# Denver Board of Water Commissioners Employees' Retirement Program

Employees' Retirement Plan

Denver Water 401 (k) Retirement Savings Plan

Denver Water 457 Deferred Compensation Plan



Treasury Department, Denver Board of Water Commissioners 1600 W. 12<sup>th</sup> Avenue, Denver Co 80204-3412, Phone: 303-328-6410



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# I. INTRODUCTORY SECTION (UNAUDITED)



1600 West 12th Ave Denver, CO 80204-3412 303.628.6000 denverwater.org

Letter of Transmittal

June 1, 2018

To the Board of Water Commissioners and Participants in the Plans of the Denver Water Retirement Program:

We are pleased to present the Annual Report of the Retirement Program of the Denver Board of Water Commissioners for the fiscal year ended December 31, 2018. The Retirement Program includes three trusteed funds ("Plans") and two additional, unfunded benefits. The trusteed funds are the Employees' Retirement Plan of the Denver Board of Water Commissioners ("Defined Benefit Plan" or "DB Plan"), the Denver Water Supplemental Retirement Savings Plan ("401(k) Plan" or "SRSP") and the Denver Water 457 Deferred Compensation Plan ("457 Plan"). The 401(k) Plan and the 457 Plan are collectively referred to as the "Defined Contribution Plans" or "DC Plans". This report contains audited financial statements only for the trusteed plans. The two unfunded benefits are a Retiree Medical Coverage Program and a Retirement Financial Planning Reimbursement Program. Although the two unfunded benefits are discussed briefly in this letter, financial statements were not prepared for either of the unfunded benefits nor are they discussed in the other sections of this Annual Report.

The report is divided into five sections: An Introductory Section, a Financial Section, an Investment Section, an Actuarial Section, and a Statistical Section.

Management assumes full responsibility for both the accuracy of the data, and the completeness and fairness of the report, including the financial statement presentation, 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. To the best of management's knowledge and belief, the data is accurate in all material respects and presents fairly the financial position and results of operations of the Plans.

CliftonLarsonAllen LLP audited the three financial statements included in this document and issued an unmodified ("clean") opinion on each of those financial statements for the year ended December 31, 2018. The independent accountant's report is the first page of each set of statements, all of which are included in the Financial Section of this report. Accounting principles accepted in the United States of America, (GAAP) require that management provide a narrative overview and analysis of the financial status of each plan to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). Each set of financial statements in the Financial Section includes the MD&A just after the auditor's report. The MD&A complements this letter of transmittal and should be read in conjunction with it.

The Introductory Section contains information about the administrative organization, the Trustee, or the Sponsor of each Plan included in the Retirement Program, the Denver Water Retirement Program Committee and the Consultants and Advisors who provide advice concerning the various elements of the Retirement Program. The Financial Section contains the audited financial statements of the Plans and other required supplementary information. The Investment Section contains a report on investment activity, investment policies, investment results, and various investment schedules. The Actuarial Section contains the actuarial assumptions and methods used in the DB Plan, a summary of DB Plan provisions, the results of the annual actuarial valuation, and other

actuarial statistics. The Statistical Section presents other significant data pertaining to the Plans, such as trend information on DB Plan expenses and revenues as well as information about the retired members of the DB Plan.

#### **Background of the Retirement Program**

The Denver Board of Water Commissioners ("Board") is a five-member board appointed by the Mayor of Denver, Colorado to oversee the operations of the water utility that serves Denver and a large part of the Denver metropolitan area ("Denver Water"). Denver Water was created by the people of Denver by the Charter of the City and County of Denver, Colorado ("City"). Article X, Section 10.1.6 of the City Charter grants to the Board authority to establish and amend benefit provisions for Denver Water employees.

The *Employees' Retirement Plan of the Denver Board of Water Commissioners* was established on June 1, 1944 as a defined benefit, single-employer plan covering substantially all regular and discretionary employees of the Board. The Board is the sponsor, administrator and trustee of the assets of the DB Plan. The assets are held in custody by The Northern Trust Company. When it was first adopted, the DB Plan benefit was set at \$3 for each year of service with a maximum monthly payment of \$100. Employees were required to contribute \$3 per month. Part-time employees and those who were hired after the age of 50 were not permitted to participate in the plan. Payments did not begin until the age of 70 and they could have been delayed for up to three years. Over the years, the DB Plan has evolved. In 1971, cost of living adjustments were added. In 1981, employee contributions were eliminated. In 1985, early retirement at age 55 with 15 years of service became available, but at a reduced amount. In 1995, the Rule of 75 was adopted, permitting an unreduced retirement at the age of 55 with 20 years of service. In 1996, part-time employees were allowed to participate in the DB Plan, and in 2001 the 35-year cap on years of service used for computing benefits was eliminated.

In December 2016, the Board approved several changes to the Plan with an effective date of January 1, 2018. Employees hired prior to January 1, 2018 will contribute 3% of their compensation to be phased in over three years beginning in 2018. A second-tier plan was created for employees hired after January 1, 2018. These employees are required to contribute 3% of their compensation beginning immediately upon hire, will have a benefit multiplier of 1.75%, are eligible for special early retirement benefits under the rule of 85 at a minimum age of 60, and no cost of living adjustment. Employees who leave employment and choose not to receive a pension benefit will be refunded their contributions with an established rate of interest.

For employees hired prior to January 1, 2018, the DB Plan provides normal, special early (Rule of 75), and late retirement benefit options with limited annual cost-of-living adjustments, disability benefits and death benefits. Participants become fully vested after five (5) years of employment. DB Plan benefits are integrated with Social Security benefits and are determined by a formula defined in the DB Plan document. A more detailed explanation of benefits is outlined in the Summary of DB Plan Provisions in the Actuarial Section of this report.

As of December 31, 2018, there were 1,887 participants in the DB Plan, including 1,006 active members, 681 retirees and beneficiaries and 151 terminated employees entitled to benefits, but not receiving them yet.

The *Denver Water Supplemental Retirement Savings Plan* was established pursuant to Section 401(k) of the Internal Revenue Code (IRC), effective January 1, 1999. It is a single-employer defined contribution plan. All regular and discretionary employees are eligible to participate in the 401(k) Plan upon completion of a required introductory period. Denver Water matches 100% of each Participant's contribution up to 3% of the Participant's published base compensation. The SRSP provides for immediate vesting of all contributions. Participation in the SRSP is voluntary. Empower Retirement Service is the administrator of the SRSP. At the end of 2018 there were 895 active participants with balances and 295 terminated participants with balances. 90% of all eligible Denver Water employees participated in the SRSP Plan as of December 31, 2018.

Denver Water established a 457 Deferred Compensation Plan pursuant to Section 457 of the Internal Revenue Code (IRC) in 1987. Assets from that plan were transferred to the *Denver Water 457 Deferred Compensation Plan*, when it was established on January 3, 2001. All regular or discretionary employees are eligible to participate in the 457 Plan upon completion of a required introductory period. Denver Water does not contribute to the plan and employee participation is voluntary\*. Empower Retirement Service is the administrator of the SRSP. At the end of 2018, there were 462 active participants with balances and 196 terminated participants with balances. 40% of all eligible Denver Water employees participated in the 457 Plan as of December 31, 2018.

Denver Water offers a *Retirement Financial Planning Reimbursement Program* designed to encourage eligible employees to consult with a Certified Financial Planner (CFP®) of their choice about their retirement planning needs. Reimbursement requires certification that the services did not include tax preparation, legal, accounting or brokerage services, as the program is designed to be a tax-free reimbursement for "qualified retirement planning services" as described in Internal Revenue Code section 132(m). The Program is available to all employees with 5 years of credited service or more and has the maximum lifetime benefit of \$2,000. 13 employees used the counseling services during 2018 and 6 of those employees have subsequently retired. The total 2018 expenditures on the Retirement Financial Planning Reimbursement Program were \$15,100.

Denver Water began offering the Retiree Medical Coverage Program in 1995, which also was the first-year employees were able to retire under the Rule of 75. The benefit is in the form of partially subsidized health care costs, until the retiree attains age 65. The retiree's coverage ceases after the retiree becomes Medicare-eligible at age 65. At that point, a spouse may elect to remain in the program until age 65, and other dependents may also elect to remain in the program until the dependent attains the cut-off age for active employee dependents. Full cost premiums are charged to the spouse or the dependent if there is an election to remain in the program after the retiree's coverage ends. 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. In January 2012, the Board discontinued its contribution for this benefit for employees hired on or after January 16, 2012. However, these employees can still access this program at full cost upon meeting the Rule of 75. The Board approved changes in the eligibility requirements for Postemployment Healthcare Benefits in 2013. The minimum eligible age changed from 55 to 60 years while the Rule of 75 remained intact, converting it to a maximum five-year benefit. Certain employees, who had completed 25 years of service as of the end of 2013, retained the right to receive a subsidy, available at the time of their retirement, if retired under the Rule of 75, but before reaching age 65. For all other employees, the minimum retirement age to be eligible for benefits was raised to age 60. As of the end of 2018, 142 retirees were receiving this benefit.

Effective with the issuance of the December 31, 2007 financial statements, The Governmental Accounting Standards Board ("GASB") Statement No. 45, "Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions", requires Denver Water to accrue the cost of this benefit over the period of employment, much as a defined pension benefit is now accrued. Denver Water is in compliance with GASB Statement No. 45 and is accruing the liabilities related to health care coverage for Early Retirees as presented in its financial statements. Denver Water is not required to, and has not, established an irrevocable trust to accumulate assets for payment of future retiree health benefits. Payments of benefits are made on a pay-as-you-go basis in amounts necessary to provide current benefits to recipients. The annual expense for this benefit is calculated based on the annual required contribution as computed by the actuary. The expense recorded in 2018 was \$1.12 million and \$2.1 million was paid as benefits under the plan. Retirees receiving benefits contributed \$856,037 of premium equivalent costs. The Net OPEB Obligation for postemployment healthcare benefits as of the end of the year was \$13.6 million.

\*Does not include discretionary contributions

#### Major Initiatives in 2018 and 2017

- **DB Plan changes approved by the Board -** On December 5, 2018 the Plan was amended to address necessary Plan changes from transitioning to a third-party administrator for benefit payment services. The changes to the Plan addressed credited service for participants on short-term and long-term disability and on active military leave who return to work, covered compensation for participants on long-term disability, return of employee contributions when deferred vested participants die before receiving benefits, timing of certain elections of lump sum benefits, and timing for elections of benefits.
- In 2017 the Board approved changes to the Plan Document in response to the Plan changes that were made in December of 2016. As of January 1, 2018, the following changes went into effect:
  - o The addition of definitions of Tier one and Tier two members.
  - o Employee contributions from both tiers will be paid from pre-tax dollars.
  - Added an election to receive a refund of accumulated contributions for non-vested members.
  - The interest rate credited on refunds of employee contributions made on or after January 1, 2018 will be 2.5% compounded annually.
  - o Eliminate mandatory distributions except for required minimum distributions.
  - Require a person rehired on or after January 1, 2018 be placed in Tier two. Credited services are retained by the member if money is left in the Plan or is restored. Benefit is calculated under two formulas for rehired Tier one employees.
  - Provide for a time limit on restoration of credited service for reemployed non-vested members who took a refund of contributions. Member must be reemployed within two years of termination. Member must repay the refund of accumulated contributions with 8% interest within 60 days of reemployment otherwise they will forfeit their prior credited services. Can be repaid with after tax dollars or a trustee to trustee transfer from a qualifying plan.

#### Tier two members

- Changed the retirement formula for Tier two members to 1.75% times their average final compensation times their years of service and will not be integrated with social security.
- o Early retirement is at age 60 with 5 years of service with reduced benefit.
- Tier two members cannot vote on major changes to the Plan.
- Changed average final compensation for Tier two members to the highest 60 consecutive months in 10 years.
- A previously vested employee reemployed within two years after receiving a lump sum payment may have previous credited service restored if the employee repays the lump sum within 60 days with 8% interest.
- Manager Changes in the DB Plan. The Chief Finance Officer, with the assistance of the Investment Consultant for the DB Plan, approved the following changes in the investment manager lineup for the DB Plan:
  - Vanguard Growth was terminated to counter the large cap tilt that resulted from the termination of Advisory Research at the end of 2017. Additionally, Vanguard was determined to be too heavily concentrated in a single value factor, dividends, and thus did not contribute a true value counterbalance to the remainder of the portfolio.
  - o Alliance Bernstein (AB) US Small/Mid cap value strategy was selected to replace Vanguard.

#### DC Plan Fund Changes:

o Harbor International was terminated and Arrowstreet was hired as its replacement.

#### Investments

As discussed in more detail in both the Financial Section and the Investment Section, assets of all Plans are held in trust for the exclusive benefit of participants and beneficiaries. Investment activities have been delegated to professional investment managers. The investment managers engaged by the Defined Benefit Plan as of December 31, 2018 are listed on page 86 of the report; funds included in the Defined Contribution Plans are listed on page 100 of the report. Activities of the professional managers are reviewed and evaluated quarterly by the investment consultant for each plan, the Retirement Program Committee (RPC), and Denver Water's Finance staff.

The investments in the Defined Benefit Plan returned -3.89% (gross of fees) during 2018, compared to the target benchmark return of -3.79% and the actuarial assumed rate of return of 7.00%. The annualized rate of return on assets of the Defined Benefit Plan was 6.09% over the last three years and 5.20% over the last five years. Returns on Defined Contribution Plans vary depending on the choices made by each participant.

A summary of the current investment objectives and guidelines for each fund, additional information concerning allocation of the DB Plan's assets, and more detailed information about investment performance is included in the Investment Section of this report.

#### **Funding**

As of January 1, 2019, the Funded Ratio of the DB Plan was 82.5%, compared to 80.8% the year before. Over the past ten years the Funded Ratio ranged from a low of 72.7% (01/01/09) to a high of 84.9% (01/01/16). More information about funding of the DB Plan, including a multi-year Schedule of Funding Progress, is provided in the Actuarial Section of this report.

Funding of the Defined Contribution Plans is primarily from employee contributions. Denver Water currently matches 100% of employee contributions to the 401(k) plan up to 3% of published base pay.

#### **Professional Services**

Professional consultants and advisors are engaged as necessary to perform professional services that are essential to the effective and efficient operation of the Plan. Opinions from the Independent Auditor for the Financial Statements of each of the Plans, an opinion from the actuary for the DB Plan, and a report from the Investment Performance Measurement Consultant to the DB Plan are included in this report. The consultants engaged to assist the CEO/Manager, various staff members, and the Board are listed on pages 15 - 19.

#### Acknowledgements

The compilation of this report reflects the combined effort of Denver Water's staff. It is intended to provide complete and reliable information about the Defined Benefit Plan and the Defined Contribution Plans. It will be made available to all members of the Denver Water Retirement Program.

We would like to express our appreciation to the Denver Water staff, specifically the members of the Retirement Program Committee and their support staff, the advisors, and to the many other people who have worked so diligently in the preparation of this report and toward the successful operation of the Denver Water Retirement Program.

Respectfully submitted,

James S. Lochhead, CEO/Manager

Gail Cagle

Chief Human Resources Officer, RPC Co-Chair

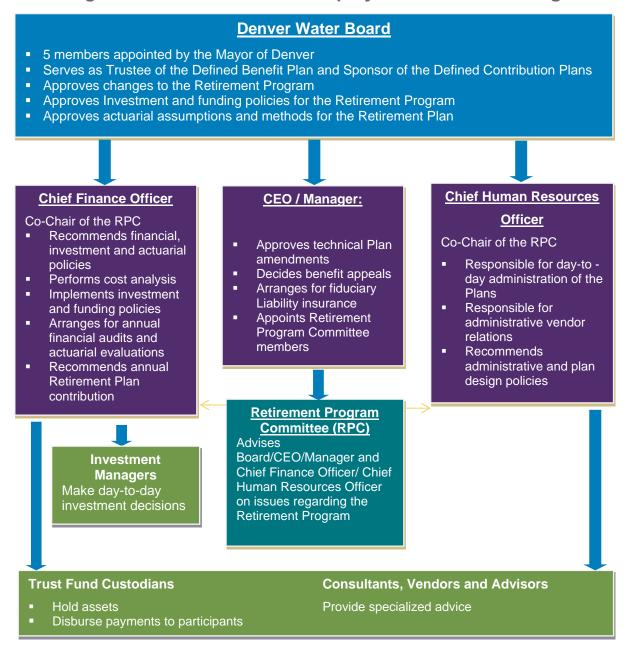
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Angela Bricmont

Chief Finance Officer, RPC Co-Chair

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# A. Organizational Chart of the Employees' Retirement Program



More information about investment professionals who provide services to the Retirement Program and their fees can be found on the following pages:19, 86, 94, 100 and 105.

# **B. Denver Board of Water Commissioners**

The Denver Board of Water Commissioners is the Sponsor of the Retirement Program and acts as Trustee of the Defined Benefit Plan.











BOARD OF WATER COMMISSIONERS - As of December 31, 2018

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

Paula Herzmark, President
Former Executive Director, Denver Health Foundation

Commissioner since April 2009; Term expires July 2019.

John R. Lucero, First Vice President

Former Deputy Director, Mayor's Office of Economic Development, Currently

Principal, Lucero Development Services

Commissioner since July 2007; Term expires July 2021

H. Gregory Austin, Vice President Former Partner, Holland & Hart LLP.

Commissioner since July 2009; Term expires July 2019

Gary Reiff, Vice President Chief Legal Officer, UCHealth Commissioner since October 2017; Term expires July 2023.

Craig Jones, Vice President

Managing Director, Colony Group's Rocky Mountain Region

Commissioner since October 2017; Term expires July 2023.

#### LAST 20 COMMISSIONERS

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 Jul 1995 to Jul 2001 Joe Shoemaker 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 October, 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 Thomas A. Gougeon Aug 2004 to July 2017 Penfield W. Tate Oct 2005 to July 2017

# C. Key Members of the Retirement Program Committee

The Retirement Program Committee ("RPC") - Responsible for advising the CEO/Manager with respect to retirement issues, was created by resolution of the Board in September 2005. The terms of the 2005 resolution were revised in 2013. Under the resolution, the Board retained full authority to approve substantive changes to the Retirement Program, investment and funding policies, and actuarial methods and assumptions. The 2013 resolution clarifies that the Retirement Program Committee will make recommendations to the Chiefs, the CEO/Manager or the Board, as appropriate, but will not have decision-making authority. The RPC is co-chaired by the Chief Human Resources Officer and Chief Finance Officer and includes key representatives from Finance, HR and the Legal. The CEO/manager issued a Policy that further describes the RPC's purpose, responsibilities, duties and procedures in November 2013. The primary purpose of the RPC, as outlined in the Executive Guideline, is to provide advice and recommendation to the co-chairs regarding proposed changes to the Retirement program, communication strategies, contractual obligations, legal and tax compliance and education and outreach.

James S. Lochhead - CEO / Manager since June 2010. Responsible for approving amendments to the Plans necessary to maintain tax qualified status, deciding benefit appeals, and arranging for fiduciary liability insurance for Plan fiduciaries. The CEO/Manager reports to the Board at least annually regarding the status of the Program and appoints members of the Retirement Program Committee.

Gail Cagle - Chief Human Resources Officer since January 2014; co-chair of the RPC. The Chief Human Resources Officer administers the Plans with regard to participants, including data maintenance, disclosures, calculations, payment of benefits and other similar duties. She is also responsible for communicating with participants and beneficiaries, recommending to CEO/Manager any changes to the Plans necessary to retain their tax qualified status evaluating and recommending changes in Program design and providing information related to the administration of the Program to the Board and the CEO/manager no less frequently than semi-annually.

Angela C. Bricmont - Chief Finance Officer since July 2010, co-chair of the RPC. The Chief Finance Officer recommends investment policy, actuarial methods and assumptions and annual contributions to the DB Plan. The Chief Finance Officer also analyzes and advises the Board and the CEO/Manager about the total cost impact of Program changes recommended by the Chief Finance Officer, implements investment and funding policies approved by the Board, allocates cash flow for the payment of benefits and other obligations, rebalances Plan assets, selects and monitors investment managers, auditors, actuaries and other financial experts. The Chief Finance Officer is responsible for reporting the financial activities and status of the Program to the Board and the CEO/Manager at least semi-annually.

Deb B. Engleman - Senior Benefits Administrator since June 1993; member RPC. The Chief Human Resources Officer has assigned to Ms. Engleman responsibility for daily monitoring, administration and evaluation of various employee benefit policies and programs and recommending changes to these programs. Ms. Engleman also administers external benefit-related contracts.

Usha Sharma - Treasurer since April 2009. The Chief Finance Officer has delegated various responsibilities pertaining to the Plans, including the preparation of this Annual Financial Report, to the Treasurer and her subordinates.

Kris Bates - Office of General Council; Ms. Bates has been employed by Denver Water since 2004; member RPC. Ms. Bates works with outside subject matter legal experts to advise the Chief Finance Officer and the Chief Human Resources Officer.

Aneta M. Rettig - Finance Supervisor with Denver Water since March 2006; member RPC; supports the Treasurer in fulfilling her responsibilities pertaining to the Plans.

Jeff Bogner - Senior Finance Analyst since August 2012; member RPC; supports the Treasurer in fulfilling her responsibilities pertaining to the Plans.

# D. Consultants and Advisors

## **Consulting Services**

Actuary	Gabriel Roeder Smith & Company	7900 East Union Avenue, Suite 650 Denver, Colorado 80237
Benefit Consultant	Gallagher Benefit Services, Inc.	6399 South Fiddler's Green Circle Suite 200 Greenwood Village, CO 80111
Legal Counsel	Davis Graham & Stubbs LLP	1550 17th Street, Suite 500 Denver, CO 80202
Performance Evaluation	The Northern Trust Company	50 S. LaSalle Street, Chicago, IL 60675
Investment Advisor (DB Plan)	Callan Associates Inc.	1900 16th Street Suite 1175 Denver, CO 80202
Investment Advisor (DC Plans)	Ellwood Associates	6400 S Fiddlers Green Cir Greenwood Village, CO 80111

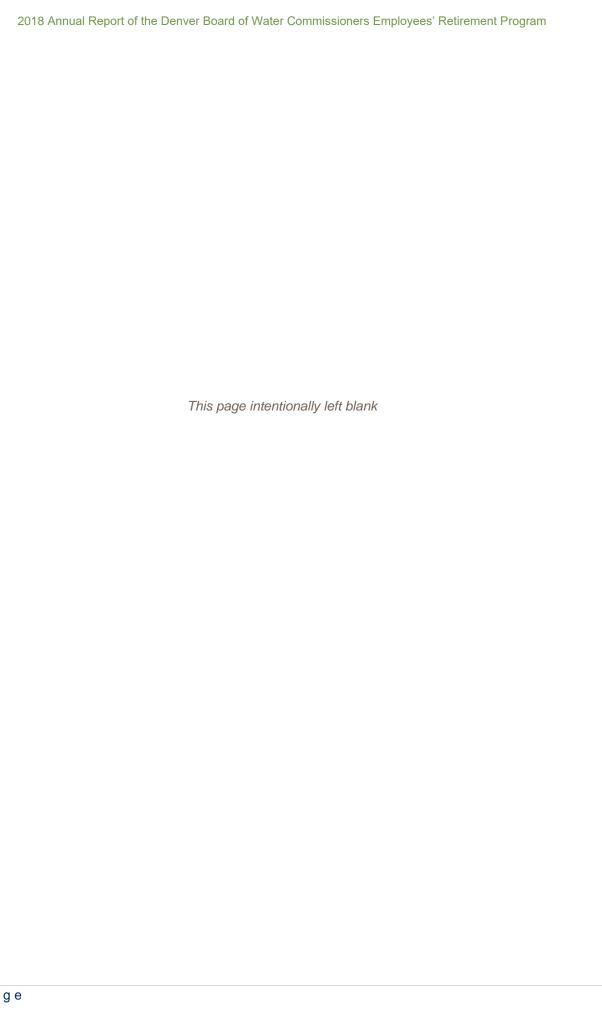
#### **Asset Custodian**

The Northern Trust Company (DB Plan)	50 S. LaSalle Street, Chicago, IL 60675
Empower Retirement (formerly Great-West Retirement Services) (DC Plans)	8515 East Orchard Road, 10T2 Greenwood Village, CO 80111

## **Independent Auditor**

CliftonLarsonAllen	370 Interlocken Boulevard, Suite 500 Broomfield, Colorado 80021
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Information regarding investment managers who provide services to the Plans and information regarding fees paid to the Program's professional service providers and investment managers can be found in the *Investment Section*.



2018 Annual Report of the Denver Board of Water Commissioners Employees' Retirement Program	

# II. FINANCIAL SECTION

# A. Employees' Retirement Plan

# 1. Independent Auditors Report



CliftonLarsonAllen LLP CLAconnect.com

#### INDEPENDENT AUDITORS' REPORT

The Board of Water Commissioners, City and County of Denver, Colorado Employees' Retirement Plan of the Denver Board of Water Commissioners Denver, Colorado

#### Report on the Financial Statements

We have audited the accompanying statements of fiduciary net position and statements of changes in fiduciary net position of the Employees' Retirement Plan of the Denver Board of Water Commissioners (the Plan), as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the Plan'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 audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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 entity'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 entity'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.

The Board of Water Commissioners, City and County of Denver, Colorado Employees' Retirement Plan of the Denver Board of Water Commissioners

#### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Plan as of December 31, 2017 and 2016, and the respective changes in fiduciary net position 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 on pages 3-7 and Schedules of Changes in Net Pension Liability and Related Ratios, Employer Contributions and Investment Returns on pages 24-26 are 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 Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated April 19, 2018, on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the Plan's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Plan's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

Clifton Larson Allen LLP

Broomfield, Colorado April 19, 2018

\*CliftonLarsonAllen LLP was not engaged to perform and has not performed, since the date of its report, any procedures on the financial statements addressed in such report and that the Board has not requested the consent of CliftonLarsonAllen LLP for the inclusion of its report therein.

# 2. Management's Discussion and Analysis

This is an analysis and overview of the financial activities of the Employees' Retirement Plan of the Denver Board of Water Commissioners (Plan) as of and for the years ended December 31, 2018 and 2017. This information should be read in conjunction with the financial statements and notes which follow.

#### Financial Highlights

As of December 31, 2018, and 2017, \$342.8 million and \$360.7 million, respectively, were held in trust for the payment of Plan benefits, and to meet the Plan's future obligations to its participants.

For 2018, the fiduciary net position restricted for pension of the Plan decreased by \$17.9 million or 5.0%. This compares with a \$46.3 million increase or 14.7% in 2017. The decrease in 2018 and the increase in 2017 was primarily due to changes in the fair value of the Plan's investments. Net depreciation in the fair value of investments was \$62.2 million or 135.9% in 2018. Comparatively, net appreciation in the fair value of investments increased \$27.8 million or 154.1% in 2017.

Additions to the Plan's fiduciary net position restricted for pension in 2018 included employer and employee contributions of \$18.0 million and \$662 thousand, respectively, offset with a net investment loss of \$14.3 million resulting in total additions to the Plan's fiduciary net position restricted for pension of \$4.3 million. Additions to the Plan's fiduciary net position restricted for pension in 2017 included employer contributions of \$18.0 million and net investment income of \$48.3 million resulting in total additions to the Plan's fiduciary net position restricted for pension of \$66.3 million.

Deductions from the Plan's fiduciary net position restricted for pension for 2018 and 2017 were \$22.2 and \$20.0 million, respectively. The majority of the 2018 and 2017 deductions were from retirement benefit payments of \$22.0 and \$19.9 million, respectively.

The Plan's investment objective is to preserve the actuarial soundness of the Plan by achieving a long-term return of at least the actuarial earnings rate and to prudently manage the inherent investment risks that are related to the achievement of this goal. As of January 1, 2018, and 2017, the dates of the latest actuarial funding valuations, the funded ratio for the Plan was 80.8% and 79.9%, respectively.

#### Overview of the Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's financial statements, which follow. The statements include the following:

- Statements of Fiduciary Net Position
- 2. Statements of Changes in Fiduciary Net Position
- 3. Notes to Financial Statements
- 4. Required Supplementary Information

The Statements of Fiduciary Net Position include information about Plan assets, liabilities and net position restricted for pension, as applicable as of December 31, 2018 and 2017. The Statements of Changes in Fiduciary Net Position show the additions to, deductions from, and net increase (or decrease) in the Plan's net position restricted for pension during 2018 and 2017.

The above financial statements are presented in accordance with the Governmental Accounting Standards Board (GASB) Statement No. 72, Fair Value Measurement and Application, which provides guidance for determining a fair value measurement for financial reporting purposes and provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements, Statement No. 67, Financial Reporting for Pension Plans (replacing GASB 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans and GASB 50, Pension Disclosures) and GASB Statement No. 34, Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments, and all other applicable GASB pronouncements including GASB Statement No. 40, Deposit and investment Risk Disclosures. These pronouncements address the requirements for financial statement presentation and certain disclosures for state and local governmental entities. The Plan's financial statements comply with all material requirements of these pronouncements.

These financial statements provide a snapshot of the Plan's assets and liabilities as of December 31, 2018 and 2017, and the activities that occurred during those years. Both financial statements were prepared using the accrual basis of accounting as required by GASB. All investment activities have been reported based on the trade dates and have been valued by independent outside sources.

Notes to Financial Statements provide additional information that is essential to have a full understanding of the basic financial statements.

Required Supplementary Information prepared in accordance with U.S. generally accepted accounting principles provides additional information about the Plan's progress in its ability to meet its future obligations. It also provides the history of the Denver Board of Water Commissioners (Board) contributions to the Plan and investment returns for the last 10 years.

#### **Changes in Net Position Restricted for Pension**

The Statement of Fiduciary Net Position displays Plan assets, liabilities, and fiduciary net position restricted for pension at year-end. The Statement of Changes in Fiduciary Net Position provide information on the source of the change in fiduciary net position restricted for pension during the year. The decrease in total assets of \$17.8 million or 4.9% in 2018 was primarily the result of a decrease in the fair value of investments. Comparatively, in 2017, total assets increased \$46.2 million or 14.7%. The increase in 2017 was primarily the result of an increase in the fair value of investments.

As of December 31, 2018, 2017 and 2016, the Plan's net position was:

#### **Fiduciary Net Position Restricted for Pension**

(Amounts expressed in thousands)

	_	Years ended December 31				2018 -	- 2017	2017 – 2016		
	_	2018	2017	2016	_	Increase (decrease)	Percentage change	Increase (decrease)	Percentage change	
Cash and cash equivalents Dividends, interest, and	\$	4,435	3,517	4,096	\$	918	26.1%	(579)	(14.1)%	
other receivables		104	410	438		(306)	(74.6)	(28)	(6.4)	
Investments, at fair value	_	338,429	356,882	310,055	_	(18,453)	(5.2)	46,827	15.1	
Total assets		342,968	360,809	314,589		(17,841)	(4.9)	46,220	14.7	
Total liabilities	_	145	94	172	-	51	54.3	(78)	(45.3)	
Fiduciary net position restricted for pension	\$_	342,823	360,715	314,417	\$	(17,892)	(5.0)%	46,298	14.7%	

Winslow Capital Management, Inc. reported cash and cash equivalents as of December 31, 2018. Cash and cash equivalents are also held in the custodial cash account used for disbursement of benefit payments and administrative expenses. Starting in 2018, the Plan began using a third-party administrator (TPA) for benefit payment services. Cash is transferred monthly from the custodial cash account to the TPA for retiree benefit payments. As of December 31, 2018, \$1.8 million was held with the TPA for benefit payments to be paid in January 2019. Many of the other managers have cash holdings from time to time, but do not specifically identify them in their statements of assets.

