain or (Loss)                     | (13,891) | (19,478) | (10,132) | 140,245 | (149,223) | 22,023  | (15,464) | 1,947   | 568     | 14,941  |

<sup>1</sup>Starting in Water Year 2011 the conversion factor from cfs to acre-feet was changed from 2 to 1.9835.

<sup>2</sup>Initiated exchange programs for Blue River effluent on September 10, 1976.

<sup>3</sup>Total Treated Water Delivered is determined by adding or subtracting Change in Clear Water Storage from Total Water Filtered.

<sup>4</sup>Other Uses include, but are not limited to, evaporation, carriage losses, seepage losses, Chatfield bypasses, flood bypasses, substitution and releases for power production and maintenance projects.

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# Pumping

## 2016 Facts

|   |             |                  |
|---|-------------|------------------|
| Treated Water pumped - Current year .....                 | 26,767.2    | MG <sup>1</sup>  |
| Treated Water pumped - Last year .....                    | 27,677.6    | MG <sup>1</sup>  |
| Percentage increase (decrease) from last year .....       | (329)%      |                  |
| Number of treated water pump stations .....               | 18          |                  |
| Maximum pumping capacity .....                            | 1,048.4     | MGD <sup>2</sup> |
| Pumping energy costs (Treated Water) - Current year ..... | \$2,903,926 |                  |
| Pumping energy costs (Treated Water) - Last year .....    | \$2,816,438 |                  |
| Percentage increase from last year .....                  | 3%          |                  |

<sup>1</sup>Million Gallons

<sup>2</sup>Million Gallons per Day

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PUMPING STATION CAPACITIES - 2016

(Page 1 of 3)

Center of pump U.S.G.S. elevation in parentheses

| <u>Pump Station/Elevation</u>        | <u>Pump Number</u> | <u>Make of Pump</u> | <u>Make of Motor</u> | <u>Horse-power</u> | <u>Head in Feet</u> | <u>Capacity in MGD</u> |
|--------------------------------------|--------------------|---------------------|----------------------|--------------------|---------------------|------------------------|
| BELLEVIEW (5,714)<br>(High Pressure) | 4                  | Goulds              | Ideal Electric       | 900                | 260                 | 15.0                   |
|                                      | 5                  | Worthington         | Westinghouse         | 300                | 260                 | 5.0                    |
|                                      | 6                  | Goulds              | US Motor             | 700                | 271                 | 10.0                   |
|                                      | 7                  | Worthington         | General Electric     | 900                | 260                 | 15.0                   |
|                                      |                    |                     |                      | <u>2,800</u>       |                     | <u>45.0</u>            |
| BELLEVIEW (5,714)<br>(Low Pressure)  | 1                  | Goulds              | General Electric     | 250                | 175                 | 6.0                    |
|                                      | 2                  | Goulds              | General Electric     | 400                | 175                 | 10.0                   |
|                                      |                    |                     |                      | <u>650</u>         |                     | <u>16.0</u>            |
| BROOMFIELD (5,316)                   | 1                  | Goulds              | US Motor             | 500                | 350                 | 6.5                    |
|                                      | 2                  | Goulds              | US Motor             | 500                | 350                 | 6.5                    |
|                                      | 3                  | Goulds              | US Motor             | 500                | 350                 | 6.5                    |
|                                      | 4                  | Goulds              | US Motor             | 500                | 300                 | 6.5                    |
|                                      |                    |                     |                      | <u>2,000</u>       |                     | <u>26.0</u>            |
| CASTLEWOOD (5,785) <sup>1</sup>      | 1                  | Peerless            | US Motor             | 10                 |                     | 0.5                    |
|                                      | 2                  | Peerless            | General Electric     | 40                 |                     | 1.5                    |
|                                      | 3                  | Peerless            | General Electric     | 100                |                     | 4.2                    |
|                                      |                    |                     |                      | <u>150</u>         |                     | <u>6.2</u>             |
| CHATFIELD (5,717)<br>(Low Pressure)  | 1                  | ITT                 | US Motor             | 200                | 150                 | 5.0                    |
|                                      | 2                  | ITT                 | US Motor             | 200                | 150                 | 5.0                    |
|                                      | 3                  | ITT                 | US Motor             | 200                | 150                 | 5.0                    |
|                                      |                    |                     |                      | <u>600</u>         |                     | <u>15.0</u>            |
| CHATFIELD (5,717)<br>(High Pressure) | 5                  | ITT                 | US Motor             | 400                | 320                 | 5.0                    |
|                                      | 6                  | ITT                 | US Motor             | 400                | 320                 | 5.0                    |
|                                      | 7                  | ITT                 | Nidec                | 400                | 320                 | 5.0                    |
|                                      |                    |                     |                      | <u>1,200</u>       |                     | <u>15.0</u>            |
| CHERRY HILLS (5,380)                 | 1                  | Worthington         | General Electric     | 1,000              | 220                 | 20.0                   |
|                                      | 2                  | Worthington         | General Electric     | 1,000              | 220                 | 20.0                   |
|                                      | 3                  | Worthington         | General Electric     | 1,000              | 220                 | 20.0                   |
|                                      | 4                  | Worthington         | General Electric     | 1,000              | 220                 | 20.0                   |
|                                      | 5                  | Worthington         | General Electric     | 1,000              | 220                 | 20.0                   |
|                                      | 6                  | Worthington         | General Electric     | 1,000              | 220                 | 20.0                   |
|                                      |                    |                     |                      | <u>6,000</u>       |                     | <u>120.0</u>           |
| CLARKSON (5,482) <sup>1</sup>        | 1                  | Fairbanks Morse     | Fairbanks Morse      | 150                | 234                 | 2.1                    |
|                                      | 2                  | Fairbanks Morse     | Fairbanks Morse      | 150                | 234                 | 2.1                    |
|                                      | 3                  | Fairbanks Morse     | Fairbanks Morse      | 150                | 234                 | 2.1                    |
|                                      | 4                  | Fairbanks Morse     | Fairbanks Morse      | 150                | 234                 | 2.1                    |
|                                      | 5                  | Fairbanks Morse     | Fairbanks Morse      | 150                | 234                 | 2.1                    |
|                                      | 6                  | Fairbanks Morse     | Reliance Electric    | 150                | 234                 | 2.1                    |
|                                      |                    |                     |                      | <u>900</u>         |                     | <u>12.6</u>            |
| EINFELDT (5,341)                     | 2                  | Wheeler Economy     | General Electric     | 800                | 175                 | 20.0                   |
|                                      | 3                  | Byron Jackson       | General Electric     | 600                | 175                 | 17.0                   |
|                                      | 4                  | Byron Jackson       | General Electric     | 400                | 175                 | 12.0                   |
|                                      | 5                  | Byron Jackson       | Westinghouse         | 200                | 175                 | 5.3                    |
|                                      | 6                  | Worthington         | General Electric     | 800                | 175                 | 20.0                   |
|                                      | 7                  | Wheeler Economy     | General Electric     | 800                | 175                 | 20.0                   |
|                                      |                    |                     |                      |                    | <u>3,600</u>        |                        |
| ELIZABETH (5,374)                    | 1                  | Goulds              | US Motor             | 400                | 164                 | 11.0                   |
|                                      | 2                  | Goulds              | US Motor             | 600                | 164/250             | 8.5                    |
|                                      | 3                  | Goulds              | US Motor             | 600                | 164/250             | 8.5                    |
|                                      | 4                  | Goulds              | US Motor             | 600                | 164/250             | 8.5                    |
|                                      | 5                  | Goulds              | US Motor             | 200                | 164                 | 5.0                    |
|                                      |                    |                     |                      | <u>2,400</u>       |                     | <u>41.5</u>            |

<sup>1</sup>Vault Type Structure (underground)

PUMPING STATION CAPACITIES (Continued) - 2016

(Page 2 of 3)

Center of pump U.S.G.S. elevation in parentheses

| <u>Pump Station/Elevation</u>        | Pump          |                     |                      | Horse-<br>power | Head<br>in Feet | Capacity<br>in MGD |
|--------------------------------------|---------------|---------------------|----------------------|-----------------|-----------------|--------------------|
|                                      | <u>Number</u> | <u>Make of Pump</u> | <u>Make of Motor</u> |                 |                 |                    |
| FIFTY-SIXTH AVENUE (5,203)           | 2             | Allis Chalmers      | Ideal Electric       | 1,750           | 450             | 15.0               |
|                                      | 3             | Allis Chalmers      | Ideal Electric       | 1,750           | 450             | 15.0               |
|                                      | 4             | Allis Chalmers      | Ideal Electric       | 1,750           | 450             | 15.0               |
|                                      | 5             | Allis Chalmers      | Ideal Electric       | 1,750           | 450             | 15.0               |
|                                      | 8             | Gould               | U.S. Motor           | 500             | 75              | 30.0               |
|                                      | 9             | Gould               | U.S. Motor           | 500             | 75              | 30.0               |
|                                      |               |                     |                      | <u>8,000</u>    |                 | <u>120.0</u>       |
| GREEN MOUNTAIN (5,837)               | 1             | Flow Serve          | General Electric     | 600             | 200             | 12.0               |
|                                      | 2             | Flow Serve          | General Electric     | 300             | 200             | 6.0                |
|                                      | 3             | Flow Serve          | General Electric     | 300             | 200             | 6.0                |
|                                      |               |                     |                      | <u>1,200</u>    |                 | <u>24.0</u>        |
| HIGHLANDS (5,704)<br>(Low Pressure)  | 1             | Fairbanks Morse     | General Electric     | 125             | 165             | 3.0                |
|                                      | 2             | Fairbanks Morse     | General Electric     | 125             | 165             | 3.0                |
|                                      | 3             | Fairbanks Morse     | General Electric     | 125             | 165             | 3.0                |
|                                      | 4             | Fairbanks Morse     | General Electric     | 125             | 165             | 3.0                |
|                                      | 5             | DeLaval             | Ideal Electric       | 350             | 165             | 10.0               |
|                                      | 6             | DeLaval             | Ideal Electric       | 350             | 165             | 10.0               |
|                                      | 7             | DeLaval             | Ideal Electric       | 350             | 165             | 10.0               |
|                                      |               |                     |                      | <u>1,550</u>    |                 | <u>42.0</u>        |
| HIGHLANDS (5,704)<br>(High Pressure) | 1             | Gould               | General Electric     | 900             | 260             | 15.0               |
|                                      | 2             | Gould               | General Electric     | 900             | 260             | 15.0               |
|                                      | 6             | Gould               | General Electric     | 300             | 110             | 10.0               |
|                                      | 7             | Gould               | General Electric     | 300             | 110             | 10.0               |
|                                      | 8             | Gould               | General Electric     | 150             | 110             | 5.0                |
|                                      | 9             | Gould               | General Electric     | 150             | 110             | 5.0                |
|                                      |               |                     |                      | <u>2,700</u>    |                 | <u>60.0</u>        |
| HILLCREST (5,602)<br>(Low Pressure)  | 1             | Allis Chalmers      | Allis Chalmers       | 50              | 169             | 1.0                |
|                                      | 2             | Allis Chalmers      | Allis Chalmers       | 100             | 167             | 2.0                |
|                                      | 3             | DeLaval             | Electric Machinery   | 200             | 163             | 5.0                |
|                                      | 4             | DeLaval             | Electric Machinery   | 400             | 163             | 11.0               |
|                                      | 5             | DeLaval             | Electric Machinery   | 400             | 163             | 11.0               |
|                                      | 6             | Worthington         | Fairbanks Morse      | 400             | 163             | 11.0               |
|                                      | 7             | Worthington         | Fairbanks Morse      | 400             | 163             | 11.0               |
|                                      |               |                     |                      | <u>1,950</u>    |                 | <u>52.0</u>        |
| HILLCREST (5,602)<br>(High Pressure) | 8             | American Marsh      | Westinghouse         | 75              | 320             | 0.8                |
|                                      | 9             | Gould               | US Motor             | 1,500           | 330             | 20.0               |
|                                      | 10            | DeLaval             | Electric Machinery   | 350             | 313             | 4.8                |
|                                      | 11            | DeLaval             | Electric Machinery   | 800             | 315             | 10.5               |
|                                      | 12            | DeLaval             | Electric Machinery   | 800             | 315             | 10.5               |
|                                      | 13            | Patterson           | Ideal Electric       | 900             | 320             | 10.0               |
|                                      |               |                     |                      | <u>4,425</u>    |                 | <u>56.6</u>        |
| KENDRICK (5,607)<br>(Low Pressure)   | 1             | Peerless            | US Motor             | 300             | 120             | 10.6               |
|                                      | 2             | Peerless            | US Motor             | 200             | 120             | 6.7                |
|                                      | 3             | Peerless            | US Motor             | 100             | 120             | 3.3                |
|                                      | 4             | Peerless            | US Motor             | 100             | 120             | 3.3                |
|                                      | 5             | Peerless            | US Motor             | 100             | 120             | 3.3                |
|                                      |               |                     |                      | <u>800</u>      |                 | <u>27.2</u>        |