Liabilities of the Plan for 2018 consisted primarily of unpaid, but earned, investment manager fees of \$106,500. In 2017, liabilities consisted primarily of outstanding investment expenses of \$94,400. The change in the fiduciary net position restricted for pension is a function of the change in total assets offset by the change in total liabilities. The Plan recorded a decrease in fiduciary net position restricted for pension of \$17.9 million in 2018 and an increase of \$46.3 million in 2017.

#### Additions

The funds needed to pay benefits are accumulated from the contributions approved by the Board, employee contributions, and the income generated from the Plan's investments, including interest, dividends, and proceeds from the sale of individual investments. Earnings on Plan investments are reported separately from fees charged by investment managers. Investment fees are reported using the best information available to Plan management. Board-approved contributions for 2018 and 2017 totaled \$18.0 million. The Board has approved contributions of amounts more than the actuarially determined contribution for seven of the last ten years. Effective January 1, 2018, the Plan was amended to require employee contributions to the Plan. Employee contributions for 2018 totaled \$662 thousand.

#### Additions to Fiduciary Net Position Restricted for Pension

(Amounts expressed in thousands)

					2018 - 2017			2017 - 2016	
		Years e	Years ended December 31		Increase	Percentage		Increase	Percentage
	-	2018	2017	2016		change	_		change
		18,000	18,000	14,500					
Employer contributions	\$				\$ _	—%	\$	3,500	24.1%
Employee contributions		662	_	_	662	—%		_	—%
Net investment income (loss)	-	(14,319)	48,273	21,326	 (62,592)	(129.7)	-	26,947	126.4
Total additions, net	\$	4,343	66,273	35,826	 (61,930)	\$ (93.4)%	\$	30,447	85.0%

#### **Deductions**

Annual Plan expenditures include retirement benefits, death benefits, refunds of employee contributions with associated interest and administrative expenses. The Plan's normal benefit is a single life annuity to retired members, but members may elect to receive benefits in various other forms, including a lump sum or annuities that provide spousal benefits upon the death of the member. Please refer to the Plan document for detailed information regarding the Plan. For the years ended December 31, 2018 and 2017, annual plan deductions totaled \$22.2 and \$20.0 million, respectively.

#### **Deductions to Fiduciary Net Position Restricted for Pension**

(Amounts expressed in thousands)

					2018 - 2017			2017 - 2016		
	Years ended December 31			Increase	Percentage		Increase	Percentage		
	2018	2017	2016	_	(decrease)	change		(decrease)	change	
Retirement benefits	\$ 22,022	19,824	19,808	\$	2,198	11.1%	\$	16	0.1%	
Death benefits	30	80	105		(50)	(62.5)		(25)	(23.8)	
Refunds of employee										
contributions	3	23	18		(20)	(87.0)		5	27.8	
Administrative expenses	180	48	52	_	132	275.0	-	(4)	(7.7)	
Total	00.005	40.075	40.000		0.000	44.0407	•	(0)	(0.04)0(	
deductions	\$ 22,235	19,975	19,983	\$	2,260	11.31%	\$	(8)	(0.04)%	

#### **Investment Activities**

The U.S. real gross domestic product (GDP) increased at an annual rate of 3.4% according to the third quarter estimate released by the Bureau of Economic Analysis (BEA) in 2018. This was slightly lower than the BEA's revised second quarter estimate of 3.5% and well above the 2.2% reported for the first quarter. Stocks were marked by volatility, with the S&P 500 setting a record high in September yet finishing down 6.2% for the year. The volatility was driven by signs of slowing global economies, concerns about monetary policy, geopolitical tension, and inflation fears. In both international developed and emerging markets, stocks declined, with the FTSE All-World Index finishing the year down 12%. The U.S. experienced positive job creation, rising wages

and low unemployment. The U.S. economy added 2.6 million new jobs in 2018. U.S. nominal average hourly earnings rose by 3.2% and the unemployment rate ended at 3.9% at the close of 2018. West Texas Intermediate Oil price peaked in October above \$75 a barrel and declined below \$45 in December amid concerns of oversupply and lower global demand growth. Core inflation in 2018 was contained around the Fed's target of 2%.

Denver Water's Retirement Plan posted a 3.9% loss for the year (-4.1% net of fees), slightly trailing the Plan's customized benchmark return of -3.8% on a gross of fees basis for 2018. The private equity segment was the best absolute and relative performer, posting a 16.1% gain for the year, 18.9 percentage points above the Russell 3000 index + 2.5% custom index return. The second-best performing segment on an absolute basis was the real estate segment, returning 7.1% for the year. The hedge fund segment recorded a 0.8% gain, outperforming its benchmark index, HFR Fund of Funds Composite, by 4.8 percentage points for the year. The fixed income segment returned 0.5% for the year versus the Denver Board of Water Fixed (DBOW) Income Blend Index return of 0.0%. The domestic public equity segment had a -6.5% return, underperforming its Denver Domestic Equity Index by 1.2 percentage points. The international equities segment reported a negative return of 15.2%, which slightly underperformed its DBOW International Equity Index by 1.0 percentage points for the year.

#### **Requests for Information**

This discussion and analysis is designed to provide a general overview of the Plan's financial status as of December 31, 2018 and 2017, and changes in financial status for the years then ended. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Treasurer Denver Water 1600 W. 12th Ave. Denver, CO 80204

# 3. Basic Financial Statements

# a. Statements of Fiduciary Net Position

	-	2018	2017
Assets:  Cash and cash equivalents  Dividends, interest and other receivables	\$	4,434,800 103,600	3,517,200 410,400
Investments, at fair value: Equities: Common stock Common stock funds	_	— 184,526,800	— 209,316,700
Total equities	-	184,526,800	209,316,700
Fixed income: Other fixed income funds	<u>-</u>	73,791,300	55,017,500
Total fixed income		73,791,300	55,017,500
Real estate funds Hedge funds Private equity funds		51,680,900 18,518,600 9,911,600	52,168,600 33,981,500 6,397,500
Total investments	- -	338,429,200	356,881,800
Total assets	_	342,967,600	360,809,400
Liabilities:  Accrued administrative expense Accrued investment expense Securities payable		38,100 106,500 —	94,400 —
Total liabilities	<u>-</u>	144,600	94,400
Net position restricted for pension	\$	342,823,000	360,715,000

See accompanying notes to financial statements.

# b. Statements of Changes in Fiduciary Net Position

Additions:	\$		
Employer contributions Employee contributions	Ψ	18,000,000 662,000	18,000,000
Investment income:  Net appreciation in fair value of investments Interest Dividends Real estate income, net of operating expenses	-	(16,431,900) 1,023,900 1,889,700 1,421,800 (12,096,500)	45,806,700 810,200 2,646,200 1,258,700 50,521,800
Less investment expense		(2,222,600)	(2,248,500)
Net investment income		(14,319,100)	48,273,300
Total additions	-	4,342,900	66,273,300
Deductions: Retirement benefits Death benefits Refunds of employee contributions Administrative expenses	<u>-</u>	22,022,200 30,000 3,100 179,600	19,824,300 80,000 23,100 47,900
Total deductions	-	22,234,900	19,975,300
Net increase in fiduciary net position		(17,892,000)	46,298,000
Net position restricted for pension:  Beginning of year  End of year	\$	360,715,000 342,823,000	314,417,000 360,715,000

See accompanying notes to financial statements.

# 4. Notes to the Financial Statements

#### Note 1 – Plan Description

#### a. Plan Administration

The Board of Water Commissioners, City and County of Denver, Colorado (the Board), adopted the Employees' Retirement Plan of the Denver Board of Water Commissioners (Plan) in 1944. It is a defined benefit, single employer plan covering substantially all regular employees of the Board.

The Board is made up of five members appointed by the Mayor of the City and County of Denver for staggered six-year terms. The Board is the sponsor, administrator and trustee of the assets of the Plan. The Board has delegated certain responsibilities regarding the Plan administration through a delegation resolution to the Chief Human Resources Officer and to the Chief Finance Officer. The delegation resolution instructs the CEO/Manager to create an advisory committee, with representation from the Finance, the Human Resources, and the Legal divisions, for the purpose of making recommendations to the CEO/Manager, the Chief Finance Officer and the Chief Human Resources Officer regarding the Retirement Program. The advisory committee, in and of itself, has no decision-making authority. The Plan is exempt from compliance with the Employee Retirement Income Security Act of 1974, as amended, as it is a governmental plan.

Various asset classes and investment manager styles are used to create a broadly diversified portfolio. The Board develops long term asset allocation ranges, while the Chief Finance Officer is charged with developing and implementing a current asset allocation and rebalancing strategy, which is designed to reflect, and be consistent with the Board approved long term asset allocation ranges. Please refer to the notes of the financial statements under "Investment Policy" for more information on asset allocations.

#### b. Plan Membership

All regular and discretionary employees of the Board become participants of the Plan upon completion of the required introductory period. As of January 1, 2018, there were 1,825 Plan participants: 120 were deferred vested participants, 658 participants were retired, 1,034 participants were active and 13 were on long-term disability.

Effective January 1, 2018 the Plan was amended to allow for employee contributions. A first and second tier membership was created to define Plan members as of a specific date of employment. Tier one members are defined as employees hired prior to January 1, 2018, which includes an employee hired prior to January 1, 2018 who is in his or her required introductory period during the first portion of 2018. Tier two members are defined as employees hired or rehired on or after January 1, 2018. These changes are expected to lower the long-term liability of the Plan and help keep the Board's annual contribution stable.

#### c. Benefits Provided

Participants become fully vested after five years of employment. The normal retirement age is 65. Tier one members who reach age 55 and have 5 years of service are eligible to receive a reduced early retirement benefit. Unreduced retirement benefits prior to age 65 are provided for Tier one members who are a minimum of age 55, whose age and years of service total 75 on the last day of employment and whose employment ends at age 50 or later.

Tier two members who reach age 60 and have 5 years of service are eligible to receive a reduced early retirement benefit. Unreduced retirement benefits prior to age 65 are provided for employees who are 60 years of age or older and whose age and years of service total 85 on the last day of employment.

The service requirement for entitlement to spousal benefits is 5 years of service with the benefit commencing when the employee would have reached age 55 for Tier one members and age 60 for Tier two members. The Plan also provides for retirement benefits in the event of total and permanent disability, as determined by the Board.

Terminated vested participants or surviving spouses whose severance date occurs before the attainment of age 55 for Tier one members and age 60 for Tier two members, shall be eligible to elect a full single lump sum payment only in lieu of a monthly pension within 90 days of his or her severance date.

Plan benefits for Tier one members are integrated with Social Security benefits and are determined by a formula defined in the Plan document. The minimum normal benefit amount is calculated by multiplying the Plan participant's number of years of credited service times the amount of the participant's average final compensation times 1.5%. Employees with final income exceeding covered compensation receive an additional 0.45% times years of credited service times average final compensation in excess of covered compensation.

Plan benefits for Tier two members are not integrated with Social Security benefits. The minimum normal benefit amount is calculated by multiplying the Plan participant's number of years of credited service times the amount of the participant's average final compensation times 1.75%. For members hired prior to January 1, 2018 who terminate employment and are rehired on or after January 1, 2018, the benefit calculation is determined by using a combination of both Tier one and Tier two formulas.

The Plan also includes a benefit provision in the event a participant dies prior to the date the member quits, retires or is discharged. In general, the participant's spouse or beneficiary will receive 50% of the participant's accrued benefit. The Plan document contains detailed provisions regarding Plan benefits.

Benefits paid by the Plan are adjusted annually by the change in the Consumer Price Index, subject to a minimum payment equal to the amount of the initial benefit and a maximum annual increase of 4.4% for employees retiring on or after September 1, 1995 and 5% for employees who retired before September 1, 1995. Changes in the Consumer Price Index in excess of the amount of the maximum annual adjustment are applied toward future adjustments. Members with Tier one service shall be entitled to the cost-of living adjustment solely for benefits attributable to Tier one service. Tier two members are not entitled to a cost-of-living adjustment.

The Board reserves the right to amend the Plan, including its benefit provisions; however, any major changes (except termination of the Plan) made by the Board for employees hired prior to January 1, 2018 will not become effective until approved by two thirds of the participants. Any change to the Plan made by the Board for employees hired or rehired on or after January 1, 2018 does not require the approval of employees, and employees hired or rehired on or after January 1, 2018, do not have any right to approval with respect to any changes to the Plan.

#### d. Contributions

The Plan was established, and is sponsored and administered by the Board, under authority of Article X, Section 10.1.6 of the Charter of the City and County of Denver, Colorado. The Plan document provides for periodic Board contributions at actuarially determined amounts sufficient to accumulate the necessary assets to pay benefits when due. The Board's funding policy defines the objectives of the Board in funding the benefits to be paid by the Plan. On August 28, 2013, the Board adopted changes to the funding policy effective for 2015 and future years. The changes redefined the funding guidelines by basing the Board's contributions to the Plan on an Actuarially

Determined Contribution (ADC) calculated annually by an independent actuary, using agreed upon methods and assumptions in accordance with the Actuarial Standards Board and specified in the funding policy. Subsequently, on June 28, 2017, the funding policy was updated, which modified its objective to include employee contributions to the Plan and modified its determination of the Board's contribution to include the Plan's funding valuation results and any other facts and circumstances relevant to the funding decision. In 2018, the Board and members of the Plan made contributions totaling \$18.0 million and \$662 thousand, respectively. In 2017, the Board made contributions totaling \$18.0 million. Plan contributions were made in accordance with actuarial funding valuations performed as of January 1, 2018 and 2017.

Effective January 1, 2018 employees hired prior to January 1, 2018 will contribute 3% of their compensation that will be phased in over three years with a 1% increase each year beginning in 2018. Employees hired after January 1, 2018 will contribute 3% of their compensation beginning immediately upon hire. All employee contributions on or after January 1, 2018 are credited with an interest rate of 2.5% compounded annually. Non-vested members who leave employment are eligible to receive an actuarial equivalence of a full single lump sum payment that will not be less than the member's contribution plus associated interest. As of December 31, 2018, the total balance of non-vested member contributions plus associated interest was \$183,400. There were no refunds of contributions and interest of non-vested members in 2018.

Prior to January 1, 1992, employees were required to contribute to the Plan. The Board amended the Plan to disallow further employee contributions and determined that all amounts previously contributed to the Plan by employees would be refunded, with interest at 5% per annum, upon termination or retirement. Refund of contribution and interest payments of \$3,100 and \$23,100 were made in 2018 and 2017, respectively, for employees who retired or were terminated during the respective year. As of December 31, 2018 and 2017, for employees that contributed to the Plan prior to 1992, the total remaining employee contributions including accrued interest was \$42,500 and \$43,600, respectively. These amounts are not accrued as liabilities in the accompanying financial statements.

## Note 2 – Summary of Significant Accounting Policies

#### a. Basis of Accounting

The Plan's financial statements are prepared using the accrual basis of accounting and in accordance with generally accepted accounting principles that apply to governmental accounting for defined benefit plans. Employer contributions are recognized when made, because there are no required due dates for contributions. Other additions are recognized when due. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan document. Plan expenses, other than benefits and refunds are recognized on the accrual basis in accordance with generally accepted accounting principles.

#### b. Plan Expenses

Certain expenses are paid from the assets of the Plan and are recorded as administrative expenses on the financial statements. These expenses include actuarial fees, auditing expenses, benefit payment processing fees, legal fees and other miscellaneous expenses.

Additionally, investment manager fees and investment consulting expenses are recorded as investment expenses. Some investment managers assess performance fees that are netted against gains or losses and are not classified as investment expenses. Investment expenses are based upon the best information management has as of the year-end.

#### Note 3 – Investments

#### a. Investment Policy

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

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

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

As of December 31 2018, the Plan's long term asset allocation ranges were as follows:

**Long Term Asset Allocation Ranges** 

	Allowable range				
	Years ended December 31				
Asset segment	2018	2017			
Equities	40%–65%	35%–70%			
Fixed Income	10–40	10-50			
Real Estate	10–20	-			
Alternative	5–20	10–40			

#### b. Money Weighted Rate of Return

For the years ended December 31, 2018 and 2017, respectively, the annual money weighted rate of return on Plan investments, net of investment expense, was -3.95% and 15.30%. The money weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the end of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money weighted rate of return is calculated net of investment expenses.

#### c. Custody and Management of Assets

During 2018 and 2017, the Northern Trust Company served as asset custodian for all Plan assets. The Board has elected to hire professional investment managers to invest the assets of the Plan on a fully discretionary basis, subject to the investment policy of the Board. Each manager is evaluated periodically against the appropriate

benchmark for his/her asset class and style. Failure to achieve the desired result does not necessitate, nor does achievement of the desired result preclude, termination of investment managers.

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

Aberdeen Asset Management Inc.

Advisory Research Inc. Alliance Bernstein L.P.

Barings LLC formerly Babson Capital Management LLC

BlackRock Alternative Advisors

BlackRock Institutional Trust Company N.A.

Dimensional Fund Advisors, LP Harbert Management Corporation Harding Loevner Funds, Inc. Horsley Bridge Venture

Northern Trust Investments, N.A. Principal Global Investors, LLC

Fidelity Institutional Asset Management

RREEF America LLC UBS Realty Investors, LLC Vanguard Group, Inc.

Winslow Capital Management, LLC

Since August 2015

Terminated in November 2017

Since May 2018
Since August 2013
Since March 2012
Since May 2016
Since February 2008
Since July 2014
Since August 2011
Since July 2015
Since July 2006
Since March 2016
Since July 2011

Since July 2011 Since January 2015 Since May 1998

Terminated in May 2017 Since August 2011

#### d. Custodial Credit Risk

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

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

#### e. Interest Rate Risk

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

Schedule of Interest Rate Risk - Segmented Time Distribution of Investment Maturities as of December 31, 2018

Investment type	Fair value/NAV	Less than 1 year	1 to 6 years	6 to 10 years	10+ years	Maturity not determined**
Other fixed income funds	\$ 73,791					73,791
Total	\$ 73,791		_			73,791

<sup>\*\*</sup>Amounts represent investments in commingled funds. Maturities of individual securities held by the funds are not reported by the fund.

#### f. Concentration of Credit Risk

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

#### g. Credit Risk

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

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

Schedule of Credit Risk as of December 31, 2018

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

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

#### h. Foreign Currency Risk

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

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

#### Schedule of Assets in Foreign Currencies

Percentage
•
of asset class
invested in
foreign
currencies
27.60
47.40
2.30

#### i. Derivatives

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

Certain commingled funds held by the Plan at the year-end were permitted through their individual investment guidelines to use derivative instruments, including forwards, futures, swaps, and options. Disclosures about derivative holdings of the commingled fund managers can be found in their respective audited financial statements. The Plan did not directly own any derivatives as of December 31, 2018 and 2017.

#### i. Fair Value of Investments

The Governmental Accounting Standards Board (GASB) implemented statement 72, which addresses accounting and financial reporting issues related to fair value measurements. This Statement provides guidance for determining a fair value measurement for financial reporting purposes and provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. The Plan has adopted GASB statement 72 and categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles.

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

# Investments and Derivative Instruments Measured at Fair Value (\$ in thousands)

(\$ III tilousarius)				2018	
		-	Fair Valu	ue Measuremen	nte Heina
		•	Quoted	ac measuremen	ito osirig
			Prices in		
			Active	Significant	
			Markets for	Other	Significant
			Identical	Observable	Unobservable
			Assets	Inputs	Inputs
	Doc	ember 31, 2018	(Level 1)	(Level 2)	(Level 3)
Investments by fair value level	Dec	elliber 31, 2010	(Level I)	(Level 2)	(Level 3)
Debt securities					
Other fixed income funds	\$	73,791		73,791	
Total debt securities	Ψ	73,791		73,791	
Equity securities		73,791		73,791	
Common stock funds		184,527	171,512	13,015	
Total equity securities		184,527	171,512	13,015	
. ,	\$		171,512	86,806	
Total investments by fair value level		258,318	171,512	00,000	
Investments measured by the net asset value (N	,	E4 C04			
Real estate funds	\$	51,681			
Hedge funds		18,519			
Private equity funds		9,912			
Total investments measured by the NAV	Φ.	80,112			
Total investments measured at fair value	\$	338,430			
			= : : : :	2017	
				2017 ue Measuremen	nts Using
			Quoted		nts Using
			Quoted Prices in	ue Measuremer	nts Using
			Quoted Prices in Active	ue Measuremer Significant	
			Quoted Prices in Active Markets for	ue Measuremer Significant Other	Significant
			Quoted Prices in Active Markets for Identical	ue Measuremen Significant Other Observable	Significant Unobservable
			Quoted Prices in Active Markets for Identical Assets	ue Measuremen Significant Other Observable Inputs	Significant Unobservable Inputs
	Dec	ember 31, 2017	Quoted Prices in Active Markets for Identical	ue Measuremen Significant Other Observable	Significant Unobservable
Investments by fair value level	Dec	ember 31, 2017	Quoted Prices in Active Markets for Identical Assets	ue Measuremen Significant Other Observable Inputs	Significant Unobservable Inputs
Debt securities			Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs
Debt securities Other fixed income funds	Dec \$	55,018	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities			Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities Equity securities		55,018 55,018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)  55,018	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities Equity securities Common stock funds		55,018 55,018 209,317	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)  55,018  55,018	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities Equity securities Common stock funds Total equity securities	\$	55,018 55,018 209,317 209,317	Quoted Prices in Active Markets for Identical Assets (Level 1)  191,058 191,058	Significant Other Observable Inputs (Level 2)  55,018  18,259 18,259	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities Equity securities Common stock funds Total equity securities Total investments by fair value level	\$	55,018 55,018 209,317	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)  55,018  55,018	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities  Equity securities Common stock funds Total equity securities  Total investments by fair value level Investments measured by the net asset value (N	\$ \$ IAV)	55,018 55,018 209,317 209,317 264,335	Quoted Prices in Active Markets for Identical Assets (Level 1)  191,058 191,058	Significant Other Observable Inputs (Level 2)  55,018  18,259 18,259	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities  Equity securities Common stock funds Total equity securities  Total investments by fair value level Investments measured by the net asset value (No Real estate funds)	\$	55,018 55,018 209,317 209,317 264,335	Quoted Prices in Active Markets for Identical Assets (Level 1)  191,058 191,058	Significant Other Observable Inputs (Level 2)  55,018  18,259 18,259	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities  Equity securities Common stock funds Total equity securities  Total investments by fair value level Investments measured by the net asset value (No Real estate funds)	\$ \$ IAV)	55,018 55,018 209,317 209,317 264,335 52,169 33,981	Quoted Prices in Active Markets for Identical Assets (Level 1)  191,058 191,058	Significant Other Observable Inputs (Level 2)  55,018  18,259 18,259	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities  Equity securities Common stock funds Total equity securities  Total investments by fair value level Investments measured by the net asset value (New Real estate funds) Hedge funds Private equity funds	\$ \$ IAV)	55,018 55,018 209,317 209,317 264,335 52,169 33,981 6,397	Quoted Prices in Active Markets for Identical Assets (Level 1)  191,058 191,058	Significant Other Observable Inputs (Level 2)  55,018  18,259 18,259	Significant Unobservable Inputs
Debt securities Other fixed income funds Total debt securities  Equity securities Common stock funds Total equity securities  Total investments by fair value level Investments measured by the net asset value (No Real estate funds)	\$ \$ IAV)	55,018 55,018 209,317 209,317 264,335 52,169 33,981	Quoted Prices in Active Markets for Identical Assets (Level 1)  191,058 191,058	Significant Other Observable Inputs (Level 2)  55,018  18,259 18,259	Significant Unobservable Inputs

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

#### Investments Measured at the NAV

(\$ in thousands)

		2018				
					Redemption	
					Frequency (If	Redemption
				Unfunded	Currently	Notice
		NAV		Commitments	Eligible)	Period
Real estate funds	\$	51,681	\$	1,519	Quarterly/None	45-90 days
Hedge funds		18,519		-	Quarterly	45-90 days
Private equity funds		9,912	_	3,130	None	N/A
Total investments measured at the NA'\$		80,112	\$	4,649		
				201	7	
Real estate funds	\$	52,169	\$	1,762	Quarterly/None	45-90 days
Hedge funds		33,981		-	Quarterly	45-90 days
Private equity funds		6,397	_	5,971	None	N/A
Total investments measured at the NA	\$	92,547	\$	7,733		

#### Real Estate Funds

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

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

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

# Hedge Funds

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

investment manager. The fund limits the amount that can be redeemed each quarter to 25% of each investor's total investment.

## **Private Equity Funds**

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

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

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

#### k. Income Taxes

Pursuant to a determination letter received from the Internal Revenue Service (IRS) dated June 11, 2014 for amendments enacted through June 27, 2012, the Plan is exempt from federal income taxes. Although the Plan has been subsequently amended, the Board is of the opinion that the Plan, as amended, meets the IRS requirements and, therefore, continues to be tax exempt.

#### I. Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Plan's management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and changes therein, disclosure of contingent assets and liabilities, and the actuarial values at the date of the financial statements. Actual results could differ from these estimates.

## Note 5 – Net Pension Liability of Denver Water

The components of the net pension liability of Denver Water at December 31, 2017 and 2016 were as follows:

	Years ended December 31, (\$ in thousands)			
		2018	2017	
Total pension liability Plan fiduciary net position restricted for pension	\$	441,036 (342,823)	418,036 (360,715)	
Denver Water's net pension liability	\$	98,213	57,321	
Plan fiduciary net position restricted for pension as a percentage of the total pension liability		77.73%	86.29%	

#### a. Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of January 1, 2018 and January 1, 2017 with a measurement date of December 31, 2018 and 2017 and calculated based on the discount rates and actuarial assumptions below.

	Years ended December 31,			
	2018	2017		
Inflation	2.75%	2.75%		
Salary increases: age-based rates from	6.25 to 3.35	6.25 to 3.35		
Investment rate of return	7.00%	7.00%		

The mortality rates for 2018 and 2017 were determined using the Combined RP-2014 Healthy Employee Mortality Tables projected with scale MP-2016 for pre- and post-retirement while the Combined RP-2014 Disabled Annuitant Mortality Tables projected with scale MP-2016 was used for post-disablement.

The actuarial assumptions used in the January 1, 2018 and the January 1, 2017 valuation were based on an actuarial experience study for the period 2011-2014.

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. Best estimates of the annualized long-term geometric mean return for each major asset class included in the pension plan's target asset allocation as of December 31, 2018 and 2017 are summarized in the following table.

	<b>December 31, 2018</b>		Decembe	r 31, 2017
	Long-Term			Long-Term
	Target	<b>Expected Real</b>	Target	<b>Expected Real</b>
	Allocation	Rate of Return	Allocation	Rate of Return
Asset class:				
Domestic fixed income	17.00%	1.50%	17.00%	0.75%
Domestic equity	30.00	4.90	30.00	4.60
International equity	20.00	5.00	20.00	4.75
Private equity	8.00	6.25	8.00	5.10
Real estate	15.00	4.00	15.00	3.50
Hedge funds	5.00	3.25	5.00	2.80
Bank loans	5.00	2.12	5.00	2.10
	100.00%		100.00%	

#### b. Discount Rate

The discount rate used in the 2018 and 2017 actuarial valuation to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed Plan member contributions would be made at the current actuarially determined contribution rate and employer contributions would be made at rates equal to the difference between actuarially determined contribution rates and member rates. Based on these

assumptions, the pension plan's fiduciary net position restricted for pension was projected to be available to make all projected future benefit payments of current active and inactive plan members. 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.

## c. Sensitivity of the Net Pension Liability to changes in the Discount Rate

The following presents the net pension liability of the Plan, calculated using the discount rate of 7.00% for 2018 and 2017 as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate.

(\$ in thousands)		1%	Current	1%
		Decrease	discount rate	Increase
2018		6.00%	7.00%	8.00%
Net pension liability	\$	150,365	98,213	54,223
2017	_	6.25%	7.25%	8.25%
Net pension liability	\$	105,633	57,321	15,564

# **Note 6 - Related Party Transactions**

An affiliate of the Plan's custodian, Northern Trust Investments, N.A., is an investment manager for the Plan, which managed \$72.8 million and \$76.1 million of the Plan's investments at December 31, 2018 and 2017, respectively. For the years ended December 31, 2018 and 2017, the Plan incurred approximately \$15,700 and \$27,700, respectively, in management fees with this investment manager.

#### Note 7 – Plan Amendment

On December 5, 2018 the Plan was amended to address necessary Plan changes from transitioning to a thirdparty administrator for benefit payment services. The changes to the Plan addressed credited service for participants on short-term and long-term disability and on active military leave who return to work, covered compensation for participants on long-term disability, return of employee contributions when deferred vested participants die before receiving benefits, timing of certain elections of lump sum benefits, and timing for elections of benefits.

In December of 2017, the Plan was amended with an effective date of January 1, 2018 to clarify the actuarial table used for actuarial equivalence for the level income option, clarification of which provisions apply to members hired prior to January 1, 2018 and rehired on or after January 1, 2018, and clarification on the non-specific Plan language regarding the partial lump sum calculation so that it is consistent with the full lump sum calculation.

On March 22, 2017 the Plan was amended to add definitions of exempt, non-exempt, and part-time employees to clarify the calculation of the 1,000 hours worked for purposes of determining credited services. In addition, the Board approved needed changes to the Plan in response to amendments to the Plan that occurred in December of 2016. In order to implement these changes, a number of amendments to the Plan were required. The following changes were made:

- The addition of definitions of Tier one and Tier two members.
- Employee contributions from both tiers will be paid from pre-tax dollars.
- Added an election to receive a refund of accumulated contributions for non-vested members.

- The interest rate credited on refunds of employee contributions made on or after January 1, 2018 will be 2.5% compounded annually.
- Eliminate mandatory distributions except for required minimum distributions.
- Require a person rehired on or after January 1, 2018 be placed in Tier two. Credited services are retained by the member if money is left in the Plan or is restored. Benefit is calculated under two formulas for rehired Tier one employees.
- Provide for a time limit on restoration of credited service for reemployed non-vested members
  who took a refund of contributions. Member must be reemployed within two years of termination.
  Member must repay the refund of accumulated contributions with 8% interest within 60 days of
  reemployment otherwise they will forfeit their prior credited services. Can be repaid with after tax
  dollars or a trustee to trustee transfer from a qualifying plan.

#### Tier two members

- Changed the retirement formula for Tier two members to 1.75% times their average final compensation times their years of service and will not be integrated with social security.
- Early retirement is at age 60 with 5 years of service with reduced benefit.
- Tier two members cannot vote on major changes to the Plan.
- Changed average final compensation for Tier two members to the highest 60 consecutive months in 10 years.
- A previously vested employee reemployed within two years after receiving a lump sum payment
  may have previous credited service restored if the employee repays the lump sum within 60 days
  with 8% interest.