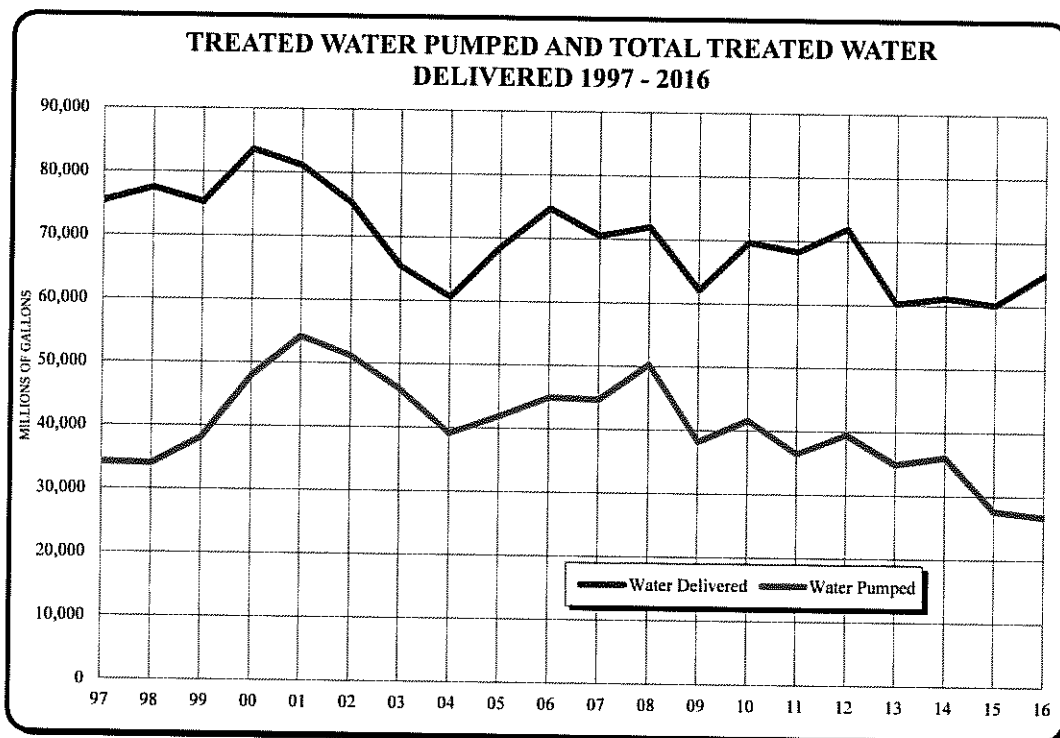
TREATED WATER PUMPED AND POWER COSTS: 1997 - 2016

| Year              | Total Treated Water Pumped | Total Treated Water Delivered | Pumps  |                          | Treated Water Total Pumping   | Gas Used | Total Power, Electric and Gas Costs <sup>2</sup> |
|-------------------|----------------------------|-------------------------------|--------|--------------------------|-------------------------------|----------|--|
|                   | (million gals.)            | (million gals.)               | Number | Capacity (million gals.) | Power Used (kwh) <sup>1</sup> | (dth)    |  |
| 1997              | 34,179.67                  | 75,363.33                     | 105    | 1,027.5                  | 31,876,334                    | 23,055   | \$1,997,924                                      |
| 1998              | 33,990.21                  | 77,466.65                     | 105    | 1,027.5                  | 30,170,882                    | 38,331   | \$1,881,873                                      |
| 1999              | 38,149.92                  | 75,232.01                     | 106    | 1,052.5                  | 33,378,202                    | 18,927   | \$1,915,984                                      |
| 2000              | 47,953.92                  | 83,585.25                     | 106    | 1,052.5                  | 39,257,987                    | 20,159   | \$2,166,806                                      |
| 2001              | 54,161.28                  | 81,051.42                     | 106    | 1,052.5                  | 42,691,836                    | 15,096   | \$2,774,857                                      |
| 2002              | 51,205.33                  | 75,221.18                     | 109    | 1,070.6                  | 46,058,108                    | 7,217    | \$1,986,429                                      |
| 2003              | 46,030.79                  | 65,399.47                     | 110    | 1,077.1                  | 33,489,508                    | 1,858    | \$2,322,558                                      |
| 2004              | 39,105.07                  | 60,578.77                     | 110    | 1,077.1                  | 35,898,176                    | -        | \$2,820,144                                      |
| 2005              | 41,890.71                  | 68,473.70                     | 110    | 1,096.3                  | 38,384,576                    | -        | \$3,686,475                                      |
| 2006              | 44,937.60                  | 74,724.98                     | 110    | 1,096.3                  | 44,823,999                    | -        | \$3,247,213                                      |
| 2007              | 44,684.79                  | 70,479.84                     | 112    | 1,097.4                  | 38,635,526                    | -        | \$2,942,190                                      |
| 2008 <sup>3</sup> | 50,283.70                  | 71,975.87                     | 112    | 1,097.4                  | 33,898,600                    | -        | \$3,583,417                                      |
| 2009              | 38,198.90                  | 62,106.90                     | 112    | 1,095.9                  | 27,801,487                    | -        | \$2,568,082                                      |
| 2010              | 41,611.30                  | 69,695.40                     | 112    | 1,095.9                  | 28,457,672                    | -        | \$2,709,675                                      |
| 2011              | 36,443.49                  | 68,260.80                     | 112    | 1,003.3                  | 25,674,399                    | -        | \$3,042,871                                      |
| 2012              | 39,484.07                  | 71,968.70                     | 112    | 1,003.3                  | 26,277,763                    | -        | \$3,328,526                                      |
| 2013              | 34,895.37                  | 60,212.44                     | 112    | 1,007.9                  | 25,604,391                    | -        | \$3,259,289                                      |
| 2014              | 36,088.94                  | 61,185.27                     | 112    | 1,007.9                  | 29,118,267                    | -        | \$3,517,530                                      |
| 2015              | 27,677.64                  | 60,115.97                     | 113    | 1,048.4                  | 22,901,689                    | -        | \$2,960,292                                      |
| 2016              | 26,767.23                  | 65,003.83                     | 113    | 1,048.4                  | 23,870,718                    | -        | \$3,145,819                                      |

<sup>1</sup>Years prior to 2008 included some raw water pumping and a portion of power used at the treatment plants.

<sup>2</sup>Total energy costs for all Denver metropolitan area Board treated water distribution facilities.

<sup>3</sup>Foothills Treatment Plant out of service from December 4, 2007 through April 25, 2008.



DISTRIBUTING RESERVOIRS AND RAW WATER PUMPING STATIONS - 2016

High water U.S.G.S. elevation in parentheses

|                                      | Capacity<br>(million gals.) |                                      | Capacity<br>(million gals.) |
|--------------------------------------|-----------------------------|--------------------------------------|-----------------------------|
| Alameda & Beech (6,042) <sup>1</sup> |                             | Hillcrest (5,624)                    |                             |
| Number 1                             | 1.0                         | Number 1                             | 14.8                        |
| Number 2                             | 2.0                         | Number 2                             | 14.8                        |
|                                      | <u>3.0</u>                  |                                      | <u>29.6</u>                 |
| Ashland (5,430)                      |                             | Hogback (6,007)                      | 4.0                         |
| East Basin                           | under construction          | Ken Caryl Ranch (6,410) <sup>1</sup> |                             |
| West Basin                           | 10.0                        | Number 3                             | 2.0                         |
|                                      | <u>10.0</u>                 | Number 4                             | 2.0                         |
| Belleview (5,743)                    | 10.0                        |                                      | <u>4.0</u>                  |
| Broomfield (5,335)                   |                             | Kendrick (5,627)                     | 15.0                        |
| Number 1                             | 2.5                         | Lone Tree (5,930)                    |                             |
| Number 2                             | 2.5                         | Number 1                             | 10.0                        |
|                                      | <u>5.0</u>                  | Number 2                             | 10.0                        |
| Broomfield Tank (5,534) <sup>1</sup> |                             |                                      | <u>20.0</u>                 |
| Number 1                             | 3.0                         | Marston Treatment (5,497)            |                             |
| Number 2                             | 3.0                         | Number 3                             | 6.8                         |
|                                      | <u>6.0</u>                  | Number 4                             | 9.2                         |
| Capitol Hill (5,395)                 |                             |                                      | <u>16.0</u>                 |
| Number 1                             | 23.4                        | Moffat Treatment (5,620)             |                             |
| Number 3                             | 27.0                        | Number 1                             | 4.3                         |
|                                      | <u>50.4</u>                 | Number 2                             | 4.3                         |
| Chatfield Tank (5,740)               |                             | Number 3                             | 5.0                         |
| Number 1                             | 5.0                         | Number 4                             | 4.4                         |
| Number 2                             | 5.0                         |                                      | <u>18.0</u>                 |
|                                      | <u>10.0</u>                 | Sixty-Fourth Avenue (5,460)          | 15.0                        |
| Colorow (6007)                       | 3.7                         | Southgate (6,123) <sup>1</sup>       |                             |
| Fifty-Sixth Avenue (5,223)           | 15.0                        | 9E                                   | 2.0                         |
| Foothills (5,860)                    |                             | 9E2                                  | 6.0                         |
| Number 1                             | 25.0                        |                                      | <u>8.0</u>                  |
| Number 2                             | 25.0                        | Southgate (6,270) <sup>1</sup>       |                             |
| Number 3                             | 25.0                        | 10E                                  | 1.5                         |
|                                      | <u>75.0</u>                 | 10E2                                 | 1.5                         |
| Green Mountain (5,859)               | 5.0                         |                                      | <u>3.0</u>                  |
| Highlands (5,722)                    |                             | Utah Tank (6,042) <sup>1</sup>       | 3.0                         |
| Number 1                             | 7.2                         | Valley Tank (6,000) <sup>1</sup>     | 2.0                         |
| Number 3                             | 13.5                        | Total Capacity                       | <u>351.4</u>                |
|                                      | <u>20.7</u>                 |                                      |                             |

<sup>1</sup>Not Owned by Denver Water.