# 5. Note 8 – Required Supplementary Information.

# a. Schedule of Changes in Net Pension Liability and Related Ratios

# Schedule I (\$ in thousands)

		2018	2017	2016	2015	2014	2013	2012	2011	2010
Total pension liability:										7
Service cost	\$	9,070	8,522	7,330	6,757	6,071	6,046			7
Interest on total pension liability		29,285	27,728	26,237	25,820	25,044	24,051			<b>,</b>
Effect of plan changes		_	_	_	_	_	_			<b>,</b>
Effect of assumption changes or inputs			22,250	_	10,152	_	_			7
Effect of economic/demographic (gains) or losses		6,700	(2,255)	(3,348)	801	_	2,037			<b>,</b>
Benefit payments		(22,055)	(19,927)	(19,932)	(20,693)	(20,366)	(17,850)			
Net change in total pension liability		23,000	36,318	10,287	22,837	10,749	14,284	_	_	_ <b>/</b>
Total pension liability, beginning		418,035	381,717	371,430	348,593	337,844	323,560			
Total pension liability, ending (a)		441,035	418,035	381,717	371,430	348,593	337,844			
Plan fiduciary net position:	-									
Employer contributions		18,000	18,000	14,500	14,500	14,500	15,000			7
Member contributions		662	_	_	_	_	_			7
Investment income net of investment expenses		(14,319)	48,272	21,326	2,473	18,523	39,023			7
Benefit payments		(22,055)	(19,927)	(19,931)	(20,694)	(20,365)	(17,851)			<b>,</b>
Administrative expenses		(180)	(48)	(52)	(44)	(144)	(116)			
Net change in plan fiduciary net position		(17,892)	46,297	15,843	(3,765)	12,514	36,056	_	_	_
Fiduciary net position, beginning		360,714	314,417	298,574	302,339	289,825	253,769			
Fiduciary net position, ending (b)		342,822	360,714	314,417	298,574	302,339	289,825			
Net pension liability, ending = $(a) - (b)$	\$	98,213	57,321	67,300	72,856	46,254	48,019			
Plan fiduciary net position as a% of total pension liability	-	77.13%	86.29%	82.37%	80.38%	86.73%	85.79%			
Covered payroll	\$	82,151	77,159	75,740	75,990	71,847	71,940			
Plan's net pension liability as a% of covered payroll		119.55%	74.29%	88.86%	95.88%	64.38%	66.75%			

This schedule is intended to show 10 years of information. Additional years will be displayed when they become available.

### b. Schedule of Employer Contributions

Schedule II (\$ in thousands)

Year ended December 31	Actuarially determined contribution	Actual employer contribution	Contribution deficiency (excess)	Covered payroll	Contribution as a% of covered payroll
2009	11,872	14,500	(2,628)	65,721	22.06
2010	12,639	12,639	_	70,372	17.96
2011	12,414	15,400	(2,986)	69,927	22.02
2012	12,256	14,300	(2,044)	71,172	20.09
2013	11,958	15,000	(3,042)	71,940	20.85
2014	13,532	14,500	(968)	71,847	20.18
2015	14,068	14,500	(432)	75,990	19.08
2016	14,017	14,500	(483)	75,740	19.14
2017	18,089	18,000	89	77,159	23.33
2018	18,489	18,000	489	82,151	21.91

See accompanying independent auditors' report.

Notes to Schedule:

Valuation date:

Actuarially determined contribution rates are calculated as of January 1

Methods and assumptions used to determine contribution rates:

Actuarial cost method Entry age normal
Amortization method Level dollar
Amortization period Layered
Amortization period at 01/01/2014 15 years

Asset valuation method 3-year smoothed market

Inflation 2.75

Salary increases Age-based rates from 6.25% to 3.35%

Investment rate of return 7.00%, net of pension plan investment expenses, including inflation

Cost of living adjustments 2.75%

Retirement age Experience-based table of rates that are specific to the type of eligibility condition

Turnover Table of rates graded by years of service

Mortality Pre-retirement – Combined RP-2014 Healthy Employee Mortality Tables

projected with scale MP-2016.

Post-retirement – Combined RP-2014 Healthy Annuitant Mortality Tables

projected with scale MP-2016.

Post-disablement - Combined RP-2014 Disabled Annuitant Mortality Tables

projected with scale MP-2016.

# c. Schedule of Investment Returns

# Schedule III

	Net money-
Fiscal year ending December 31,	weighted rate of return
2009	N/A
2010	N/A
2011	N/A
2012	N/A
2013	15.35%
2014	6.44%
2015	0.81%
2016	7.16%
2017	15.30%
2018	(3.95)%

This schedule is intended to show 10 years of information. Additional years will be displayed when they become available.

# 6. Additional Supplementary information (unaudited)

# a. Schedule of Administrative Expense

	2018	<u>2017</u>
Actuarial Services Audit Services Benefit payment processor	\$39,500 9,655 130,411	\$39,500 8,375
Total Administrative Expenses	179,566	47,875
Average Assets <sup>1</sup>	\$351,661,200	\$337,392,100
Administrative Expenses as a percentage of Average Assets	0.051%	0.014%

<sup>&</sup>lt;sup>1</sup>Average Assets are calculated based on total assets less securities payable.

# b. Schedule of Investment Expenses

	<u>2018</u>	<u>2017</u>
Aberdeen Asset Management	\$ 86,544	\$83,929
Advisory Research Inc.	-	80,231
Alliance Bernstein	119,230	_
Babson Capital Management LLC	68,374	69,932
Blackrock Alternative Investors	351,886	340,749
BlackRock Institutional Trust Company N.A.	23,605	19,268
Dimensional Fund Advisors LP	220,072	216,823
Harbert Management Corporation	151,688	166,200
Harding Loevner Funds, Inc.	310,501	279,166
Horsley Bridge Venture	36,000	36,000
Northern Trust Investments, N. A.	15,697	27,679
Principal Global Investors, LLC	181,102	174,863
Fidelity Institutional Asset Management	107,442	111,588
RREEF America LLC	128,391	123,194
UBS Realty Investors, LLC	109,035	112,400
Vanguard Group, INC.	24,423	51,036
Winslow Capital Management, LLC	108,290	104,177
Total payments to investment advisors	2,042,280	2,059,620
Investment Consulting Expense	88,607	86,785
Investment Performance Reporting Expense	91,665	102,187
Total Investment Expenses	\$2,222,552	\$2,248,592
Average Assets	\$351,661,200	\$337,566,000
Investment Expenses as a		
Percentage of Average Assets	0.614%	0.666%

# B. Denver Water Supplemental Retirement Savings Plan

# 1. Independent Auditor's Reports



CliftonLarsonAllen LLP CLAconnect.com

#### INDEPENDENT AUDITORS' REPORT

The Board of Water Commissioners, City and County of Denver, Colorado Denver Water Supplemental Retirement Savings Plan Denver, Colorado

#### Report on the Financial Statements

We have audited the accompanying statements of fiduciary net position and statements of changes in fiduciary net position of the Denver Water Supplemental Retirement Savings Plan (the Plan), as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the Plan'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 audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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 entity'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 entity'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.

The Board of Water Commissioners, City and County of Denver, Colorado Denver Water Supplemental Retirement Savings Plan

#### Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Plan as of December 31, 2017 and 2016, and the respective changes in fiduciary net position 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 on pages 3-6 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 Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated April 19, 2018, on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the Plan's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Plan's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

Clifton Larson Allen LLP

Broomfield, Colorado April 19, 2018

<sup>\*</sup>CliftonLarsonAllen LLP was not engaged to perform and has not performed, since the date of its report, any procedures on the financial statements addressed in such report and that the Board has not requested the consent of CliftonLarsonAllen LLP for the inclusion of its report therein.

# 2. Management's Discussion and Analysis (unaudited)

This is an analysis and overview of the financial activities of the Denver Water Supplemental Retirement Savings Plan (SRSP) for the years ended December 31, 2018 and 2017. This information should be read in conjunction with the financial statements and notes, which follow.

# **Financial Highlights**

As of December 31, 2018, \$100.8 million was held in trust for the payment of SRSP benefits to the participants as compared to \$105.9 million in 2017. This represents a decrease in total SRSP fiduciary net position held in trust of \$5.1 million or 4.9%.

Additions to the SRSP fiduciary net position for 2018 and 2017 included participant contributions of \$4.4 and \$4.3 million, respectively. Participant rollovers totaled \$1.2 million in 2018 and \$986 thousand in 2017. Total Denver Board of Water Commissioners (Board) matching contributions in 2018 and 2017 were \$2.1 and \$2.0 million, respectively. The Board also contributed an additional \$4.8 million in 2017 due to a one-time non-elective contribution for the purpose of buying out employees' paid leave. The net investment loss for 2018 was \$4.5 million compared to a net investment income of \$14.3 million in 2017. The decrease in net investment income from 2017 to 2018 is primarily the result of market depreciation.

Total deductions from the SRSP fiduciary net position were \$8.3 million in 2018 and \$8.2 million in 2017. The deductions comprised retirement benefit payments of \$8.2 million, participant investment advisory fees of \$25,400, and administrative expenses of \$83,900 in 2018. In 2017, the deductions comprised retirement benefit payments of \$8.1 million, participant investment advisory fees of \$26,100, and administrative expenses of \$76,900. Total deductions in 2018 were 0.9% more than those in 2017.

The SRSP is a defined contribution plan and its purpose is to enable the participants to accumulate financial assets for their retirement. The Board matches 100% of employee contributions up to 3% of the participating employees' published hourly base pay and salary.

As of December 31, 2018, there were 859 employees contributing to the SRSP, or 90% of all eligible Denver Water employees. In comparison, as of December 31, 2017, there were 904 employees contributing to the SRSP, or 91% of all eligible Denver Water employees. There were 958 employees eligible to participate in the SRSP as of December 31, 2018 and 993 as of December 31, 2017.

#### **Overview of the Financial Statements**

The following discussion and analysis is intended to serve as an introduction to the SRSP financial statements, which follow. The statements include:

- 1. Statements of Fiduciary Net Position
- 2. Statements of Changes in Fiduciary Net Position
- 3. Notes to Financial Statements

The Statements of Fiduciary Net Position present the SRSP assets, liabilities and fiduciary net position as of December 31, 2018 and 2017. The Statements of Changes in Fiduciary Net Position show the additions to and deductions from SRSP fiduciary net position during 2018 and 2017.

The above financial statements are presented in accordance with the Governmental Accounting Standards Board (GASB) ) Statement No. 72, *Fair Value Measurement and Application,* which provides guidance for determining a fair value measurement for financial reporting purposes and provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements, Statement No. 67, Financial Reporting for Pension Plans (replacing GASB 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans and GASB 50, Pension Disclosures), and GASB Statement No. 34, *Basic Financial* 

Statements – and Management's Discussion and Analysis – for State and Local Governments and all other applicable GASB pronouncements. These pronouncements address the requirements for financial statement presentation and certain disclosures for state and local governmental entities. The Plan's financial statements comply with all material requirements of these pronouncements.

These financial statements provide a snapshot of the SRSP assets and liabilities as of December 31 and the activities which occurred during the years presented. Both financial statements were prepared using the accrual basis of accounting as required by GASB. All investment activities have been reported based on the trade dates and have been valued based on independent outside sources.

The Notes to Financial Statements provide additional information, which is essential to have a full understanding of the basic financial statements.

### **Financial Analysis**

The following section provides further detail of the activities within the SRSP as well as additions and deductions to the Plan. Additions to the SRSP consist of participant and employer contributions, participant rollovers, interest income on outstanding participant loans, miscellaneous income and net investment income. Deductions to the Plan are the result of benefit payments to participants, administrative expenses, and participant investment advisory fees. Comparative financial schedules depict the changes between the years 2018, 2017 and 2016.

As of December 31, the SRSP's fiduciary net position was:

# Fiduciary Net Position (Amounts expressed in thousands)

					2018 -	- 2017		2017 -	- 2016
		Years ended	December 31		 Increase	Percentage	-	Increase	Percentage
		2018	2017	2016	(decrease)	change		(decrease)	change
Mutual funds	\$	84,892	89,528	71,074	\$ (4,636)	(5.2)%	\$	18,454	26.0%
Commingled fund		12,619	13,409	13,058	(790)	(5.9)		351	2.7
Money market fund		1,030	855	1,470	175	20.5		(615)	(41.8)
Total investments		98,541	103,792	85,602	 (5,251)	(5.1)	_	18,190	21.2
Receivables:	_						_		
Contributions		267	235	244	32	13.6		(9)	(3.7)
Participant loans		1,953	1,929	1,920	24	1.2		9	0.5
Other receivable				2				(2)	(100.0)
Total receivables		2,220	2,164	2,166	 56	2.6	_	(2)	(0.1)
Total assets	_	100,761	105,956	87,768	(5,195)	(4.9)	_	18,188	20.7
Total liabilities			8	5	(8)	(100.0)		3	60.0
Fiduciary net position	\$	100,761	105,948	87,763	 (5,187)	(4.9)%	\$_	18,185	20.7%

#### **SRSP Activities**

The fiduciary net position decreased by \$5.2 million or 4.9% in 2018 and increased by \$18.2 million or 20.7% in 2017. Additional details for the change in fiduciary net position are discussed on the following pages.

#### **Additions**

The money used to pay benefits is accumulated from the contributions made by the Board and each participant and from income generated by investments, including investment valuation appreciation, interest, and dividends. Earnings on investments are reported net of investment management expenses. The Board's matching contributions for 2018 and 2017 were \$2.1 and \$2.0 million, respectively. In 2016 the Board approved a new paid leave program in which, on a one-time basis only, any paid leave over an employees' target balance would be bought out by the employer and placed in the employees' retirement account. The increase in employer contributions from 2016 to 2017 of \$4.8 million was due to a one-time non-elective employer contribution for the

purpose of buying out the employees' paid leave. Net investment loss was \$4.5 million in 2018 as compared to net investment income of \$14.3 million in 2017. The decrease of net investment income from 2017 to 2018 was primarily due to market depreciation in fair value of investments.

# Additions to Fiduciary Net Position

(Amounts expressed in thousands)

				2018 – 2017		2017 -	- 2016
<u>Y</u>	ears ended	December 31		Increase	Percentage	Increase	Percentage
	2018	2017	2016	(decrease)	change	(decrease)	change
Employer contributions \$	2,050	6,770	2,034	(4,720)	(69.7)% \$	4,736	232.8%
Participant contributions	4,352	4,259	4,484	93	2.2	(225)	(5.0)
Participant rollovers	1,154	986	1,155	168	17.0	(169)	(14.6)
Participant interest on loans	84	82	67	2	2.4	15	22.4
Miscellaneous income	16	24	25	(8)	(33.3)	(1)	(4.0)
Net investment income(loss_	(4,537)	14,299	5,858	(18,836)	(131.7)	8,441	144.1
Total additions \$	3,119	26,420	13,623	(23,301)	(88.2)% \$	12,797	93.9%

#### **Deductions**

Benefits paid to participants during the year represent the majority of the deductions from the SRSP. In 2018 and 2017, benefits paid were \$8.2 and \$8.1 million, respectively, an increase of 0.8%. In comparison, benefits paid to participants increased 51.7% in 2017 over 2016. The change in the amount of benefit payments from year to year is attributed to the number of participants choosing to take lump-sum distributions at retirement in any one year and to changes in the number of participants receiving benefits in the SRSP.

Administrative expenses for the SRSP were \$83,900 in 2018 and \$76,900 in 2017. Administrative fees are calculated based upon a percentage of the fair value of investments. In 2018 and 2017, participant investment advisory fees were \$25,400 and \$26,100, respectively. Please refer to note 4 of the financial statements for a detailed explanation of SRSP administrative expenses.

#### **Deductions from Fiduciary Net Position**

(amounts expressed in thousands)

				2018 – 2017		2017 – 2016	
	Years	ended Decem	ber 31	Increase	Percentage	Increase	Percentage
	2018	2017	2016	(decrease)	change	(decrease)	change
Benefits paid to participants	\$ 8,197	8,132	5,362	65	0.8%	\$ 2,770	51.7%
Administrative expenses Participant investment	84	77	62	7	9.1	15	24.2
advisory fees	25	26	18	(1)	(3.8)	8	44.4
Total deductions	\$ 8,306	8,235	5,442	71	0.9%	2,793	51.3%

#### **Requests for Information**

This discussion and analysis is designed to provide a general overview of the SRSP fiduciary net position and changes in fiduciary net position as of December 31, 2018 and 2017 and for the years then ended. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

2017 2016

Treasurer Denver Water 1600 W. 12th Ave. Denver, CO 80204

# **Basic Financial Statements**

# a. Statements of Net Position

Assets	2018	2017
Investments, at fair value:		
Mutual funds \$	84,891,500	89,527,700
Commingled fund	12,619,200	13,408,800
Money market fund	1,030,400	855,700
Total investments	98,541,100	103,792,200
Receivables:		
Employer contributions	86,300	76,900
Employee contributions	180,200	158,100
Participant loans	1,953,600	1,928,800
Other receivables		
Total receivables	2,220,100	2,163,800
Total assets	100,761,200	105,956,000
Liabilities		
Accrued administrative expenses		7,500
Fiduciary net position \$	100,761,200	105,948,500

See accompanying notes to financial statements.

# b. Statement of Changes in Net Position

		2018	2017
Additions:			
Investment income:  Net appreciation in fair value of investments  Dividends	\$	(8,269,500) 3,732,800	10,133,100 4,165,100
Net investment income	-	(4,536,700)	14,298,200
Contributions: Employer contributions Participant contributions Participant rollovers	-	2,050,100 4,352,100 1,154,000	6,770,000 4,259,200 986,300
Total contributions		7,556,200	12,015,500
Other additions: Miscellaneous income Participant loan interest  Total other additions		15,500 84,300 99,800	24,000 82,300 106,300
Total additions	-	3,119,300	26,420,000
Deductions:  Benefits paid to participants  Administrative expenses  Participant investment advisory fees		8,197,300 83,900 25,400	8,131,800 76,900 26,100
Total deductions		8,306,600	8,234,800
Net increase		(5,187,300)	18,185,200
Fiduciary net position: Beginning of year		105,948,500	87,763,300
End of year	\$	100,761,200	105,948,500

See accompanying notes to financial statements.

### 3. Notes to the Financial Statements

# Note 1 - Plan Description

The Board of Water Commissioners, City and County of Denver, Colorado (the Board), adopted the Denver Water Supplemental Retirement Savings Plan in 1999 (SRSP). The Board operates a water utility created by the Charter of the City and County of Denver, Colorado.

The Board is made up of five members appointed by the Mayor of the City and County of Denver for staggered six-year terms. The Board is the sponsor of the Plan. The Board has delegated certain responsibilities regarding the Plan administration through a delegation resolution to the Chief Human Resources Officer and to the Chief Finance Officer. The delegation resolution instructs the CEO/Manager to create an advisory committee, with representation from the Finance, the Human Resources, and the Legal divisions, for the purpose of making recommendations to the CEO/Manager, the Chief Finance Officer and the Chief Human Resources Officer regarding the Retirement Program, including this SRSP. The advisory committee, in and of itself, has no decision-making authority.

The Board has engaged with Great West Life & Annuity Insurance Company d/b/a Empower Retirement (Empower Retirement) to provide recordkeeping and communication services for the Plan. The Board engages investment experts to monitor and recommend changes in the investment options included in the Plan.

#### a. General

The SRSP is a defined contribution plan covering all regular and discretionary employees of Denver Water who have completed the required introductory period and is qualified under section 401(a) paragraph (k) in accordance with the regulations of the Internal Revenue Code of 1986, as amended (IRC). The purpose of the SRSP is to provide supplemental retirement and other related benefits for eligible employees. As of December 31, 2017, there were 904 active employees out of 993 eligible employees participating in the SRSP. This compares with 928 active employees out of 1,017 eligible employees participating in the SRSP as of December 31, 2016. The SRSP and the trust established by the SRSP are maintained for the exclusive purpose of providing benefits to eligible employees and their beneficiaries, and for defraying reasonable administrative expenses. The SRSP provisions and contribution requirements are established and may be amended by the Board.

The SRSP is exempt from compliance with the Employee Retirement Income Security Act of 1974, as amended, as it is a governmental plan.

#### b. Contributions

Each year a participant may contribute up to 97% of pretax annual compensation, but not less than \$10 per pay period up to an annual maximum amount as codified by the Internal Revenue Service (IRS). Participants direct the investment of their contributions into various investment options offered by the SRSP. The Board makes a matching contribution in an amount equal to 100% of the first 3% of base compensation that each participant contributes to the SRSP. The SRSP was amended in 2013 to authorize employer discretionary contributions to qualifying participants. There were no discretionary contributions in 2017 and \$27,050 of discretionary contributions in 2016.

Employer contributions must be made no later than the last day of the Plan year for which the contribution is made. The employer may suspend, reduce or eliminate future employer contributions and may rescind such action at any time. The matching contribution is allocated to the participants' accounts and is participant directed.

Although it has not expressed any intent to do so, the Board may change the amount of or discontinue the matching or employer discretionary contribution at any time

#### c. Participant Accounts

Each participant's account reflects the cumulative amount of each participant's contribution along with the employer's matching and discretionary contribution including any income, gains, losses, or increases or decreases in fair value attributable to the investment of contributions, and further reflects any distributions to the participant or his or her beneficiary and any fees or expenses charged against the participant's account. The amount of the employer discretionary contribution, if any, for a Plan year is determined by the employer, and subject to Treasury Regulations under IRS Code §415 and 401(a)(17).

### d. Vesting

A participant's interest in his/her participant and employer matching contributions is fully vested and non-forfeitable.

In addition to the participant's and employer contributions, any discretionary contributions to qualifying participants become fully vested upon completing seven years of service, the qualifying participant attaining the age of 65 while employed by the employer, by termination due to the qualifying participant's death or disability, by termination of employment due to serious health conditions of the qualifying participant's spouse, and by termination, by the employer for reasons other than serious cause.

In the event of forfeitures due to termination of the qualifying participant prior to vesting the non-vested portion of the qualifying participant's discretionary employer contribution account will be used to pay Plan administrative expenses. Any excess, after paying Plan administrative expenses, will be allocated to participant accounts as employer contributions on the last day of the Plan year during the year of the forfeiture.

### e. Participant Loans

Only active employees who participate in the SRSP may request a loan and the participant must have a minimum vested account balance of \$2,000.

The minimum loan amount that a participant may request is \$1,000 and the maximum is \$50,000 or 50% of the vested account balance, whichever is less. The \$50,000 maximum loan amount is reduced by the highest loan balance during the past 12 months minus the loan balance on the date a new loan is made. If a participant has an outstanding loan through another qualified plan, 403(b) plan, or a 457 plan maintained by the same employer, the maximum loan amount available must be reduced by the highest outstanding loan balance during the past 12 months. The participant is responsible for ensuring that the aggregated loan amount on all plans sponsored by the same employer is the lesser of \$50,000 or 50% of the vested account balance.

The Plan offers two loan options to the participants. One is a General-Purpose Loan that has a term of twelve to sixty (12-60) months. No reason or documentation, other than a signed promissory note, is required when a participant requests a General-Purpose Loan. The other is a Principal Residence Loan that has a term of 72-180 months, which must be utilized for the purchase of a primary residence only.

Participants are charged a loan origination fee that is deducted from the original loan amount as well as an annual administrative fee that is deducted quarterly from the participants account. Outstanding loans are assessed an interest rate of 1% over the prime rate published in the Wall Street Journal on the first business day of the month before the loan is originated. The interest rate for General Purpose Loans are fixed for the life of the loan. For more information regarding the loan policy, participants may refer to the Plan Document.

### f. Payment of Benefits

On termination of service, a participant with a balance of \$1,000 or less will have the amount automatically distributed in a lump sum as soon as feasibly possible. A participant whose account is greater than \$1,000 may elect to receive either a single lump-sum amount equal to the value of the participant's interest in his or her account at termination or take periodic distributions provided they meet minimum distribution requirements of IRC code section 401(a)(9). Distributions must start no later than age 70½. Participants may also specify that funds roll directly from their account to an eligible retirement plan. Upon the death of a participant, the account is paid to the participant's beneficiaries in a single lump sum.

### g. Record Keeping, Custody and Management of Assets

Effective December 29, 2015, the Board amended the original agreement with Empower Retirement for an additional five years of recordkeeping and communication services related to the SRSP. Trust services are provided by Orchard Trust Company, LLC, through a separate contract with the Board. Fees for the trust services are paid by the participants. Assets allocated to the various funds are managed by investment professionals hired by the fund.

#### h. SRSP Termination

Though it has not expressed any intent to do so, the Board has the right under the SRSP to terminate the SRSP at any time with respect to any or all participants by resolution of the Board. Upon discontinuance of the SRSP, the account of each participant would remain fully vested and non-forfeitable.

# Note 2 – Summary of Significant Accounting Policies

#### a. Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Board to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates

# b. Basis of Accounting

The SRSP financial statements are prepared using the accrual basis of accounting and in accordance with generally accepted accounting principles that apply to governmental accounting for defined contribution plans. Contributions are recognized when earned without regard to the date of actual collection. Expenses are recognized when due and payable. Benefit payments and refunds are recognized upon distribution.

## c. Income Recognition

Purchases and sales are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Net realized and unrealized gains and losses are reflected as net appreciation or depreciation in fair value of investments in the accompanying statements of changes in fiduciary net position. This is determined as the difference between fair value at the beginning of the year (or date purchased during the year) and selling price or year-end fair value.

## d. Tax Status

The SRSP is intended to be an eligible employee retirement plan under Section 401(a) of the Code. The Board and the SRSP's tax counsel believe that it is currently designed and operating in compliance with the applicable requirements of the Code.

#### Note 3 – Investments

The following table lists the investment options available to participants and the value of each option at December 31, 2018 and 2017 (amounts are expressed in thousands):

	2018	2017
American Beacon Small CP Val Institutional	\$ 3,190	3,765
American Funds Washington Mutual	7,284	9,271
Arrowstreet Intl Equity ACWI Ex US Class A	3,680	_
Baron Growth Institutional	3,164	3,108
Cohen & Streers Institutional Global Realty	855	770
Fidelity Global Ex US Index	2,130	_
Fidelity Global Ex US Index Premium	_	1,378
Fidelity Total Market Index	16,402	_
Fidelity Total Market Index Institutional	_	17,666
Fidelity US Bond Index	1,416	_
Fidelity US Bond Index Premium	_	1,114
Frost Total Return Bond Institutional	5,219	4,486
Galliard Retirement Income Fund	12,619	13,409
Harbor International Institutional	_	5,167
Northern Global Sustainability Index	505	1,196
PIMCO High Yield Institutional	1,593	1,945
T. Rowe Price Growth Stock Fund I	6,831	8,344
Vanguard Inflation-Protected Secs Adm	2,306	1,585
Vanguard Target Retirement 2015 Inv	1,593	2,192
Vanguard Target Retirement 2020 Inv	2,313	2,166
Vanguard Target Retirement 2025 Inv	9,453	9,789
Vanguard Target Retirement 2030 Inv	1,352	808
Vanguard Target Retirement 2035 Inv	6,178	6,075
Vanguard Target Retirement 2040 Inv	1,825	1,569
Vanguard Target Retirement 2045 Inv	4,383	4,527
Vanguard Target Retirement 2050 Inv	410	273
Vanguard Target Retirement 2055 Inv	979	935
Vanguard Target Retirement 2060 Inv	467	356
Vanguard Target Retirement 2065 Inv	10	_
Vanguard Target Retirement Income Inv	896	765
Vanguard Total Intl BD Idx Admiral	458	277
Vanguard Treasury Money Market Inv	1,030	856
Total investments	\$ 98,541	103,792

The SRSP offered 26 mutual funds (including 12 target date funds), one money market fund and one commingled fund as investment options as of December 31, 2018. In 2017, the SRSP offered 25 mutual funds (including 11 target date funds), one money market fund and one commingled fund as investment options. The net investment loss (including gains and losses on investments bought and sold, as well as income received on investments

during the year) during 2018 was approximately \$4.5 million. Comparatively, net investment income during 2017 was approximately \$14.3 million.

#### a. Fair Value Measurements

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

Investments Measured at Fair Value (\$ in thousands)

			Fair vai	ue Measurement	s Using
		December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level  Mutual Funds	Φ.	04.000	04.000		
	\$	84,892	84,892	10.610	-
Commingled Funds	\$	12,619	04.000	12,619	
Total investments by fair value level	ф	97,511	84,892	12,619	
Investments measured at amortized cost					
Money market funds	\$	1,030			
Total investments measured at fair value	\$	98,541			
		December 31, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level		December of, 2017	(ECVCI I)	(LCVC1 Z)	(2010)
Mutual Funds	\$	89,528	89,528	_	_
Commingled Funds	Ψ	13,409	-	13,409	_
Total investments by fair value level	\$	102,937	89,528	13,409	
Investments measured at amortized cost Money market funds Total investments measured at fair value	\$	855 103,792			

Funds classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Funds classified in Level 2 of the fair value hierarchy are valued based on evaluated prices using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Level 3 inputs are significant unobservable inputs.

#### Note 4 – Administrative Expenses

The majority of investment options available to participants in the SRSP are registered mutual funds. The dollar amount of fees paid by the SRSP for investment management and administrative services on these funds are not separately disclosed. The fees are calculated and withdrawn from all participant accounts on a monthly basis. Revenue generated from the funds that had revenue sharing arrangements with the recordkeeper (Frost Total Return Bond Institutional, Northern Global Sustainability, Baron Growth Institutional and Cohen & Steers Institutional Global Realty) were credited to participants with account balances in the revenue-paying fund, based on the average daily balance of the participant's investment in such fund(s) for the month.

The assessed recordkeeping and communication fee for 2018 totaled \$83,900. Revenue sharing from 12(b)(1) fees reported by the recordkeeper for the same period was \$15,500. The assessed recordkeeping and communication fee for 2017 totaled \$76,900 and revenue sharing from 12(b)(1) fees reported by the recordkeeper for the same period was \$24,000.

# Note 5 – Participant Investment Advisory Fees

The plan participants may choose to either manage their investments themselves, use an online investment advice tool or they can choose to have their account managed as an ancillary service available through the Plan recordkeeper. Participants who choose to use the online investment advice tool pay an annual fee assessed quarterly. Participants choosing to have their account managed pay an annual tiered fee, assessed quarterly, based on the participant's account balance. In 2018 and 2017, total participant investment advisory fees paid were \$25,400 and \$26,100, respectively.

#### Note 6 - Risks and Uncertainties

#### a. Custodial Credit Risk

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

The SRSP investments are evidenced by mutual fund shares and commingled fund units. In accordance with Governmental Accounting Standards Board (GASB) Statement No. 40, *Deposit and Investment Risk Disclosures*, investments in mutual funds should be disclosed but not categorized because they are not evidenced by securities that exist in physical or book-entry form. The SRSP investment is the mutual fund share and commingled fund unit, not the underlying security. Additionally, investments in open-end mutual funds are not subject to custodial credit risk disclosures.

#### b. Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single issuer. If 5% or more of the total assets of the SRSP are invested with one issuer then the investment is considered to have concentration risk. Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds or pools are excluded from concentration of credit risk requirements. The SRSP investment options consist of diversified mutual funds, one commingled fund, and one money market fund and are not subject to and therefore do not have concentration risk.

### c. Credit Risk

Credit risk exists when there is a possibility the issuer or other counterparty to an investment may be unable to fulfill its obligations. The SRSP investment policy does not specifically address the quality rating of the investments. Each participant is responsible for determining the risks and commensurate returns of their portfolio. The SRSP investment options consist of diversified mutual funds, one commingled fund, and one money market fund and therefore do not have credit risk. The mutual funds, commingled fund, and money market fund have not been rated by any nationally recognized rating agency (Moody's, Fitch and Standard & Poor's rating agencies).

#### d. Interest Rate Risk

Interest rate risk exists when there is a possibility that changes in interest rates could adversely affect an investment's fair value. Some of the mutual funds held by the SRSP invest in debt instruments that are subject to

interest rate risk. The schedule presented below provides an indication of the interest rate risk associated with the funds holding debt obligations as of the most recent information available:

	Average effective	Average effective	Average credit
Target date funds:	maturity (years)	duration (years)	quality
Vanguard Target Retirement 2015 Inv	7.51	5.83	AA
5 5	8.02		AA
Vanguard Target Retirement 2020 Inv		6.17	
Vanguard Target Retirement 2025 Inv	8.74	6.64	A
Vanguard Target Retirement 2030 Inv	8.74	6.64	A
Vanguard Target Retirement 2035 Inv	8.74	6.64	Α
Vanguard Target Retirement 2040 Inv	8.74	6.64	Α
Vanguard Target Retirement 2045 Inv	8.74	6.64	Α
Vanguard Target Retirement 2050 Inv	8.74	6.64	Α
Vanguard Target Retirement 2055 Inv	8.74	6.64	Α
Vanguard Target Retirement 2060 Inv	8.75	6.65	Α
Vanguard Target Retirement 2065 Inv	8.74	6.65	
Vanguard Target Retirement Income Inv	7.32	5.71	AA
Fixed income mutual funds:			
Fidelity US Bond Index	8.10	5.92	AA
Frost Total Return Bond Institutional	5.10	3.37	ВВ
PIMCO High Yield Institutional	5.75	3.65	BB
Vanguard Inflation Protected	8.20	7.57	AAA
Vanguard Total Intl Bd Index Admiral Commingled funds:	9.30	7.90	A

### e. Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The SRSP diversified selection of mutual funds encourages the participants to employ diversification, asset allocation, and quality strategies to minimize risks. Each participant is responsible for determining the risks and commensurate returns of their portfolio.

The SRSP exposure to foreign currency risk measured by fund allocation to foreign securities as of the most recent information available is summarized in the table below:

	invested in foreign securities
American Beacon Small CP Val Institutional	2.86%
American Funds Washington Mutual	9.20
Arrowstreet INTL Equity ACWI Ex US Class A	97.90
Baron Growth Institutional	2.63
Cohen & Streers Institutional Global Realty	47.96
Fidelity Global Ex US Index	94.13
Fidelity Total Market Index	0.95
Fidelity US Bond Index	9.03
Frost Total Return Bond Institutional	14.39
Northern Global Sustainability Index	38.46
PIMCO High Yield Institutional	12.75
T. Rowe Price Growth Stock Fund I	6.17
Vanguard Target Retirement 2015 Inv	31.76
Vanguard Target Retirement 2020 Inv	34.64
Vanguard Target Retirement 2025 Inv	36.93
Vanguard Target Retirement 2030 Inv	37.20
Vanguard Target Retirement 2035 Inv	37.48
Vanguard Target Retirement 2040 Inv	37.78
Vanguard Target Retirement 2045 Inv	37.99
Vanguard Target Retirement 2050 Inv	37.96
Vanguard Target Retirement 2055 Inv	37.91
Vanguard Target Retirement 2060 Inv	37.99
Vanguard Target Retirement 2065 Inv	38.09
Vanguard Target Retirement Income Inv	30.04
Vanguard Total Intl BD Idx Admiral	96.71

# Note 7 – SRSP Amendments

On December 6, 2017, the SRSP was amended to revise the definition of compensation and the definition of spouse and permitted deferral of compensation as a percentage or a dollar amount.

# C. Denver Water 457 Deferred Compensation Plan

# 1. Independent Auditors Report



#### INDEPENDENT AUDITORS' REPORT

The Board of Water Commissioners, City and County of Denver, Colorado Denver Water 457 Deferred Compensation Plan Denver, Colorado

# Report on the Financial Statements

We have audited the accompanying statements of fiduciary net position and statements of changes in fiduciary net position of the Denver Water 457 Deferred Compensation Plan (the Plan), as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the Plan'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 audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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 entity'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 entity'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.

The Board of Water Commissioners, City and County of Denver, Colorado Denver Water 457 Deferred Compensation Plan

#### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Plan as of December 31, 2017 and 2016, and the respective changes in fiduciary net position 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 on pages 3-6 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 Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 19, 2018, on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the Plan's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Plan's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

Clifton Larson Allen LLP

Broomfield, Colorado April 19, 2018

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<sup>\*</sup>CliftonLarsonAllen LLP was not engaged to perform and has not performed, since the date of its report, any procedures on the financial statements addressed in such report and that the Board has not requested the consent of CliftonLarsonAllen LLP for the inclusion of its report therein.

# 2. Management's Discussion and Analysis

This is an analysis and overview of the financial activities of the Denver Water 457 Deferred Compensation Plan (Plan) for the years ended December 31, 2018 and 2017. This information should be read in conjunction with the Plan financial statements and notes, which follow.

# Financial Highlights

As of December 31, 2018, \$32.7 million was held in trust for the payment of Plan benefits to the participants as compared to \$34.1 million in 2017.

Total fiduciary net position decreased by \$1.5 million or 4.3% in 2018 as compared to an increase in 2017 of \$1.6 million or 4.9%. The decrease in 2018 and the increase in 2017 was primarily due to changes in the fair values of the Plan's investments.

In 2018, the Plan had a net investment loss of \$1.1 million compared to a net investment income of \$4.4 million in 2017. Participant contributions were approximately \$2.1 million in 2018 and \$2.0 million in 2017. Deductions from fiduciary net position totaled \$3.1 million in 2018 and \$4.9 million in 2017 and were primarily for benefit payments to participants.

The Plan is a deferred compensation plan and its primary purpose is to attract and retain qualified personnel by permitting eligible employees to defer a portion of their current income for their retirement. At December 31, 2018, there were 385 participating employees in the Plan, which constituted 40% of all eligible Denver Water employees. This compares to 391 participating employees in the Plan, constituting 39% of all eligible employees in 2017. There were 958 employees eligible for the Plan as of December 31, 2018, compared with 993 employees eligible for the Plan as of December 31, 2017.

## Overview of the Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's financial statements, which follow. The statements include:

- 1. Statements of Fiduciary Net Position
- 2. Statements of Changes in Fiduciary Net Position
- 3. Notes to Financial Statements

The Statements of Fiduciary Net Position presents the Plan's assets, liabilities and fiduciary net position as of December 31, 2018 and 2017. The Statements of Changes in Fiduciary Net Position show the additions to and deductions from Plan fiduciary net position during 2018 and 2017.

The above financial statements are presented in accordance with the Governmental Accounting Standards Board (GASB) Statement No. 72, Fair Value Measurement and Application, which provides guidance for determining a fair value measurement for financial reporting purposes and provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements, Statement No. 67, Financial Reporting for Pension Plans (replacing GASB 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans and GASB 50, Pension Disclosures), and GASB Statement No. 34, Basic Financial Statements and Management's Discussion and Analysis—for State and Local Governments, and all other applicable GASB pronouncements. These pronouncements address the requirements for financial statement presentation and certain disclosures for state and local governmental entities. The Plan's financial statements comply with all material requirements of these pronouncements.

These financial statements provide a snapshot of the Plan's assets and liabilities as of December 31 and the activities which occurred during the years presented. Both financial statements were prepared using the accrual basis of accounting as required by GASB. All investment activities have been reported based on trade dates and have been valued based on independent outside sources.

The Notes to Financial Statements provide additional information, which is essential to have a full understanding of the basic financial statements.

# Financial Analysis

The following section provides further detail of the activities within the Plan as well as additions and deductions to the Plan. Additions to the Plan consist of participant and employer contributions, participant rollovers, interest income on outstanding participant loans, miscellaneous income, and net investment income. Deductions to the Plan are the result of benefit payments to participants, administrative expenses and participant investment advisory fees. Comparative financial schedules depict the changes between the years 2018, 2017 and 2016.

As of December 31, the Plan fiduciary net position was:

# Fiduciary Net Position (Amounts expressed in thousands)

	Years	ended Decen	nber 31	2018 -	2017	2017 -	2016
				Increase	Percent	Increase	Percent
	2018	2017	2016	(decrease)	change	(decrease)	change
Mutual funds	24,989	25,363	22,680	(374)	(1.5)% \$	2,683	11.8%
Commingled fund	6,780	8,019	8,796	(1,239)	(15.5)	(777)	(8.8)
Money market fund	605	490	788	115	23.5	(298)	(37.8)
Total investments	32,374	33,872	32,264	(1,498)	(4.4)	1,608	5.0
Receivables:							
Contributions	84	77	66	7	9.1	11	16.7
Participant loans	209	194	209	15	7.7	(15)	(7.2)
Other receivable			1			(1)	(100.0)
Total receivables	293	271	276	22	8.1	(5)	(1.8)
Total assets	32,667	34,143	32,540	(1,476)	(4.3)	1,603	4.9
Total liabilities		2	1	(2)	(100.0)	1_	100.0
Fiduciary net position \$	32,667	34,141	32,539	(1,474)	(4.3)% \$	1,602	4.9%

#### Plan Activities

The decrease to net position in 2018 was primarily due to the depreciation of the fair value of investments. The total decrease in Plan net position was \$1.5 million or 4.3%. In 2017, Plan net position increased by \$1.6 million or 4.9%, as compared to 2016. Additional details for the change in net position are discussed on the following page.

#### **Additions**

The money used to pay benefits is accumulated from the contributions made by each participant and from income generated from the participants' investments including investment appreciation, interest and dividends. Earnings on investments are reported net of investment management expenses. Investment loss net of investment manager fees during 2018 was \$1.1 million as compared to a net investment income of \$4.4 million in 2017.

# Additions to Fiduciary Net Position

(Amounts expressed in thousands)

				2018 – 2017		2017 -	<u> </u>	
_	Years	ended Decem	ber 31	Increase	Percent	Increase	Percent	
	2018	2017	2016	(decrease)	change	(decrease)	change	
Participant contributions \$	2,108	2,017	2,070	91	4.5% \$	(53)	(2.6)%	
Employer contributions	25	_	36	25	_	(36)	(100.0)	
Participant rollovers	583	33	2	550	1,666.7	31	1,550.0	
Participant loan interest	9	9	8	_	_	1	12.5	
Miscellaneous income	5	9	12	(4.0)	(44.4)	(3)	(25.0)	
Net investment income	(1,075)	4,427	1,854	(5,502)	(124.3)	2,573	138.8	
Total additions \$_	1,655	6,495	3,982	(4,840)	(74.5)%	2,513	63.1%	

#### **Deductions**

Benefits paid to participants of \$3.1 million in 2018 and \$4.9 million in 2017 represent the majority of the deductions from the Plan. Benefits paid to participants were 36.3% less in 2018 compared to 2017 and 117.9% more in 2017 compared to 2016. The change in the amount of benefits paid to participants from year to year is attributed to the number of participants choosing to take lump sum distributions at retirement in any one year and to changes in the number of participants receiving benefits in the Plan.

Administrative expenses for 2018 and 2017 were \$26,500 and \$25,900, respectively. Administrative fees are calculated based upon a percentage of the fair value of investments. In 2018, participant investment advisory fees were \$5,400 as compared to \$5,500 in 2017. Please refer to note 4 of the financial statements for information regarding administrative expenses.

### **Deductions from Fiduciary Net Position**

(Amounts expressed in thousands)

			2018 -	- 2017	2017 –	2016	
	Years	ended Decem	ber 31	Ingrasca	Percent	(decrease)	Percent
	2018	2017	2016	Increase change		(decrease)	change
Benefits paid to participants	\$ 3,098	4,861	2,231	(1,763)	(36.3)%	2,630	117.9%
Administrative expenses Participant investment	27	25	22	2	8.0	3	13.6
advisory fees	5	6	5	(1)	(16.7)	1	20.0
Total deductions	\$ 3,130	4,892	2,258	(1,762)	(36.0)%	2,634	116.7%

### Requests for Information

This discussion and analysis is designed to provide a general overview of the fiduciary net position and changes in fiduciary net position as of December 31, 2018 and 2017 and for the years then ended. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Treasurer Denver Water 1600 W. 12th Ave. Denver, CO 80204

# 3. Basic Financial Statements

# a. Statements of Net Position

	=	2018	2017
Assets:			
Investments, at fair value:			
Mutual funds	\$	24,989,100	25,363,300
Commingled fund		6,780,100	8,018,600
Money market fund	_	604,700	490,500
Total investments	_	32,373,900	33,872,400
Receivables:			
Participant contributions		83,700	77,000
Participant loans	_	209,700	193,900
Total receivables	=	293,400	270,900
Total assets		32,667,300	34,143,300
Liabilities:			
Accrued administrative expenses	_		1,500
Net position	\$ _	32,667,300	34,141,800

See accompanying notes to financial statements.

# b. Statements of Changes in Net Position

	_	2018	2017
Additions:			
Investment income:			
Net appreciation in fair value of investments	\$	(2,212,000)	3,114,900
Dividends		1,137,500	1,311,600
Net investment income	_	(1,074,500)	4,426,500
Contributions:			
Participant contributions		2,108,300	2,017,100
Employer discretionary contributions		24,500	_
Participant rollovers		583,000	33,300
Total contributions		2,715,800	2,050,400
Other additions:			
Miscellaneous income		4,800	9,400
Participant loan interest		9,100	8,700
Total other additions		13,900	18,100
Total additions	_	1,655,200	6,495,000
Deductions:			
Benefits paid to participants		3,097,800	4,861,000
Administrative expenses		26,500	25,900
Participant investment advisory fees		5,400	5,500
Total deductions		3,129,700	4,892,400
Net increase		(1,474,500)	1,602,600
Net position:			
Beginning of year	_	34,141,800	32,539,200
End of year	\$	32,667,300	34,141,800

See accompanying notes to financial statements.

# 4. Notes to the Financial Statements

# Note 1 - Plan Description

The Denver Board of Water Commissioners, City and County of Denver, Colorado (Board) operates a water utility created by the Charter of the City and County of Denver. In 1987, the Board initiated a deferred compensation plan and adopted the Conference of Mayors' 457 Plan. The termination of the administrator of the Plan in December 2000 required the Board to adopt a new plan. In January 2001, the Board adopted the Denver Water 457 Deferred Compensation Plan (Plan). All of the investments in the old Plan were sold and the proceeds were used to purchase like kind investments in the new Plan.

The Board is made up of five members appointed by the Mayor of the City and County of Denver for staggered six-year terms. The Board is the sponsor of the Plan. The Board has delegated certain responsibilities regarding the Plan administration through a delegation resolution to the Chief Human Resources Officer and to the Chief Finance Officer. The delegation resolution instructs the CEO/Manager to create an advisory committee, with representation from the Finance, the Human Resources, and the Legal divisions, for the purpose of making recommendations to the CEO/Manager, the Chief Finance Officer and the Chief Human Resources Officer regarding the Retirement Program, including this Plan. The advisory committee, in and of itself, has no decision-making authority.

The Board has engaged with Great West Life & Annuity Insurance Company d/b/a Empower Retirement (Empower Retirement) to provide recordkeeping and communication services for the Plan. The Board engages investment experts to monitor and recommend changes in the investment options included in the Plan.

The following description of the Plan provides general information. Participants and others should refer to the Plan document for a more complete description of the Plan provisions.

### a. General

The Plan is a deferred compensation plan covering all regular and discretionary employees of the Board who have completed the required introductory period. The Plan's primary purpose is to attract and retain qualified personnel by permitting them to provide for benefits in the event of their retirement or death.

The Plan is exempt from compliance with the Employee Retirement Income Security Act of 1974, as amended, as it is a governmental plan.

# b. Contributions

Each year a participant may defer up to an annual maximum amount as codified by the Internal Revenue Service. The Plan will accept transfers, pursuant to Section 457 of the Internal Revenue Code (Code), of amounts deferred by an individual under another eligible deferred compensation plan. Participants direct the investment of their contributions into various investment options offered by the Plan. The Plan was amended in 2013 to authorize employer discretionary contributions to qualifying participants. There were \$24,500 in discretionary contributions in 2018 and no discretionary contributions in 2017. Employer contributions must be made no later than the last day of the Plan year for which the contribution is made. The employer may suspend, reduce or eliminate future employer contributions and may rescind such action at any time.

# c. Participant Accounts

Each participant's account reflects the cumulative amount of each participant's deferred compensation and employer discretionary contribution (if any), including any income, gains, losses, or increases or decreases in fair value attributable to the investment of the participant's deferred compensation and employer discretionary contribution (if any), and further reflects any distributions to the participant or his or her beneficiary and any fees or expenses charged against the participant's account. The amount of the employer discretionary contribution, if any, for a Plan year is determined by the employer, and is subject to Treasury Regulations under IRS Code §415 and 401(a) (17).

## d. Vesting

A participant's interest in his/her participant contributions is fully vested and non-forfeitable. Discretionary contributions to qualifying participants become fully vested upon completing seven years of service, the qualifying participant attaining the age of 65 while employed by the employer, by termination due to the qualifying participant's death or disability, by termination of employment due to serious health conditions of the qualifying participant's spouse and by termination by the employer for reasons other than serious cause. In December 2016, the Plan was amended to allow a specified dollar amount of the qualifying participant's discretionary employer contribution to become fully vested and non-forfeitable.

In the event of forfeitures due to termination of the qualifying participant prior to vesting the non-vested portion of the qualifying participant's discretionary employer contribution account will be used to pay Plan administrative expenses. Any excess, after paying Plan administrative expenses, will be allocated to participant accounts as employer contributions on the last day of the Plan year during the year of the forfeiture.

# e. Participant Loans

Only active Plan participants may request a loan and the participant must have a minimum vested account balance of \$2,000. The minimum loan amount that a participant may request is \$1,000 and the maximum is \$50,000 or 50% of the vested account balance, whichever is less. The \$50,000 maximum loan amount is reduced by the highest loan balance during the past 12 months minus the loan balance on the date a new loan is made. If a participant has an outstanding loan through another qualified plan, 403(b) plan, or a 401(k) plan maintained by the same employer, the maximum loan amount available must be reduced by the highest outstanding loan balance during the past 12 months. The participant is responsible for ensuring that the aggregated loan amount on all plans sponsored by the same employer is the lesser of \$50,000 or 50% of the vested account balance.

The Plan offers two loan options to the participants. One is a General-Purpose Loan that has a term of twelve to sixty (12-60) months. No reason or documentation, other than a signed promissory note, is required when a participant requests a General-Purpose Loan. The other is a Principal Residence Loan that has a term of 72-180 months, which must be utilized for the purchase of a primary residence only.

Participants are charged a loan origination fee and it is deducted from the original loan amount as well as an annual administrative fee that is deducted quarterly and is assessed to each participant's account. The interest rate assessed to the loans is 1% over the prime rate published in the Wall Street Journal on the first business day of the month before the loan is originated.

The interest rate for General Purpose Loans is fixed for the life of the loan. For more information regarding the loan policy, participants may refer to the Plan Document

# f. Payment of Benefits

On termination of service, a participant with a balance of \$1,000 or less will have the amount distributed in a lump sum as soon as feasibly possible. A participant whose account is greater than \$1,000 may elect to receive either a lump sum amount equal to the value of the participant's interest in his or her account, or leave the balance in

the Plan. Distributions from balances left in the Plan must begin no later than age 70½. When balances are paid, participants will receive payment under various payment options defined by the Plan. Upon the death of a participant, a death benefit equal to the value of the participant's account shall be payable to a designated beneficiary. The beneficiary may select from various payment options defined by the Plan.

# g. Recordkeeping, Custody and Management of Assets

Effective December 29, 2015, the Board amended the original agreement with Empower Retirement for an additional five years of recordkeeping and communication services related to the Plan. Trust services are provided by Orchard Trust Company, LLC, through a separate contract with the Board. Fees for the trust services are paid by the participants. Assets allocated to the various funds are managed by investment professionals hired by the fund.

### h. Plan Termination

Though it has not expressed any intent to do so, the Board has the right under the Plan to terminate the Plan at any time with respect to any or all participants by resolution of the Board.

# Note 2 – Summary of Significant Accounting Policies

### a. Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires the Board to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein and disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

# b. Basis of Accounting

The Plan's financial statements are prepared using the accrual basis of accounting and in accordance with generally accepted accounting principles that apply to governmental accounting for defined contribution plans. Contributions are recognized when earned without regard to the date of actual collection. Expenses are recognized when due and payable. Benefit payments and refunds are recognized upon distribution.

# c. Income Recognition

Purchases and sales are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Net realized and unrealized gains and losses are reflected as net appreciation or depreciation in fair value of investments in the accompanying statements of changes in net position. This is determined as the difference between fair value at the beginning of the year (or date purchased during the year) and selling price or year-end fair value.

### d. Tax Status

The Plan is intended to be an eligible deferred compensation plan under Section 457(b) of the Code. The Board and the Plan's tax counsel believe that the Plan is currently designed and operating in compliance with the applicable requirements of the Code.

### Note 3 - Investments

The following table lists the investment options available to participants and the value of each option at December 31, 2018 and 2017 (amounts are expressed in thousands).

,	2018	2017
American Beacon Small CP Val Institutional	\$ 1,0	090 1,275
American Funds Washington Mutual	1,9	958 2,138
Arrowstreet Intl Equity ACWI Ex US Class A	•	913 —
Baron Growth Institutional	8	370
Cohen & Streers Institutional Global Realty	;	320 246
Fidelity Global Ex US Index	(	665
Fidelity Global Ex US Index Premium		<b>—</b> 258
Fidelity Total Market Index	4,2	269 —
Fidelity Total Market Index Institutional		<b>—</b> 4,473
Fidelity US Bond Index	-	748 —
Fidelity US Bond Index Premium		<del></del>
Frost Total Return Bond Institutional	1,9	938 1,716
Galliard Retirement Income Fund	6,7	780 8,019
Harbor International Institutional		<b>—</b> 1,448
Northern Global Sustainability Index	•	148 352
PIMCO High Yield Institutional	8	332 938
T. Rowe Price Growth Stock Fund I	2,4	472 3,675
Vanguard Inflation-Protected Secs Adm	!	516 373
Vanguard Target Retirement 2015 Inv	4	463 663
Vanguard Target Retirement 2020 Inv	1,0	070 803
Vanguard Target Retirement 2025 Inv	1,7	798 2,504
Vanguard Target Retirement 2030 Inv	(	672 236
Vanguard Target Retirement 2035 Inv		515 972
Vanguard Target Retirement 2040 Inv		338 254
Vanguard Target Retirement 2045 Inv		1,145
Vanguard Target Retirement 2050 Inv	•	144 96
Vanguard Target Retirement 2055 Inv	2	207 193
Vanguard Target Retirement 2060 Inv		46 37
Vanguard Target Retirement 2065 Inv		5 —
Vanguard Target Retirement Income Inv	4	429 402
Vanguard Total Intl BD Idx Admiral	;	397 62
Vanguard Treasury Money Market Inv	6	05 490
Total investments	\$ 32,3	33,872

The Plan offered 26 mutual fund investment options (including 12 target date funds), one money market fund and one commingled fund as of December 31, 2018. In 2017, the Plan offered 25 mutual fund investment options (including 11 target date funds), one money market fund and one commingled fund as of December 31, 2017. The Plan's investments (including gains and losses on investments bought and sold, as well as income received on investments held during the year) during 2018 and 2017 generated an investment loss of \$1.1 million and investment income of \$4.4 million, respectively.

# a. Fair Value Measurement

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

Investments and Derivative Instruments Measured at Fair Value (\$ in thousands)

			Fair Value Measurements Using		
	_	December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level					
Mutual Funds	\$	24,989	24,989	-	-
Commingled funds	-	6,780	-	6,780	
Total investments by fair value level	\$ _	31,769	24,989	6,780	
Investments measured at amortized cost Money market funds	\$	605			
Total investments measured at fair value	\$	32,374			
Total investments measured at fair value	Ψ =		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
Investments by fair value level		December 31, 2017	(Level 1)	(Level 2)	(Level 3)
Investments by fair value level  Mutual Funds	\$	25,363	25,363		
Commingled funds	φ	8,019	25,505	8,019	
Total investments by fair value level	\$	33,382	25,363	8,019	
Total invocation by fair value force	Ψ =	00,002	20,000	0,010	
Investments measured at amortized cost					
Money market funds	\$	490			
Total investments measured at fair value	\$	33,872			

Funds classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Funds classified in Level 2 of the fair value hierarchy are valued based on evaluated prices using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Level 3 inputs are significant unobservable inputs.

# Note 4 – Administrative Expenses

The majority of investment options available to participants in the Plan are registered mutual funds. The dollar amount of fees paid by the Plan for investment management and administrative services on these funds is not separately disclosed. The fees are calculated and withdrawn from all participant accounts on a monthly basis. Revenue generated from the funds which had revenue sharing arrangements with the recordkeeper (Frost Total Return Bond Institutional, Northern Global Sustainability, Baron Growth Institutional and Cohen & Steers Institutional Global Realty) were credited to participants with account balances in the revenue-paying fund, based on the average daily balance of the participant's investment in such fund(s) for the month.

The assessed recordkeeping and communication fee for 2018 totaled \$26,500. Revenue sharing from 12(b) (1) fees reported by the recordkeeper for the same period was \$4,800. The assessed recordkeeping and communication fee for 2017 totaled \$25,900. Revenue sharing from 12(b) (1) fees reported by the recordkeeper for the same period was \$9,400.

# Note 5 – Participant Investment Advisory Fees

The Plan participants may choose to either manage their investments themselves, use an online investment advice tool, or they can choose to have their account managed as an ancillary service available through the Plan recordkeeper. Participants who choose to use the online investment advice tool pay an annual fee assessed quarterly. Participants choosing to have their account managed pay an annual tiered fee, assessed quarterly, based on the participant's account balance. In 2018 and 2017, total participant investment advisory fees paid were \$5,400 and \$5,500, respectively.

## Note 6 - Risks and Uncertainties

## a. Custodial Credit Risk

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

The Plan investments are evidenced by mutual fund shares and commingled fund units. In accordance with Governmental Accounting Standards Board (GASB) Statement No. 40, Deposit and Investment Risk Disclosures, investments in these funds should be disclosed but not categorized because they are not evidenced by securities that exist in physical or book-entry form. The Plan's investment is the mutual fund share or the commingled fund unit, not the underlying security. Additionally, investments in open-end mutual or commingled funds are not subject to custodial credit risk disclosures.

### b. Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single issuer. If 5% or more of the total assets of the Plan are invested with one issuer then the investment is considered to have concentration risk. Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds or pools are excluded from concentration of credit risk requirements. The Plan investment options consist of diversified mutual funds, a commingled fund, and one money market fund and therefore do not have concentration risk.

# c. Credit Risk

Credit risk exists when there is a possibility the issuer or other counterparty to an investment may be unable to fulfill its obligations. The Plan investment policy does not specifically address the quality rating of the investments. Each participant is responsible for determining the risks and commensurate returns of their portfolio. The Plan investment options consist of diversified mutual funds and one commingled fund, and one money market fund and therefore do not have credit risk. The mutual funds, commingled fund, and money market fund have not been rated by any nationally recognized rating agency (Moody's, Fitch and Standard & Poor's rating agencies).

### d. Interest Rate Risk

Interest rate risk exists when there is a possibility that changes in interest rates could adversely affect an investment's fair value. Some of the mutual funds held by the Plan invest in debt instruments that are subject to interest rate risk. The schedule presented below provides an indication of the interest rate risk associated with the funds holding debt obligations as of the most recent information available:

Schedule of maturity, duration and credit quality

	Average effective	Average effective	Average credit
	maturity (years)	duration (years)	quality
Target date funds:			
Vanguard Target Retirement 2015 Inv	7.51	5.83	AA
Vanguard Target Retirement 2020 Inv	8.02	6.17	AA
Vanguard Target Retirement 2025 Inv	8.74	6.64	Α
Vanguard Target Retirement 2030 Inv	8.74	6.64	Α
Vanguard Target Retirement 2035 Inv	8.74	6.64	Α
Vanguard Target Retirement 2040 Inv	8.74	6.64	Α
Vanguard Target Retirement 2045 Inv	8.74	6.64	Α
Vanguard Target Retirement 2050 Inv	8.74	6.65	Α
Vanguard Target Retirement 2055 Inv	8.74	6.64	Α
Vanguard Target Retirement 2060 Inv	8.75	6.65	Α
Vanguard Target Retirement 2065 Inv	8.74	6.65	Α
Vanguard Target Retirement Income Inv	7.32	5.71	AA
Fixed income mutual funds:			
Fidelity US Bond Index	8.10	5.92	AA
Frost Total Return Bond Institutional	5.10	3.37	BB
PIMCO High Yield Institutional	5.75	3.65	BB
Vanguard Inflation Protected	8.20	7.57	AAA
Vanguard Total Intl Bd Index Admiral	9.30	7.90	Α
Commingled funds:			

# e. Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Plan's diversified selection of funds encourages the participants to employ diversification, asset allocation, and quality strategies to minimize risks. Each participant is responsible for determining the risks and commensurate returns of their portfolio.

The Plan exposure to foreign currency risk is measured by fund allocation to foreign securities as of the most recent information available is summarized in the table (amounts are expressed in thousands).

Schedule of assets invested in foreign securities

	Percentage
	of fund
	invested in
	foreign
_	securities
American Beacon Small CP Val Institutional	2.86%
American Funds Washington Mutual	9.20
Arrowstreet INTL Equity ACWI Ex US Class A	97.90
Baron Growth Institutional	2.63
Cohen & Streers Institutional Global Realty	47.96
Fidelity Global Ex US Index	94.13
Fidelity Total Market Index	0.95
Fidelity US Bond Index	9.03
Frost Total Return Bond Institutional	14.39
Northern Global Sustainability Index	38.46
PIMCO High Yield Institutional	12.75
T. Rowe Price Growth Stock Fund I	6.17
Vanguard Target Retirement 2015 Inv	31.76
Vanguard Target Retirement 2020 Inv	34.64
Vanguard Target Retirement 2025 Inv	36.93
Vanguard Target Retirement 2030 Inv	37.20
Vanguard Target Retirement 2035 Inv	37.48
Vanguard Target Retirement 2040 Inv	37.78
Vanguard Target Retirement 2045 Inv	37.99
Vanguard Target Retirement 2050 Inv	37.96
Vanguard Target Retirement 2055 Inv	37.91
Vanguard Target Retirement 2060 Inv	37.99
Vanguard Target Retirement 2065 Inv	38.09
Vanguard Target Retirement Income Inv	30.04
Vanguard Total Intl BD Idx Admiral	96.71

# Note 7 - Plan Amendments

On December 6, 2017 the Plan was amended to revise the definition of compensation and the definition of spouse and permitted deferral of compensation as a percentage or a dollar amount.

On April 2017, the Plan was amended to allow employees to defer their paid time off (PTO) and any back pay in accordance with the IRS 457(b) requirements.