RAW WATER PUMPING STATIONS

| <u>Pump Station</u> | <u>Pump Number</u> | <u>Make of Pump</u> | <u>Make of Motor</u> | <u>Horse-Power</u> | <u>Head in Feet</u> | <u>Capacity in MGD</u> |
|---------------------|--------------------|---------------------|----------------------|--------------------|---------------------|------------------------|
| Last Chance         | 1                  | Worthington         | General Electric     |                    |                     |                        |
| Metro Sewer         | 1                  | Peerless            | United States        | 30                 | 60                  | 2.2                    |
|                     | 2                  | Peerless            | General Electric     | 200                | 30                  | 30.0                   |
|                     | 3                  | Peerless            | General Electric     | 200                | 30                  | 30.0                   |
|                     |                    |                     |                      | 200                | 30                  | 30.0                   |
| Kassler             | 3                  | Peerless            | General Electric     | 600                | 90                  | 90.0                   |
|                     | 5                  | Peerless            | General Electric     | 600                | 153                 | 10.0                   |
|                     |                    |                     |                      | 600                | 153                 | 10.0                   |
|                     |                    |                     | Total                | 1,200              | 306                 | 20.0                   |
|                     |                    |                     |                      | 1,830              | 456                 | 112.2                  |

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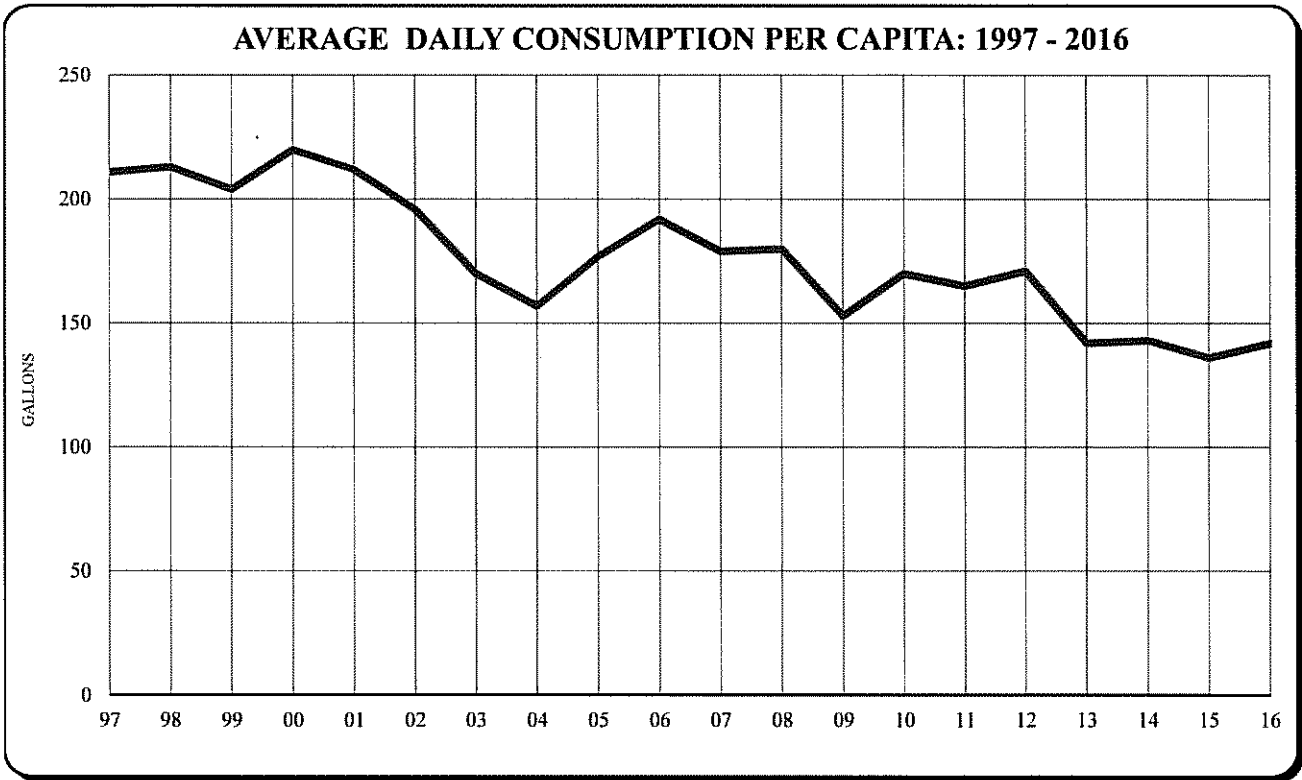
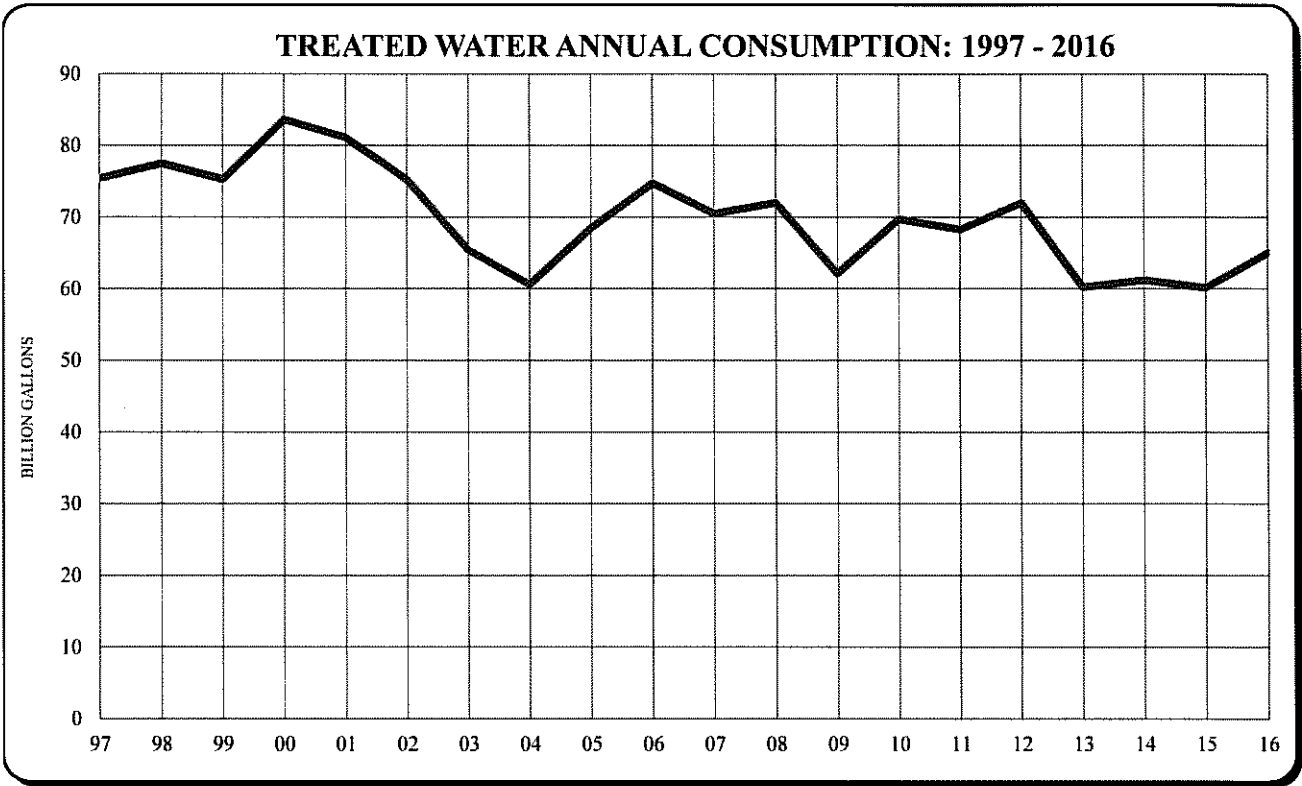
# Treatment and Water Quality

## 2016 Facts

|   |              |
|---|--------------|
| Treated water consumption.....                                    | 65,003.83 MG |
| Increase (decrease) from last year.....                           | 4,887.86 MG  |
| Average daily consumption.....                                    | 178.09 MG    |
| Maximum daily consumption:<br>(July 13).....                      | 355.88 MG    |
| Maximum hour treated water use rate:<br>(Aug 1 at 5:30 a.m.)..... | 592.00 MGD   |
| Water Quality:  |              |
| Total samples collected.....                                      | 32,168       |
| Microbiological analyses completed.....                           | 11,407       |
| Chemical analyses completed.....                                  | 49,829       |

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CONSUMPTION OF TREATED WATER - 20 YEAR GRAPHS: 1997 - 2016



## CONSUMPTION OF TREATED WATER: 1997 - 2016

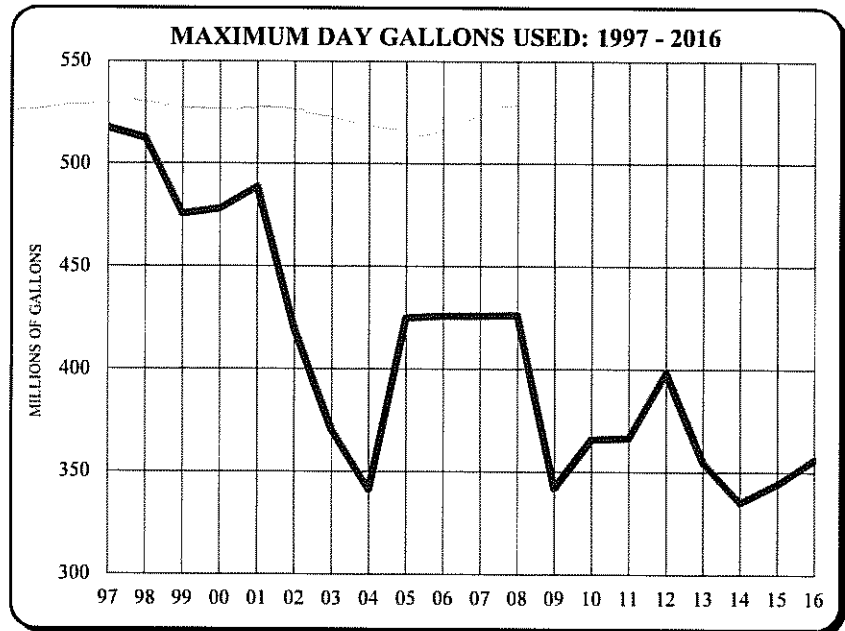
| Year | Acre-Feet | (million gallons) |            |            | Population<br>July 1 <sup>1</sup> | Avg. Daily Gals.<br>Per Capita | Precipitation in Inches <sup>2</sup> |             |
|------|-----------|-------------------|------------|------------|-----------------------------------|--------------------------------|--------------------------------------|-------------|
|      |           | Annual            | Daily Avg. | Daily Max. |                                   |                                | Year                                 | 4/1 to 9/30 |
| 1997 | 231,282   | 75,363.33         | 206.47     | 517.57     | 980,000                           | 211                            | 20.38                                | 14.46       |
| 1998 | 237,764   | 77,475.48         | 212.26     | 512.53     | 996,000                           | 213                            | 17.61                                | 12.77       |
| 1999 | 230,879   | 75,232.01         | 206.12     | 475.66     | 1,012,000                         | 204                            | 20.03                                | 17.04       |
| 2000 | 256,514   | 83,585.25         | 228.38     | 478.19     | 1,036,000                         | 220                            | 14.87                                | 11.07       |
| 2001 | 248,738   | 81,051.42         | 222.06     | 488.71     | 1,048,000                         | 212                            | 16.45                                | 12.43       |
| 2002 | 230,845   | 75,221.18         | 206.09     | 419.20     | 1,049,000                         | 196                            | 9.95                                 | 6.59        |
| 2003 | 200,704   | 65,399.47         | 179.18     | 370.05     | 1,052,000                         | 170                            | 17.00                                | 8.77        |
| 2004 | 185,909   | 60,578.77         | 165.52     | 340.92     | 1,055,000                         | 157                            | 21.35                                | 16.06       |
| 2005 | 210,138   | 68,473.70         | 187.60     | 424.80     | 1,057,000                         | 177                            | 16.32                                | 10.90       |
| 2006 | 229,323   | 74,724.98         | 204.73     | 425.68     | 1,064,000                         | 192                            | 16.15                                | 8.66        |
| 2007 | 216,295   | 70,479.84         | 193.10     | 425.70     | 1,077,000                         | 179                            | 18.10                                | 11.45       |
| 2008 | 220,886   | 71,975.87         | 196.66     | 426.16     | 1,093,000                         | 180                            | 12.42                                | 8.19        |
| 2009 | 190,599   | 62,106.90         | 170.16     | 341.80     | 1,111,000                         | 153                            | 21.34                                | 15.09       |
| 2010 | 213,887   | 69,695.40         | 190.95     | 365.81     | 1,125,000                         | 170                            | 14.28                                | 9.74        |
| 2011 | 209,485   | 68,260.80         | 187.02     | 366.40     | 1,135,000                         | 165                            | 19.29                                | 13.99       |
| 2012 | 220,864   | 71,968.70         | 196.64     | 398.20     | 1,147,000                         | 171                            | 12.39                                | 8.72        |
| 2013 | 184,785   | 60,212.44         | 164.97     | 354.50     | 1,161,000                         | 142                            | 22.41                                | 17.95       |
| 2014 | 187,771   | 61,185.27         | 167.63     | 335.20     | 1,172,000                         | 143                            | 20.26                                | 14.77       |
| 2015 | 184,489   | 60,115.97         | 164.70     | 344.26     | 1,210,000                         | 136                            | 27.80                                | 19.07       |
| 2016 | 199,489   | 65,003.83         | 178.09     | 355.88     | 1,249,000                         | 142                            | 13.84                                | 8.25        |