	2018 Annual Report of the Denver Board of Water Commissioners Employees' Retirement Program	
III.	INVESTMENT SECTION (UNAUDITED)	
111.	INVESTMENT SECTION (GNAGDITED)	

# A. Employees Retirement Plan

# 1. Report on Investment Activity

The Northern Trust Company 50 South La Salle Street Chicago, Illinois 60603 (312) 630-6000



May 2, 2019

Plan Members, the Board of Trustees & Retirement Program Committee Denver, Colorado

Dear Employee's Retirement Plan of the Denver Board of Water Commissioners,

This letter reviews the performance for the Denver Water Employees Retirement Plan (DWERP) for the year ended December 31, 2018.

Northern Trust calculates time-weighted performance statistics based on our accounting system's data using the BAI iterative methodology (CFA Institute accepted). Northern Trust evaluates DWERP's performance in relation to market indices, appropriate manager peer groups and other public funds of similar size.

DWERP's primary investment objective is to prudently and expertly invest assets, in accordance with government law and industry practices, in a manner that will help ensure DWERP's ability to pay promised benefits to its members and their beneficiaries. A policy benchmark is constructed that mirrors DWERP's strategic asset allocation policy. This policy benchmark is a custom index based on current asset allocation approved by the Director of Finance. The Board establishes ranges.

# Market Environment

2018 closed with a bang and investors found themselves with a lump of coal as 2018 ended. Global equity markets fell 13% in the fourth quarter and 9% for the year. Concerns were brewing amid signs of economic moderation, ongoing trade frictions, monetary policy tightening and renewed dysfunction in Washington.

Credit spread widening occurred throughout most of 2018, but it intensified in the fourth quarter of the year with both investment grade and high yield credit spreads ending at levels last seen in 2016. Normally, the credit markets are considered the "canary in the coal mind," alerting investors that stresses are building in the financial system ahead of other financial market metrics. This time around, however, it was reversed. Credit spreads took their cue from the broader deterioration in financial market sentiment despite solid fundamentals and adequate liquidity. Overall, both investments grade and high yield credit markets ended the year down slightly, a fairly constructive result given the poor equity market performance.

Global equity markets handled moderating global growth and ongoing political distractions fairly well for most of the year, but they finally cracked as investors determined that Fed policy was too aggressive. Through September, global equity markets were up more than 4%, with U.S. equity markets up double-digits offsetting negative returns

in emerging market equities. But the homestretch brought material equity market weakness. Evan after the post-Christmas bounce, global markets fell by 13% in the fourth quarter. Developed markets drove the downturn (-13%) while emerging market equities held up better (-7%). Global equity markets fell by 9% in 2018 after being down as much as 13% at the bottom.

Global real estate and listed infrastructure underperformed the broader global equity markets for most of 2018 before showing their diversification properties during the year-end equity market slide. Rising interest rates into November represented a drag to these interest rate sensitive asset classes. A strong fourth quarter allowed both global real estate and listed infrastructure to perform in-line with, or even better than, global equities for the year.

# **DWERP Performance**

For the calendar year, DWERP's total fund had a time-weighted rate of return of -3.89%. **DWERP's performance** topped the median return of -4.87% of the TUCS Universe of Public Funds valued at less than \$500 million, and just missed being in the top 25<sup>th</sup> percentile. The plan trailed its strategic policy benchmark by 10 basis points for 2018.

The policy benchmark at year end was comprised of the following indices in the percentages as follows: MSCI ACWI ex USA ND (19.53%), HFR Fund of Funds Composite (5%), BC U.S. Aggregate (22%), NCREIF-ODCE (15%), Russell 3000 (34.72%), and Russell 3000 + 2.5% (3.75%).

Over the trailing three years ending 12/31/18, DWERP earned a 6.09% annualized return. The trailing 5-year return now stands at 5.20% and is 0.34% ahead of the policy target return. The 10-year trailing return is 8.31% and beats the benchmark by 0.61%.

DWERP's Domestic equity composite lost 6.49% in 2018, underperforming the benchmark return of -5.24%. The 3-year return of 7.08% also trails the benchmark return of 8.97%. Winslow Large Cap Growth continued their outperformance into 2018 by outperforming their benchmark by the widest margin of all domestic equity managers in the plan and the only equity manager to turn in a positive return for the year.

DWERP's real estate investments had success returning 7.07% for the year. The real estate benchmark return was 7.31%.

DWERP's fixed income composite gained 0.53% for the year. This return outpaced the BB Barclays U.S. Aggregate index return of 0.01%. The 3-year return of 2.82% outpaced the benchmark return of 2.06%.

DWERP's hedge fund composite gained 0.76% for the year. This return outpaced the HFR Fund of Funds Composite rate of -4.03%.

DWERP's private equity composite was a bright spot, returning 16.06% for the year and crushing the benchmark return of -2.86%.

In summary, the portfolio underperformed the total fund benchmark in 2018 by a small margin and its performance ranks above the median of the TUCS Universe of Public Funds valued at \$500 million or less. The Equity portfolio was the biggest drag on the total plan, being the largest allocation and the largest percent loss for the year. The Real Estate portfolio bucked the trend and posted positive results for the year with all managers posting positive returns. Private Equity also performed well, but being a very small allocation, didn't move the needle much for the entire plan. Hedge Fund, and Fixed Income asset classes produced relatively flat returns for the year.

Sincerely,
Shane Crea
Senior Consultant, Vice President
The Northern

# 2. Outline of Investment Policies

Excerpted from the "Statement of Investment Objectives, Policy and Guidelines for the Investment of the Retirement Trust Fund of the Employees' Retirement Plan of Denver Board of Water Commissioners", approved by the Board on April 11, 2018 ("IPS.")

The purpose of the IPS is to provide the Chief Finance Officer, and other staff with a foundation from which to effectively engage and evaluate the performance of Investment Managers and to oversee the management of the Fund in a prudent manner.

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

All transactions that utilize assets of the Fund will be undertaken for the sole benefit of the Fund and its beneficiaries. The assets will be invested in a manner consistent with the Plan Document and any applicable Federal, State, or Internal Revenue Service laws or regulations. The Fund's assets will be managed with that degree of care, prudence and diligence that a prudent person, acting in a like capacity and familiar with such matters, would use in a similar situation. Investment decisions with respect to individual assets should be evaluated not in isolation but in the context of the entire portfolio and as part of an overall investment strategy having risk and return objectives reasonably suited to the Fund.

The Board, in its capacity as Trustee to the Plan, is a fiduciary of the Fund. The Board may, from time to time, delegate some of its Trustee duties. All persons or entities to which duties are delegated will have a fiduciary duty to the Trust and will follow the Prudent Conduct requirements of the Plan Document.

The asset allocation strategy is designed to reflect, and be consistent with, the long-term investment objective expressed in the "Objectives" section of this Policy. To achieve this objective, various asset classes and investment manager styles are selected by the Chief Finance Officer to create a broadly diversified portfolio. Both the actuarial return assumption and the asset allocation strategy will change through time to reflect current investment objectives and market conditions. The Board has developed long-term asset allocation ranges based on several factors including: the long-term investment goals of the Plan; the Board's risk tolerance; the Plan's liquidity needs; and any legal or regulatory requirements. The allowable long-term asset allocation ranges are outlined in the appendix to the IPS. The current long-term allocation ranges are as follows:

Asset Class	Minimum	Maximum
Public Equities	40%	65%
Fixed income	10%	40%
Real Estate	10%	20%
Alternatives	5%	20%

Although there is no specific allocation to cash, the Board recognizes that it is necessary to hold a portion of the Fund as immediately available funds to pay scheduled and unscheduled benefits and administrative expenses. The appropriate level of cash reserves will depend upon anticipated liquidity needs as determined by the Chief Finance Officer on an ongoing basis.

Investment Managers are given full discretionary authority over the management of their assigned investment portfolio, subject to the Fiduciary Standard stated above and any other policies and guidelines within this Policy

and within other guidelines agreed upon by the Chief Finance Officer and the Investment Managers. Separate accounts or pooled funds may be used based upon the most favorable approach for the Fund's circumstances.

Investment Managers have the responsibility to vote proxies related to securities in portfolios they manage on behalf of the Fund in the best interests of the Plan and its beneficiaries. The Chief Finance Officer shall be responsible for voting of the proxies with respect to the pooled funds for the exclusive benefit of the Plan, Active Investment Managers are expected to outperform their respective passive index designated by the Chief Finance Officer, with the assistance of the Investment Consultant, and rank above median within a peer universe of active Investment Managers over a reasonable period of time. Passive products are expected to produce returns that have minimal tracking error to their target index returns.

The Board has delegated implementation of this Policy to the full-time staff member occupying the position of the Chief Finance Officer. Details concerning the Board's delegation may be found in the 2013 Denver Water Delegation Resolution Regarding the Retirement Program ("Resolution") approved on May 8, 2013. The Chief Finance Officer may assign members of his/her Treasury staff to perform the day to day actions necessary to implement his/her decisions/actions, while retaining his/her fiduciary status. The Chief Finance Officer is directed to review this Policy, including the asset allocation ranges, at a minimum, annually with the Investment Consultant for continued appropriateness, and to recommend changes to the Board when appropriate.

As a supplement to the IPS, the Operating Procedure document created and maintained by the Treasury section since October 2009, is intended to provide the operating instructions to the investment professionals at Denver Water responsible for oversight and day-to-day management of the Fund. The Procedure defines the risk and returns objectives of the Fund, expands on the underlying principles of the Board in the management of the Fund, describes the approved categories of investments and asset mix guidelines, provides guidance for the prudent and effective management of the Fund including constraints, and establishes the process for hiring and monitoring investment managers.

# 3. Schedule of Investment Managers

Manager	Strategy/Product	Vehicle	Date funded
Domestic Equity Managers			
Winslow Capital Management, LLC	Winslow Large Cap Growth Portfolio	Separately managed account	Since 08/2011
Fidelity Institutional Asset Management	Small/Mid Cap Core Pool	Commingled fund	Since 07/2011
Alliance Bernstein	AB Discovery Value Fund CL Z	Commingled fund	Since 06/2018
Northern Trust Investments, N.A.	NTGI-QM Collective Daily S&P 500 Equity Index Fund	Commingled fund	Since 07/2006
International Equity Managers			
Dimensional Fund Advisors LP	World ex U.S. Value Portfolio (DFWVX)	Institutional mutual fund	Since 02/2008
Harding Loevner Funds, Inc.	International Equity Portfolio (HLMIX)	Institutional mutual fund	Since 08/2011
Fixed Income Managers			
Babson Capital Management LLC	Babson Capital Floating Rate Income Fund	Commingled fund	Since 08/2013
BlackRock Institutional Trust Company, N.A.	The US Debt Index Non-Lendable Fund	Commingled fund	Since 05/2016
Private Equity			
Aberdeen Asset Management Inc.	Aberdeen VI, LP - Buyout Fund	Commingled fund	Since 08/2015
Horsley Bridge Partners	Horsley Bridge XI Venture Fund	Commingled fund	Since 07/2015
Real Estate Managers			
Principal Global Investors, LLC	U.S. Property Separate Account	Commingled fund	Since 03/2016
RREEF America REIT II	RREEF America	Commingled fund	Since 08/2014
Harbert Management Corporation	Harbert United States Real Estate Fund V, LP	Commingled fund	Since 07/2014
UBS Realty Investors, LLC	Trumbull Property Fund	Commingled fund	Since 05/1998
Hedge Fund-of-Funds			
BlackRock Alternative Advisors	BlackRock Appreciation IV	Commingled fund	Since 03/2012
Cash and Equivalent			
Northern Trust Investments, N.A.	The Northern Trust Collective Government STIF	Commingled fund	Since 1988
Managers terminated during 20°	18		
Advisory Research, Inc.	Master Limited Partnership	Separately managed account	Terminated 11/2017
Vanguard Group	Vanguard Dicidend Growth Fund (VDIGX)	Mutual Fund	Terminated 05/2018

Fees paid to investment managers are included in the Investment Section on page 94.

# 4. Schedule of Investment Results

The investment returns for the Employees' Retirement Plan are calculated by the Plan's custodian, The Northern Trust Company. Northern Trust calculates time-weighted performance statistics based on the company's accounting system's data using the BAI iterative methodology (CFA Institute accepted). Northern Trust evaluates the Plan's performance in relation to market indices, appropriate manager peer groups and other public funds of similar size. Returns are reported gross of fees, except for institutional mutual funds.

	Rates of return (%)				
		Annualized			
	1-year	3-year	5-year		
Denver Board of Water	-3.89	6.09	5.20		
Denver Target Index <sup>1</sup>	-3.79	6.03	4.86		
Median TUCS Public Funds (<\$500 Million)					
Total Domestic Equity	-6.49	7.08	6.25		
Russell 3000	-5.24	8.97	7.91		
Total International Equity	-15.23	5.82	1.80		
MSCI ACWI ex US	-14.20	4.48	0.68		
Total Fixed Income	0.53	2.82	2.53		
BC Aggregate Bond Index	0.01	2.06	2.52		
Real Estate	7.07	8.59	10.39		
Real Estate Benchmark³	7.31	7.41	9.50		
Hedge Fund-of-Funds	0.76	4.05	3.46		
HFR Fund of Funds Composite	-4.03	1.29	1.39		
Private Equity	16.06	14.87	-		
Russell 3000 Index + 2.5%	-2.86	11.68	-		
Cash	1.74	0.92	0.56		
90 Day T-Bill	1.98	1.08	0.67		

		Rates of return (%)			
	2018	2017	2016	2015	2014
Denver Board of Water	-3.89	15.61	7.47	1.08	6.72
Denver Target Index <sup>1</sup>	-3.79	15.71	7.19	1.10	5.36
Median TUCS Public Funds (<\$500 Million)					
Total Domestic Equity	-9.25	18.99	10.34	-1.64	12.12
Denver Domestic Equity Index <sup>2</sup>	-5.24	21.13	12.74	0.48	12.56
Total International Equity	-15.23	29.03	8.35	-5.73	-2.15
MSCI ACWI ex US	-14.20	27.19	4.50	-5.66	-3.87
Total Fixed Income	0.53	3.76	4.22	0.50	3.71
BC Aggregate Bond Index	0.01	3.54	2.65	0.55	5.97
Real Estate	7.07	9.23	9.47	15.50	10.84
Real Estate Benchmark³	7.31	6.92	9.27	15.02	12.50
Hedge Fund-of-Funds	0.76	9.04	2.52	0.78	4.41
HFR Fund of Funds Composite	-4.03	7.76	0.49	-0.26	3.37
Private Equity	16.06	18.27	10.42	-	-
Russell 3000 Index + 2.5%	-2.86	24.11	15.53	-	-
Cash	1.74	0.77	0.27	0.02	0.01
90 Day T-Bill	1.98	0.94	0.33	0.06	0.03

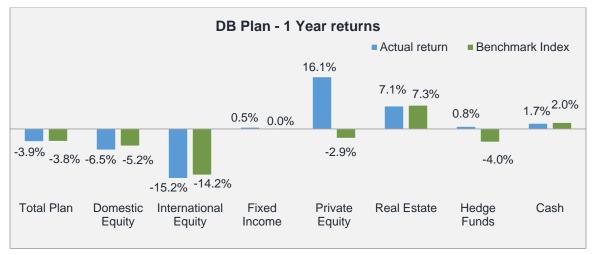
Source: Northern Trust

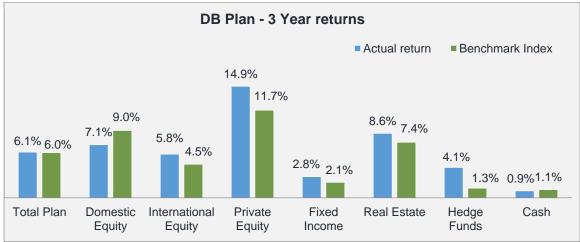
<sup>&</sup>lt;sup>1</sup> Denver Target Index is a combination of current segment benchmark indices, weighted at the target asset allocations.

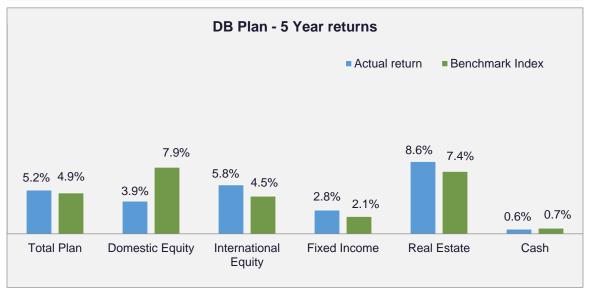
<sup>&</sup>lt;sup>2</sup> Separate benchmarks for domestic (Russell 3000) and international equities (MSCI ACWI ex US) replaced MSCI ACWI ND benchmark used or all equities as of September 30, 2017.

2018 Annual Report of the Denver Board of Water Commissioners Employees' Retirement Program

<sup>3</sup> Real Estate Benchmark is a custom blend of NFI ODCE Gross of Fee Index until 6/30/2016 and NFI ODCE Equal Weight Net from 07/01/2017







# 5. Asset Allocation

	Market Value As of 12/31/2018	% of Portfolio	Long Term Asset Allocation Ranges <sup>3</sup>	Target Allocation <sup>4</sup>
Equities	184,640,704	54.1%	35-70%	55.0%
Domestic Equity	123,686,889	36.3%		34.25%
Winslow Large Cap Growth	14,389,045	4.2%		5.0%
Fidelity SMID	13,014,875	3.8%		5.0%
Alliance Bernstein	23,522,921	6.9%		10.0%
NTGI S&P 500	72,760,047	21.3%		15.0%
International Equity	60,953,815	17.8%		20.0%
Harding Loevner International Equity Portfolio	31,005,128	9.1%		10.0%
DFA World ex US Value Fund	29,948,688	8.8%		10.0%
Fixed Income	73,791,329	21.6%	10-50%	22.0%
Babson Capital Floating Rate Income Fund	14,297,347	4.2%		5.0%
Blackrock	59,493,983	17.4%		17.0%
Alternatives	80,200,778	23.5%	10-40%	28.0%
Private Equity	9,911,637	2.9%		3.75%
Aberdeen	7,395,768	2.2%		1.5%
Horsley Bridge	2,515,869	0.7%		1.5%
Real Estate	51,770,501	15.2%		15.0%
RREEF America REIT II	13,703,145	4.0%		4.0%
Harbert United States Real Estate Fund V, LP	9,838,532	2.9%		3.5%
Principal	16,731,412	4.9%		4.0%
UBS TPF	11,497,411	3.4%		3.5%
Hedge Funds	18,518,640	5.4%		10.0%
BlackRock Alternative Advisors	18,518,640	5.4%		10.0%
Cash <sup>1</sup>	2,577,168	0.8%	N/A	
Total Portfolio <sup>2</sup>	\$341,209,979	100.0%		100.0%

Source: Northern Trust; data as of 12/31/2018

<sup>&</sup>lt;sup>1</sup> While the IPS does not quantify an allocation to cash, the Operating Procedure for the DB Plan sets the current target level for cash and cash equivalents at the amount equal to two months of pension payments, or approximately \$3 million.

<sup>&</sup>lt;sup>2</sup> The total market value of the assets in the DB Plan reported by Northern Trust is higher than the net position restricted for pension reported in the Statement of Fiduciary Net Position due to certain accrued administrative and investment expenses not reported by the custodian until paid.

<sup>&</sup>lt;sup>3</sup>Long Term Asset Allocation ranges are approved by the Board and outlined in the IPS.

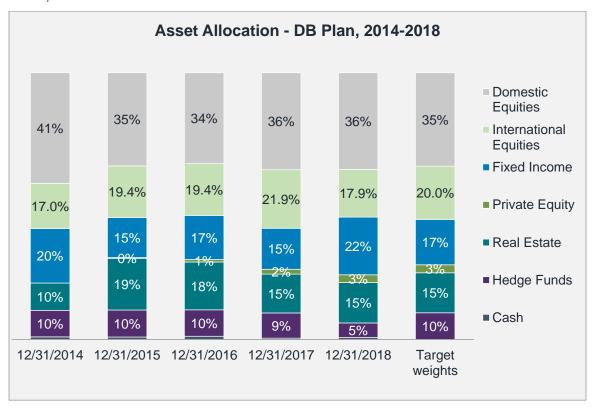
<sup>&</sup>lt;sup>4</sup>The Board charged the Chief Finance Officer with developing and implementing a current asset allocation and rebalancing strategy which is designed to reflect and be consistent with the long-term investment objective and the long-term asset allocation ranges outlined in the IPS. These target allocation weights are contained in the Operating Procedure. At December 31, 2018, all asset classes were within their stipulated operational ranges.

Employees' Retirement Plan – Asset Allocation by Asset Class, 2014-2018

	Market Value As of 12/31/2014	Market Value As of 12/31/2015	Market Value As of 12/31/2016	Market Value As of 12/31/2017	Market Value As of 12/31/2018
Domestic Equities	\$125,325,739	\$104,365,862	\$107,148,201	130,639,642	123,686,889
International Equities	51,341,596	57,844,581	61,063,115	78,787,664	60,953,815
Fixed Income	61,861,038	44,678,783	51,961,438	55,204,084	73,791,329
Private Equity	-	913,966	3,001,589	6,397,483	9,911,637
Real Estate	30,920,643	57,889,003	56,353,856	52,366,163	51,770,501
Hedge Funds	30,131,618	30,231,635	31,164,931	33,959,916	18,518,640
Cash <sup>1</sup>	2,955,296	2,811,588	3,852,051	1,803,615	2,577,168
Total Portfolio <sup>2</sup>	\$302,535,931	\$298,735,419	\$314,545,181	359,158,567	341,209,979

Source: Northern Trust

<sup>&</sup>lt;sup>2</sup> The total market value of the assets in the DB Plan reported by Northern Trust is higher than the net asset value reported in the Statement of Plan Net Assets due to certain accrued administrative and investment expenses not reported by the custodian until paid.



Percentages may not add to 100% due to rounding.

<sup>&</sup>lt;sup>1</sup> Cash in this schedule differs from the amount reported in the financial statement due to classification differences. The amount of cash and money market mutual funds held within an individual investment portfolio (e.g. equity, fixed income) is reported in the portfolio classification in this schedule, but reported as Cash in the financial statements.

# 6. Investment Summary

Employees' Retirement Plan – Portfolio by Asset Type as of 12/31/2018

	Cost	Market Value	Accrued Income/ Expense	Market Value including accruals	% of Total
Equities	159,010,519	184,529,820	6,643	184,533,463	54.1%
Common stock	11,126,185	14,275,161	6,642	14,281,804	4.2%
Common stock- funds	159,010,519	184,526,820	0	184,533,463	49.9%
Fixed income	73,833,679	73,791,329	0	73,791,329	21.6%
Corporate Bonds - funds	73,833,679	73,791,329	0	73,791,329	21.6%
Real Estate	43,486,727	51,465,203	89,649	51,554,852	15.1%
Private Equity	8,336,885	9,911,637	0	9,911,637	2.9%
Hedge Funds	15,292,386	18,518,640	0	18,518,640	5.4%
Hedge Funds of Funds	15,292,386	18,518,640	0	18,518,640	5.4%
Cash and Cash Equivalents	2,677,141	2,677,141	7,266	2,684,408	0.79%
Funds-short term investment	2,677,141	2,677,141	7,266	2,684,408	0.79%
Adjustments to Cash					
Pending trade - sales					
Total	302,637,340	340,890,772	103,559	340,994,331	100.0%

Source: Northern Trust

Totals may not add up due to rounding.

The total market value of the assets in the DB Plan reported by Northern Trust is higher than the net position restricted for pension reported in the Statement of Fiduciary Net Position due to certain accrued administrative and investment expenses not reported by the custodian until paid.

# 7. List of Largest Holdings by Asset Type

The lists of largest equity and fixed income holdings do not include mutual fund holdings and commingled funds. Employees' Retirement Plan - Top 10 Equity Holdings (by Market Value) as of 12/31/2018

Security Description	CUSIP Country		Market Value <sup>*</sup>	% of Total equities*	% of Total portfolio value*
MICROSOFT CORP COM	594918104	United States	1,030,935.50	0.56%	0.30%
AMAZON COM INC COM	023135106	United States	878,652.45	0.48%	0.26%
VISA INC COM CL A STK	92826C839	United States	700,601.40	0.38%	0.21%
UNITEDHEALTH GROUP INC COM	913224P102	United States	589,168.80	0.32%	0.17%
SALESFORCE COM INC COM STK	79466L302	United States	484,873.80	0.26%	0.14%
ALPHABET INC CAP STK CL C	02079K107	United States	455,668.40	0.25%	0.13%
ALPHABET INC CAP STK CL A	02079K305	United States	454,557.60	0.25%	0.13%
PAYPAL HLDGS INC COM	70450Y103	United States	433,063.50	0.23%	0.13%
MASTERCARD INC CL A	57636Q104	United States	413,143.50	0.22%	0.12%
NIKE INC CL B	654106103	United States	382,562.40	0.21%	0.11%
	Total to	pp 10 Equities	5,823,227.35	3.15%	1.71%
	Total valu	e of equities*	184,640,704	100.0%	54.15%
	Total value	e of portfolio*	\$340,994,331	N/A	100.0%

Source: Northern Trust

\*Market value excluding accruals

Totals may not add up due to rounding.

The complete schedule of holdings at year-end is available upon request.

# 8. Schedule of Fees and Commissions

Employees' Retirement Plan - Schedule of Fees, 2018

Aberdeen Asset Management Inc.  Alliance Bernstein  Advisory Research, Inc.  Barings U.S. Loan Fund Series  BlackRock Alternative Investors  BlackRock Institutional	\$2,515,869 23,522,921 - 14,297,347 18,518,640 59,493,983 29,948,688	\$5,025,812 - 297 15,044,386 33,959,916 40,159,698	86,544 119,229 - 68,373 351,886 23,604	0.75% on committed Capital Annual 0.79% 0.48% 1.25%
Advisory Research, Inc.  Barings U.S. Loan Fund Series  BlackRock Alternative Investors	- 14,297,347 18,518,640 59,493,983	15,044,386 33,959,916	- 68,373 351,886	0.48% 1.25%
Barings U.S. Loan Fund Series BlackRock Alternative Investors	18,518,640 59,493,983	15,044,386 33,959,916	351,886	1.25%
Series BlackRock Alternative Investors	18,518,640 59,493,983	33,959,916	351,886	1.25%
Investors	59,493,983			
BlackRock Institutional		40,159,698	23,604	
Trust Company N.A.	29,948,688			0.05%
Dimensional Fund Advisors LP		40,501,997	220,072	0.60%
Fidelity Institutional Asset Management	13,014,875	18,259,106	107,442	0.65%
Harbert Management Corporation	9,838,532	11,690,043	151,687	annual 1.5% management fee applied only to unreturned, contributed capital plus 20% performance fee on net income
Harding Loevner Funds, Inc.	31,005,128	38,285,668	310,501	0.87%
Horsley Bridge Venture	2,515,869	1,371,671	36,000	1% on committed capital
Northern Trust Investments, N. A S&P 500	72,760,047	76,122,464	15,696	0.05%
Principal Global Investors, LLC	16,731,412	16,198,938	181,102	1.00%
RREEF America LLC  UBS Realty Investors, LLC	13,703,145 11,497,411	13,278,738 11,198,444	128,391 109,035	0.95%  1st \$10 mil – 0.95% NAV + 0.20% on cash above 7.5% of NAV + incentive fee of 0.075% for each 1% of outperformance above CPI+5%
Vanguard Group, Inc	-	17,212,836	-	
Winslow Capital Management, LLC	14,389,045	19,044,939	108,290	0.95%
Total Assets <sup>1</sup>	\$341,209,979	\$359,158,567	\$1,898,623	
Investment Consulting Experiment Performance Rep		Total Investment Expenses	88,607 91,664 <b>\$2,078,894</b>	N/A N/A
	Investment Expenses as	a percentage of average assets	0.61 %	
Actuarial Services Audit Services		Total Administrative Expenses	39,500 9,655 <b>\$49,155</b>	N/A N/A
	Total Expenses as	a percentage of average assets	0.62%	

Source: Denver Water

<sup>&</sup>lt;sup>1</sup>Includes cash account. The total market value of the assets in the DB Plan reported by Northern Trust is higher than the net asset value reported in the Statement of Plan Net Assets due to certain accrued administrative and investment expenses not reported by the custodian until paid.

<sup>&</sup>lt;sup>2</sup>Includes custody fees.

# Employees' Retirement Plan - Schedule of Broker Commissions by Broker, 2018

Broker	Total Shares	Net Base Amount (\$)	Commission (\$)	Per Share <sup>1</sup>	% Cost of Trade
Unassigned Broker	12,490,522.31	173,933,001.81	0.00	0.00	0.000%
Allen & Company LLC	7,160.00	1,041,153.05	214.80	0.03	0.021%
Barclays Bank Plc (All U.K. Offices)	21,568.00	2,637,108.12	647.04	0.03	0.025%
Citation Group (The)	15,825.00	2,054,690.34	474.75	0.03	0.023%
Citigroup Global Markets Inc.	39,405.00	6,095,637.40	1,182.15	0.03	0.019%
Citigroup Global Markets, Inc. CP and CD	356.00	103,001.31	10.68	0.03	0.010%
Cowen And Company, LLC	1,350.00	170,228.93	40.50	0.03	0.024%
Credit Suisse Securities (USA) LLC	18,940.00	2,106,535.25	568.20	0.03	0.027%
Deutsche Bank Securities Inc.	816.00	70,486.46	24.48	0.03	0.035%
Goldman, Sachs & Co.	17,100.00	668,045.40	249.00	0.01	0.037%
ISI Group Inc.	4,395.00	486,073.20	131.85	0.03	0.027%
J.P. Morgan Securities LLC	14,220.00	1,510,324.56	346.27	0.02	0.023%
Jefferies LLC	28,173.00	3,539,761.67	845.19	0.03	0.024%
Liquidnet Inc.	1,230.00	167,814.87	24.60	0.02	0.015%
Merrill Lynch, Pierce, Fenner & Smith Inc	500.00	64,956.68	15.00	0.03	0.023%
Morgan Stanley & Co. LLC	3,800.00	220,538.31	3.00	0.00	0.001%
Piper Jaffray & Co.	1,940.00	197,260.36	58.20	0.03	0.030%
Raymond James & Associates, Inc.	550.00	77,901.60	16.50	0.03	0.021%
RBC Capital Markets, LLC	900.00	113,038.87	27.00	0.03	0.024%
Sanford Bernstein & Co., LLC	3,770.00	396,393.80	113.10	0.03	0.029%
UBS Securities LLC	20,808.00	2,656,562.95	624.24	0.03	0.023%
Wells Fargo Bank Minnesota NA	500.00	128,631.03	15.00	0.03	0.012%

Source: Northern Trust

The Trustees of the Employees' Retirement Plan have determined that because neither they nor staff are involved in the day-to-day investment of the Fund assets, neither they nor staff are in a position to determine with which brokers an investment manager can obtain the best execution of a transaction. For that reason, the Trustees do not direct commissions to any firm.

<sup>&</sup>lt;sup>1</sup> The table lists all transactions and commissions recorded by Northern Trust. It does not include commissions paid by mutual funds and commingled funds or spread on any fixed income transactions. Transactions for which a broker was not specified (including sales and purchases of shares of mutual funds and commingled funds) are grouped under "Unassigned Broker".

# B. Denver Water 401(k) Supplemental Retirement Savings Plan/ Denver Water 457 Deferred Compensation Plan

# 1. Report on Investment Activity

This section was prepared by the Denver Water staff

On December 31, 2018, the market value of assets in the 401(k) Plan totaled \$100.5 million, a -4.9% decrease

In 2018, employee contributions to the 401(k) Plan amounted to \$4.4 million, while Denver Water's matching contributions totaled \$2.1 million.

in the Plan asset value compared to December 31, 2017. At year-end 2018, the Plan had 1,190 participants including 895 active participants<sup>1</sup>. Total employee contributions to the 401(k) Plan amounted to \$4.4 million in 2018, or an average of \$4,916 per year per active participant, while Denver Water's matching contributions totaled \$2.1 million (an average of \$2,346 per year per active participant)<sup>2</sup>. Slightly over 90% of the eligible Denver Water employees participated in the 401(k) Plan at year-end, compared to a 91% participation rate in 2017.<sup>3</sup>

On December 31, 2018, the market value of assets in the 457 Plan totaled \$32.6 million, a -3.9% decrease in the Plan asset value compared to December 31, 2017. The Plan had 658 participants, including 462 active<sup>1</sup>. During 2018, participant contributions totaled \$2.1 million (or an average of \$5,455 per year per active participant).<sup>2</sup> Over 39% of the eligible Denver Water employees participated in the 457 Plan at year-end, compared to a 39% participation rate in 2017.

In 2015, both plans were amended to allow participants to borrow money from the Plans. In 2018, loans from the 401(k) Plan totaled \$1,953,639 and 457 Plan amounted to \$213,233.

As noted in the policy statements for both the 401(k) and 457 Plans, the primary objective of the Board is to offer investment options having diverse risk and return expectations so that each participant may construct a portfolio that can be expected to meet his or her

The investment of all contributions in the DC Plans is directed by each participant. Returns vary by participant based upon the timing of contributions and the funds

individual needs. Investment managers are selected by the Chief Finance Officer, with the assistance of the Retirement Program Committee and the investment consultant for the DC Plans, Ellwood Associates. As of December 31, 2017, participants in either plan had access to twenty-eight (28) investment options representing all major asset classes (of which twelve were Target Retirement Funds focused on various retirement dates). The schedule of investment options available in the DC Plans can be found on page 100. The investment of both

<sup>&</sup>lt;sup>1</sup> Total participants are defined as those participants who had cash value at the end of the reporting period. Active participants are defined as those participants who were actively employed and had a balance at the end of the reporting period.

<sup>&</sup>lt;sup>2</sup> In 2016, an eligible employee was able to make a tax-deferred contribution of up to \$17,500 to each Defined Contribution Plan in which he or she was a participant. Participants age 50 or older could contribute an additional \$5,500 to each plan as catch-up contributions. For more information on limitation on effective deferrals see "401(k) Resource Guide - Plan Participants - Limitation on Elective Deferrals", "IRS Announces Pension Plan Limitations for 2013" IR-2012-77, Oct. 18, 2012, available on <a href="www.irs.gov">www.irs.gov</a>.

<sup>&</sup>lt;sup>3</sup> For more statistical information about Retirement Program, see the Statistical Section of this Report.

employee contributions and the employer-matching contributions is directed by the participants. Page 101 contains investment return information on each fund available to participants. Returns vary by participant based upon the timing of contributions and the funds selected by the participant. Most funds in the lineup had rates of return above the median for their peer group over 1, 3, and 5-year periods.

Empower Retirement (formerly Great-West Retirement Services) ("Empower") is the custodian/trustee and the administrator for the Denver Water 401(k) and 457 Plans. Effective in January 2016, the total fee for recordkeeping and communication services was reduced from 0.09% to 0.075% annually. The fee is being calculated and withdrawn from all participant accounts on a monthly basis. Revenue sharing is credited to participants with account balances in a revenue-paying fund which generated the revenue, based on the average daily balance of the participant's investment in such fund(s) for the prior month.

Expense ratios for all funds in the lineup, as well as the revenue sharing amounts received by the Plan administrator, are disclosed to participants in the enrollment package and though the HR page on Inflow. They are disclosed to the general public in the audited financial statements. Current expense ratios wrap fees and revenue sharing levels are presented in more detail on page 105.

# 2. Outline of Investment Policies

# Denver Water 401(k) Supplemental Retirement Savings Plan

Excerpted from the "Investment Policy Statement for Denver Water Supplemental Retirement Savings Plan (401(k) Plan) ["401(k) IPS"], approved by the Board on March 12, 2014

The purpose of the 401(k) Plan is to enable each Plan participant to accumulate financial assets for retirement. The Board acknowledges that participants may have diverse current and projected needs and objectives. For that reason, the primary objective of the Board is to offer investment options having diverse risk and return expectations so that each participant may construct a portfolio that can be expected to meet his or her individual needs. Within this overall objective, the Board identified the following additional objectives:

- To undertake all transactions solely in the interest of the participants;
- To maintain flexibility in meeting the future needs of participants;
- To enable participants to exercise investment control;
- To allow participants to maximize return within reasonable and prudent levels of risk by selecting from the investment options offered;
- To monitor administration costs to ensure they remain reasonable;
- To arrange for investment education to be available to Participants.

The Board is a fiduciary of the 401(k) Plan. As such, the Board is authorized to delegate certain responsibilities to professional experts in various fields. As a sponsor of the 401(k) Plan, the Board is responsible for establishing investment policy objectives and guidelines. By resolution dated September 14, 2005 and updated on November 14, 2018, the Board has delegated certain duties related to implementation of the 401(k) IPS to the Chief Finance Officer and the Chief Human Resources Officer. Among the responsibilities delegated to the Chief Finance Officer is the responsibility and authority to determine which investment options will be chosen, and to monitor the continued acceptability of the investment options. It is the policy of the Board to engage experts to assist with these duties.

In the 401(k) IPS, the Board directs the Chief Finance Officer, with the assistance of the Investment Consultant to review long-term performance characteristics of various asset classes and to select broad asset classes for inclusion in the 401(k) Plan which have a long-term return history that is reasonably useful with respect to evaluating its probable future return, its standard deviation, and its correlation with the other selected asset classes. With a focus on balancing the risk and rewards of market behavior, it is the policy of the Board that the investment options made available to participants in the 401(k) Plan be chosen from no fewer than the following asset classes: Domestic Equities, International Equities, Domestic Fixed Income, and Fixed Interest or Stable Value Products. Within each of the broad asset classes, the 401(k) IPS requires that included investment options be diversified with respect to market capitalization, fixed income maturities, and investment style. Investment options that combine various asset classes are also included.

Over a complete market cycle, each investment option's overall annualized total return should perform above the median of portfolios in their Peer Universe. The Chief Finance Officer shall continually monitor and review investment options against this expectation. The Chief Finance Officer has authority to take corrective action by replacing an option if deemed appropriate at any time, on a case-by-case basis.

When evaluating quarterly performance of each investment option, the Chief Finance Officer is directed to focus on:

- Consistency with expected style mandate;
- Material changes in the manager's organization, investment philosophy, and/or personnel;
- Comparisons of the investment option's results to its benchmark;
- The risk associated with each investment option;

The investment option's performance relative to its Peer Universe.

The Chief Finance Officer is directed to review the 401(k) IPS annually, to consult as necessary with expert advisors, and to suggest updates to the CEO/Manager and the Board as necessary.

# **Denver Water 457 Deferred Compensation Plan**

Excerpted from the "Investment Policy Statement for the Denver Water 457 Deferred Compensation Plan (the "457 Plan, ["457 IPS"])", approved by the Board on November 14, 2018

The Board's involvement in the Denver Water 457 Plan is solely to offer employees an opportunity to make voluntary payroll deferrals to the extent permitted by Internal Revenue Code section 457. The Board's objective is to offer employees reasonable choice in the 457 Plan funding products, and to control the administrative burdens and costs of the 457 Plan to Denver Water and its employees.

For these reasons, it is the policy of the Board that:

- The investment options offered in the 457 Plan will be the same as those offered in the 401(k) Plan;
- The same Record keeper will be used for the 457 Plan as for the 401(k) Plan and recordkeeping information;
- Participants will receive a consolidated participant statement for the two Plans, so that participants can see the effect of their investment allocation decisions more comprehensively.
- In order to maintain the 457 Plan as an eligible deferred compensation plan under section 457 of the Internal Revenue Code, assets of the 457 Plan will be held by an independent custodian and the Board will take such other actions as are necessary to maintain the tax deferred status of the 457 Plan;
- In all investment-related matters not specifically addressed in the 457 IPS, the investment policy for the 401(k)
   Plan shall be followed.

# 3. Schedule of Investment Managers

Fund	Ticker	Asset class
Global Real Estate		
Cohen & Steers Instl Global Realty I	CSSPX	Global Real Estate
International Equity		
Arrowstreet International Equity	ARWIEA	Foreign Stock
Northern Global Sustainability Index	NSRIX	Foreign Stock
Fidelity Global ex US Index Premium	FSGDX	Foreign Stock
Domestic Equity		
Fidelity Total Market Index Instl	FSKTX	All cap domestic equity
Baron Growth Instl	BGRIX	Small Cap Growth
American Beacon Small Cp Val Inst	AVFIX	Small Cap Value
T. Rowe Price Growth Stock	PRUFX	Large Cap Growth
American Funds Washington Mutual R6	RWMGX	Large Cap Value
Fixed Income		
PIMCO High Yield Instl	PHIYX	High Yield Bond
Vanguard Inflation Protected Securities Admin	VAIPX	High Quality Bond – TIPS
Frost Total Return Bond Inst	FIJEX	High Quality Bond
Fidelity U.S. Bond Index Premium	FSITX	Domestic Bond
Vanguard Total International Bond Index Admiral	VTABX	International Bond
Target Date Retirement Funds		
Vanguard Target Retirement Income	VTINX	Multiple Asset Classes
Vanguard Target Retirement 2015	VTXVX	Multiple Asset Classes
Vanguard Target Retirement 2020	VTWNX	Multiple Asset Classes
Vanguard Target Retirement 2025	VTTVX	Multiple Asset Classes
Vanguard Target Retirement 2030	VTHRX	Multiple Asset Classes
Vanguard Target Retirement 2035	VTTHX	Multiple Asset Classes
Vanguard Target Retirement 2040	VFORX	Multiple Asset Classes
Vanguard Target Retirement 2045	VTIVX	Multiple Asset Classes
Vanguard Target Retirement 2050	VFIFX	Multiple Asset Classes
Vanguard Target Retirement 2055	VFFVX	Multiple Asset Classes
Vanguard Target Retirement 2060	VTTSX	Multiple Asset Classes
Vanguard Target Retirement 2065	VLXVX	Multiple Asset Classes
Cash and Equivalent		
Vanguard Treasury Money Market Investor	VUSXX	Money Market
Galliard Retirement Income	n/a	Stable Value

As of December 31, 2018

# 4. Schedule of Investment Results

The investment returns for the Denver Water 401(k) Supplemental Retirement Savings Plan/ Denver Water 457 Deferred Compensation Plan are provided by the Plans' Investment Consultant, Ellwood. Ellwood derives the information about returns from Morningstar Principia. Total return is calculated by taking the change in a fund's Net Asset Value (NAV), assuming the reinvestment of all income and capital gains distributions during the period, and then dividing by the initial NAV. Total returns account for management, administrative, and 12b-1 fees and other costs automatically deducted from fund assets. Ellwood evaluates the Plans' performance in relation to market indices and appropriate manager peer groups. Returns are reported net of fees.

	Rates of Return (%)				
Fund	Ticker	Current Year	3-year	5-year	
Global Real Estate					
Cohen & Steers Instl Global Realty	CSSPX	-3.9%	4.0%	5.6%	
Global Real Estate Peer Group		-5.6%	2.7%	4.3%	
International Equity					
Arrowstreet International	ARWIEA	-14.7%	4.8%	2.0%	
MSCI ACWI EX USD Index		-14.2%	4.5%	0.7%	
Northern Global Sustainability Index	NSRIX	-7.6%	6.4%	4.5%	
MSCI World Index		-8.7%	6.3%	4.6%	
Fidelity Global ex US Index	FSGDX	-13.9%	4.7%	0.7%	
MSCI ACWI ex U.S. Index		-14.2%	4.5%	0.7%	
Domestic Equity					
Fidelity Total Market Index	FSKTX	-5.3%	9.0%	7.9%	
Dow Jones U.S. Total Stock Market Index		-5.3%	8.9%	7.9%	
Baron Growth Instl	BGRIX	-2.7%	9.6%	5.8%	
Small Growth Peer Group		-9.3%	7.2%	5.1%	
American Beacon Small Cp Val Inst	AVFIX	-15.6%	5.1%	2.9%	
Small Value Peer Group		-12.9%	7.4%	3.6%	
T. Rowe Price Growth Stock	PRGFX	-0.9%	10.5%	10.2%	
Large Growth Peer Group		-1.5%	11.1%	10.4%	
American Funds Washington Mutual R6	RWMGX	-2.7%	10.1%	8.3%	
Large Value Peer Group		-8.3%	7.0%	5.9%	
Fixed Income					
PIMCO High Yield Instl	PHIYX	-2.5%	5.5%	3.6%	
High Yield Bond Peer Group		-2.0%	6.3%	3.9%	
Vanguard Inflation Protected Securities Admin	VAIPX	-1.4%	2.0%	1.6%	
Inflation-Protected Bond Peer Group		-1.3%	2.1%	1.7%	
Frost Total Return Bond Inst	FIJEX	1.4%	3.8%	3.1%	
Intermediate-Term Bond Peer Group		0.0%	2.1%	2.5%	
Fidelity US Bond Index Premium	FSITX	0.0%	2.0%	2.5	
Barclays Aggregate Bond Index		0.0%	2.1%	2.5	
Vanguard Total Intl Bd Idx Admiral	VTABX	2.9%	3.3%	-	
Barclays Global Aggregate ex. U.S. Hedged Index		3.2%	3.5%	4.0%	
Target Date Retirement Funds					
Vanguard Target Retirement Income	VTINX	-2.0%	3.8%	3.3%	
Retirement Income Peer Group		-2.0%	3.9%	3.5%	
Vanguard Target Retirement 2015	VTXVX	-3.0%	4.7%	4.0%	
Target Date 2011-2015 Peer Group		-2.9%	4.9%	4.2%	
Vanguard Target Retirement 2020	VTWNX	-4.2%	5.3%	4.4%	
Target Date 2015-2020 Peer Group		-4.2%	5.5%	4.6%	
Vanguard Target Retirement 2025	VTTVX	-5.2%	5.7%	4.7%	
Target Date 2021-2025 Peer Group		-5.0%	5.9%	4.9%	

		Rates of Return (%)				
Fund	Ticker	Current Year	3-year	5-year		
Vanguard Target Retirement 2030	VTHRX	-5.9%	6.1%	4.8%		
Target Date 2026-2030 Peer Group		-5.7%	6.2%	4.9%		
Vanguard Target Retirement 2035	VTTHX	-6.6%	6.4%	5.0%		
Target Date 2031-2035 Peer Group		-6.5%	6.6%	5.2%		
Vanguard Target Retirement 2040	VFORX	-7.3%	6.7%	5.1%		
Target Date 2036-2040 Peer Group	-	-7.3%	6.9%	5.4%		
Vanguard Target Retirement 2045	VTIVX	-7.9%	6.8%	5.1%		
Target Date 2041-2045 Peer Group		-7.8%	6.9%	5.4%		
Vanguard Target Retirement 2050	VFIFX	-7.9%	6.8%	5.1%		
Target Date 2046-2050 Peer Group	-	-7.8%	6.9%	5.4%		
Vanguard Target Retirement 2055	VFFVX	-7.9%	6.8%	5.1%		
Target Date 2051-2060 Peer Group		-7.8%	7.0%	5.4%		
Vanguard Target Retirement 2060	VTTSX	-7.9%	6.8%	5.1%		
Target Date 2051-2060 Peer Group		-7.8%	6.9%	5.4%		
Vanguard Target Retirement 2065	VLXVX	-7.9%	-	-		
Target Date 2061-2065 Peer Group		-7.8%	-	-		
Cash and Equivalent						
Galliard Retirement Income (gross)	n/a	2.0%	1.7%	1.7%		
USTREAS T-Bill Auction Ave 3 Mon Index		1.9%	1.0%	0.6%		

Source: Ellwood

Asset Allocation
 Denver Water 401(k) Supplemental Retirement Savings Plan

Section   Stock   Section   Sectio	Fund	Ticker	Total Assets as of 12/31/2018	% of the Total Assets	Total Assets as of 12/31/2017	% of the Total Assets
International Equity	Global Real Estate		\$855,050	0.7%	\$0.00	0.00%
Arrowstreet International   ARWIEA   \$3,679,993   3.7%   \$0.00   0.00%	Cohen & Steers Instl Global Realty	CSSPX	\$855,050	0.7%	\$0.00	0.0%
Harbor International Inst	International Equity		\$7,169,971	7.3%	\$7,741,506	7.5%
Northern Global Sustainability Index	Arrowstreet International	ARWIEA	\$3,679,993	3.7%	\$0.00	0.00%
Fidelity Global ex US Index Prem	Harbor International Inst	HAINXA	\$0.00	0.0%	\$5,167,485	5.0%
Section   Sect	Northern Global Sustainability Index	NSRIX	\$505,067	0.5%	\$1,195,822	1.2%
Fidelity Total Market Index	Fidelity Global ex US Index Prem	FSGDX	\$0	0.0%	\$1,378,199	1.3%
Baron Growth Inst  BGRIX   \$3,163,590   3.0%   \$3,108,136   3.0%	Domestic Equity		\$29,453,846	28.4%	\$42,153,187	40.6%%
American Beacon Small Cp Val Inst         AVFIX         \$3,189,827         3.2%         \$3,764,767         4.1%           T. Rowe Price Growth Stock I         PRGFX         \$6,831,485         6.9%         \$8,343,570         8.0%           American Funds Washington Mutual R6         RWMGX         \$7,284,344         7.4%         \$9,270,630         8.9%           Fixed Income         \$10,992,182         11.2%         \$9,409,263         9.1%           PIMCO High Yield Instl         PHIYX         \$1,593,416         1.6%         \$1,944,687         1.87%           Vanguard Inflation Protected Securities Admin.         VAIPX         \$2,305,615         2.3%         \$1,566,383         1.53%           Frost Total Return Bond Inst         FIJEX         \$4,486,463         4.32%         \$4,486,463         4.32%           Fidelity US Bond Index Premium         FNSKX         \$0.00         0.0%         \$1,114,308         1.07%           Vanguard Total Intl Bd Idx Admiral         VTABX         \$457,541         0.46%         \$277,422         0.27%           Target Date Retirement Lincome         VTINX         \$896,127         0.9%         \$764,545         0.7%           Vanguard Target Retirement 2015         VTXVX         \$1,593,341         1.6%         \$2,192,299         2.	Fidelity Total Market Index	FSKTX	\$0	0.0%	\$17,666,084	17.0%
T. Rowe Price Growth Stock   PRGFX   \$6,831,485   6.9%   \$8,343,570   8.0%	Baron Growth Instl	BGRIX	\$3,163,590	3.0%	\$3,108,136	3.0%
American Funds Washington Mutual R6   RWMGX   \$7,284,344   7.4%   \$9,270,630   8.9%	American Beacon Small Cp Val Inst	AVFIX	\$3,189,827	3.2%	\$3,764,767	4.1%
Fixed Income	T. Rowe Price Growth Stock I	PRGFX	\$6,831,485	6.9%	\$8,343,570	8.0%
PHICO High Yield Inst    PHIYX   \$1,593,416   1.6%   \$1,944,687   1.87%	American Funds Washington Mutual R6	RWMGX	\$7,284,344	7.4%	\$9,270,630	8.9%
Vanguard Inflation Protected Securities Admin.         VAIPX         \$2,305,615         2.3%         \$1,586,383         1.53%           Frost Total Return Bond Inst         FIJEX         \$4,486,463         4.32%         \$4,486,463         4.32%           Frost Total Return Bond Inst         FIJEX         \$4,486,463         4.32%         \$4,486,463         4.32%           Frost Total Return Bond Inst         FIJEX         \$4,486,463         4.32%         \$4,486,463         4.32%           Vanguard Total Intl Bd Idx Admiral         VTABX         \$457.541         0.46%         \$277,422         0.27%           Target Date Retirement Funds         \$29,857,820         30.3%         \$29,453,846         28.4%           Vanguard Target Retirement Income         VTINX         \$896,127         0.9%         \$764,545         0.7%           Vanguard Target Retirement 2015         VTXVX         \$1,593,341         1.6%         \$2,192,299         2.1%           Vanguard Target Retirement 2020         VTWNX         \$2,312,232         2.4%         \$2,166,154         2.1%           Vanguard Target Retirement 2030         VTHXX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,	Fixed Income		\$10,992,182	11.2%	\$9,409,263	9.1%
Admin. VAIPX \$2,305,615 2.3% \$1,586,383 1.53%  Frost Total Return Bond Inst FIJEX \$4,486,463 4.32% \$4,486,463 4.32% Fidelity US Bond Index Premium FNSKX \$0.00 0.0% \$1,114,308 1.07% Anguard Total Intl Bd Idx Admiral VTABX \$457.541 0.46% \$277,422 0.27% Target Date Retirement Funds \$29,857,820 30.3% \$29,453,846 28.4% Anguard Target Retirement Income VTINX \$896,127 0.9% \$764,545 0.7% Anguard Target Retirement 2015 VTXVX \$1,593,341 1.6% \$2,192,299 2.1% Anguard Target Retirement 2020 VTWNX \$2,312,232 2.4% \$2,166,154 2.1% Anguard Target Retirement 2025 VTTVX \$9,452,740 9.6% \$9,788,675 9.4% Anguard Target Retirement 2030 VTHXX \$1,351,650 1.4% \$807,761 0.8% Anguard Target Retirement 2035 VTTHX \$6,178,009 6.3% \$6,075,478 5.9% Anguard Target Retirement 2040 VFORX \$1,824,933 1.2% \$1,568,576 1.5% Anguard Target Retirement 2040 VFORX \$1,824,933 1.2% \$1,568,576 1.5% Anguard Target Retirement 2045 VTIVX \$4,382,727 4.5% \$4,527,063 4.4% Anguard Target Retirement 2050 VFIFX \$410,016 0.4% \$273,128 0.3% Anguard Target Retirement 2050 VFIFX \$410,016 0.4% \$273,128 0.3% Anguard Target Retirement 2050 VFIFX \$410,016 0.4% \$273,128 0.3% Anguard Target Retirement 2050 VFIFX \$410,016 0.4% \$273,128 0.3% Anguard Target Retirement 2050 VFIFX \$410,016 0.4% \$273,128 0.3% Anguard Target Retirement 2050 VFIFX \$467,297 0.01% \$355,591 0.3% Anguard Target Retirement 2050 VFIFX \$467,297 0.01% \$355,591 0.3% Anguard Target Retirement 2050 VFIFX \$467,297 0.01% \$355,591 0.3% Anguard Treasury Money Market Inv Anguard Target Retirement Income NA \$12,616,206 12.8% \$13,408,757 12.9%	PIMCO High Yield Instl	PHIYX	\$1,593,416	1.6%	\$1,944,687	1.87%
Fidelity US Bond Index Premium		VAIPX	\$2,305,615	2.3%	\$1,586,383	1.53%
Vanguard Total Intl Bd Idx Admiral         VTABX         \$457.541         0.46%         \$277,422         0.27%           Target Date Retirement Funds         \$29,857,820         30.3%         \$29,453,846         28.4%           Vanguard Target Retirement Income         VTINX         \$896,127         0.9%         \$764,545         0.7%           Vanguard Target Retirement 2015         VTXVX         \$1,593,341         1.6%         \$2,192,299         2.1%           Vanguard Target Retirement 2020         VTWNX         \$2,312,232         2.4%         \$2,166,154         2.1%           Vanguard Target Retirement 2025         VTTVX         \$9,452,740         9.6%         \$9,788,675         9.4%           Vanguard Target Retirement 2030         VTHRX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128	Frost Total Return Bond Inst	FIJEX	\$4,486,463	4.32%	\$4,486,463	4.32%
Target Date Retirement Funds         \$29,857,820         30.3%         \$29,453,846         28.4%           Vanguard Target Retirement Income         VTINX         \$896,127         0.9%         \$764,545         0.7%           Vanguard Target Retirement 2015         VTXVX         \$1,593,341         1.6%         \$2,192,299         2.1%           Vanguard Target Retirement 2020         VTWNX         \$2,312,232         2.4%         \$2,166,154         2.1%           Vanguard Target Retirement 2025         VTTVX         \$9,452,740         9.6%         \$9,788,675         9.4%           Vanguard Target Retirement 2030         VTHXX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2050         VFIFX         \$979,157         0.9%         \$934,576         <	Fidelity US Bond Index Premium	FNSKX	\$0.00	0.0%	\$1,114,308	1.07%
Vanguard Target Retirement Income         VTINX         \$896,127         0.9%         \$764,545         0.7%           Vanguard Target Retirement 2015         VTXVX         \$1,593,341         1.6%         \$2,192,299         2.1%           Vanguard Target Retirement 2020         VTWNX         \$2,312,232         2.4%         \$2,166,154         2.1%           Vanguard Target Retirement 2025         VTTVX         \$9,452,740         9.6%         \$9,788,675         9.4%           Vanguard Target Retirement 2030         VTHRX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%<	Vanguard Total Intl Bd Idx Admiral	VTABX	\$457.541	0.46%	\$277,422	0.27%
Vanguard Target Retirement 2015         VTXVX         \$1,593,341         1.6%         \$2,192,299         2.1%           Vanguard Target Retirement 2020         VTWNX         \$2,312,232         2.4%         \$2,166,154         2.1%           Vanguard Target Retirement 2025         VTTVX         \$9,452,740         9.6%         \$9,788,675         9.4%           Vanguard Target Retirement 2030         VTHRX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7% <th>Target Date Retirement Funds</th> <th></th> <th>\$29,857,820</th> <th>30.3%</th> <th>\$29,453,846</th> <th>28.4%</th>	Target Date Retirement Funds		\$29,857,820	30.3%	\$29,453,846	28.4%
Vanguard Target Retirement 2020         VTWNX         \$2,312,232         2.4%         \$2,166,154         2.1%           Vanguard Target Retirement 2025         VTTVX         \$9,452,740         9.6%         \$9,788,675         9.4%           Vanguard Target Retirement 2030         VTHRX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8% <th>Vanguard Target Retirement Income</th> <th>VTINX</th> <th>\$896,127</th> <th>0.9%</th> <th>\$764,545</th> <th>0.7%</th>	Vanguard Target Retirement Income	VTINX	\$896,127	0.9%	\$764,545	0.7%
Vanguard Target Retirement 2025         VTTVX         \$9,452,740         9.6%         \$9,788,675         9.4%           Vanguard Target Retirement 2030         VTHRX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2015	VTXVX	\$1,593,341	1.6%	\$2,192,299	2.1%
Vanguard Target Retirement 2030         VTHRX         \$1,351,650         1.4%         \$807,761         0.8%           Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2020	VTWNX	\$2,312,232	2.4%	\$2,166,154	2.1%
Vanguard Target Retirement 2035         VTTHX         \$6,178,009         6.3%         \$6,075,478         5.9%           Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2025	VTTVX	\$9,452,740	9.6%	\$9,788,675	9.4%
Vanguard Target Retirement 2040         VFORX         \$1,824,933         1.2%         \$1,568,576         1.5%           Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2030	VTHRX	\$1,351,650	1.4%	\$807,761	0.8%
Vanguard Target Retirement 2045         VTIVX         \$4,382,727         4.5%         \$4,527,063         4.4%           Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2035	VTTHX	\$6,178,009	6.3%	\$6,075,478	5.9%
Vanguard Target Retirement 2050         VFIFX         \$410,016         0.4%         \$273,128         0.3%           Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2040	VFORX	\$1,824,933	1.2%	\$1,568,576	1.5%
Vanguard Target Retirement 2055         VFFVX         \$979,157         0.9%         \$934,576         0.9%           Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	-	VTIVX	\$4,382,727	4.5%	\$4,527,063	4.4%
Vanguard Target Retirement 2060         VTTSX         \$467,297         0.01%         \$355,591         0.3%           Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2050	VFIFX	\$410,016	0.4%	\$273,128	0.3%
Cash and Equivalent         \$13,646,722         13.6%         \$14,264,573         13.7%           Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	, ,	VFFVX	\$979,157	0.9%	\$934,576	0.9%
Vanguard Treasury Money Market Inv         VUSXX         \$1,030,516         1.1%         \$855,816         0.8%           Galliard Retirement Income         n/a         \$12,616,206         12.8%         \$13,408,757         12.9%	Vanguard Target Retirement 2060	VTTSX	\$467,297	0.01%	\$355,591	0.3%
Galliard Retirement Income n/a \$12,616,206 12.8% \$13,408,757 12.9%	Cash and Equivalent		\$13,646,722	13.6%	\$14,264,573	13.7%
	Vanguard Treasury Money Market Inv	VUSXX	\$1,030,516	1.1%	\$855,816	0.8%
Total \$98,541,271* 100.0% \$103,792,201* 100.0%	Galliard Retirement Income	n/a	\$12,616,206	12.8%	\$13,408,757	12.9%
	Total		\$98,541,271 <u>*</u>	100.0%	\$103,792,201*	100.0%

Source: Empower Retirement

\*Does not include loan balance of \$1.9 mil

# **Denver Water 457 Deferred Compensation Plan**

Fund	Ticker	Total Assets as of 12/31/2018	% of the Total Assets	Total Assets as of 12/31/2017	% of the Total Assets
Global Real Estate		\$0.00	0.00%	\$\$245,780	0.7%
Cohen & Steers Instl Global Realty	CSSPX	\$0.00	0.00%	\$245,780	0.7%
International Equity		\$2,045,619	6.3%	\$2,057,893	6.1%
Harbor International Instl	HAINX	\$1,448,247	4.3%	\$1,448,247	4.3%
Arrowstreet international	ARWIEA	\$912,719	2.8%	\$0.00	0.00%
Northern Global Sustainability Index	NSRIX	\$147,986	0.5%	\$351,788	1.0%
Fidelity Global ex US Index Prem	FSGDX	\$0.00	0.00%	\$257,858	0.8%
Domestic Equity		\$2,057,893	6.1%	\$12,415,290	36.7%
Fidelity Total Market Index	FSKTX	\$0.00	0.00%	\$4,472,763	13.2%
Baron Growth Instl	BGRIX	\$870,142	2.7%	\$854,254	2.52%
American Beacon Small Cp Val Inst	AVFIX	\$1,090,180	3.4%	\$1,274,516	3.76%
T. Rowe Price Growth Stock I	PRGFX	\$2,471,528	7.6%	\$3,675,349	10.85%
American Funds Washington Mutual R6	RWMGX	\$1,957,978	6.1%	\$2,138,408	6.31%
Fixed Income		\$4,430,640	13.7%	3,339,079	9.9%
PIMCO High Yield Instl	PHIYX	\$832,442	2.6%	\$938,182	2.8%
Vanguard Inflation Protected Securities Admin	VAIPX	\$515,995	1.6%	\$373,258	1.1%
Frost Total Return Bond Inst	FIJEX	\$1,938,165	5.9%	\$1,715,451	5.1%
Fidelity US Bond Index Premium	FNSKX	\$746,941	0.2.3%	\$250,199	0.7%
Vanguard Total Intl Bd Idx Admiral	VTABX	\$397,097	2.3%	\$61,989	0.2%
Target Date Retirement Funds		\$7,854,415	24.3%	\$7,305,224	21.6%
Vanguard Target Retirement Income	VTINX	\$429,094	1.33%	\$402,188	1.19%
Vanguard Target Retirement 2015	VTXVX	\$463,156	1.4%	\$663,272	1.96%
Vanguard Target Retirement 2020	VTWNX	\$1,069,724	3.3%	\$802,854	2.37%
Vanguard Target Retirement 2025	VTTVX	\$1,798,469	5.6%	\$2,503,952	7.39%
Vanguard Target Retirement 2030	VTHRX	\$671,911	2.1%	\$235,970	0.70%
Vanguard Target Retirement 2035	VTTHX	\$1,515,231	4.7%	\$971,980	2.87%
Vanguard Target Retirement 2040	VFORX	\$338,492	1.1%	\$254,289	0.75%
Vanguard Target Retirement 2045	VTIVX	\$1,166,088	3.6%	\$1,145,299	3.38%
Vanguard Target Retirement 2050	VFIFX	\$143,683	0.44%	\$95,488	0.28%
Vanguard Target Retirement 2055	VFFVX	\$206,935	0.64%	\$193,367	0.57%
Vanguard Target Retirement 2060	VTTSX	\$46,182	0.14%	\$36,565	0.11%
Cash and Equivalent		\$7,384,883	22.7%	\$8,509,107	25.1%
Vanguard Treasury Money Market Inv	VUSXX	\$604,734	11.9%	\$490,507	1.45%
Galliard Retirement Income	n/a	\$6,780,149	20.9%	\$8,018,600	23.67%
Total Source: Empower Petirement		\$32,374,006*	100.0%	\$33,872,373*	100.0%

Source: Empower Retirement

<sup>\*</sup>Does not include loan balance of \$0.2 mil

# 6. Schedule of Fees and Commissions Schedule of fees paid by Plan Participants as of 12/31/2018

Fund	Ticker	Expense Ratio <sup>2</sup>	Admin Fess (%)³	Revenue sharing – paid back to Participants (%)¹	Average Expense Ratio in the Peer Group
Global Real Estate					
Cohen & Steers Instl Global Realty	CSSPX	1.00	0.075	0.10	1.40
International Equity					
Harbor International Instl	HAINX	0.79	0.075	0.10	1.01
Arrowstreet International	ARWIEA	0.90	0.075	0.00	0.99
Northern Global Sustainability Index	NSRIX	0.31	0.075	0.00	1.04
Fidelity Global ex US Index	FSGDX	0.11	0.075	0.00	1.01
Domestic Equity					
Fidelity Total Market Index	FSKTX	0.04	0.075	0.00	0.88
Baron Growth	BGRIX	1.05	0.075	0.15	1.12
American Beacon Small Cap Val Inst	AVFIX	0.84	0.075	0.00	1.14
T. Rowe Price Growth Stock	PRGFX	0.52	0.075	0.15	0.93
American Funds Washington Mutual R6	RWMGX	0.30	0.075	0.00	0.88
Fixed Income					
PIMCO High Yield Instl	PHIYX	0.30	0.075	0.00	0.86
Vanguard Inflation Protected Securities Admin	VAIPX	0.10	0.075	0.00	0.61
Frost Total Return Bond Inst	FIJEX	0.52	0.075	0.10	0.65
Fidelity US Bond	FNSKX	0.05	0.075	0.00	0.65
Vanguard Total Intl Bd Idx Admiral	VTABX	0.12	0.075	0.00	0.88
Target Date Retirement Fund	s				
Vanguard Target Retirement Income	VTINX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2010	VTEVX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2015	VTXVX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2020	VTWNX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2025	VTTVX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2030	VTHRX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2035	VTTHX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2040	VFORX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2045	VTIVX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2050	VFIFX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2055	VFFVX	0.14	0.075	0.00	0.76
Vanguard Target Retirement 2060	VTTSX	0.14	0.075	0.00	0.76
Cash and Equivalent					
Vanguard Treasury Money Market Inv	VUSXX	0.09	0.075	0.00	0.45
Galliard Retirement Income	N/A	0.65	0.075	0.00	0.42
Weighted average (both	plans)	0.34	0.075	0.025	

Source: Ellwood

# 2018 Annual Report of the Denver Board of Water Commissioners Employees' Retirement Program

<sup>&</sup>lt;sup>1</sup> The dollar amount of fees paid by the Plans for investment management and administrative services on the funds is not separately disclosed. Revenue sharing arrangements with Empower are discussed in more detail in the Report on Investment Activity for the DC Plans (page 97).