<sup>1</sup>Population estimates are treated water customers only.

<sup>2</sup>Precipitation readings are the averages of Stapleton, Lakewood and Kassler measurement stations.

### TREATMENT PLANT CAPACITY

| Plant     | Type       | Capacity<br>in MGD |
|-----------|------------|--------------------|
| Foothills | Dual-Media | 280.0              |
| Marston   | Dual-Media | 250.0              |
| Moffat    | Rapid Sand | 185.0              |
|           |            | <u>715.0</u>       |

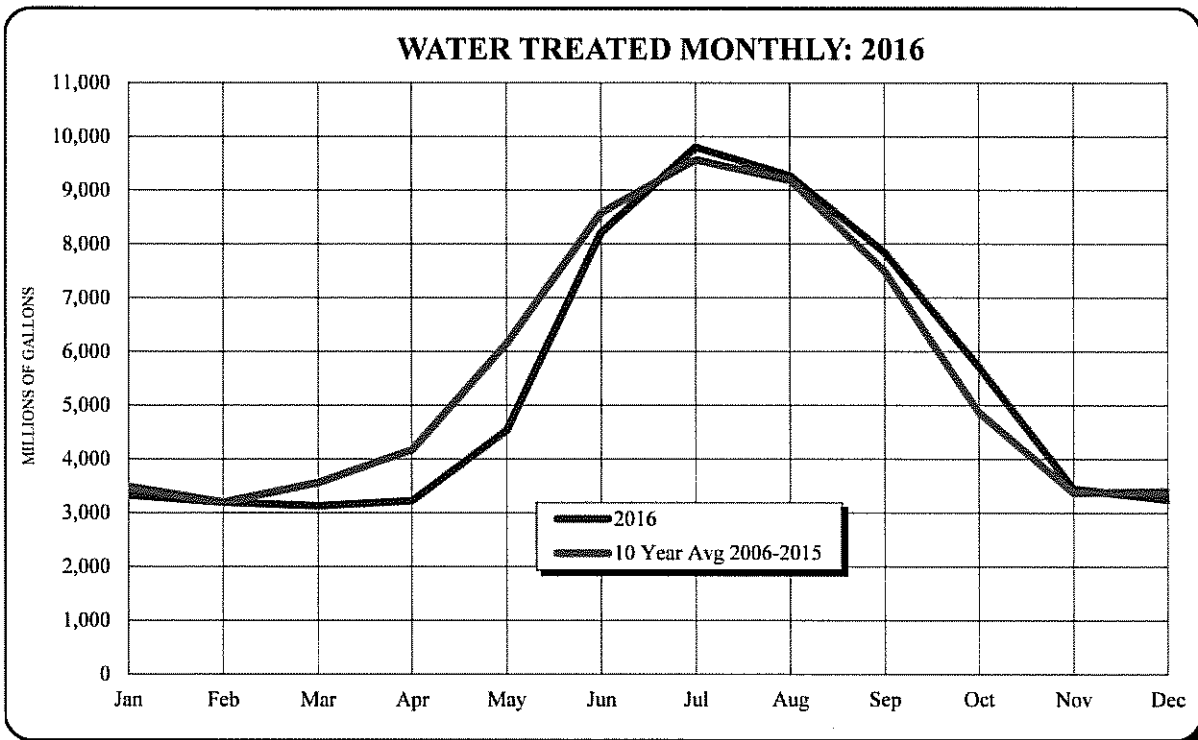


# WATER TREATED MONTHLY - 2016

(millions of gallons)

|           | Treatment Plant  |                  |                  | Total Produced   |
|-----------|------------------|------------------|------------------|------------------|
|           | Foothills        | Marston          | Moffat           |                  |
| January   | 756.35           | 1,576.17         | 995.17           | 3,327.69         |
| February  | 367.45           | 1,535.92         | 1,289.98         | 3,193.35         |
| March     | 1,882.23         | 599.52           | 646.17           | 3,127.92         |
| April     | 1,989.44         | 593.98           | 641.74           | 3,225.16         |
| May       | 2,897.67         | 972.02           | 663.00           | 4,532.69         |
| June      | 5,494.31         | 1,246.13         | 1,474.68         | 8,215.12         |
| July      | 5,980.17         | 2,090.88         | 1,732.46         | 9,803.51         |
| August    | 6,060.02         | 1,353.77         | 1,860.72         | 9,274.51         |
| September | 5,812.73         | 809.64           | 1,227.56         | 7,849.93         |
| October   | 4,758.70         | -                | 961.22           | 5,719.92         |
| November  | 2,790.19         | -                | 654.00           | 3,444.19         |
| December  | 2,033.82         | 531.00           | 685.00           | 3,249.82         |
|           | <u>40,823.08</u> | <u>11,309.03</u> | <u>12,831.70</u> | <u>64,963.81</u> |

Note: Totals are based on multiple totalizer meter readings at various treatment plant sites. The accuracy of the readings varies within the limits inherent to each water meter.



## RECONCILIATION OF WATER TREATED TO WATER DELIVERED/CONSUMED:

|   |                     |
|---|---------------------|
| Total Water Treated for the Year (Produced)         | 64,963.81 MG        |
| (Increase) Decrease In Clear Water Storage          | 40.02 MG            |
| Total Treated Water Delivered/Consumed for the Year | <u>65,003.83 MG</u> |

CHEMICAL TREATMENT AND ANALYSIS:  
TREATED WATER IN DISTRIBUTION SYSTEM - 2016

CHEMICAL TREATMENT

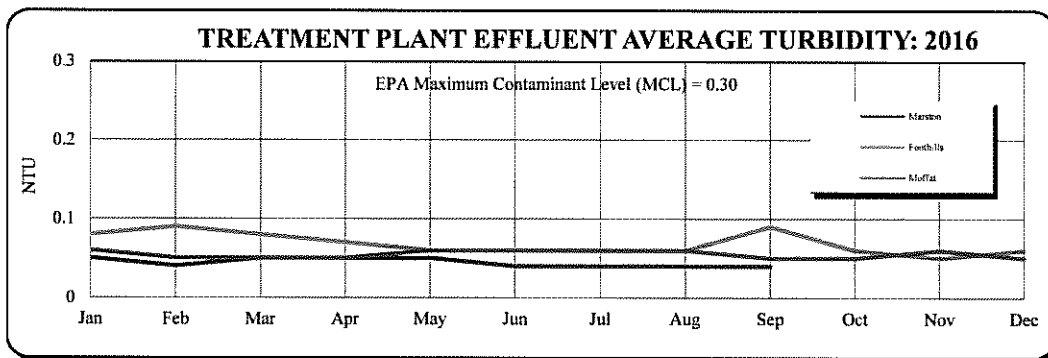
Chemicals are used at various points throughout the treatment plants to provide for appropriate water treatment including oxidation, coagulation, pH adjustment, fluoridation and disinfection. The following are total pounds and cost of chemicals used at each treatment plant.

|           | Pounds of<br>Chemicals Used | Total<br>Cost |
|-----------|-----------------------------|---------------|
| Foothills | 18,683,629                  | \$ 1,634,775  |
| Moffat    | 8,020,541                   | 780,631       |
| Marston   | 7,767,628                   | 689,334       |
| Recycling | 2,510,135                   | 248,552       |
|           | 36,981,933                  | \$ 3,353,292  |

DISTRIBUTION SYSTEM & TREATMENT PLANT EFFLUENT TOTAL COLIFORM RESULTS

| Month     | Number of<br>Samples | Number of<br>Positives | % Positive |
|-----------|----------------------|------------------------|------------|
| January   | 383                  | 0                      | 0.00%      |
| February  | 426                  | 0                      | 0.00%      |
| March     | 390                  | 0                      | 0.00%      |
| April     | 406                  | 0                      | 0.00%      |
| May       | 372                  | 0                      | 0.00%      |
| June      | 438                  | 1                      | 0.23%      |
| July      | 389                  | 0                      | 0.00%      |
| August    | 451                  | 0                      | 0.00%      |
| September | 415                  | 0                      | 0.00%      |
| October   | 397                  | 0                      | 0.00%      |
| November  | 395                  | 0                      | 0.00%      |
| December  | 379                  | 0                      | 0.00%      |
|           | 4,841                | 1                      | 0.02%      |

The total coliform group of bacteria is a microbiological indicator used to determine the safety of drinking water for human consumption. The EPA and the Colorado Department of Public Health and Environment require that Denver Water test a minimum of 300 treated water samples each month for total coliforms. The Maximum Contaminant Level (MCL) for total coliform specifies that no more than 5% of the samples taken each month may be positive. All positive samples were further analyzed to determine if *E. coli* bacteria were present, which would indicate possible contamination from a fecal source. There were no *E. coli* positive samples in the current year.



Turbidity is a measure of the clarity of the water. EPA has established 0.30 NTU (Nephelometric Turbidity Unit) as the MCL for turbidity.

TREATED WATER QUALITY SUMMARY:  
TREATMENT PLANT EFFLUENT AVERAGES – 2016

| <u>Analysis</u>                        | <u>Maximum Contaminant Level (MCL)</u> | <u>Marston</u> | <u>Foothills</u> | <u>Moffat</u> |
|--|--|----------------|------------------|---------------|
| <b>General (mg/L)</b>                  |  |                |                  |               |
| Alkalinity, Total as CaCO <sub>3</sub> |  | 72             | 64               | 30            |
| Chlorine, Total                        |  | 1.7            | 1.6              | 1.6           |
| Hardness as CaCO <sub>3</sub>          |  | 117            | 102              | 51            |
| pH (SU)                                |  | 7.8            | 7.8              | 7.7           |
| Specific Conductance (µS)              |  | 339            | 299              | 145           |
| Temperature (°C)                       |  | 12             | 13               | 11            |
| Total Dissolved Solids                 |  | 196            | 175              | 81            |
| Turbidity (NTU)                        | 0.30                                   | 0.04           | 0.07             | 0.05          |
| <b>Metals (µg/L)</b>                   |  |                |                  |               |
| Aluminum                               |  | 37             | 41               | 27            |
| Barium                                 | 2,000                                  | 37             | 37               | 23            |
| Boron                                  |  | 19             | 15               | 9             |
| Calcium (mg/L)                         |  | 29             | 25               | 12            |
| Magnesium (mg/L)                       |  | 8              | 7                | 3             |
| Manganese                              |  | 5              | 12               | 8             |
| Molybdenum                             |  | 6              | 8                | 1             |
| Potassium (mg/L)                       |  | 2              | 2                | 1             |
| Sodium (mg/L)                          |  | 22             | 20               | 8             |
| Strontium (mg/L)                       |  | 0.2            | 0.2              | 0.1           |
| <b>Ions (mg/L)</b>                     |  |                |                  |               |
| Chloride                               |  | 26             | 24               | 7             |
| Fluoride                               | 4.0                                    | 0.7            | 0.8              | 0.7           |
| Nitrate + Nitrite- Nitrogen            | 10                                     | 0.1            | 0.1              | 0.1           |
| Silicon                                |  | 3              | 4                | 3             |
| Sulfate                                |  | 53             | 45               | 22            |
| <b>Radiological (pCi/L)</b>            |  |                |                  |               |
| Uranium (µg/L)                         | 30                                     | 0.5            | 0.6              | < 0.5         |

(Continued next page)

TREATED WATER QUALITY SUMMARY:  
TREATMENT PLANT EFFLUENT AVERAGES – 2016 (Continued)

| <u>Analysis</u>                        | <u>Maximum<br/>Contaminant<br/>Level (MCL)</u> | <u>Marston</u> | <u>Foothills</u> | <u>Moffat</u> |
|--|--|----------------|------------------|---------------|
| <b>Disinfection By-Products (µg/L)</b> |  |                |                  |               |
| Bromodichloromethane                   |  | 7.4            | 6.1              | 3.2           |
| Chloroform                             |  | 8.9            | 11               | 9.9           |
| Dibromochloromethane                   |  | 3.2            | 1.7              | 0.8           |
| Dichloroacetic acid                    |  | 8.6            | 11.2             | 9.0           |
| Haloacetic Acids                       | 60   | 15             | 19               | 16            |
| Total Trihalomethanes                  | 80   | 18             | 15               | 16            |
| Trichloroacetic acid                   |  | 4.5            | 6.2              | 6.0           |
| <b>Nonspecific Organics</b>            |  |                |                  |               |
| Total Organic Carbon (mg/L)            |  | 2.4            | 2.1              | 1.8           |
| Total Organic Halogen (µg/L)           |  | 190            | 180              | 150           |

TREATED WATER QUALITY SUMMARY:  
TREATMENT PLANT EFFLUENT AVERAGES – 2016 (Continued)

The following analyses were performed and each of these constituents was either below the reporting limit or the average result was less than the reporting limit. The Maximum Contaminant Level is listed after the analysis in parentheses, if applicable. The unit of measure is also listed if different than that listed for the subsection.

|  |  |                            |   |
|--|--|----------------------------|---|
| <b>Metals - plumbing, mining, natural erosion (µg/L)</b> | Strontium-90   | 2-Chlorobiphenyl           | Hexachlorocyclopentadiene   |
| Antimony (6)   | Thorium-227,234  | 2-Chlorophenol             | Indeno(1,2,3-cd)pyrene  |
| Arsenic (10)   | Thallium=208   | 2-Nitrophenol              | Isophorone  |
| Beryllium (4)  | Uranium-235  | 2,4-Dichlorophenol         | Methacrylonitrile   |
| Cadmium (5)  | Zinc-65  | 2,4-Dimethylphenol         | Methyl acrylate   |
| Chromium (100)   | <b>human activity, Algal toxins</b>  | 2,4-Dinitrophenol          | Methylmethacrylate  |
| Cobalt   | <i>Cryptosporidium (oocysts/L)</i>   | 2,4-Dinitrotoluene         | Naphthalene   |
| Copper (TT <sup>1</sup> )                                | <i>E. coli (count/100 ml)</i>  | 2,6-Dinitrotoluene         | n-Butyl Acrylate  |
| Iron   | <i>Giardia (TT<sup>1</sup>) (cysts/L)</i>  | 3,5-Dichlorobenzoic acid   | N-nitrosopyrrolidine  |
| Lead (TT <sup>1</sup> )                                  | <i>Legionella (TT<sup>1</sup>)</i>   | 4-tert-Octylphenol         | Nitrobenzene  |
| Lithium  | Plankton   | 4-Nitrophenol              | Nonylphenol isomer mix  |
| Mercury (2)  | Cylindrospermopsin (Algal Toxin)   | 4,6-Dinitro-2-methylphenol | Pyrene  |
| Selenium (50)  | Microcystin-LA (Algal Toxin)   | Acenaphthene               | TCPP  |
| Silver   | Microcystin-LF (Algal Toxin)   | Acenaphthylene             | TDCPP   |
| Thallium (2)   | Microcystin-LR (Algal Toxin)   | Acetochlor                 | Trichloronate   |
|  |  |                            | <b>SOC - Plastizers, Surfactants, Personal Care Products µg/L, ng/L</b> |
| Titanium   | Microcystin-LY (Algal Toxin)   | Ametryn                    | 1,2,4,5-Tetrachlorobenzene  |
| Vanadium   | Microcystin-RR (Algal Toxin)   | Anthracene                 |   |
| <b>Ions - from farming, and industry, (mg/L, µg/L)</b>   | Microcystin-YR (Algal Toxin)   | Benzo(a)anthracene         | 1,1,2-Trichloro-1,2,2-trifluoroethane                                   |
| Bromide  | Nodularin (Algal Toxin)  | Benzo(a)pyrene (0.2)       | 2,4,5-Trichlorobiphenyl   |
| Carbon disulfide   | Total Coliform (DS)  | Benzo(b)fluoranthene       | 4-Chloro-3-methylphenol   |
|  | <b>Disinfection By-Products - reaction between the disinfectant and natural organic matter (µg/L)</b>      |                            |   |
| Cyanide, Total   | Bromoform  | Benzo(g,h,i)perylene       | Benzyl chloride   |
| Hydroxide  | Carbon Tetrachloride   | Benzo(k)fluoranthene       | Bis(2-ethylhexyl)adipate  |
| Nitrite-Nitrogen (1)                                     | Chlorate   | Chloroprene                | Bis(2-ethylhexyl)phthalate  |
| Ortho Phosphorus, Dissolved                              | Chloroacetone  | Chloropropylate            | Bisphenol A   |
| Perchlorate  | Chloroacetonitrile   | Chrysene                   | Butyl benzyl phthalate  |
| <b>deposits/mining (pCi/L)</b>                           | Monochloroacetic Acid  | Cyclohexanone              | Butylparaben  |
| Alpha  | N-nitrosodiethylamine (Nitrosamine)  | Dibenzo(a,h)anthracene     | Chloroprene   |
| Beta   | N-nitrosodimethylamine (NDMA)  | Diethanolmine (DEA)        | Desethylatrazine  |
| Cesium-134,137   | N-nitrosodi-n-butylamine   | Ethyl acrylate             | Desisopropylatrazine  |
| Iodine-129, 131  | N-nitrosodi-n-propylamine  | Ethyl tert-butyl ether     | Diethyl phthalate   |
| Radium <sup>226/228 (5)</sup>                            | N-nitrosomethylethylamine  | Fluoranthene               | Dimethyl phthalate  |
|  | N-nitrosodiphenylamine   | Fluorene                   | Di-n-butyl phthalate  |
|  | Tribromoacetic Acid  | Hexachlorobenzene          | Di-n-octyl phthalate  |
|  | <b>Synthetic Organic Compounds (SOC) - from Feedstock/ combustion by-products, Flame retardants (µg/L)</b> |                            |   |

<sup>1</sup>TT indicates that the MCL involves treatment techniques.

TREATED WATER QUALITY SUMMARY:  
TREATMENT PLANT EFFLUENT AVERAGES – 2016 (Continued)

|   |                     |                            |                          |
|---|---------------------|----------------------------|--------------------------|
| Epichlorohydrin                         | alpha-Chlordane     | Cyanazine                  | Ethion                   |
| Ethyl acrylate                          | Acifluorfen         | Dacthal                    | Ethofumesate             |
| Ethyl methacrylate                      | Alachlor (2)        | Dalapon (200)              | Ethoprop                 |
| Galaxolide                              | Aldicarb            | DCPA acid metabolites      | Ethylene dibromide       |
| Isobutylparaben                         | Aldicarb sulfone    | Demeton O                  | Etridiazole              |
| Isopropyl ether                         | Aldicarb sulfoxide  | Demeton S                  | Famphur                  |
| Methyl paraben                          | Aldrin              | Desethylatrazine           | Fenamiphos               |
| Methacrylonitrile                       | Atraton             | Desisopropylatrazine (DIA) | Fenarimol                |
| Polychlorinated Biphenyls (PCB)         | Atrazine (3)        | delta- BHC                 | Fenitrothion             |
| PCB 1016 Aroclor                        | Azinphos-ethyl      | Diazinon                   | Fenoxaprop-ethyl         |
| PCB 1221 Aroclor                        | Azoxystrobin        | Dicamba                    | Fensulfthion             |
| PCB 1232 Aroclor                        | Baygon              | Dichlobenil                | Fenthion                 |
| PCB 1242 Aroclor                        | Bendiocarb          | Dichlofenthion             | Fenuron                  |
| PCB 1248 Aroclor                        | Benfluralin         | Dichloran                  | Fipronil                 |
| PCB 1254 Aroclor                        | Bensulide           | Dichloprop                 | Fluazifop-butyl          |
| PCB 1260 Aroclor                        | Bentazon            | Dichlorvos                 | Fluchloralin             |
| Perfluoro octanesulfonic acid (PFOS)    | β-BHC (beta-BHC)    | Dicrotophos                | Fluometuron              |
| Perfluoro-1-butanesulfonic acid (PFBS)  | Bolstar             | Dieldrin                   | Fluridone                |
| Perfluoro-1-hexanesulfonic acid (PFHxS) | Bromacil            | Diflubenzuron              | Fonofos                  |
| Perfluoroheptanoic acid (PFHpA)         | Butachlor           | Dimethoate                 | gamma-Chlordane          |
| Perfluoro-nonanoic acid (PFNA)          | Butylate            | Dinoseb                    | Halofenozide             |
| Perfluorooctanoic acid (PFOA)           | Carbaryl            | Dioxathion                 | Halosulfuron methyl      |
| Phenol                                  | Carbofuran          | Dioxin                     | Heptachlor (0.4)         |
| Pyrene                                  | Carbophenothion     | Diphenamid                 | Heptachlor Epoxide (0.2) |
| Tetrabromobisphenol A                   | Carboxin            | Disulfoton                 | Hexachlorobenzene        |
| Toxaphene                               | Chlordane           | Disulfoton sulfone         | Hexazinone               |
| <b>Pesticides µg/L</b>                  | Chlorfenvinphos     | Disulfoton sulfoxide       | Imidacloprid             |
| 1,2-Dibromo-3-chloropropane (0.2)       | Chloridazon         | Diuron                     | Isophorone               |
| 2,4,5-T                                 | Chlomeb             | Dursban                    | Kepone                   |
| 2,4,5-Trichlorobiphenyl                 | Chlorobenzilate     | Endosulfan sulfate         | Leptophos                |
| 2,4,6-Trichlorophenol                   | Chlorothalonil      | Endosulfan –A              | Lindane                  |
| 2,4-D (70)                              | chlorpyrifos methyl | Endosulfan –B              | Linuron                  |
| 2,4-DB                                  | cis-Nonachlor       | Endrin (2)                 | Malathion                |
| 3-Hydroxycarbofuran                     | cis-Permethrin      | Endrin Aldehyde            | Metalaxyl                |
| 4,4'-DDD                                | Clomazone           | EPN                        | Metazachlor              |
| 4,4'-DDE                                | Clopyralid          | EPTC                       | Methiocarb               |
| 4,4'-DDT                                | Coumaphos           | Esfenvalerate              | Methomyl                 |
| alpha-BHC                               | Crotoxyphos         | Ethalfuralin               | Methoxychlor             |
|   |                     |                            | Methyl paraoxon          |