<sup>&</sup>lt;sup>2</sup> Expense ratios provided by Ellwood Consulting

<sup>&</sup>lt;sup>3</sup>Effective in January 2016, the total fee for recordkeeping and communication services was reduced from 0.09% to 0.075% annually. The fee is being calculated and withdrawn from all participant accounts on a monthly basis and any revenue sharing is credited to participants with account balances in a revenue-paying fund which generated the revenue, based on the average daily balance of the participant's investment in such fund(s) for the prior month.

# IV. ACTUARIAL SECTION (UNDAUDITED)

# A. Actuary's Certification Letter

This section is excerpted from the January 1, 2018 Actuarial Valuation Report prepared by Gabriel Roeder Smith & Company and pertains only to the DB Plan



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April 30, 2018

Ms. Usha Sharma Treasurer Denver Water 1600 West 12<sup>th</sup> Avenue Denver, CO 80204

Re: Actuarial Valuation of the Employees' Retirement Plan of the Denver Board of Water Commissioners as of January 1, 2018

Dear Usha:

We are pleased to present the Report on the actuarial valuation of the Employees' Retirement Plan of the Denver Board of Water Commissioners ("Plan") as of January 1, 2018.

This Report presents the results of the January 1, 2018 actuarial valuation of the Plan. The Report describes the current actuarial condition of the Plan, determines required annual employer contribution rates, and analyzes changes in these required rates. In addition, the Report provides various summaries of the data. This report should not be relied on for any purpose other than the purpose described in the primary communication. Accounting information for purposes of complying with Governmental Accounting Standards Board (GASB) Statements Nos. 67 and 68 is provided in a separate report.

We certify that the information included herein and contained in the January 1, 2018 Actuarial Valuation Report is accurate and fairly presents the actuarial position of the Plan as of the valuation date.

### Financing Objectives

The Actuarially Determined Contribution is determined by taking the sum of the normal cost, a component to amortize the unfunded liability and a component to cover administrative expenses. The Board's current funding policy is to contribute an amount each year based on the most recently calculated Actuarially Determined Contribution.

The amortization component is determined using 15-year closed level-dollar amortizations of layered amortization bases. The first base was established using the unfunded liability as of January 1, 2014. Subsequent bases were established at each valuation date by taking the unfunded liability at that time, less the total outstanding balances of the previous amortization balances.

The total actuarially determined contribution has decreased from 23.444% of pay to 23.312% of pay. During 2018, members hired on or after January 1, 2018 will contribute 3% of pay. Members hired prior to that date will contribute 1% of pay in 2018, 2% of pay in 2019, and 3% of pay in 2020. The expected 2018 blended member rate is 1.046%, resulting in a 22.266% of pay net employer contribution.

Ms. Usha Sharma April 30, 2018 Page 2

Assuming all actuarial assumptions are met, this method of payment of the unfunded liability will result in full funding in 15 years for each layer. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. A schedule of each year's initial base and remaining outstanding balance is illustrated in Exhibit B.5.

#### Progress Toward Realization of Financing Objectives

The unfunded actuarial accrued liability and the funded ratio (ratio of the actuarial value of assets to the actuarial accrued liability) illustrate the progress toward the realization of certain financing objectives.

Based on the actuarial valuation as of January 1, 2018, the Plan has an unfunded liability of \$81.5 million and a funded ratio of 80.8%.

The increase in the funded ratio on an actuarial value of assets basis, from 79.9% to 80.8%, is primarily due to investment gains and the recognition of deferred asset gains and losses. The funded ratio on a market value of assets basis increased from 78.3% to 84.9% primarily due to investment gains greater than expected. A funded ratio less than 100% indicates an actuarially determined contribution that will require a normal cost and an amortization payment. If the contributions equal the ADC, and if all assumptions are met, the funded ratio should improve over time.

#### Benefit Provisions

All of the benefit provisions reflected in this valuation are those which were in effect on January 1, 2018. Beginning January 1, 2018, current members are required to contribute 1% of bi-weekly compensation to the Plan. The required contribution will increase to 2% in the 2019 Plan Year and 3% in the 2020 Plan Year and thereafter. Members hired on or after January 1, 2018 will contribute 3% of pay. The benefit provisions are summarized in Section D of this Report.

#### Assumptions and Methods

The assumptions were adopted by the Denver Board of Water Commissioners primarily upon the prior actuary's analysis and recommendations from the 2015 Experience Study. A new discount rate and mortality tables were adopted by the Board effective January 1, 2017. There were no changes in actuarial assumptions and methods since the prior report. These assumptions and methods are detailed in Section F of this Report. The Board has sole authority to determine the actuarial assumptions used for the Plan. In our opinion, the actuarial assumptions used are reasonable.



## **B. Summary of Actuarial Methods and Assumptions**

The actuarial assumptions used in the valuation are intended to estimate future experience affecting projected benefit flow and investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the plan's benefits.

The tables in this section give rates of decrement, referred to in actuarial notation by the general symbol "q'." The underlying theory is described more fully in Jordan, Life Contingencies, Society of Actuaries (Second Edition, 1967), page 277. Any age referred to in a table is always the age of the person at his or her nearest birthday.

#### **Actuarial Cost Method**

The actuarial cost method we use to calculate the funding requirements of the Plan is called the entry age normal actuarial cost method.

Under this cost method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit age. The portion of this actuarial present value allocated to a valuation year is called the Normal Cost. The portion of the actuarial present value not provided for at the valuation date by future Normal Costs is called the actuarial accrued liability.

#### **Actuarial Value of Assets**

The actuarial value of assets is determined by calculating the expected return on the prior year's market value of assets, adjusted for cash flows of contributions and benefit payments for the year, and assuming a 7.00% interest return. The difference between this expected value and the actual return for the plan year is recognized over 3 years. The actuarial value of assets is then the actual market value minus the gains and losses for prior years that are still deferred. The resulting value is limited to between 80% and 120% of the market value of assets.

#### **Annual Required Contribution (Adopted January 1, 2014)**

The Actuarially Determined Contribution (ADC) is calculated in accordance with the Funding Policy adopted by the Board. The unfunded actuarial accrued liability (UAAL) is amortized as a level dollar amount over a 15-year period using a layered approach beginning January 1, 2014. The UAAL as of January 1, 2014 will be amortized over a 15-year closed period. Future fluctuations in the UAAL due to plan experience different than assumed or changes in actuarial assumptions, methods or plan provisions will be amortized over a 15-year period beginning with the first valuation date following such change. In the event of a surplus (Actuarial Value of Assets greater than the Actuarial Accrued Liability), all prior amortization bases will be eliminated and the surplus will be amortized over a 30-year open period as a level-dollar amount.

#### **Cost-of-Living Adjustment**

For members hired prior to January 1, 2018, the monthly amount of any Pension provided by the Plan may be increased annually of the first day of each January by the change in the U.S. Consumer Price Index (CPI-W) as reported the preceding November. Annual increases may not exceed 5% for members whose severance date occurs prior to September 1, 1995 and 4.4% for members whose severance date occurs after August 31, 1995. Effective January 1, 2017, if the change in the U.S. Consumer Price Index is negative, then it shall be treated as zero. The Cost-of-Living Adjustment granted in 2017 was 2.32%. There are no Cost-of-Living Adjustments for members hired on or after January 1, 2018.

#### **Actuarial Assumptions**

Investment return: 7.00% per annum, compounded annually, composed of an assumed 2.75% inflation rate and a 4.25% real rate of return. This rate represents the assumed return, net of all investment expenses.

Salary increase rate: Inflation rate of 2.75%, plus productivity component of 0.50%, plus merit component as shown

Sample Attained Age	Percentage Increase in Salary						
	Merit	Productivity	Inflation	Total			
22	3.0%	0.5%	2.75%	6.25%			
27	3.0	0.5	2.75	6.25			
32	2.5	0.5	2.75	5.75			
37	2.0	0.5	2.75	5.25			
42	1.0	0.5	2.75	4.25			
47	0.5	0.5	2.75	3.75			
52	0.1	0.5	2.75	3.35			

Expenses: Administrative expenses are assumed to be \$120,000 per year.

#### **Demographic assumptions**

Mortality rates (pre- and post-retirement) – Combined RP-2014 Healthy Mortality Tables projected with scale MP to 2016.

Mortality rates (post-disablement) – Combined RP-2014 Disabled Annuitant Mortality Tables, projected with scale MP-2016.

Sample rates are shown below:

Sample Attained Age	Probability of Death Pre- Retirement	Probability of Death Pre- Retirement	Sample Attained Age	Probability of Death Post- Retirement		Sample Attained Age	Death	oility of 1 Post- bility
	Men	Women		Men	Women		Men	Women
20	0.03%	0.01%	20	0.03%	0.02%	20	0.03%	0.02%
25	0.03	0.01	25	0.04	0.07	25	0.14	0.07
30	0.04	0.02	30	0.07	0.21	30	0.41	0.21
35	0.05	0.03	35	0.12	0.42	35	0.82	0.42
40	0.06	0.04	40	0.17	0.65	40	1.20	0.65
45	0.08	0.06	45	0.23	0.82	45	1.40	0.82
50	0.13	0.09	50	0.31	1.00	50	1.57	1.00
55	0.23	0.15	55	0.47	1.29	55	1.90	1.29
60	0.43	0.24	60	0.70	1.65	60	2.41	1.65
65	0.78	0.34	65	1.04	1.92	65	2.99	1.92
70	1.23	0.52	70	1.49	2.34	70	3.57	2.34
75	1.91	0.87	75	2.21	3.32	75	4.47	3.32
80	3.15	1.52	80	3.63	5.06	80	6.22	5.06
85	6.22	4.04	85	6.37	5.17	85	9.32	7.73
90	11.58	8.97	90	11.45	9.30	90	14.57	11.52

Graduated rates are used. Sample rates shown below:

Sample Attained Ages	Probability of Disability
25	0.027%
30	0.064
35	0.109
40	0.164
45	0.255
50	0.437
55	0.792
60	1.256

#### Termination rates (for causes other than death, disability or retirement)

Termination rates are based on service. Termination rates are not applied after a member becomes eligible for a retirement benefit. Rates at selected ages are shown:

Years of	Probability of
Service	Termination
1	9.00%
2	9.00
3	9.00
4	9.00
5	5.00
6	5.00
7-10	3.00
11-15	2.00
16-29	1.00
30+	0.00

#### **Retirement Rates**

Attained Age	Before Eligible for Special Early Retirement	After Eligible for Special Early Retirement
50	0.0%	3.0%
51	0.0	3.0
52	0.0	3.0
53	0.0	3.0
54	0.0	9.0
55	5.0	15.0
56	5.0	15.0
57	5.0	15.0
58	5.0	10.0
59	5.0	10.0
60	5.0	15.0
61	5.0	20.0

62	5.0	20.0
63	0.0	30.0
64	0.0	30.0
65	0.0	30.0
66-69	0.0	30.0
70 & Over	0.0	100.0

#### **Other Assumptions**

Percent married: 75% of employees are assumed to be married.

Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

Cost of living adjustment: 2.75% per annum.

Deferred vested members and their surviving spouses are assumed to retire at first eligibility for unreduced benefits (age 65, unless eligible for Special Early Retirement, in which case, age 55).

Valuation payroll is based on census data provided (annualized for new hires) and then increasing for one-half year salary increase.

Pay increase timing: Middle of year.

Decrement timing: Decrements of all types are assumed to occur mid-year.

Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Decrement relativity: Decrement rates are used directly, without adjustment for multiple decrement table effects.

Age at Termination/Retirement	% Electing Lump Sum	% Electing Straight Life Annuity
<45	10%	90%
45-55 Not Retirement Eligible	20%	80%
50+ Retirement Eligible	25%	75%

#### C. Changes in Actuarial Methods and Assumptions since Prior Year

There were no changes in actuarial methods and assumptions since the prior report.

## D. Schedule of Active Member Valuation Date

Valuation Date	Number of Active Members	Annual Payroll	Annual Average Pay	% Increase in Average Pay	Number of Deferred Vested
1/1/2009	1,017	65,721,304	64,623	2.05	77
1/1/2010	1,060	70,372,085	66,389	2.73	79
1/1/2011	1,063	69,926,961	64,237	(3.24)	82
1/1/2012	1,043	71,172,362	66,839	4.05	83
1/1/2013	1,045	71,940,163	66,868	0.04	82
1/1/2014	1,023	71,847,268	68,369	2.24	84
1/1/2015	1,034	75,990,457	74,611	9.13	90
1/1/2016	1,004	75,740,030	75,438	1.11	100
1/1/2017	1,019	77,159,061	75,720	0.37	106
1/1/2018	1,034	82,150,595	79,449	4.92	120

## E. Schedule of Retirees and Beneficiaries Added and Removed from Rolls

Plan Year Ending	Number Added to Rolls	Annual Allowances Added to Rolls	Number Removed from Rolls	Annual Allowances Removed from Rolls	Number at End of Year	Annual Allowances	% Increase in Annual Allowances	Average Annual Allowances
12/31/2009	24	918,144	19	322,450	446	11,527,450	5.45	25,846
12/31/2010	32	1,066,810	11	204,272	467	12,389,988	7.48	26,531
12/31/2011	31	1,261,199	11	151,079	487	13,500,108	8.96	27,721
12/31/2012	45	1,511,056	13	283,394	519	14,727,770	9,.09	28,377
12/31/2013	56	1,856,554	10	173,084	565	16,411,240	11.43	29,046
12/31/2014	34	943,263	12	296,617	587	16,807,704	3.94	29,059
12/31/2015	45	1,192,656	16	312,120	616	17,938,422	5.16	29.121
12/31/2016	56	1,824,592	21	492,301	651	19,270,714	7.43	29,602
12/31/2017	57	2,113,509	37	774,332	671	20,609,891	6.95	30,715
12/31/2018	34	1,556,827	9	236,672	696	21,930,046	13.80	31,509

## F. Solvency Test

					d Liabilities tion Assets		
Valuation Date	(1) Active Member Contributions	(2) Deferred Vested, Retirees and Beneficiaries	(3) Active Members	Valuation Assets	(1)	(2)	(3)
1/1/2009	495,900	124,774,259	163,394,642	209,770,560	100	100	51.7
1/1/2010	499,600	132,568,017	168,189,298	228,083,245	100	100	56.4
1/1/2011	408,200	142,084,100	153,777,087	218,757,059	100	100	49.6
1/1/2012	353,600	154,303,402	156,786,401	238,384,139	100	100	53.4
1/1/2013	274,800	168,146,325	152,183,674	252,919,993	100	100	55.5
1/1/2014	127,900	191,230,293	146,486,108	272,829,275	100	100	55.6
1/1/2015	90,000	202,360,110	157,097,607	297,670,643	100	100	60.6
1/1/2016	66,000	212,726,742	155,290,362	312,384,696	100	100	64.1
1/1/2017	57,400	241,571,671	160,084,488	320,904,267	100	100	49.5
1/1/2018	34,900	260,199,893	164,501,606	343,199,212	100	100	50.4

## G. Analysis of Financial Experience

Plan Year Ending	Actuarial (Gains)/Losses		Changes in Plan Provisions	Changes in Assumptions/ Methods	Total (Gain)/Loss	
	Asset Sources	Liability Sources	Total			
12/31/2009	(710,044)	(1,354,240)	(2,064,284)	(956,258)	0	(3,020,542)
12/31/2010	24,758,527	(6,215,755)	18,542,772	0	(13,585,635)	4,957,137
12/31/2011	(3,318,033)	2,464,819	(853,214)	0	0	(853,214)
12/31/2012	751,281	(3,476,652)	(2,725,371)	0	0	(2,725,371)
12/31/2013	(3,897,780)	2,052,114	(1,845,666)	0	2,795,982	950,316
12/31/2014	(10,614,132)	964,653	(9,649,479)	0	10,152,400	502,921
12/31/2015	403,252	(3,334,682)	(2,931,430)	0	0	(2,931,430)
12/31/2016	8,445,835	(2,254,507)	6,191,328	0	22,249,786	28,441,114
12/31/2017	(1,876,082)	6,700,482	4,824,400	0	0	4,824,400
12/31/2018	3,181,696	(525,139)	2,656,557	0	(4,004,229)	(1,347,672)

#### H. Analysis of Financial Experience – PLAN YEAR

UAAL, January 1, 2018 Expected Changes during 2017	\$81,537,187 -
Expected UAAL, January 1, 2017	\$80,809,292
Experience Changes During 2017 Investment (gains)/losses	\$3,181,696
<ul> <li>Salary changes different than assumed (gain)/loss</li> <li>New and Rehired members (gain)/loss</li> </ul>	(23,084)
Withdrawal Experience (gain)/loss	368,109 (2,218,893)
Retirement Experience (gain)/loss	(715,712)
Pensioner Mortality Experience (gain)/loss	3,278,368
Cost of Living Adjustment different than assumed	(1,349,449)
Miscellaneous demographic and assumption (gains)/losses	(3,868,708)
Total Experience Changes (gain)/loss	(4,529,368)
Total (gain)/loss	(\$1,347,672)
Unfunded Actuarial Accrued Liability, January 1, 2018	\$81,537,187

#### I. Summary of Plan Provisions

#### Plan Year

The Plan Year is the 12-month period beginning January 1 and ending December 31.

#### Accrued Benefit

The Accrued Benefit for each member is the member's Normal Retirement Benefit calculated using Average Final Compensation and Credited Service as of the calculation date.

#### Average Final Compensation

A member's Average Monthly Salary, as of a given date, is the average of the highest 36 consecutive completed calendar months of compensation during the last 120 months of employment for members hired prior to January 1, 2018 and the average of the highest 60 consecutive completed calendar months of compensation during the last 120 months of employment for members hired or rehired on or after January 1, 2018.

#### Compensation

Salary is the total compensation paid to a member for services rendered to the Employer, prior to any pre-tax contributions to any qualified cash or deferred compensation arrangement, eligible deferred compensation plan or under a cafeteria plan.

#### Credited Service

A member shall be credited with one year of Credited Service for each Plan Year in which the member is credited with 1,000 or more Hours of Service. Members hired or rehired on or after January 1, 2018 credited with less than 1,000 Hours of Service in a Plan Year shall receive partial Credited Service based on the number of Hours of

Service for which Member Contributions were made, credited in such Plan Year, divided by 2080 rounded to the nearest 1/100th of 1%.

#### Employees/Membership

Employees hired prior to January 1, 2018 shall become a Member retroactive to the employee's date of employment upon the completion of the Required Introductory Period (typically six months). Employees hired or rehired on or after January 1, 2018 shall become a Member on the date of such Employee's employment or reemployment.

#### **Employee Contributions**

A member hired prior to January 1, 2018 is required to contribute 1% of bi-weekly Compensation commencing with the first pay date on which the Merit Increase paid in the 2018 Plan Year is processed and ending with the pay date prior to the first pay date on which the Merit Increase paid in the 2019 Plan Year is processed. The required contribution will increase to 2% in the 2019 Plan Year and 3% in the 2020 Plan Year and each pay date thereafter. Member contributions made on or after January 1, 2018, receive interest at a rate of 2.5% per year. Any member contributions currently in the Plan are credited with interest at a rate of 5.0% per year.

#### Normal Retirement Date

A member's Normal Retirement Age is the later of age 65 or the date the member completes five years of Credited Service. Normal Retirement Date is the day immediately following the attainment of Normal Retirement Age.

#### Normal Retirement Benefits

For members hired prior to January 1, 2018, the monthly normal retirement pension payable upon retirement on a member's Normal Retirement Date is the sum of 1.5% of Average Final Compensation and 0.45% of Average Final Compensation in excess of Covered Compensation, times Credited Services. For members hired or rehired on or after January 1, 2018, the monthly normal retirement pension payable upon retirement on a member's Normal Retirement Date is 1.75% of Average Final Compensation times Credited Service.

#### Regular Early Retirement

#### Eligibility:

Age 55 for members hired prior to January 1, 2018, or age 60 for members hired or rehired on or after January 1, 2018, an in either case vested in the Accrued Benefit (5 years of credited service for severance dates on or after April 18, 1995.)

#### Amount:

A member's Regular Early Retirement Benefit is a monthly pension benefit equal to his Accrued Benefit determined as of his Early Retirement Date, reduced by 1/3rd of 1% for each month payments commence prior to the member's Normal Retirement Date.

#### Special Early Retirement - Rule of 75 and 85

#### Eligibility:

For members hired prior to January 1, 2018, age 50 and age plus service equals 75 or more. For members hired or rehired on or after January 1, 2018, age 60 and age plus service equals 85 or more.

#### Amount:

A member's Special Early Retirement Benefit is a monthly pension benefit equal to his Accrued Benefit determined as of his Special Early Retirement Date, unreduced for earlier commencement. Benefits are payable at the later of age 55 for members hired prior to January 1, 2018, age 60 for members hired or rehired on or after January 1, 2018, and age at retirement.

#### **Deferred Vested Retirement**

Eligibility:

5 or more years of Credited Service.

Amount:

A member's Deferred Vested Retirement shall be equal to the member's Accrued Benefit, payable at the member's Normal Retirement Date. Members hired prior to January 1, 2018 may retire with an Early Retirement Benefit upon attainment of age 55 with applicable reductions. Members hired or rehired on or after January 1, 2018 may retire with an Early Retirement Benefit upon attainment of age 60 with applicable reductions.

#### **Disability Retirement**

Eligibility:

Termination due to Disability.

Amount:

A member's Disability Retirement shall be equal to the member's Normal Retirement Benefit based on Average Final Compensation and Covered Compensation at time of Disability and Credited Service member would have accrued had he continued employment through his Normal Retirement Date (or date of discontinuance of disability benefits, if earlier).

#### Normal Benefit Form

Life Annuity

#### Optional Benefit Forms

Optional Benefit Forms are available and equal to the Actuarial Equivalent of the Normal Benefit Form and may be in an amount more than or less than that provided by the Normal Benefit Form depending on the option selected. Such distribution may be as a Joint & 50%, 75%, or 100% Survivor Annuity, with or without a Pop-up Feature, Level Income Option, or a Lump Sum.

Benefit reductions for Joint and Survivor Annuities are specified in the Plan Document. Lump Sum and Level Income benefits are calculated using an actuarial equivalence conversion.

#### Pre-Retirement Death Benefit

If a member dies prior to commencing benefits, the member's spouse will receive a monthly benefit payable as a Life Annuity in an amount equal to 50% of the member's Accrued Benefit.

#### Lump Sum Death Benefit

Upon the death of a Retired member receiving a monthly pension, \$5,000 shall be paid in a single sum to the member's designated beneficiary.

#### Cost of Living Adjustment

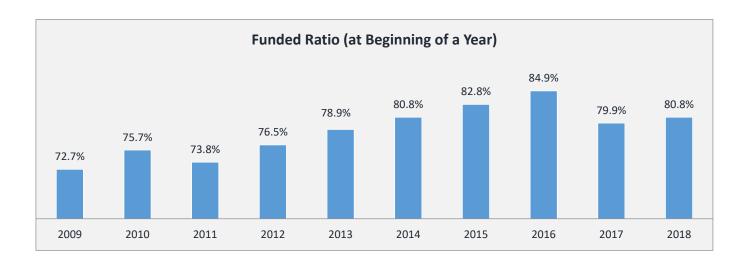
For members hired prior to January 1, 2018, the monthly amount of any Pension provided by the Plan will be increased annually on the first day of each January by the change in the U.S. Consumer Price Index (CPI-W) as reported the preceding November. Annual increases may not exceed 5% for members whose severance date occurs prior to September 1, 1995 and 4.4% for members whose severance date occurs after August 31, 1995. Effective January 1, 2017, if the change in the U.S. Consumer Price Index is negative, then it shall be treated as zero. The Cost-of-Living Adjustment granted in 2017 was 2.32%. There are no Cost-of-Living Adjustments for members hired on or after January 1, 2018.

#### J. Changes in Plan Provisions

None.

## K. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Accrued Liabilities (UAL) (b-a)	Funded Ratio (a/b)	Covered payroll (c)	UAL as a % of Covered Payroll1 ((b- a)/c)
1/1/2009	209,770,560	288,664,801	78,894,241	72.7	65,721,304	120.0
1/1/2010	228,083,245	301,256,915	73,173,670	75.7	70,372,085	104.0
1/1/2011	218,757,059	296,269,387	77,512,328	73.8	69,926,961	110.8
1/1/2012	238,384,139	311,443,403	73,059,264	76.5	71,172,362	102.7
1/1/2013	252,919,993	320,604,799	67,684,806	78.9	71,940,163	94.1
1/1/2014	272,829,275	337,844,301	65,015,026	80.8	71,847,268	90.5
1/1/2015	297,670,643	359,547,717	61,877,074	82.8	75,990,457	81.4
1/1/2016	312,384,696	368,083,104	55,698,408	84.9	75,740,030	73.5
1/1/2017	320,904,267	401,713,559	80,809,292	79.9	77,159,061	104.7
1/1/2018	343,199,212	424,736,399	81,537,187	80.8	82,150,595	99.2



## L. Schedule of Employer Contributions

Plan Year Ending	Annual Required Contribution	Employer Contribution	Employee Contribution	Percentage Contributed
12/31/2005	8,738,577	8,738,635	-	100.0
12/31/2006	8,268,755	8,269,119	-	100.0
12/31/2007	6,981,523	7,277,159	-	104.2
12/31/2008	7,233,450	7,590,475	-	104.9
12/31/2009	11,871,976	14,500,000	-	122.1
12/31/2010	12,638,827	12,638,827	-	100.0
12/31/2011	12,414,279	15,400,000	-	124.1
12/31/2012	12,256,238	14,300,000	-	116.7
12/31/2013	11,957,548	15,000,000	-	125.4
12/31/2014	13,532,013	14,500,000	-	107.2
12/31/2015	14,067,795	14,500,000	-	103.1
12/31/2016	14,268,653	14,500,000	-	102.0
12/31/2017	17,050,669	18,000,000	-	105.6
12/31/2018	19,150,681	18,000,000	662,000	97.5

#### M. Notes to Trend Data

#### N. Summary of Actuarial Assumptions, Methods and Additional Information

Valuation Date January 1, 2018

Actuarial Cost Method Entry Age Normal

Amortization Method 15 years (layered), as a level dollar amount

(beginning January 1, 2014)

Remaining amortization period 15 years (as of January 1, 2014)

Asset valuation method 3-year smoothing of market value gains or losses

Actuarial assumptions:

Investment rate of return\* 7.00% per annum, compounded annually,

composed of an assumed 2.75% inflation rate

and a 4.25% real rate of return. This rate represents the assumed return, net of all

investment expenses.