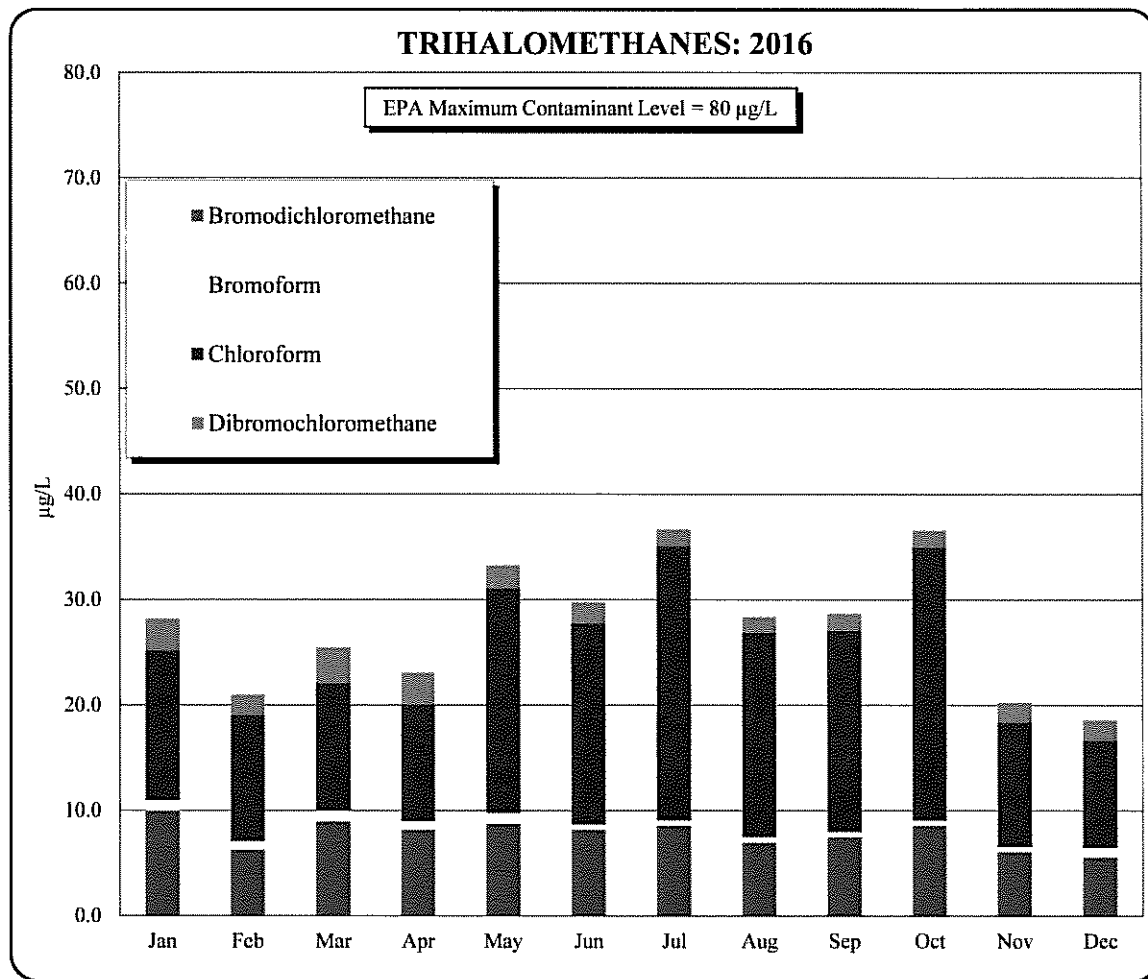
TREATED WATER QUALITY SUMMARY:  
TREATMENT PLANT EFFLUENT AVERAGES – 2016 (Continued)

|                         |  |                                  |  |
|-------------------------|--|----------------------------------|--|
| Methyl parathion        | Propargite   | 1,2,4-Trimethylbenzene           | Methyl tert-butyl ether (MTBE)               |
| Metolachlor             | Propazine  | 1,2-Dichloropropane (5)          | n-Butylbenzene                               |
| Metribuzin              | Propiconazole isomer a   | 1,3,5-Trimethylbenzene           | n-Propylbenzene                              |
| Metsulfuron-methyl      | Propiconazole isomer b   | 1,3-Dichloropropane              | o-Chlorotoluene                              |
| Mevinphos               | Propoxur   | 1,3-Dichloropropene              | o-Dichlorobenzene (600)                      |
| MGK 264 isomer a        | Prothiofos   | 1,4-Dioxane                      | p-Chlorotoluene                              |
| MGK 264 isomer b        | Siduron, Total   | 1-Chlorobutane                   | p-Dichlorobenzene (78.5)                     |
| MGK 326                 | Silvex (50)  | 2,2-Dichloropropane              | Pentachlorobenzene                           |
| Mirex                   | Simazine (4)   | 2-Hexanone                       | Pentachloroethane                            |
| Molinate                | Simetryn   | 2-Nitropropane                   | p-Isopropyltoluene (Cymene)                  |
| Monocrotophos           | Stirofos   | 4-Methyl-2-Pentanone (MIBK)      | Propionitrile                                |
| Monuron                 | Sulfotep   | Acrylonitrile                    | sec-Butylbenzene                             |
| Naled                   | Tebuthiuron  | Allyl chloride                   | Styrene (100)                                |
| Napropamide             | Terbacil   | Anilazine                        | tert-Amyl Methyl ether (TAME)                |
| Neburon                 | Terbufos   | Anthracene                       | tert-Butyl alcohol                           |
| N-nitrosomorpholine     | Terbutryn  | Benzene (5)                      | tert-Butylbenzene                            |
| N-nitrosopiperidine     | Thidiazuron  | Bromobenzene                     | Tetrachloroethene (5)                        |
| Norflurazon             | Thiobencarb  | Bromoethane                      | Tetrahydrofuran                              |
| Oryzalin                | Thionazin  | Bromomethane                     | Toluene (1000)                               |
| Oxadiazon               | trans-Nonachlor  | Carbon disulfide                 | trans-1,2-Dichloroethene (100)               |
| Oxamyl (200)            | Triademefon  | Chlorobenzene (100)              | trans-1,3-Dichloropropene                    |
| Oxychlor dane           | Triadimenol  | Chlorodifluoromethane (CFC 22)   | trans-1,4-Dichloro-2-butene                  |
| Oxyfluorfen             | Tribufos   | Chloroethane                     | Trichloroethylene (5) (TCE)                  |
| Paclobutrazol           | Trichloronate  | Chloromethane                    | Trichlorofluoromethane                       |
| Parathion               | Tricyclazole   | cis-1,2-Dichloroethene (70)      | Vinyl acetate                                |
| Pebulate                | Trifluralin  | cis-1,3-Dichloropropene          | Vinyl Chloride (2)                           |
| Pendimethalin           | Vernolate  | Dibromomethane                   | Xylenes (10000)                              |
| Pentachlorophenol (1)   | Vinclozolin  | Dichlorodifluoromethane (CFC-12) | <b>Pharmaceuticals/Hormones (µg/L, ng/L)</b> |
| Pentachloronitrobenzene | Z-Phosphamidon   | Dichloromethane (5)              | 17 alpha-Estradiol                           |
|                         | <b>Volatile Organic Compounds (VOC) - from solvents, feedstock/ fuels, Flame retardants (µg/L, ng/L)</b> |                                  |  |
| Permethrin Isomers      |  | Diisopropyl ether                | 17 alpha-Ethynyl estradiol                   |
| Permethrin, cis & trans | 1,1,1,2-Tetrachloroethane  | Epichlorohydrin                  | 17-beta-Estradiol                            |
| Phorate                 | 1,1,1-Trichloroethane (200)  | Ether                            | Acetaminophen (Tylenol)                      |
| Phosmet                 | 1,1,2,2-Tetrachloroethane  | Ethyl Benzene (700)              | Antipyrine                                   |
| Picloram                | 1,1,2-Trichloroethane (5)  | Ethyl tert-butyl ether           | Atenolol                                     |
| Profluralin             | 1,1-Dichloroethane   | Hexachloroethane                 | Azithromycin                                 |
| Prometon                | 1,1-Dichloroethene (7)   | Hexachlorobutadiene              | Bacitracin                                   |
| Prometryn               | 1,1-Dichloropropene  | Isopropylbenzene (Cumene)        | Bezafibrate                                  |
| Pronamide               | 1,2,3-Trichlorobenzene   | m-Dichlorobenzene                | Caffeine                                     |
| Propachlor              | 1,2,3-Trichloropropane   | Methyl iodide                    |  |
| Propanil                | 1,2,3-Trimethylbenzene   |                                  |  |
|                         | 1,2,4-Trichlorobenzene (70)  |                                  |  |

TREATED WATER QUALITY SUMMARY:  
TREATMENT PLANT EFFLUENT AVERAGES – 2016 (Continued)

|                           |                       |
|---------------------------|-----------------------|
| Carbadox                  | Oleandomycin          |
| Carbamazepine             | Oxytetracycline       |
| Carboxin                  | Paraxanthine          |
| Chloramphenicol           | Penicillin G          |
| Chlorotetracycline        | Penicillin V          |
| Ciprofloxacin             | Phenanthrene          |
| Clofibric acid            | Prednisone            |
| cis-Testosterone          | Primidone             |
| Cotinine                  | Progesterone          |
| Dexamethasone             | Roxithromycin         |
| Diazepam (Valium)         | Salicylic acid        |
| Diclofenac                | Salinomycin           |
| Diethylstilbestrol (DES)  | Simvastatin           |
| Dilantin                  | Sulfachloropyridazine |
| Diltiazem                 | Sulfadiazine          |
| Doxycycline               | Sulfadimethoxine      |
| Enrofloxacin              | Sulfamerazine         |
| Erythromycin              | Sulfamethazine        |
| Estradiol                 | Sulfamethizole        |
| Estriol                   | Sulfamethoxazole      |
| Estrone                   | Sulfasalazine         |
| Fluoxetine (Prozac)       | Sulfathiazole         |
| Gemfibrozil               | trans-Testosterone    |
| Ibuprofen                 | Tetracycline          |
| Iopromide                 | Theobromine           |
| Lasalocid                 | Theophylline          |
| Levothyroxine (Synthroid) | Thiabendazole         |
| Lincomycin                | trans-Testosterone    |
| Meprobamate               | Triclocarban          |
| Monensin                  | Triclosan             |
| Naproxen (Aleve)          | Trimethoprim          |
| Narasin                   | Tylosin               |
| Norfloxacin               | Virginiamycin M1      |

DISTRIBUTION SYSTEM AVERAGE TRIHALOMETHANES - 2016



Trihalomethanes (THMs) are organic compounds formed when chlorine disinfectant is added to the water. The use of chlorine and other chlorine-based disinfectant compounds is mandated by health regulatory agencies to eliminate microbiological contaminants from drinking water. The creation of THMs is a consequence of this necessary practice. THMs are comprised of four individual compounds. EPA has established 80 mg/L as the MCL for Total Trihalomethanes (the sum of the four individual compounds). The amounts present in the Denver distribution system are consistently below the 80 mg/L level.

WATER QUALITY SAMPLE COLLECTION AND ANALYTICAL PROCEDURES - 2016

Samples Collected:

|                     |               |
|---------------------|---------------|
| Watershed           | 6,826         |
| Treatment plant     | 3,168         |
| Distribution system | 16,575        |
| Other               | 5,599         |
|                     | <u>32,168</u> |

Analyses Performed:

|                 |               |
|-----------------|---------------|
| Microbiological | 11,407        |
| Chemical        | 49,829        |
|                 | <u>61,236</u> |

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# Transmission and Distribution

## 2016 Facts

|  |         |
|--|---------|
| Miles of pipe installed, net of reductions ..... | 17.6    |
| Miles of pipe in system .....                    | 3,109.3 |
| Miles of recycled water mains in system .....    | 73.5    |
| Number of valves operated and maintained .....   | 83,171  |
| Number of recycled water valves in system .....  | 1,538   |
| Number of hydrants operated and maintained ..... | 20,556  |
| Leak Detection Program:                          |         |
| Miles of pipe surveyed .....                     | 922     |
| Visible leaks pinpointed .....                   | 134     |
| Non-visible leaks detected .....                 | 68      |

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TRANSMISSION AND DISTRIBUTION MAINS<sup>1</sup> - 2016

SUMMARY OF PIPE BY MATERIAL

| Kind of Pipe                | Length in Feet    |               | Length in Miles   |                |
|-----------------------------|-------------------|---------------|-------------------|----------------|
|                             | 12-31-15          | Net Change    | 12-31-16          | 12-31-16       |
| Cast Iron                   | 5,895,795         | (56,169)      | 5,839,626         | 1,106.0        |
| Cement Asbestos             | 1,659,669         | (1,396)       | 1,658,273         | 314.1          |
| Cement Mortar Coated Steel  | 121               | (117)         | 4                 | -              |
| Concrete <sup>4</sup>       | 10,934            | -             | 10,934            | 2.1            |
| Copper                      | 1,406             | (118)         | 1,288             | 0.2            |
| Ductile iron                | 3,218,153         | 15,165        | 3,233,318         | 612.4          |
| Embedded Cyl Prestressed    | 79,108            | 2             | 79,110            | 15.0           |
| Galvanized                  | 4,307             | (71)          | 4,236             | 0.8            |
| Lined Cyl Prestressed       | 231,198           | (23)          | 231,175           | 43.8           |
| Non-Cyl Prestressed         | 7,558             | -             | 7,558             | 1.4            |
| Pretensioned Concrete       | 69,744            | (24)          | 69,720            | 13.2           |
| Polyvinyl Chloride          | 3,215,452         | 136,537       | 3,351,989         | 634.8          |
| Reinforced Concrete Cyl     | 288,472           | (40)          | 288,432           | 54.6           |
| Reinforced Concrete Non-Cyl | 72,911            | -             | 72,911            | 13.8           |
| Steel <sup>3</sup>          | 1,546,648         | 146           | 1,546,794         | 293.0          |
| Steel -tape Coated          | -                 | -             | -                 | -              |
| Steel - enamel Coated       | -                 | -             | -                 | -              |
| Unknown <sup>2</sup>        | 22,860            | (1,199)       | 21,661            | 4.1            |
|                             | <u>16,324,336</u> | <u>92,693</u> | <u>16,417,029</u> | <u>3,109.3</u> |

SUMMARY OF PIPE BY DIAMETER

| Diameter of Pipe in Inches | Length in Feet    |               | Length in Miles   |                |
|----------------------------|-------------------|---------------|-------------------|----------------|
|                            | 12-31-15          | Net Change    | 12-31-16          | 12-31-16       |
| 0.75                       | 134               | (24)          | 110               | -              |
| 1                          | 329               | (14)          | 315               | 0.1            |
| 1.5                        | 395               | (1)           | 394               | 0.1            |
| 2                          | 1,908             | (146)         | 1,762             | 0.3            |
| 3                          | 5,166             | (7)           | 5,159             | 1.0            |
| 4                          | 119,763           | (508)         | 119,255           | 22.6           |
| 6                          | 4,759,348         | (3,722)       | 4,755,626         | 900.7          |
| 8                          | 4,739,147         | 50,285        | 4,789,432         | 907.1          |
| 10                         | 128,379           | (58)          | 128,321           | 24.3           |
| 12                         | 3,334,198         | 43,036        | 3,377,234         | 639.6          |
| 14                         | 40,019            | (23)          | 39,996            | 7.6            |
| 15                         | 4,502             | -             | 4,502             | 0.9            |
| 16                         | 561,677           | 5,406         | 567,083           | 107.4          |
| 18                         | 50,607            | 19            | 50,626            | 9.6            |
| 20                         | 133,282           | (465)         | 132,817           | 25.2           |
| 24                         | 480,933           | (60)          | 480,873           | 91.1           |
| 27                         | 39                | (15)          | 24                | -              |
| 30                         | 419,340           | (33)          | 419,307           | 79.4           |
| 33                         | -                 | -             | -                 | -              |
| 36                         | 491,620           | 53            | 491,673           | 93.1           |
| 40                         | 59                | -             | 59                | -              |
| 42                         | 204,663           | (1,027)       | 203,636           | 38.6           |
| 45                         | 76                | -             | 76                | -              |
| 46                         | 22,109            | 1             | 22,110            | 4.2            |
| 48                         | 122,538           | 1             | 122,539           | 23.2           |
| 51                         | 6,359             | -             | 6,359             | 1.2            |
| 54                         | 177,152           | 24            | 177,176           | 33.6           |
| 57                         | 12,979            | 9             | 12,988            | 2.5            |
| 60                         | 185,903           | 9             | 185,912           | 35.2           |
| 63                         | 17,586            | (3)           | 17,583            | 3.3            |
| 66                         | 78,566            | -             | 78,566            | 14.9           |
| 67                         | 1,007             | -             | 1,007             | 0.2            |
| 72                         | 112,024           | (27)          | 111,997           | 21.2           |
| 78                         | -                 | -             | -                 | -              |
| 84                         | 18,241            | (6)           | 18,235            | 3.5            |
| 88                         | -                 | -             | -                 | -              |
| 90                         | 32,609            | (11)          | 32,598            | 6.2            |
| 96                         | 358               | -             | 358               | 0.1            |
| 108                        | 57,886            | -             | 57,886            | 11.0           |
| 120                        | 3,369             | -             | 3,369             | 0.6            |
| 144                        | 66                | -             | 66                | -              |
| 150                        | -                 | -             | -                 | -              |
|                            | <u>16,324,336</u> | <u>92,693</u> | <u>16,417,029</u> | <u>3,109.3</u> |

<sup>1</sup>Mains within the City and Total Service Contract Areas.

<sup>2</sup>Unknown pipe material is assumed to be cast iron.

<sup>3</sup>Steel pipe is no longer separated out by pipe coating. That information is tracked separately.

<sup>4</sup>The Conduit Rectification Project has allowed concrete pipe to be more discretely defined as variations of Cylindrical Prestressed and Reinforced.

VALVES<sup>1</sup> - 2016

SUMMARY OF VALVES BY TYPE

| Type of Valve               | 12-31-15      | Net Change | 12-31-16      |
|-----------------------------|---------------|------------|---------------|
| Air vacuum valve            | 3,180         | 15         | 3,195         |
| Ball valve                  | 41            | -          | 41            |
| Blowoff valve               | 3,271         | 18         | 3,289         |
| Butterfly valve             | 1,802         | 10         | 1,812         |
| Check valve                 | 96            | 4          | 100           |
| Cone valve                  | 130           | (5)        | 125           |
| Gate valve                  | 47,188        | (480)      | 46,708        |
| Hub valve                   | 24            | -          | 24            |
| MacDougall blowoff valve    | 145           | (1)        | 144           |
| Pito (Corp stop)            | 620           | (3)        | 617           |
| Pressure regulating valve   | 291           | (5)        | 286           |
| Unknown                     | -             | -          | -             |
| Vacuum valve                | 16            | -          | 16            |
| Gate valve - Resilient Seat | 24,895        | 1,376      | 26,271        |
| Altitude valve              | 1             | -          | 1             |
| Corp Stop                   | 508           | (8)        | 500           |
| Surge valve                 | 22            | -          | 22            |
| Slide gate valve            | 12            | -          | 12            |
| Plug valve                  | -             | -          | -             |
| Sleeve valve                | 5             | -          | 5             |
| Knife valve                 | 3             | -          | 3             |
|                             | <u>82,250</u> | <u>921</u> | <u>83,171</u> |

SUMMARY OF VALVES BY DIAMETER

| Diameter of Valve in Inches | 12-31-15      | Net Change | 12-31-16      |
|-----------------------------|---------------|------------|---------------|
| 0.75                        | 71            | -          | 71            |
| 1                           | 1,321         | (7)        | 1,314         |
| 2                           | 3,579         | 19         | 3,598         |
| 2.5                         | -             | -          | -             |
| 3                           | 170           | -          | 170           |
| 4                           | 1,800         | 18         | 1,818         |
| 6                           | 38,327        | 346        | 38,673        |
| 8                           | 19,561        | 276        | 19,837        |
| 10                          | 624           | 1          | 625           |
| 12                          | 14,317        | 259        | 14,576        |
| 14                          | 105           | (3)        | 102           |
| 15                          | 2             | -          | 2             |
| 16                          | 504           | 14         | 518           |
| 18                          | 139           | -          | 139           |
| 20                          | 252           | (5)        | 247           |
| 24                          | 691           | -          | 691           |
| 27                          | -             | -          | -             |
| 30                          | 253           | 1          | 254           |
| 36                          | 231           | 1          | 232           |
| 42                          | 90            | 1          | 91            |
| 48                          | 75            | -          | 75            |
| 54                          | 46            | -          | 46            |
| 60                          | 47            | -          | 47            |
| 66                          | 4             | -          | 4             |
| 72                          | 22            | -          | 22            |
| 84                          | 7             | -          | 7             |
| 96                          | 6             | -          | 6             |
| 108                         | 3             | -          | 3             |
| 120                         | 3             | -          | 3             |
|                             | <u>82,250</u> | <u>921</u> | <u>83,171</u> |

<sup>1</sup>Valves within the City and Total Service Contract Areas.