Projected salary increases Age-based rates from 6.25% to 3.35%

\*Includes inflation at 2.75% and 0.5% productivity

# V. STATISTICAL SECTION (UNAUDITED)

This section provides detailed information about the Retirement Plans of the Denver Board of Water Commissioners as a context for understanding the Program's overall financial condition. "Schedules of Additions by Source", "Schedules of Deductions by Type", "Schedules of Benefit and Refund Deductions from Net Assets by Type" and "Schedules of Changes in Net Assets" provide detailed information about the trends of key sources of additions and deductions to assets of Denver Water Retirement Plans, as well as their overall growth. "Schedule of Retired Members by Type of Benefit" contains information regarding the number and type of benefit recipients, and benefit amount for those who retired in 2018. "Schedule of Average Benefit Payment Amounts for Retirees" contains information on the average monthly benefit, average final monthly salary, and number of retired members of the Employees' Retirement Plan of Denver Water (DB Plan) over the last 10 years. Finally, the section entitled "Other Information" contains various tables showing member data for the Plans for the years 2009-2018. All non-accounting data was derived from Denver Water's internal sources and vendor reports and has been updated as of the end of 2018, as available.

## A. Employees' Retirement Plan

#### 1. Schedule of Additions by Source, 2009 – 2018

		Employ	er Contributions <sup>1</sup>		
Fiscal Year Ending	Member Contributions <sup>2</sup>	Dollars	Percentage of Annual Covered Payroll <sup>3</sup>	Net Investment and Other Income <sup>4</sup>	Total
2009	N/A	14,500,000	22.1%	31,558,700	46,058,700
2010	N/A	12,638,800	18.0%	24,118,400	36,757,200
2011	N/A	15,400,000	22.0%	(2,094,700)	13,305,300
2012	N/A	14,300,000	20.1%	28,171,400	42,471,400
2013	N/A	15,000,000	20.9%	39,023,000	54,023,000
2014	N/A	14,500,000	20.2%	18,523,200	33,023,200
2015	N/A	14,500,000	19.1%	2,473,300	16,973,300
2016	N/A	14,500,000	19.1%	21,326,100	35,826,100
2017	N/A	18,000,000	23.3%	48,273,300	66,273,300
2018	662,000	18,000,000	21.9%	(14,319,100)	4,342,900

Source: Financial Statements for the Employees' Retirement Plan

<sup>&</sup>lt;sup>1</sup> Employer cash contributions are made at actuarially determined amounts sufficient to accumulate the necessary assets to pay benefits when due. Contribution amounts are rounded to the nearest \$100 dollars and do not include interest earned for early payment of contribution.

<sup>&</sup>lt;sup>2</sup>Effective September 1, 1995, members had the ability to make a voluntary after-tax contributions to the Plan to purchase an additional monthly benefit (pension purchase feature). The additional benefit was in the form of a monthly annuity with no cost-of-living adjustment. No contributions were made under this provision in 1999-2008. The pension purchase feature was eliminated effective July 1, 2009.

<sup>&</sup>lt;sup>3</sup> Percentage is calculated based on contribution payment made on December 31 of each year. Actual percentage may be lower due to earlier payment of contribution.

<sup>4.</sup> Investment and miscellaneous income (including realized and unrealized gains/losses) net of investment expense.

#### 2. Schedule of Deductions by Type, 2009-2018

		Deductions by Type		
Fiscal Year Ending	Benefit Payments	Administrative Expenses	Refunds <sup>1</sup>	Total
2009	12,640,900	52,400	88,400	12,781,700
2010	14,143,900	59,800	108,300	14,312,000
2011	15,416,200	123,200	78,000	15,617,400
2012	16,704,300	123,800	93,700	16,921,800
2013	17,699,200	115,500	151,400	17,966,100
2014	20,299,200	144,000	66,400	20,509,600
2015	20,665,500	44,200	28,000	20,737,700
2016	19,913,500	52,100	18,100	19,983,700
2017	19,904,300	47,900	23,100	19,975,300
2018	22,052,200	179,600	3,100	22,234,900

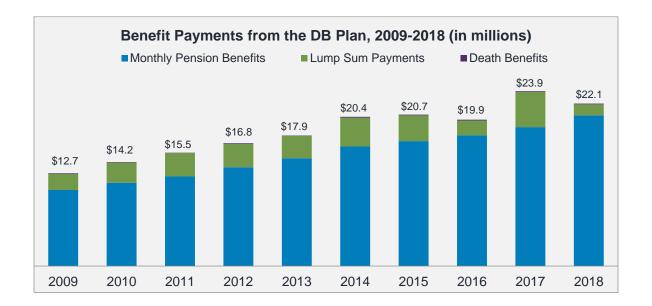
Source: Financial Statements for the Employees' Retirement Plan

#### 3. Schedule of Benefit Deductions from Net Assets by Type 2009-2018

Fiscal Year Ending	Annual Pension Benefits	Lump Sum Payments	Death Benefits	Total Benefits	Refunds
2009	10,350,800	2,215,100	75,000	12,640,900	88,400
2010	11,338,400	2,740,500	65,000	14,143,900	108,300
2011	12,184,400	3,176,800	55,000	15,416,200	78,000
2012	13,442,000	3,167,300	100,000	16,704,340	93,700
2013	14,670,900	3,028,300	55,000	17,699,200	151,400
2014	16,264,600	3,929,600	105,000	20,299,200	66,400
2015	17,041,700	3,538,800	85,000	20,665,500	28,000
2016	17,781,700	2,026,800	105,000	19,913,500	18,100
2017	18,958,515	4,824,400	72,359	23,855,274	23,100
2018	20,508,900	1,513,300	30,000	22,052,200	3,100

Source: Financial Statements for the Employees' Retirement Plan, Custody Reports

<sup>&</sup>lt;sup>1</sup>-Effective January 1, 1992, the Board determined that all employee contributions to the Denver Water Employees' Retirement Plan would be refunded, with interest at 5%, upon termination or retirement. An amount of \$2,480,000 was paid in 1992 to refund amounts contributed by employees who had retired prior to December 1992 or were terminated during 1992. Amounts listed subsequent to 1992 were paid to employees who were terminated or retired in the year listed. Employees stopped making mandatory contributions after September 1981. As of December 31, 2018, and 2017, total remaining employee contributions including accrued interest were \$42,500 and \$43,600 respectively.



## 4. Schedule of Changes in Fiduciary Net Position, 2009-2018

Fiscal Year Ending	Total Additions	Total Deductions	Change in Net Assets	Net position restricted for pension, Beginning of Year	Net position restricted for pension, End of Year
2009	46,058,700	12,781,700	33,277,000	174,808,800	208,085,800
2010	36,757,200	14,312,000	22,445,200	208,085,800	230,531,000
2011	13,305,300	15,617,400	(2,312,100)	250,531,000	228,218,900
2012	42,471,400	16,921,800	25,549,600	228,218,900	253,768,500
2013	54,023,000	17,966,100	36,056,900	253,768,500	289,825,400
2014	33,023,200	20,509,600	12,513,600	289,825,400	302,339,000
2015	16,973,300	20,738,700	(3,764,400)	302,339,000	298,574,600
2016	35,826,100	19,983,700	15,842,400	298,574,600	314,417,000
2017	66,273,300	19,975,300	46,298,000	314,417,000	360,715,000
2018	4,342,900	22,234,900	(17,892,000)	360,715,000	342,823,000

Source: Financial Statements for the Employees' Retirement Plan

#### 5. Schedule of Retired Members by type of Benefit

Date as of January 1, 2019

			Type of retirement*		Option selected #						
Amount of monthly benefit	Number of retirees	1	2	3	4	5	Life	Opt. 1	Opt. 2	Opt. 3	Def
Deferred	166	0	0	0	15	151	0	0	0	0	166
\$1 - \$249	10	0	6	4	0	0	8	0	0	2	0
\$250 - \$499	38	9	24	5	0	0	32	3	1	2	0
\$500 - \$749	48	8	33	5	2	0	40	4	0	4	0
\$750 - \$999	36	10	19	5	2	0	26	3	3	4	0
\$1,000 - \$1,249	39	5	21	11	2	0	33	2	2	2	0
\$1,250 - \$1,499	35	10	17	8	0	0	23	6	1	5	0
\$1,500 - \$1,749	43	7	24	10	2	0	31	5	1	6	0
\$1,750 - \$1,999	32	4	19	6	3	0	21	4	3	4	0
over \$2,000	400	50	308	20	22	0	241	95	21	43	0
Totals	847	103	471	74	48	151	455	122	32	72	166

#### \*Type of Retirement

- 1-Normal retirement
- 2-Early and special early retirement
- 3-Survivor
- 4-Disability
- 5-Vested terminations with deferred benefits

#### # Option Selected

Life or leveling option

Opt. 1 - 50% J&S with and without pop up

Opt. 2 - 75% J&S with and without pop up

Opt. 3 – 100% J&S with and without pop up

Def. – Deferred benefits

Source: January 1, 2019 Actuarial Valuation Report for Employees' Retirement Plan prepared by GRS

## 6. Schedule of Average Benefit Payment Amounts for Retirees, 2009-2018

			Years of Credit	ed Service				
Retirement Effective Dates	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
January 1, 2009 to December 31, 2009								
Average Monthly Benefit	\$0	\$1,379.36	\$0	\$0	\$3,031.65	\$3,711.94	\$3,416.99	\$3,224.64
Number of Active Retirees	0	2	0	0	4	6	8	20
January 1, 2010 to December 31, 2010								
Average Monthly Benefit	\$457.36	\$1,018.89	\$2,257.99	\$1,410.37	\$2,424.95	\$2,565.34	\$3,901.13	\$2,676.96
Number of Active Retirees	1	4	2	1	2	7	10	27
January 1, 2011 to December 31, 2011								
Average Monthly Benefit	\$0.00	\$892.08	\$1,235.41	\$1,494.81	\$2,216.83	\$3,747.31	\$3,472.47	\$2,713.81
Number of Active Retirees	0	3	4	1	1	9	5	23
January 1, 2012 to December 31, 2012								
Average Monthly Benefit	\$447.58	\$551.04	\$1,431.77	\$2,077.38	\$3,022.27	\$3,230.24	\$4,105.24	\$3,097.40
Number of Active Retirees	2	1	1		8	11	11	33
January 1, 2013 to December 31, 2013								
Average Monthly Benefit	\$676.26	\$770.75	\$1,809.36	\$2,273.52	\$2,916.17	\$3,144.23	\$4,463.10	\$3,053.70
Number of Active Retirees	1	4	7	7	3	8	18	48
January 1, 2014 to December 31, 2014								
Average Monthly Benefit	\$0.00	\$951.89	\$2,051.16	\$1,636.05	\$1,843.68	\$2,824.24	\$3,568.32	\$2,297.64
Number of Active Retirees	0	6	3	1	5	3	8	26
January 1, 2015 to December 31, 2015								
Average Monthly Benefit	\$759.99	\$1,204.97	\$1,813.91	\$1,828.66	\$3,492.23	\$4,799.75	\$3,447.28	\$3,144.63
Number of Active Retirees	4	1	3	2	4	9	6	29
January 1, 2016 to December 31, 2016								
Average Monthly Benefit	\$569.31	\$1,355,37	\$1,418.34	\$2,220.23	\$3,509.63	\$5,501.198	\$3,619.08	\$3,128.24
Number of Active Retirees	4	4	1	3	9		6	35
January 1, 2017 to December 31, 2017								
Average Monthly Benefit	\$757.25	\$899.80	\$2,338.22	\$2,446.01	\$2,869.22	\$4,248.71	\$4,530.66	\$2,815.40
Number of Active Retirees	6	6	5	6	2	9	9	43
January 1, 2018 to December 31, 2018								
Average Monthly Benefit	\$774.29	\$1,200.60	\$1,821.23	\$1,526.26	\$4,324.64	\$4,301.51	\$3,960.63	\$3,177.53
Number of Active Retirees	2	1	6	2	6	8	3	28

## 1. Employees' Retirement Plan - Member Count

			Inactive					
As of	Total	Active <sup>1</sup>	With Deferred Benefits	Retired Members and Beneficiaries	On Long Term Disability			
01/01/2010	1,588	1,063	79	435	11			
01/01/2011	1,613	1,063	83	456	11			
01/01/2012	1,613	1,043	83	477	10			
01/01/2013	1,646	1,045	82	511	8			
01/01/2014	1,672	1,023	84	558	7			
01/01/2015	1,711	1,034	90	582	5			
01/01/2016	1,720	1,004	100	604	12			
01/01/2017	1,776	1,019	106	639	12			
01/01/2018	1,825	1,034	120	658	13			
01/01/2019	1.887	1.006	151	681	15			

Source: 2010-2019 Actuarial Valuation reports; extracted from "Member Data Reconciliation"

## 2. Employees' Retirement Plan - Active Members

As of	Number of Members on Leave of Absence	Active Only	Average Age	Average Vesting Service	Average Earnings
01/01/2009	1	1,018	46.1	14.1	\$64,623
01/01/2010	3	1,060	45.9	13.7	\$66,389
01/01/2011	N/A	1,063	46.0	13.4	\$64,237
01/01/2012	N/A	1,043	46.4	13.8	\$66,839
01/01/2013	N/A	1,045	46.3	13.4	\$66,868
01/01/2014	N/A	1,023	46.2	12.9	\$68,369
01/01/2015	N/A	1,034	46.3	12.7	\$74,611
01/01/2016	N/A	1,004	46.4	12.6	\$75,438
01/01/2017	N/A	1,019	46.0	12.2	\$75,720
01/01/2018	N/A	1,034	45.3	11.5	\$79,449
01/01/2019	N/A	1,006	45.1	11.6	\$81,167

Source: 2010-2019 Actuarial Valuation reports; extracted from "Active Member Averages"

<sup>&</sup>lt;sup>1</sup> Includes members on leave of absence as of January 1, 2019.

# 3. Employees' Retirement Plan – Retiring Members by Type of Benefit Elected, 2009-2018

Fiscal Year Ending	Lump Sum	Partial Lump/Annuity	Annuity Only	Total Retirements
2009	5	4	16	25
2010	17	2	25	44
2011	7	0	23	30
2012	12	3	30	45
2013	19	5	43	67
2014	10	4	23	37
2015	11	2	29	42
2016	6	1	34	41
2017	2	1	45	48
2018	4	3	25	32

Source: 2009-2018 Actuarial Valuation reports; extracted from "Retirements by Type""

### 4. Employees' Retirement Plan – Retiring Members by Type of Retirement, 2009-2018

Fiscal Year Ending	Normal Retirement	Early Retirement	Special Early (Rule of 75)	Special Early (Rule of 75 Grow-In)	Total Retirements
2009	0	2	23	0	25
2010	7	11	26	0	44
2011	8	3	19	0	30
2012	9	6	30	0	45
2013	6	14	47	0	67
2014	8	8	20	1	37
2015	14	2	22	4	42
2016	5	7	29	0	41
2017	6	5	31	3	45
2018	11	3	18	0	32

Source: 2009-2018 Actuarial Valuation report; extracted from "Retirements by Type"

## 5. Retired Members (inactive Plan Members) - By Type of Retirement

As of	Normal Retirement	Early and Special Early Retirement	Survivor	Disability Retirements	Vested Terminations	Total Inactive Members
01/01/2009	72	290	54	25	77	518
01/01/2010	68	307	52	19	79	525
01/01/2011	73	316	59	20	82	550
01/01/2012	75	334	60	19	82	570
01/01/2013	83	353	66	18	81	601
01/01/2014	85	396	68	17	83	649
01/01/2015	85	410	77	16	89	677
01/01/2016	89	408	72	47	100	716
01/01/2017	87	434	82	48	106	757
01/01/2018	92	459	74	46	120	791
01/01/2019	103	471	74	48	151	793

Source: 2009-2019 Actuarial Valuation reports; extracted from "Schedules of Retired Members by Type of Benefit"."

## 6. Retired Members (Inactive Plan Members) - By Option Selected

As of	Life or leveling option	50% J&S	75% J& S	100% J&S	Total
01/01/2009	367	90	15	46	518
01/01/2010	370	88	16	51	525
01/01/2011	398	92	15	45	550
01/01/2012	413	96	15	46	570
01/01/2013	345	98	18	50	511
01/01/2014	372	98	25	63	558
01/01/2015	394	100	27	61	582
01/01/2016	406	105	30	63	604
01/01/2017	434	113	29	63	639
01/01/2018	447	115	30	66	658
01/01/2019	455	122	32	72	681

Source: 2009-2019 Actuarial Valuation reports; extracted from "Schedules of Retired Members by Type of Benefit".

## B. Denver Water Supplements Retirement Savings Plan

#### 1. Schedule of Additions by Source, 2009-2018

Fiscal Year Ending	Employee Contributions	Employee Rollovers	Employer Contributions <sup>1</sup>	Net Investment and Other Income <sup>2</sup>	Total
2009	3,294,300	62,400	1,647,700	6,157,200	11,161,600
2010	3,562,000	89,200	1,671,100	4,952,000	10,274,300
2011	3,694,600	9,100	1,735,100	(90,900)	5,348,800
2012	3,827,400	275,200	1,743,300	5,543,600	11,389,500
2013	4,153,300	694,200	1,834,900	10,752,000	17,434,400
2014	4,245,800	342,600	1,977,800	4,616,500	11,182,700
2015	4,463,400	1,298,000	1,988,400	157,100	7,907,900
2016	4,483,900	1,154,800	2,033,800	5,950,600	13,623,100
2017	4,259,200	986,300	6,770,000	14,404,500	26,420,000
2018	4,352,100	1,154,000	2,050,100	(4,536,700)	3,119,300

Source: Financial Statements for 401(k) Supplemental Retirement Savings Plan

#### 2. Schedule of Deductions by Type, 2009-2018

	Deductions by <sup>*</sup>			
Fiscal Year Ending	Benefit Payments	Expenses <sup>1</sup>	Participant investment advisory fees	Total
2009	2,106,300	79,600	-	2,185,900
2010	2,911,200	83,800	-	2,995,000
2011	3,004,500	44,700	-	3,049,200
2012	2,458,700	49,700	3,900	2,512,300
2013	4,907,800	58,700	10,900	4,977,400
2014	3,573,000	67,200	19,900	3,660,100
2015	6,025,000	71,100	20,400	6,116,500
2016	5,362,100	62,300	17,800	8,180,900
2017	8,131,800	76,900	21.600	8,234,800
2018	8,197,300	83,900	25,400	8,306,600

Source: Financial Statements for 401(k) Supplemental Retirement Savings Plan

Includes imputed amount of investment and recordkeeping fees.

<sup>&</sup>lt;sup>1</sup> Employer's matching contribution is currently 100% of each Participant's contribution up to 3% of the Participant's published base pay for the 401(k) Plan year. Employer's contribution also includes discretionary contributions, as described in the financial statements for the DC Plans.

<sup>&</sup>lt;sup>2.</sup> Investment, Participant loan interest and miscellaneous income (including realized and unrealized gains/losses) net of investment expense.

## 3. Schedule of Benefit Deductions from Net Assets by Type 2009-2018

Fiscal Year Ending	Retirement	Age 70 1/2 Minimum	Termination of Employment	Hardship Withdrawal	Other <sup>1</sup>	Total Benefits
2009	1,655,300	0	201,700	100,900	148,400	2,106,300
2010	2,163,350	0	257,700	122,250	367,900	2,911,200
2011	2,301,600	4,200	326,600	185,300	186,800	3,004,500
2012	1,757,800	1,900	392,600	197,900	108,500	2,458,700
2013	3,603,000	0	736,700	200,700	367,400	4,907,800
2014	2,3745,000	0	565,500	257,000	375,500	3,573,000
2015	3,056,000	0	1,910,000	32,000	1,012,200	6,010,000
2016	2,036,100	17,300	2,082,200	188,400	1,038,100	5,362,100
2017	3,026,400	39,200	4,337,300	87,600	641,300	8,131,800
2018	2,025,026	78,729	4,468,348	146,925	1,391,825	8,110,853

Source: Empower Retirement, Plan Disbursement Summary

## 4. Schedule of Changes in Net Assets, 2009-2018

Fiscal Year Ending	Total Additions	Total Deductions	Change in Net Assets	Net Assets Held in Trust, Beginning of Year	Net Assets Held in Trust, End of Year
2009	11,161,600	2,185,900	8,975,700	30,381,500	39,357,200
2010	10,274,300	2,995,000	7,279,300	39,357,200	46,636,500
2011	5,347,900	3,049,200	2,298,700	46,636,500	48,935,200
2012	11,389,500	2,512,300	8,877,200	48,935,200	57,812,400
2013	17,434,400	4,977,400	12,457,000	57,812,400	70,269,400
2014	11,182,700	3,660,100	7,522,600	70,269,400	77,792,000
2015	7,906,900	6,116,500	1,790,400	77,792,000	79,582,400
2016	13,623,100	5,442,200	8,180,900	79,582,400	87,763,300
2017	26,420,000	8,234,800	18,185,200	87,763,300	105,948,500
2018	3,119,300	8,306,600	(5,187,300)	105,948,500	100,761,200

Source: Financial Statements for 401(k) Supplemental Retirement Savings Plan

<sup>&</sup>lt;sup>1</sup>"Other" includes beneficiary payments, Qualified Domestic Relations Order (QDRO) payments, death claims, disability payments, early distributions and taxes withheld.

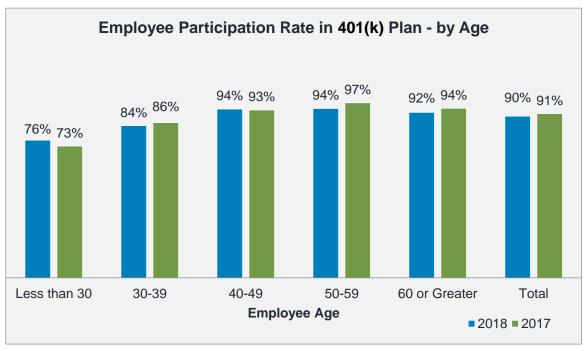
#### 5. Other Information

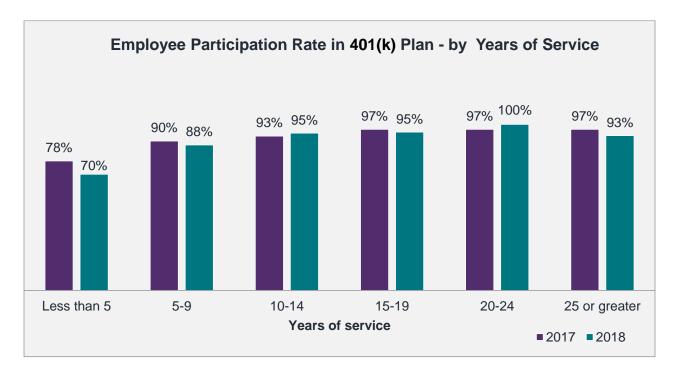
# 6. Denver Water 401(k) Supplemental Retirement Savings Plan - Number of Participants

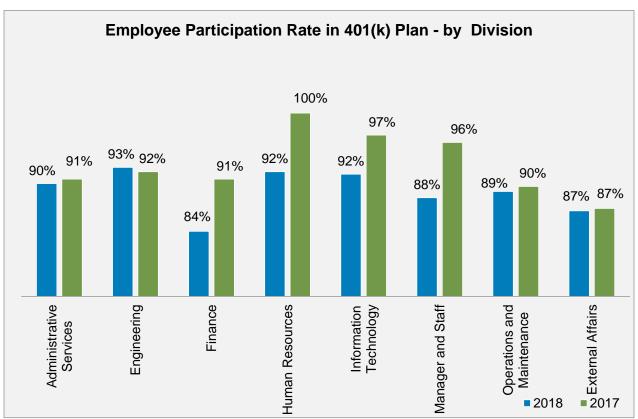
Fiscal Year	Participants <sup>1</sup>				
Ending	Total	Active	Inactive	New enrollments	
12/31/2009	1,011	926	85	60	
12/31/2010	1,010	922	88	N/A	
12/31/2011	1,027	930	97	N/A	
12/31/2012	1,061	940	121	N/A	
12/31/2013	1,092	929	163	N/A	
12/31/2014	1 142	957	185	N/A	
12/31/2015	1,141	937	204	N/A	
12/31/2016	1,189	953	236	N/A	
12/31/2017	1,190	927	263	N/A	
12/31/2018	1,190	895	295	N/A	

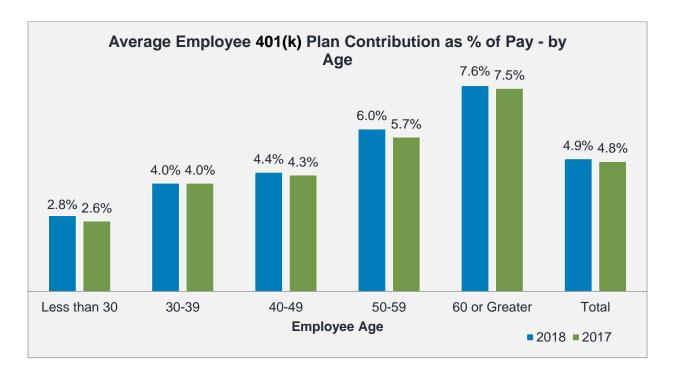
Source: VALIC/ Empower Retirement

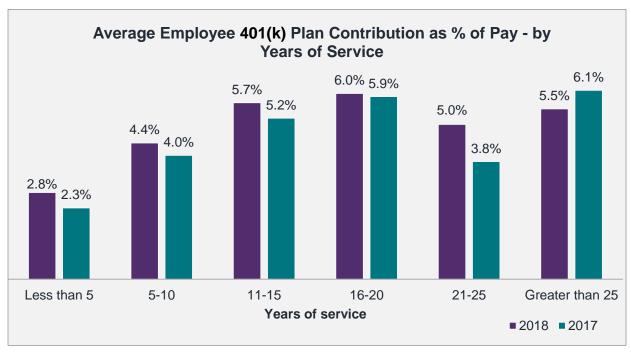
<sup>&</sup>lt;sup>1</sup> Total participants are defined as those participants who had cash value at the end of the reporting period. Active participants are defined as those participants who were actively employed and had a balance at the end of the year. Inactive participants include plan participants who are no longer employed but have a balance.











## C. Denver Water 457 Deferred Compensation Plan

#### 1. Schedule of Additional Source, 2009-2018

Fiscal Year Ending	Participant Contributions	Participant Rollovers	Employer Contributions <sup>1</sup>	Net Investment and Other Income <sup>2</sup>	Total
2009	1,302,800	-	N/A	3,334,200	4,637,000
2010	1,437,700	-	N/A	2,326,100	3,763,800
2011	1,580,600	1,900	N/A	252,400	1,834,900
2012	1,707,900	12,200	N/A	2,257,800	3,978,000
2013	1,839,600	110,200	23,000	3,936,700	5,909,500
2014	1,878,600	9,400	35,000	1,752,100	3,675,100
2015	2,187,500	82,100	36,000	339,600	2,645,200
2016	2,069,700	2,000	36,000	1,874,300	3,982.000
2017	2,017,100	33,300	-	4,426,500	6,476,900
2018	2,108,300	583,000	24,500	(1,074,500)	1,641,300

Source: Financial Statements for Denver Water 457 Deferred Compensation Plan

## 2. Schedule of Deductions by Type, 2009-2018

	Dedu	Deductions by Type		
Fiscal Year Ending	Benefit Payments	Administrative Expenses <sup>1</sup>	Participant investment advisory fees	Total
2009	2,500,700	54,300	-	2,555,000
2010	2,692,400	49,900	-	2,742,300
2011	2,987,700	23,000	-	3,010,700
2012	1,956,500	23500	1,200	1,981,200
2013	2,349,500	25,900	3,200	2,378,600
2014	1,642,900	28,400	5,600	1,676,900
2015	4,126,900	28,600	6,200	4,161,700
2016	2,230,900	22,700	4,500	2,258,100
2017	4,861,000	25,900	5,500	4,892,400
2018	3,097,800	26,500	5,400	3,129,700

Source: Financial Statements for Denver Water 457 Deferred Compensation Plan

<sup>&</sup>lt;sup>1</sup> Employer's contribution also includes discretionary contributions, as described in the financial statements for the DC Plans.

<sup>&</sup>lt;sup>2</sup> Investment and miscellaneous income (including realized and unrealized gains/losses) net of investment expense and participant advisory fees.

<sup>&</sup>lt;sup>1</sup> Includes imputed amount of investment and recordkeeping fees.

## 3. Schedule of Benefit Deductions from Net Assets by Type, 2009-2018

Fiscal Year Ending	Retirement	Age 70 1/2 minimum	Termination of Employment	Hardship	Other <sup>1</sup>	Total Benefits
2009	1,846,700	0	337,600	-	316,400	2,500,700
2010	2,085,400	0	372,700	-	234,300	2,692,400
2011	2,761,200	24,300	152,700	8,000	41,500	2,987,700
2012	1,564,900	22,300	279,200	600	88,500	1,956,500
2013	2,147,600	11,100	100,700	17,100	73,000	2,349,500
2014	840,200	11,800	475,000	18,800	297,100	1,642,900
2015	1,262,500	0	2,572,000	2,100	279,500	4,116,100
2016	1,638,400	34,000	438,400	0	120,100	2,230,900
2017	2,755,900	45,800	1,883,100	1,900	174,300	4,861,000
2018	1,206,487	70,529	1,650,978	6,729	160,176	3,094,899
	D ::	51.1	0			

Source: Empower Retirement, Plan Disbursement Summary

## 4. Schedule of Changes in Net Assets, 2009-2018

Fiscal Year	Total Additions	Total Deductions	Change In Net Assets	Net Assets Held in	Net Assets Held in
Ending				Trust, Beginning of Year	Trust, End of Year
2009	4,637,000	2,555,000	2,082,000	22,878,500	24,960,500
2010	3,763,800	2,742,300	1,021,500	24,960,500	25,982,000
2011	1,834,900	3,010,700	(1,175,800)	25,982,000	24,806,200
2012	3,977,900	1,981,200	1,996,600	24,806,200	26,802,900
2013	5,909,500	2,378,600	3,530,900	26,802,900	30,333,800
2014	3,675,100	1,676,900	1,998,200	30,333,800	32,332,000
2015	2,645,200	4,161,700	(1,516,500)	32,332,000	30,815,500
2016	3,981,800	2,258,100	1,723,700	30,815,500	32,539,200
2017	6,495,000	4,892,400	1,602,600	32,539,200	34,141,800
2018	1,655,200	3,129,700	(1,474,500)	34,141,800	32,667,300

Source: Financial Statements for Denver Water 457 Deferred Compensation Plan

<sup>&</sup>lt;sup>1</sup>" Other" includes beneficiary payments, Qualified Domestic Relations Order (QDRO) payments, death claims, disability payments, early distributions and taxes withheld.

#### 5. Denver Water 457 Deferred Compensation Plan- Number of Participants

Fiscal Year		Participants <sup>1</sup>				
Ending	Total	Active	Inactive	New Enrollments		
12/31/2009	679	314	365	11		
12/31/2010	636	278	358	N/A		
12/31/2011	619	516	103	N/A		
12/31/2012	607	495	112	N/A		
12/31/2013	608	467	141	N/A		
12/31/2014	621	476	145	N/A		
12/31/2015	629	473	156	N/A		
12/31/2016	655	493	162	N/A		
12/31/2017	665	484	181	N/A		
12/31/2018	658	462	196	N/A		

Source: VALIC/ Empower Retirement

<sup>1</sup>Total participants are defined as those participants who had cash value at the end of the reporting period. Active participants are defined as those participants who were actively employed and had a balance at the end of the year. Inactive participants include plan participants who are no longer employed but have a balance.