# FIRE HYDRANTS<sup>1</sup> - 2016

## FIRE HYDRANTS

| Size in Inches | Total Hydrants |            |               |
|----------------|----------------|------------|---------------|
|                | 12-31-15       | Net Change | 12-31-16      |
| 4              | 41             | -          | 41            |
| 6              | 20,228         | 287        | 20,515        |
|                | <u>20,269</u>  | <u>287</u> | <u>20,556</u> |

## FIRE HYDRANT BRANCH PIPE

| Size in Inches | Kind of Pipe      | Length in Feet |              |                |
|----------------|-------------------|----------------|--------------|----------------|
|                |                   | 12-31-15       | Net Change   | 12-31-16       |
| 4              | Cast iron         | 783            | -            | 783            |
| 4              | Ductile iron      | 101            | 7            | 108            |
| 6              | Cast iron         | 86,169         | (1,853)      | 84,316         |
| 6              | Cement asbestos   | 3,059          | (40)         | 3,019          |
| 6              | Ductile iron      | 272,845        | 9,705        | 282,550        |
| 6              | Polyvinylchloride | 929            | (12)         | 917            |
| 6              | Steel             | 18,765         | 277          | 19,042         |
| 6              | Unknown           | 12,713         | (267)        | 12,446         |
| 8              | Steel             | 385            | -            | 385            |
|                |                   | <u>395,749</u> | <u>7,817</u> | <u>403,566</u> |

## SUMMARY OF FIRE HYDRANT BRANCH PIPE BY MATERIAL

| Kind of Pipe      | Length in Feet |              |                |
|-------------------|----------------|--------------|----------------|
|                   | 12-31-15       | Net Change   | 12-31-16       |
| Cast iron         | 86,952         | (1,853)      | 85,099         |
| Cement asbestos   | 3,059          | (40)         | 3,019          |
| Ductile iron      | 272,946        | 9,712        | 282,658        |
| Polyvinylchloride | 929            | (12)         | 917            |
| Steel             | 19,150         | 277          | 19,427         |
| Unknown           | 12,713         | (267)        | 12,446         |
|                   | <u>395,749</u> | <u>7,817</u> | <u>403,566</u> |

## SUMMARY OF FIRE HYDRANT BRANCH PIPE BY DIAMETER

| Size in Inches | Length in Feet |              |                |
|----------------|----------------|--------------|----------------|
|                | 12-31-15       | Net Change   | 12-31-16       |
| 4              | 884            | 7            | 891            |
| 6              | 394,480        | 7,810        | 402,290        |
| 8              | 385            | -            | 385            |
|                | <u>395,749</u> | <u>7,817</u> | <u>403,566</u> |

<sup>1</sup>Fire hydrants and branch pipe within the City and Total Service Contract Areas.

RECYCLED WATER MAINS AND VALVES - 2016

SUMMARY OF PIPE BY MATERIAL

| Kind of Pipe | Length in Feet |                |
|--------------|----------------|----------------|
|              | 12-31-15       | 12-31-16       |
| Copper       | 117            | -              |
| Ductile Iron | 25,929         | (79)           |
| PVC          | 193,308        | 33,107         |
| Steel        | 135,704        | (13)           |
|              | <u>355,058</u> | <u>33,015</u>  |
|              |                | <u>388,073</u> |

SUMMARY OF PIPE BY DIAMETER

| Size | Kind of Pipe | Length in Feet |                |
|------|--------------|----------------|----------------|
|      |              | 12-31-15       | 12-31-16       |
| 2"   | Copper       | 83             | 83             |
| 2"   | PVC          | 5              | 5              |
| 2"   | Steel        | 17             | 17             |
| 3"   | Copper       | 34             | 34             |
| 3"   | PVC          | 13             | 13             |
| 4"   | Ductile Iron | 196            | 196            |
| 4"   | PVC          | 6,763          | 3,086          |
| 4"   | Steel        | 26             | 26             |
| 6"   | Ductile Iron | 4,725          | 19             |
| 6"   | PVC          | 14,609         | 2,731          |
| 6"   | Steel        | 481            | 481            |
| 8"   | Ductile Iron | 2,202          | (99)           |
| 8"   | PVC          | 36,215         | 20             |
| 8"   | Steel        | 231            | (13)           |
| 10"  | Ductile Iron | 107            | 107            |
| 10"  | PVC          | 167            | 167            |
| 10"  | Steel        | 93             | 93             |
| 12"  | Ductile Iron | 308            | 308            |
| 12"  | PVC          | 44,718         | 44,718         |
| 12"  | Steel        | 9,929          | 9,929          |
| 14"  | Steel        | 13             | 13             |
| 16"  | Ductile Iron | 45             | 45             |
| 16"  | PVC          | 26,015         | 26,015         |
| 16"  | Steel        | 119            | 119            |
| 18"  | PVC          | 42             | 42             |
| 18"  | Steel        | 27             | 27             |
| 20"  | PVC          | 33,705         | 27,271         |
| 20"  | Steel        | 286            | 286            |
| 24"  | PVC          | 31,014         | 31,014         |
| 24"  | Steel        | 5,748          | 5,748          |
| 30"  | Ductile Iron | 1,399          | 1,399          |
| 30"  | PVC          | 41             | 41             |
| 30"  | Steel        | 23,725         | 23,725         |
| 36"  | DI           | 16,946         | 16,946         |
| 36"  | PVC          | -              | -              |
| 36"  | Steel        | 29,292         | 29,292         |
| 42"  | PVC          | -              | -              |
| 42"  | Steel        | 36,319         | 36,319         |
| 48"  | PVC          | -              | -              |
| 48"  | Steel        | 8,018          | 8,018          |
| 54"  | Steel        | 21,304         | 21,304         |
| 84"  | Steel        | 78             | 78             |
|      |              | <u>355,058</u> | <u>33,015</u>  |
|      |              |                | <u>388,073</u> |

RECYCLED WATER VALVES

SUMMARY OF VALVES BY TYPE

| Type of Valve     | 12-31-15     | 12-31-16          |
|-------------------|--------------|-------------------|
| Air vacuum valves | 340          | 340               |
| Blowoff valve     | 188          | 199               |
| Butterfly valve   | 217          | 217               |
| Check Valve       | 36           | 36                |
| Comp Stop         | 102          | 95                |
| Cone              | 6            | 6                 |
| Gate valve        | 598          | 619               |
| Pitot             | 18           | 18                |
| Plug Valve        | 3            | 3                 |
| PRV               | 3            | 4                 |
| Sleeve Valve      | 1            | 1                 |
|                   | <u>1,512</u> | <u>1,538</u>      |
|                   |              | <u>Net Change</u> |
|                   |              | 26                |

SUMMARY OF VALVES BY DIAMETER

| Diameter of Valve | 12-31-15     | 12-31-16          |
|-------------------|--------------|-------------------|
| 1"                | 115          | 107               |
| 2"                | 265          | 276               |
| 2.5"              | 5            | 5                 |
| 4"                | 182          | 192               |
| 6"                | 419          | 434               |
| 8"                | 136          | 133               |
| 10"               | 25           | 25                |
| 12"               | 156          | 156               |
| 16"               | 30           | 30                |
| 18"               | 1            | 1                 |
| 20"               | 47           | 47                |
| 24"               | 55           | 55                |
| 30"               | 19           | 19                |
| 36"               | 28           | 28                |
| 42"               | 13           | 13                |
| 48"               | 7            | 8                 |
| 54"               | 9            | 9                 |
|                   | <u>1,512</u> | <u>1,538</u>      |
|                   |              | <u>Net Change</u> |
|                   |              | (8)               |

BREAKS IN MAINS, WATER CONTROL AND LEAK DETECTION SERVICES - 2016

DENVER MAIN BREAKS

| <u>Size</u> | <u>Pipe Material</u> | <u>Number of Breaks</u> |
|-------------|----------------------|-------------------------|
| 3"          | Cast Iron            | 1                       |
| 4"          | Cast Iron            | 1                       |
| 4"          | Ductile Iron         | 1                       |
| 4"          | Cement Asbestos      | 1                       |
| 6"          | Ductile Iron         | 10                      |
| 6"          | Cement Asbestos      | 9                       |
| 6"          | PVC                  | -                       |
| 6"          | Cast Iron            | 112                     |
| 8"          | Cement Asbestos      | 1                       |
| 8"          | Ductile Iron         | 8                       |
| 8"          | PVC                  | -                       |
| 8"          | Cast Iron            | 38                      |
| 12"         | Cement Asbestos      | 3                       |
| 12"         | Cast Iron            | 35                      |
| 12"         | Ductile Iron         | 4                       |
| 16"         | PVC                  | -                       |
| 16"         | Ductile Iron         | 1                       |
| 16"         | Steel                | -                       |
| 20"         | Steel                | -                       |
|             |                      | <u>225</u>              |

TOTAL SERVICE MAIN BREAKS

| <u>Size</u> | <u>Pipe Material</u> | <u>Number of Breaks</u> |
|-------------|----------------------|-------------------------|
| 4"          | Cast Iron            | -                       |
| 4"          | Ductile Iron         | 1                       |
| 6"          | Ductile Iron         | 2                       |
| 6"          | Cast Iron            | 25                      |
| 6"          | Cement Asbestos      | 4                       |
| 8"          | Cement Asbestos      | 1                       |
| 8"          | Ductile Iron         | 3                       |
| 8"          | Cast Iron            | 16                      |
| 8"          | PVC                  | 1                       |
| 10"         | Cast Iron            | 2                       |
| 12"         | Cast Iron            | 1                       |
| 12"         | Ductile Iron         | -                       |
| 16"         | Ductile Iron         | -                       |
|             |                      | <u>56</u>               |

WATER CONTROL SERVICES

|   | <u>2016</u>   | <u>2015</u>   | <u>2014</u>   | <u>2013</u>   | <u>2012</u>   |
|---|---------------|---------------|---------------|---------------|---------------|
| Service Calls                           | 8,060         | 7,818         | 7,565         | 8,989         | 11,892        |
| Service Leaks                           | 503           | 542           | 337           | 719           | 402           |
| Service Turn Ons                        | 417           | 349           | 319           | 649           | 844           |
| Service Turn Offs                       | 586           | 601           | 614           | 1,588         | 935           |
| Valve Leaks                             | 66            | 128           | 59            | 64            | 58            |
| Fire Hydrants Hit                       | 151           | 109           | 155           | 146           | 146           |
| Fire Hydrants Packed and Greased        | 21,123        | 17,351        | 28,110        | 22,153        | 23,360        |
| Fire Hydrants Excavated for Replacement | 60            | 41            | 116           | 160           | 435           |
| Fire Hydrants, Miscellaneous Repairs    | 2,575         | 592           | 1,125         | 2,718         | 1,171         |
| Total Fire Hydrants Tested and Repaired | <u>23,909</u> | <u>18,093</u> | <u>29,506</u> | <u>25,177</u> | <u>25,112</u> |

LEAK DETECTION PROGRAM

|  | <u>2016</u>       | <u>2015</u>       | <u>2014</u>       | <u>2013</u>       | <u>2012</u>       |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| Non-Visible Leaks Detected                                       | 68                | 62                | 110               | 61                | 93                |
| Non-Visible Water Leaks Loss (1000's of Gallons) <sup>1</sup>    | 17,870            | 16,262            | 28,908            | 16,030            | 24,440            |
| Visible Leaks Pinpointed   | 134               | 131               | 160               | 116               | 137               |
| Miles Surveyed   | 922               | 808               | 1,290             | 615               | 1,022             |
| Savings Generated from Saving Lost Water <sup>1</sup>            | \$ 34,130         | \$ 31,120         | \$ 55,212         | \$ 30,618         | \$ 46,681         |
| Savings Generated from Pinpointing Leaks <sup>1</sup>            | 93,800            | 91,700            | 112,000           | 81,200            | 95,900            |
| Total Savings Generated from Leak Detection Program <sup>1</sup> | <u>\$ 127,930</u> | <u>\$ 122,820</u> | <u>\$ 167,212</u> | <u>\$ 111,818</u> | <u>\$ 142,581</u> |

<sup>1</sup>Estimated.

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